



**MANAV RACHNA  
UNIVERSITY**

Declared as State Private University vide Haryana Act 26 of 2014

# **ANNUAL REPORT**

**ACADEMIC YEAR**

**2019-2020**



**MANAV RACHNA UNIVERSITY**

**Sector -43, Aravalli Hills, Surajkund Road, Faridabad, Haryana -121003**

## INDEX

| S. No. | Description  | Page No.       |
|--------|--|----------------|
|        | <b>Chapter 1: About the University</b>                 | <b>02 – 18</b> |
| 1.1    | Executive Summary                                      | 02             |
| 1.2    | Statutory Recognition                                  | 04             |
| 1.3    | Vision   | 04             |
| 1.4    | Mission  | 04             |
| 1.5    | Quality Policy   | 04             |
| 1.6    | Officers of the University                             | 05 – 08        |
| 1.7    | Governance   | 09 – 11        |
| 1.8    | Advisory Boards  | 12 – 13        |
| 1.9    | Other Committees of the University                     | 14 – 18        |
|        |  |                |
|        | <b>Chapter 2: Academics at Manav Rachna University</b> | <b>19 – 31</b> |
| 2.1    | Faculties & Departments of the University              | 19 – 21        |
| 2.2    | Doctoral Program                                       | 21 – 23        |
| 2.3    | Teaching Learning Process                              | 23 – 25        |
| 2.4    | Faculty members of the University                      | 25 – 28        |
| 2.5    | Students on Roll                                       | 28             |
| 2.6    | Scholarships   | 28 – 31        |
|        |  |                |
|        | <b>Chapter 3: Assessment and Evaluation</b>            | <b>32 – 50</b> |
| 3.1    | Calendars (Academic & Examination)                     | 31 – 42        |
| 3.2    | Examination Cell                                       | 42 – 43        |
| 3.3    | Result Analysis  | 43 – 46        |
| 3.4    | Open House Reports                                     | 46 – 48        |
| 3.5    | Automation of Examination on ERP                       | 48 – 50        |
|        |  |                |
|        | <b>Chapter 4: Research Development and Innovations</b> | <b>51 – 69</b> |
| 4.1    | Research and Publications                              | 51             |
| 4.2    | Major Research & Development Events Organized          | 52             |
| 4.3    | Research Endeavors, Innovation & Incubation            | 52 – 57        |
| 4.4    | IPR cell   | 58 – 59        |
| 4.5    | Manav Rachna Business Incubator                        | 59 – 60        |
| 4.6    | Innovations and Competitions won                       | 60 – 63        |
| 4.7    | Research Computing Cluster                             | 64             |
| 4.8    | Research Integrated UG Programs                        | 64 – 67        |
| 4.9    | Institutional Social Responsibility (ISR)              | 67 – 69        |
|        |  |                |
|        | <b>Chapter 5: Training and Placements</b>              | <b>70 – 73</b> |
| 5.1    | Summer Training Modules (In House)                     | 70 – 72        |
| 5.2    | Student Placement Opportunities                        | 72 – 73        |

|      |   |                  |
|------|---|------------------|
|      |   |                  |
|      | <b>Chapter 6: Achievements of Faculty</b>   | <b>76 – 82</b>   |
| 6.1  | E-Content Developed   | 76               |
| 6.2  | Membership of International / National Societies / Committees / Sessions Chaired / Lectures Delivered | 76 – 78          |
| 6.3  | Webinars & Workshops Organised  | 78 – 79          |
| 6.4  | Certifications Awarded to the Faculty   | 80 – 82          |
|      |   |                  |
|      | <b>Chapter 7: Outreach &amp; Professional Activities</b>  | <b>83 – 111</b>  |
| 7.1  | Students' Achievements  | 83 – 86          |
| 7.2  | Events organized In House   | 86 – 93          |
| 7.3  | Visit to Industries & Exhibitions   | 94 – 95          |
| 7.4  | Orientation 2K19  | 96               |
| 7.5  | 3 <sup>rd</sup> Convocation Ceremony  | 97 – 98          |
| 7.6  | Alumni Network  | 99 – 100         |
| 7.7  | Expert Lectures   | 100 – 102        |
| 7.8  | Webinars by External Experts  | 103 – 108        |
| 7.9  | International Collaborations & Linkages   | 109              |
| 7.10 | Green Initiatives   | 109-111          |
|      |   |                  |
|      | <b>Chapter 8: Internal Quality Assurance Cell (IQAC)</b>  | <b>112 – 120</b> |
| 8.1  | FDP Organised   | 112 – 113        |
| 8.2  | Public Lecture Series   | 113              |
| 8.3  | SWAYAM-NPTEL  | 114 – 116        |
| 8.4  | Virtual labs  | 116 – 117        |
| 8.5  | IQAC Calendar   | 118 – 119        |
| 8.6  | Internal Academic Audit   | 119 – 120        |
|      |   |                  |
|      | <b>Chapter 9: New Initiatives</b>   | <b>121 – 136</b> |
| 9.1  | Innovative Practices in Teaching  | 121 – 124        |
| 9.2  | Centre for Academic Leadership  | 124 – 126        |
| 9.3  | Manav Rachna Centre for peace and Sustainability  | 127 – 130        |
| 9.4  | Center of Excellence in Alternative Dispute Resolution (CADR)   | 131 – 133        |
| 9.5  | Teacher On Call   | 133              |
| 9.6  | MoU's Signed  | 134 – 136        |
|      |   |                  |
|      | <b>Chapter 10: Manav Rachna Creating Buzz...</b>  | <b>137 – 139</b> |

| <b>Annexure No</b> | <b>Particular</b>   | <b>Page No</b> |
|--------------------|---|----------------|
| Annex 4.1          | Research Publications in Journals                                 | 141 – 153      |
| Annex 4.2          | Research Publications in Conferences                              | 154 – 159      |
| Annex 4.3          | Patent Details (Filed/Published/Granted)                          | 160            |
| Annex 4.4          | Books /Chapters /Monograph/Case Study authored by faculty members | 161 – 162      |
| Annex 4.5          | Seminar/ Conference/ Workshop Organized                           | 163 – 169      |
| Annex 4.6          | Expert Talks / Guest Lecture Organized                            | 170 – 172      |
| Annex 4.7          | Consultancy   | 173            |
| Annex 4.8          | Externally Funded Research Projects                               | 174            |
| Annex 4.9          | Interdepartmental & Interdisciplinary Research                    | 175 – 188      |
| Annex 5.1          | Summer Training   | 189 – 223      |
| Annex 5.2          | Placements  | 224 – 233      |
| Annex 8.1          | Minutes of IQAC Meetings  | 234 – 239      |
|                    | Audited Balance Sheet   | 240 – 246      |
|                    | Editorial Team  | 246            |
|                    |   |                |



## **“Manav Rachna”**

Manav Rachna carries forward the mantle of excellence and professionalism with the philosophy of Manav Rachna.

## **“Vidyantariksha”**

This is a conjunction of the words ‘vidya’ and ‘antariksha’. “Vidya means knowledge, information, the basis of creativity and innovation. It is the foundation of technology and envisages the future. “Antariksha means ‘the sky’ the space which we belong to or exist. It can be broken into ‘antar’ and ‘ikshan’ which means inner vision. Hence the combination, the core promise of Manav Rachna becomes “the reality of inner vision or root of all knowledge”.

# CHAPTER 1

## ABOUT THE UNIVERSITY

### 1.1 Executive Summary

Manav Rachna University (MRU) is a leading State Private University established vide Haryana State Legislature Act No 26 of 2014 & Under Section 2(f) of UGC Act 1956 and included in the list of Universities by UGC. The University offering globally relevant education and is also listed on the official website of Government of Haryana. The University has evolved from Manav Rachna College of Engineering (MRCE), which was established in the year 2004, a NAAC accredited 'A' Grade institution. The accreditations/rankings are testimonial to the trust of accrediting bodies in the quality of education being offered, a well-established teaching and learning process guided by the global best practices and a culture of academic excellence promoting research, innovation & entrepreneurship. The University has five faculties and nine Academic Departments. The Programs offered at Faculty of Engineering, Faculty of Law & Faculty of Education and Humanities are approved by the respective regulatory bodies like AICTE, BCI, NCTE & RCI.

University Campus is spread over approximately 10.48 acres with a built-up area of 37487 sq. mtr. The campus, just 15 Km away from south Delhi, provides state-of-the-art facilities and ambience for a conducive learning environment.

Our vision is to educate students in the frontier areas of knowledge enabling them to take up challenges as ethical and responsible global citizens.

MRU has been bestowed with QS I-Gauge overall Gold rating and has been awarded Diamond rating in facilities and student employability for 2018-21. MRU is among the few Institutions in country who have received E LEAD Certification by QS I Gauge for their readiness to deliver online (2020-21)

As per Times Engineering Survey 2020, Manav Rachna University is among the top 2 emerging engineering institutes and is ranked number 1 in research capability & Placements. Also, university has been recognized as valuable Swayam-NPTEL local chapter with rating of 'A'. Innovation Incubation Council (IIC) of MRU established under AICTE- Ministry of Innovation Cell, GOI received 4 Star Rating for the year 2019-20, in the North West Region. University has collaborated with the leading universities and Institutions both at global and national level for delivering the best education to its students. It has strong industry connect for the design and delivery of various courses.

University upgrades its curriculum to keep pace with the latest trends and keeps it recent and relevant. It has incorporated courses like Artificial Intelligence, Machine Learning, Data Analysis, Mechatronics, Robotics, Nanotechnology, Financial management, HR Management to name a few to impart training and prepare its students for leadership positions of tomorrow.

The academics at MRU is designed towards providing the students a strong background in fundamentals, an ability to translate it to real-life problems and a capacity to design, build and analyze different products, processes and systems. Guided by international best practices, the teaching-learning process ensures the development of Global Graduate Attributes as recommended by various professional bodies/societies.

The academic process is outcome based and ensures development of the desired skill set. Choice Based Credit System provides flexibility to the students to take courses from the areas of their interest. Learner Centric Education with latest pedagogical approaches like active learning, collaborative and cooperative leaning, agile methodology ensures holistic development of graduates who understand the impact of their actions/ decisions on the society and environment.

University envisions developing Sustainable Development as a thrust area of Research and Innovation. The research training provided to our graduate students creates the next generation of leaders well-prepared to advance knowledge and transfer of technology. Several Live Projects are being given by Industry to the UG students to work on and come out with innovative solutions. Any new Knowledge created by the Students and Faculty through their research and innovation is disseminated through publishing of books, research papers in the reputed Journals and filing of Patents. The dedication and hard work of its faculty and students is acknowledged in terms of awards & recognition they receive at different forums. Inculcating entrepreneurial skills is given its due importance and the University has established its incubation centre.

We continually seek feedback from all our stakeholders, analyse it and take action wherever required. We are conscious of the need to adopt various measures for quality assurance and have taken suitable measures in that direction. Transparency in all our operations, emphasis on an honest and sincere approach, has gained us respect and we are the preferred choice of the faculty and students in northern India.

## **1.2 Statutory Recognition**

Manav Rachna University is a State Private University, established vide Haryana State Legislature Act No 26 of 2014 & under section 2(f) of UGC Act 1956. The University has evolved from Manav Rachna College of Engineering (MRCE), a NAAC Accredited 'A' Grade institute.

## **1.3 Vision**

Manav Rachna University envisions to educate students in frontier areas of knowledge enabling them to take up challenges as ethical and responsible global citizens.

## **1.4 Mission**

- To impart outcome based holistic education
- To disseminate education in frontier areas
- To produce globally competitive, ethical and socially responsible human resources
- To produce human resources sensitive to issues of Environment and Sustainable Development
- To develop Environment and Sustainable development as thrust area of research and development.

## **1.5 Quality Policy**

To continuously learn from the best practice, study rolemodels and develop transparent procedures for empowerment of stakeholders.

## 1.6 OFFICERS OF THE UNIVERSITY



*CHANCELLOR*

Dr. Prashant Bhalla



*VICE CHANCELLOR*

Prof. (Dr.) IK Bhat



*VICE PRESIDENT, MREI*

Dr. Amit Bhalla



*REGISTRAR*

Dr. Kameshwar Singh



*DEAN ACADEMICS*

Prof. (Dr.) Sangita Banga



*DEAN RESEARCH*

Prof. (Dr.) Pradeep Kumar Varshney



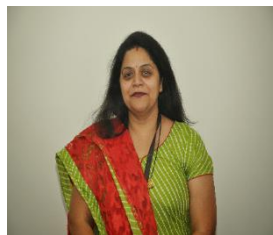
*DEAN STUDENTS' WELFARE*

Prof. (Dr.) Shruti Vashist



*PROCTOR*

Prof. (Dr.) D K Sharma



*DEPUTY CONTROLLER OF EXAMINATION*

Ms. Shefali Chopra

**DEANS OF FACULTIES**



*FACULTY OF ENGINEERING*

*And FACULTY OF LAW*

Prof. (Dr.) Sangita Banga



*FACULTY OF APPLIED SCIENCES*

Prof. (Dr.) Pradeep Kumar Varshney



*FACULTY OF MANAGEMENT & COMMERCE*

Prof. (Dr.) Parul Jhajharia



*FACULTY OF EDUCATION & HUMANITIES*

Prof. (Dr.) Babita Parashar



*Director Law*

Mr. Ajay Thomas (w.e.f 1<sup>st</sup> January 2020)



## **1.7 GOVERNANCE**

### **1.7.1 Governing Body**

The Governing body is the highest decision-making authority of the University. All the movable and immovable property of the University vests in it. The Governing Body provides general superintendence and direction to the University and in particular, regulates and controls the functioning of the University in accordance with the provisions of the applicable Acts, Statutes, Ordinances, Rules, Regulations, Notifications and Orders etc. In academic year 2019-20, the Governing Body met three times i.e. on 30th September, 2019, 24th January, 2020 and 28th April, 2020.

#### **Members**

- 1) Dr. Prashant Bhalla, Chancellor/Chairman
- 2) Dr. Amit Bhalla, Vice President, MREI
- 3) Prof. I.K. Bhat, Vice Chancellor
- 4) Ms. Anita Chaudhary, IAS (Retd.) Former Secretary, GOI
- 5) Dr. Shalini Tuli, Associate Professor, Govt. College ( Govt. Nominee)
- 6) Col. (Retd.) V.K. Gaur, Advisor, MREI
- 7) Dr. M.M. Kathuria, Trustee, UET
- 8) Dr. N.C Wadhwa, DG, MREI
- 9) Prof. Sanjay Srivastava, MD MREI & VC MRIIRS
- 10) Sh. Amit Kumar, FCA
- 11) Dr. Kameshwar Singh, Registrar/Member Secretary

### **1.7.2. Board of Management**

The Board of Management (BoM) is the Chief Executive body of the University and works under the overall directions of the Governing Body. The role of BoM is to establish and monitor the achievement of the University's mission and Objectives. This includes, formulation and monitoring of academic standards, benchmarks and goals; establishment of academic and research units; supervision of the University's finances and budgetary processes; conducting institutional performance evaluations; compliance of the University's statutory and regulatory responsibilities; liaison with external agencies and evaluation of the performance of the senior University functionaries. In academic year 2019-20, the BOM met three times i.e. on 02th August, 2019, 15th January, 2020 and 28th April, 2020.

#### **Members**

- 1) Prof. I.K. Bhat, Vice Chancellor
- 2) Dr. Amit Bhalla, Vice President, MREI
- 3) Sh. Rajeev Kapoor, ED & Group HR-Head, Uno Minda

- 4) Dr. Shalini Tuli, Associate Professor -Govt. Nominee
- 5) Mr. Navdeep Chawla, President – FIA
- 6) Dr. M.M. Kathuria, Trustee, UET
- 7) Prof. Sangita Banga, Dean Academics
- 8) Prof. Parul Jhajharia, Dean-Faulty of Management and Commerce
- 9) Prof. Joshe P. Verghese, Professor Emeritus
- 10)Prof. Versha Vahini, HoD- Law
- 11)Dr. Babita Parashar, Dean – Faculty of Education & Humanities
- 12)Ms. Hanu Bhardwaj, HoD-Computer Science and Technology
- 13)Dr. Kameshwar Singh, Registrar / Member Secretary

### **1.7.3 Academic Council**

The Academic Council is the principal academic body of the University. It exercises general supervision over the academic policies of the University, subject to the provisions of the Act, Statutes, Ordinances of the University, The Academic Council is responsible for evaluation and approval of overall educational policy, academic degree programs, requirements for admission, academic honors and awards etc. at the University. In academic Year 2019-20 the Academic Council met three times i.e on 23rd August, 2019, 9th December, 2019 and 21st April, 2020.

#### **Members**

- 1) Prof. I.K. Bhatt, Vice Chancellor-Chairman
- 2) Prof. Raj Senani, Professor Emeritus, Netaji Subhash University of Technology
- 3) Prof. Anita Rastogi, Professor JMI, Delhi
- 4) Prof. Pilli Emmanuel, Associate Professor MNIT, Jaipur
- 5) Prof. Kanupriya Sachdeva, Professor MNIT, Jaipur
- 6) Prof. Devender Kumar, Professor Delhi Technological University, Delhi
- 7) Prof. G.S. Bajpayee, Professor & Registrar, NLU, Delhi
- 8) Sh. Ajay Kabra, Sr. Director – Agile Transformation Xebia India
- 9) Sh. Pradeep Kumar, Head Channels Sales, Altair Engineering
- 10)Dr. S.K. Goyal, Executive Director (SAARC)
- 11)Prof. (Dr.) S.K. Garg, Pro-VC, Delhi Technical University,
- 12)Prof. (Dr.) R.K. Singh, School of Economic, New Delhi
- 13)Prof. Sangita Banga, Dean Academics
- 14)Prof. Parul Jhajharia, Dean-Management and Commerce
- 15)Prof. Pardeep Kumar Varshney, Dean, Research & Applied Science
- 16)Dr. Babita Parashar, Dean-Faculty of Education and Humanities

- 17) Prof. Versha Vahini, HoD, Law
- 18) Prof. Shruti Vashisht, HoD-ECE & Dean, Students welfare
- 19) Ms. Hanu Bhardwaj, HoD, Computer Science Technology
- 20) Prof. Sujata Nayak, HoD, Mechanical Engineering
- 21) Dr. Sudhish Shukla, HoD, Chemistry
- 22) Dr. Rashee Singh, HoD, Education and Humanities
- 23) Dr. Deepa Arora, HoD, Mathematics
- 24) Dr. Jai Prakash, HoD-Physics
- 25) Prof. D.K. Sharma, Professor, Physics
- 26) Prof. Susmita Ray, Professor, Computer Science and Engineering
- 27) Dr. Pragati Chauhan, HoD, Management and Commerce
- 28) Ms. Meena Kapahi, Associate Professor, Chemistry
- 29) Dr. Jyoti Pruthi, Associate Professor, CSE
- 30) Dr. Kameshwar Singh, Registrar /Member-Secretary

#### **1.7.4. Finance Committee**

The Finance Committee is the principal financial body of the University. The main task of the Committee is to take care of the financial matters of the University. In academic year 2019-20, the Finance Committee met thrice i.e. on 30th September, 2019, 24th January, 2020 and 28th April, 2020.

#### **Members**

- 1) Prof (Dr.) I.K Bhat, Vice chancellor
- 2) Dr. Amit Bhalla, Vice President, MREI
- 3) Dr. M.M. Kathuria, Trustee, UET
- 4) Prof. Sangita Banga & Dean Academics
- 5) Sh. Amit Kumar, FCA
- 6) Dr. Kameshwar Singh, Registrar
- 7) Sh. Rajeev Malhotra, Chief Finance & Accounts Officer, Member Secretary

## **1.8. Advisory Boards**

### **1.8.1 Advisory Board of Faculty of Law**

The Advisory Board is constituted to advise, guide, supervise and steer the holistic growth of faculty of law so as to take it to the greater heights. In the academic year 2017-18, the Advisory met three times i.e. on 07<sup>th</sup> September, 2019, 18<sup>th</sup> January, 2020 and 1<sup>st</sup> May, 2020.

#### **Members**

- 1) Hon'ble Mr. Justice R.C. Lahoti (Former CJI) Chairman
- 2) Hon'ble Mr. Justice Amitava Roy, Former Judge, SCI
- 3) Hon'ble Mr. Justice K.K. Lahoti (Former Acting Chief Justice, "H" High Court-MP)
- 4) Hon'ble Mr. Justice Kailash Gambhir (Former Judge, Hon'ble High Court of Delhi)
- 5) Hon'ble Mr. Justice Rajiv Bhalla (Former Judge, Hon'ble High Court of P&H)
- 6) Mr. Atmaram Nadkarni, (ASG, Government of India)
- 7) Mr. P. K. Malhotra, Former Law Secy., GOI
- 8) Mr. Arvind P. Datar, (Senior Counsel) Member
- 9) Mr. Ravindra Srivastav (Senior Counsel) Member
- 10) Mr. Parag Tripathi (Senior Counsel) Member
- 11) Mr. Gourab Banerji (Senior Counsel) Member
- 12) Mr. Sanjeev Sharma (Senior Counsel) Member
- 13) Mr. Gopal Jain (Senior Counsel) Member
- 14) Mr. Ashok Gupta (Senior Counsel) Member
- 15) Mr. Vinay Bhasin (Senior Counsel) Member
- 16) Mr. Jasbir Singh Bajaj (IAS) Member
- 17) Mr. R. K. Bajaj, Former Chief Commissioner – IT Member
- 18) Mr. Sudhir Sharma (Partner, Luthra & Luthra) Member
- 19) Mr. Anup Trehan (Partner, Access Law) Member
- 20) Mr. Shashank Garg (Partner, Advani & Co.) Convener



## 1.8.2 Advisory Board of Manav Rachna Centre for Peace & Sustainability

The Advisory Board is constituted to advise, guide, supervise and steer the holistic growth of the Centre so as to take it to the greater heights. In the academic year 2019-20, the Advisory met once on 28th Feb, 2020.

### Members

- 1) Dr. Karan Singh (Indian politician, philanthropist and poet), Chairman
- 2) Dr. Prashant Bhalla, Chancellor
- 3) Dr. Amit Bhalla, Vice President, MREI
- 4) Hon'ble Mr. Justice R.C. Lahoti (Former CJI)
- 5) Swami Gyananandji, Spiritual Guru, GIEO, Gita & Shri Krishan Kripa Sewa Samiti
- 6) Dr. Ved Prakash, Former Chairman, University Grant Commission
- 7) Dr. Muzaffer Ahmad, Former Director General health Govt of J&K
- 8) Dr. Rajendra Shende, Chairman Terre Policy Centre
- 9) Dr. Meenakshee Gopinathan, Indian educationist, political scientist, writer
- 10) Dr. Anand Prakash, Professor & Head, Department of Psychology, Delhi University
- 11) Mr. Vishesh Gupta, Chairperson and Board of Directors of Bharat Soka Gakkai (BSG)
- 12) Dr. Jyotsna Singh, Director, Dara Shikoh Centre, J & K. Amar Mahal Museum & Library, J & K
- 13) Dr. Sushila Bhan, Chairperson, Institute for Peace Research & Action
- 14) Lt. Gen S. P. Kochhar, Retired Signal Officer in Chief- Indian Army
- 15) Mr. Anuj Sinha, Chairman of the Board at Network of Organisations for S&T Communication
- 16) Prof. Sanjay Srivastava, MD MREI & VC MRIIRS
- 17) Prof (Dr.) I.K Bhat, Vice chancellor
- 18) Dr. Geeta Thakur (Member Secretary)



## 1.9 Other Committees of the University

A well-organized University set up requires a lot to be monitored for smooth functioning and overall excellence such as attendance, feedback, course uploading to name only a few in this regard. Managing this entire gamut is not a one man show but it requires a collaborative effort from all staff members. University therefore works in a more decentralized manner through its various committees. These committees are empowered, have more autonomy and thus, help in quick decision making. All the committees are headed by coordinators with defined roles and responsibilities to perform.

| <b>OTHER COMMITTEES</b>    |   |   |
|----------------------------|---|---|
| <b>Committee Name</b>      | <b>Coordinator &amp; Team Members</b>   | <b>Roles and Responsibility</b>   |
| <b>Board of Discipline</b> | Sh. Ajit Katiyar, Associate Professor – Chairman                              | To consider the matter concerning maintenance of discipline among the students in the University  |
|                            | HoD concerned and Hostel warden to which act of indiscipline pertain – Member | To enquire into the act of indiscipline or misconduct committed by a student(s) whenever such cases are referred to the Board of Discipline and to submit their findings, conclusions, and recommendations for the quantum of punishment under the provision of this ordinance. |
|                            | Dr. Somdutt Bhardwaj, Associate Professor – Member                            | To supervise and monitor the discipline ecosystem prevailing in the University  |
|                            | Ms. Manpreet Kaur, Associate Professor – Member                               | To maintain liaison with the police authorities and concerned departments of the Government, neighboring institutions and the authorities of the University regarding maintenance of law and order in the University.   |
|                            | Ms. Meenakshi Gupta, Assistant Professor – Member                             | To organize counseling session and liaisoning with parents of the guardians of the students.  |

|   |  |  |
|---|--|--|
|   | Dr. Shobha Srivastava, Deputy Registrar-Administrator – Member Secretary     | To perform such other functions as may be assigned to it by the Vice Chancellor from time to time.   |
|   | Mr. A.K. Mishra, Sports Office and Manager Operations                        |  |
| <b>Annual Report</b>                                  | Prof. Sangita Banga, Dean Academics – Chairperson                            | The committee shall function under overall supervision and patronage of the Dean Academics and will be required to submit the Draft Annual Report within two months' time. |
|   | Dr. Babita Parashar, Dean Faculty of Education & Humanities – Convenor       |  |
|   | Prof. Shruti Vashisht, Dean - DSW – Member                                   |  |
|   | Dr. Megha Mittal, Associate Professor – Member                               |  |
|   | Prof. Versha Vahini, HoD-Law – Member  |  |
|   | Prof. Geeta Thakur, Prof. Education & Head-ASLI                              |  |
|   | Ms. Yogita Guputa, Asst. Professor – Member                                  |  |
|   | Ms. Gaganjot Kaur, Asst. Professor – Member                                  |  |
| <b>University Level Greivance Redressal Committee</b> | Prof. Shruti Vashisht - Chairperson  | Create and communicate a detailed policy.  |
|   | Prof. A.K. Gupta, - Member   | Ensure awareness and orientation on the sexual harassment at work place  |
|   | Prof. Versha Vahini, - Member  | Ensure complaint committee is trained in both skill and capacity.  |
|   | Ms. Hanu Bhardwaj, Associate Professor – Member                              | Prepare an annual report and report to the Vice Chancellor   |
|   | Mr. Sandeep Kumar, Associate Professor – Member                              |  |
|   | Dr. Archana Bhatia, Chairperson, Nari Uthan Shikshan Shashaktikaran – Member |  |

|   |  |   |
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| <b>Grace Marks Committee</b>  | Dean Academics – Chairperson   | The committee shall function under overall supervision and patronage of the Dean Academics  |
|   | Dean Student Welfare – Member  |   |
|   | Controller of Examination – Member   |   |
|   | Dean Management – Member   |   |
|   | Registrar - Member Secretary   |   |
| <b>Committee for Documents / Reports and processes for updation of data</b> | Ms. Meena Kapahi, Associate Professor-Chemistry – Coordinator                  | Team Assist to Dean Academics in Processing of Academic Documents / Reports as well as in developing system and processes for updation of data  |
|   | Dr. Deepa Arora, Associate Professor & Head Maths - Co-Coordinator             |   |
|   | Dr. Roopa Rani, Asst. Professor-Chemistry – Member                             |   |
|   | Dr. Ananna Bardhan, Asst. Professor-Physics – Member                           |   |
|   | Dr. Manpreet Kaur, Associate Professor-CST – Member                            |   |
|   | Dr. Seema Sharma, Asst. Professor - Faculty of Education & Humanities – Member |   |
|   | Ms. Priyanka Maderna, Asst. Professor-law – Member                             |   |
|   | Dr. Pooja Kapoor, Associate Professor-Management – Member                      |   |
|   | Dr. Ankita Pandey, Asst. Professor-Maths – Member                              |   |
|   | Mr. Bhanu, Asst. Professor-ECE – Member  |   |
|   | Mr. Gianender, Asst. Professor-ME – Member                                     |   |
| Mr. Ram Chatterjee, Asst. Professor-CST – Member                            |  |   |
| <b>Website Committee</b>  | Dr. Mrinal Pandey, Associate Professor-CST - Coordinator                       | <b>The Website Coordinator Will:</b>  |
|   | Ms. Garima Grover, Asst. Professor-ECE – Member                                | (1) Finalize Website Activity Calendar. (2) Managing Content (3) Maintaining Web Design (4) Maintaining continuity of themes, layout (5) Streamlining navigation (6) Updating contents (7) Ask from |



|                           |   |   |
|---------------------------|---|---|
|                           | Ms. Gaganjot Kaur, Asst. Professor-CST – Member                                 | the Dean's HoD's for their respective areas contents and events information (8) Communicate with the Web Team to keep apprised of developments (9) Coordinating with the team members reviewing website contents time to time to match with the updations in the university information database (11) Give consolidated feedback to Dean's and HoD's  |
|                           | Mr. Mandeep Bhadana, Asst. Professor-ME – Member                                | <b>The Website Team Members will:</b>   |
|                           | Ms. Rashi Banerji, Assistant Professor, Member                                  |   |
|                           | Dr. Kiran Gupta, Associate Professor-Faculty of Education & Humanities – Member | (1) Reviewing the specific portions of website for its contents accuracy (2) To be responsible for providing the data specific to the particular area and the formats in which it should be updated on the website (3) Participate in managing the contents and deciding the layout of the website (4) Participate in content writing for specific areas (5) Participate in website meetings (6) Participate in coordinating and communicating with other departments in fetching the information and data. |
|                           | Dr. Ankita Pandey, Asst. Professor-Maths – Member                               |   |
|                           | Dr. Jaya Tuteja, Asst. Professor-Chemistry – Member                             |   |
|                           |   |   |
| <b>Purchase Committee</b> | Dr. Shobha Srivastava, Deputy Registrar (Admin) – Chairman                      | (1)To collect and analyze quotations from the Vendors (2)To complete documentation work relating to purchase (3) Ensure transparency and fairness in the procurement (4) Placing the order to vendor for supply of the stores (5) To get the entry of the stores in the Stock Register of the University  |
|                           | Ms. Shefali Chopra, Deputy Registrar (R & S) – Member                           |   |
|                           | Mr. Bharat Bhushan, (Admin) – Member  |   |

|   |  |   |
|---|--|---|
| <b>Security Lapses &amp; Losses Committee</b> | Prof. Versha Vahini, Professor – Chairperson                         |   |
|   | Mr. Satish Arora, CVO – Member                                       |   |
|   | Dr. Vikram Sharma, Library – Member                                  |   |
|   | Mr. A.K. Mishra, Sports Officer – Member                             |   |
|   | Dr. Shobha Srivastava, Deputy Registrar - Member Secretary           |   |
| <b>Women Cell</b>                             | Prof. Shruti Vashisht – Chairperson                                  | <p>(1) The complaint committee shall look into all the cases relating to sexual harassment of students/employees working in the University, investigate the same as per procedure laid down in the act and rules made therein and make recommendations to the competent authority for decision.</p> <p>(2) The complaint committee shall ensure complete confidentiality and shall not disclose the contents of the complaint, identity and address of complainant, respondent and witness and information pertaining to conciliatory/ inquiry proceedings or recommendations of the committee into the complaint to anyone as it is totally prohibited under the provisions of the said act.</p> |
|   | Prof. Sujata Nayak, HoD-Mechanical – Member                          |   |
|   | Dr. Babita Parashar, Dean Faculty of Education & Humanities – Member |   |
|   | Dr. Parneeta Dhallwal, Associate Professor – Member                  |   |
|   | Dr. Megha Mittal, Associate Professor - Member                       |   |
|   | Ms. Priyanka Maderna, Asst. Professor-law – Member                   |   |
|   | Dr. Manpreet Kaur, Associate Professor-CST – Member                  |   |
|   | Dr. Deepa Arora, Associate Professor & Head Maths – Member           |   |
|   |  |   |

## **CHAPTER: 2**

### **ACADEMICS AT MANAV RACHNA UNIVERSITY**

Manav Rachna University, evolved in the year 2014 under the Haryana State Legislature Act No. 26 of 2014 from erstwhile Manav Rachna College of Engineering (MRCE), is flourishing with the gradual passage of time. During the last four years, University has been abuzz with activities and has surged forward in every respect. University has strengthened its academic profile by introducing contemporary, innovative and need-based programs both at UG and PG level. In particular, University introduced inter-disciplinary courses in engineering, applied sciences and integrated programs in Education, law and humanities, to name but few.

All the Engineering Programs offered under the Faculty of Engineering, are approved by AICTE. Manav Rachna University is bestowed with QS I-Gauge Gold rating. QS I-Gauge has certified Manav Rachna University as a globally recognized and benchmarked higher education institution offering online education in appreciation of the digital shift and readiness level of the University towards online education during the global pandemic Manav Rachna University is among the Top 3 emerging Engineering Institutes of the country as per Times Engineering Institutes Survey 2020. It is also the top most promising and emerging institute for Placement and Research Capability.

The University is declared as Nodal Centre for Virtual Labs, in association with IIT, Delhi and is a local chapter of NPTEL. Faculty of Law, MRU, offers Law Programs approved and recognized by BCI. The Faculty of Law at Manav Rachna University is delighted to be a Foundation Member of the LSAC Global Law Alliance – a group of colleges and universities that provide the highest quality legal education to India's future lawyers.. All the programmes offeren under Faculty of Education are NCTE approved.

#### **2.1 Faculties of the University**

- 2.1.1. Faculty of Applied Sciences
- 2.1.2. Faculty of Engineering
- 2.1.3. Faculty of Management and Commerce
- 2.1.4. Faculty of Education and Humanities
- 2.1.5. Faculty of Law

Under the five Faculties, there exist different departments offering Undergraduate; Post Graduate and Doctoral Programs.

**2.1.1 Faculty of Applied Sciences:** Departments, Programs offered, their future plans and faculty members are listed as under:

- **Department of Chemistry:**
  - ✓ B.Sc. (Hons.) (3 year): Chemistry
  - ✓ M.Sc. (2 year): Chemistry
  - ✓ Ph. D.
  
- **Department of Mathematics**
  - ✓ B.Sc. (Hons.) (3 year): Mathematics
  - ✓ M.Sc. (2 year): Mathematics
  - ✓ Ph. D.
  
- **Department of Physics.**
  - ✓ B.Sc. (Hons.) (3 year): Physics
  - ✓ M.Sc. (2 year): Physics
  - ✓ Ph. D.

**2.1.2. Faculty of Engineering:** Various Departments, Programs offered by them, their future plans and faculty members are listed as under:

- **Department of Computer Science and Technology**
  - ✓ B. Tech. (4 year) / B. Tech. Lateral Entry (3 year) Computer Science & Engineering
  - ✓ B. Tech. (4 year) with Specialization in Data Science and Machine Learning.
  - ✓ B. Tech. (4 year) with Specialization in Digital transformation Engineering in association with Xebia
  - ✓ M. Tech. (2 year) Computer Engineering
  - ✓ Ph. D.
  
- **Department of Electronics and Communication Engineering**
  - ✓ B. Tech. Lateral Entry (3 year): Electronics & Computer Engineering
  - ✓ B. Tech. (4 year): Electronics & Computer Engineering
  - ✓ B. Tech. (4 year) Electronics & Computer Engineering (with Specialization in VLSI and Design Technology)
  - ✓ B. Tech. (4 years) Electronics & Computer Engineering (with specialization in Health Technology)
  - ✓ Ph. D
  
- **Department of Mechanical Engineering**
  - ✓ B. Tech. (4year) Mechanical Engineering with specialization in Smart Manufacturing and Automation
  - ✓ B. Tech. Lateral Entry (3 year): Mechanical Engineering
  - ✓ M. Tech. (2 year): Mechanical Engineering
  - ✓ Ph. D

**2.1.3. Faculty of Management and Humanities:** Programmes offered by Department of Management & Commerce are mentioned below:

➤ **Department of Management and Commerce offering Undergraduate programmes (3 year):**

- ✓ Bachelor of Business Administration (BBA- Finance & Accounts) integrated with CMA Program, USA and endorsed by Institute of Management Accountants, USA.
- ✓ Bachelor of Business Administration (BBA- Entrepreneurship & Family Business.
- ✓ Bachelor of Business Administration (BBA- Health Care Management) in association with Cygnus Hospitals, India.
- ✓ Bachelor of Business Administration (BBA-Operations Management with Specialization in Supply Chain Management, Logistics & Projects Management).
- ✓ Ph.D.

**2.1.4. Faculty of Education:** Department under the Faculty and Programs are:

➤ **Department of Education and Humanities**

- ✓ Integrated B.Sc. B. Ed. (4 year)
- ✓ Integrated B.A. B. Ed. (4 year)
- ✓ B.Ed. (2 year)
- ✓ B.Ed. Special Education (2 year)
- ✓ Ph. D.

**2.1.5. Faculty of Law:** Department under the Faculty of Law offers following Programs:

➤ **Department of Law**

- ✓ B.A. LLB (Hons.) (5 year)
- ✓ B.B.A. LLB (Hons.) (5 year)
- ✓ B.Com. LLB (Hons.) (5 year)
- ✓ LL.M (1 year)
- ✓ LL.M (2 year) Pt. Time
- ✓ Ph.D.

**2.2 Doctoral Program:**

Manav Rachna University is a multidisciplinary & interdisciplinary research driven University. University invite on-line Applications from the eligible candidates for

admission to Doctoral (Ph.D) Programme as per UGC Minimum Standards and Procedures for Awards of M. Phil/ Ph.D Degree Regulations, 2016 dated 05.05.2016 published in the Gazette of India dated 05/07/2016.

## **AREAS OF EXPERTISE AVAILABLE IN THE DEPARTMENTS**

Substantial research is being undertaken in the various faculties. In an endeavor to carry forward the research impetus, the University offers full time Ph.D. programmes in various Faculties. Broadly, the research activities are going on in the following main areas:

**1. Computer Science & Technology:-** Artificial Intelligence, Pattern Recognition, Machine Learning, Data Mining, Big Data Analysis, Block chain Technology, Search Engine and Hidden Web, Education Technology, Green Computing, Soft Computing, Genetic Algorithms, Communication Systems & Networks, Network Security, Computational Models & Optimization.

**2. Electronics & Communication:-** Antenna Design, Affordable healthcare devices, Human machine interaction, Digital filter design, Computer Vision and Image Processing, Digital Hardware Design for Biomedical Instruments, VLSI Design, Power System Analysis, Internet of Things, Embedded System Design, Wireless Communication, Energy Harvesting, Solar Cells.

**3. Mechanical Engineering: -** Tribology-Thin Film Lubrication (EHL/micro-EHL), Wear Phenomena, Friction and (scuffing) Failure Phenomena, Solar Energy and its Applications, Turbo-machines, Thermal Engineering, Fluid Mechanics

**4. Management:-** Finance, Management, Accounting Strategy, Marketing, Human Resources, Organizational Behavior, Operations, Supply Chain Management, Banking, Insurance, Green Management, Entrepreneurship, Consulting.

**5. Physics:-** Electronic Structure Calculations, Simulation of Laser-Plasma acceleration, Photonics: short radiation pulse Generation, Laboratory Astrophysics Simulation, Ionospheric Physics, Nanotechnology, Nanoscience, Multiferroics materials, Spintronics, Organic Solar Cells and Solid State Physics

**6. Mathematics:-** Algebra, Analysis, Ring Theory, Differential Geometry, Coding Theory, Wavelets, Approximation Theory, Fluid Mechanics, Mathematical Modelling, Operations Research.

**7. Chemistry:-** Green Chemistry- green synthesis of biofuels, Heterocyclic Compounds, Electrochemical Batteries, Water Detoxification, Corrosion, Heavy Metal Toxicity, Polymer Chemistry, Composites Polymer electrolytes,

Superabsorbent Polymers/Hydrogels, Catalysis, Molecular Modeling, Detoxification by Natural Adsorbents.

**8. Education:-** Assessment and Evaluation, Educational Psychology, E-learning, School management and administration, Curriculum development, Value Education, Innovative Pedagogies, Research-Based Teacher Education, Peace and Sustainability.

**9. Law:-** International Arbitration, Corporate Law, Intellectual Property Rights Law, Human Rights, Constitutional Law, Public Law and Policy, Crime and Criminology, Trade Law, Business Law, Competition Law.

No. of seats are dynamically contingent upon the number of available supervisors & other learning resources.

**Currently 103 scholars are registered for the doctoral program at MRU under different faculties.**

## **2.1 Teaching Learning Process**

Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences. University is agile in terms of designing the curriculum. The curricula designed for various programs in MRU ensure that students are substantially sound, able to apply the concepts in practical circumstances and analyse the outcomes of such practical application. In engineering and sciences programs, lab is the important component of every course. Hands on skills are further augmented by the introduction of workshop courses every semester. Some of the engineering programs are delivered in collaboration with its Industry experts. The curriculum thus designed is latest and able to meet the demand of Industry. Further, the teaching and learning methodologies adopted also supplement and complement the Curriculum. The pedagogies like collaborative learning, cooperative learning, active learning are used for the delivery of classes. University has come up with the concept of Agile Classrooms with the support of Knowledge Partner, Xebia, for the delivery through these approaches. MRU is the first campus in India to have agile classrooms. Agile practices followed in industry have been mapped with respect to the classroom environment. These specially designed classrooms enable students to work in team and faculty to develop a better evaluation technique, improve performance of students both in soft skills and technical skills through continuous monitoring of their progress on the visual boards. Various Agile data visualization techniques are implemented to monitor the progress of the courses & student's performance and address the limitations of traditional pedagogy. These different pedagogies make students work together to accomplish the same goal, improves their communication among peers and develop better skills required by industry.

- Faculty of Law has an Advisory Board which boasts of Former Chief Justice of India, Former Supreme and High Court Judges, ASG, Former Law Secretary to Ministry of Law and Justice, Senior Advocates, IAS officers and other legal luminaries as its eminent members.
- In Every program there is Mandatory industrial training/Internship for student's employability centric courses are offered in curriculum.
- Research has been introduced at UG level for the students, faculty mentors them to write review papers, articles and publish/present their work in conferences & journals.
- Periodic industrial visits visit to research labs, Courts, schools, hospitals are organized to provide enough exposure to students in their related areas. University follows the Choice based credit system; thus every program has provision for open electives, program electives and MOOC courses, with academic credits
- Engineering Exploration is introduced for the first year B.Tech students to work on multidisciplinary projects right from the first year.
- Center of excellence in collaboration with industry gives opportunity to students to get train on the latest technologies and software's
- Students are encouraged to carry out Minor projects, Major projects in industries and are mentored by experts from industry to work on the problem statements given by the industry
- Training is imparted for higher studies and competitive exams– GATE/CAT/GRE/NET/Judiciary
- Tutorial hours in most of the technical courses to improve the problem solving skills
- Special Classes are organised for slow learners
- Mentorship/ Teacher-guardian relationship support students to identify their strength and make right choice of electives and move ahead on their career path.
- Laboratories are equipped with scaled/real models and illustrative charts to enhance understanding
- Innovation &Incubation centre established under MHRD provides an opportunity for the students to learn through experimentation
- University has policy for the promotion of innovation and startups with special provisions as per National policy of Innovation, 2019
- Students are motivated to take up socially relevant project work



- Every department organizes expert lecture/workshop/ Alumni interaction in a semester exposing the students to latest trends in the industry
- Students are sponsored to participate in state level, national and international competitions/conferences/ workshops/ seminars
- Continuous assessment is conducted through weekly quizzes, tests, extemporary, group discussions and assignments. Faculty is encouraged to conduct Open book examinations and evaluate through project based learning.
- Student Feedback, Student Satisfaction Survey & course Exit feedbacks are conducted to resolve the gaps between knowledge delivery and learning.

#### 2.4 Faculty Members of the University

| MRU FACULTY LIST |                           |            |                            |
|------------------|---------------------------|------------|----------------------------|
| Sr no            | Name of Faculty           | Department | Designation                |
| 1                | Dr. Pradeep K Varshney    | Chemistry  | Professor & Dean-Research  |
| 2                | Dr. Sangita Banga         | Chemistry  | Professor & Dean-Academics |
| 3                | Dr. Meena Kapahi          | Chemistry  | Associate Professor        |
| 4                | Dr. Megha Bansal          | Chemistry  | Associate Professor        |
| 5                | Dr. Sudhish Kumar Shukla  | Chemistry  | Associate Professor        |
| 6                | Dr. Arpit Sand            | Chemistry  | Associate Professor        |
| 7                | Dr. Priti Gupta           | Chemistry  | Assistant Professor        |
| 8                | Dr. Ekta Rawat            | Chemistry  | Assistant Professor        |
| 9                | Dr. Roopa Rani            | Chemistry  | Assistant Professor        |
| 10               | Dr. Vinayak Vandan Pathak | Chemistry  | Assistant Professor        |
| 11               | Dr. Jaya Tuteja           | Chemistry  | Assistant Professor        |
| 12               | Dr. Shilpa Sharma         | Chemistry  | Assistant Professor        |
| 13               | Dr. Harsha Devnani        | Chemistry  | Assistant Professor        |
| 14               | Dr. Jayamani              | Chemistry  | Assistant Professor        |
| 15               | Dr. Deepa Arora           | Maths      | Associate Professor        |
| 16               | Seema Aggarwal            | Maths      | Assistant Professor        |
| 17               | Dr. Dinesh Tripathi       | Maths      | Assistant Professor        |
| 18               | Savita Saini              | Maths      | Assistant Professor        |
| 19               | Ramapati Maurya           | Maths      | Assistant Professor        |
| 20               | Dr. Aparna Vyas           | Maths      | Associate Professor        |
| 21               | Dr. Advin Masih           | Maths      | Assistant Professor        |
| 22               | Dr. Ruchi Gupta           | Maths      | Assistant Professor        |
| 23               | Dr. Ankita Gaur           | Maths      | Assistant Professor        |
| 24               | Dr. Yogendra Kumar Sharma | Maths      | Associate Professor        |
| 25               | Dr. Kalpana Shukla        | Maths      | Assistant Professor        |
| 26               | Dr. Kamlesh Kumar         | Maths      | Assistant Professor        |
| 27               | Dr. Shiv Kumar Dixit      | Physics    | Assistant Professor        |
| 28               | Dr. Jai Prakash           | Physics    | Associate Professor        |
| 29               | Dr. Dinesh Kumar Sharma   | Physics    | Professor                  |
| 30               | Dr. Haider Abbas          | Physics    | Professor                  |

|    |                         |         |                     |
|----|-------------------------|---------|---------------------|
| 31 | Dr. Deepti Maikhuri     | Physics | Assistant Professor |
| 32 | Dr. Anshuman Sahai      | Physics | Assistant Professor |
| 33 | Dr. Ananna Bardhan      | Physics | Assistant Professor |
| 34 | Aditya Sharma           | Physics | Assistant Professor |
| 35 | Sandeep Kumar           | Physics | Associate Professor |
| 36 | Dr. Sachin Lakra        | CST     | Associate Professor |
| 37 | Hanu Bhardwaj           | CST     | Associate Professor |
| 38 | Dr. Jyoti Pruthi        | CST     | Professor           |
| 39 | Dr. Prinima             | CST     | Associate Professor |
| 40 | Bharti Jha              | CST     | Assistant Professor |
| 41 | Agha Imran Hussain      | CST     | Assistant Professor |
| 42 | Neelu Chaudhary         | CST     | Assistant Professor |
| 43 | Nikita Taneja           | CST     | Assistant Professor |
| 44 | Mrinal Pandey           | CST     | Associate Professor |
| 45 | Ram Chatterjee          | CST     | Assistant Professor |
| 46 | Deepanshi Gupta         | CST     | Assistant Professor |
| 47 | Sarika                  | CST     | Assistant Professor |
| 48 | Priyanka Gupta          | CST     | Assistant Professor |
| 49 | Manoj Kumar             | CST     | Assistant Professor |
| 50 | Urmila Pilania          | CST     | Assistant Professor |
| 51 | Narender                | CST     | Assistant Professor |
| 52 | Meena Chaudhary         | CST     | Assistant Professor |
| 53 | Gunjan Chandwani        | CST     | Assistant Professor |
| 54 | Mamta Arora             | CST     | Assistant Professor |
| 55 | Riya Sapra              | CST     | Assistant Professor |
| 56 | Anup Singh Kushwaha     | CST     | Assistant Professor |
| 57 | Shailja Gupta           | CST     | Assistant Professor |
| 58 | Ankur Kumar Aggarwal    | CST     | Assistant Professor |
| 59 | Gaganjot Kaur           | CST     | Assistant Professor |
| 60 | Manpreet Kaur           | CST     | Associate Professor |
| 61 | Dr. Hardeo Kumar Thakur | CST     | Associate Professor |
| 62 | Dr. Parneeta Dhaliwal   | CST     | Associate Professor |
| 63 | Dr. Susmita Ray         | CST     | Professor           |
| 64 | Anu Priya Sharma        | CST     | Assistant Professor |
| 65 | Shreya Malhotra         | CST     | Assistant Professor |
| 66 | Dr. Sanjay Singh        | CST     | Associate Professor |
| 67 | Dr. Thurai Pandian M    | CST     | Associate Professor |
| 68 | Sanjay Kumar            | CST     | Assistant Professor |
| 69 | Alpana                  | CST     | Assistant Professor |
| 70 | Dr. Shruti Vashist      | ECE     | Professor           |
| 71 | Meenakshi Gupta         | ECE     | Assistant Professor |
| 72 | Lokesh Bhardwaj         | ECE     | Assistant Professor |
| 73 | Yogita Gupta            | ECE     | Assistant Professor |
| 74 | K.Deepa                 | ECE     | Assistant Professor |
| 75 | Nitika                  | ECE     | Assistant Professor |
| 76 | Bhanu Pratap Chaudhary  | ECE     | Assistant Professor |

|     |                            |            |                                |
|-----|----------------------------|------------|--------------------------------|
| 77  | Vijay Kumar Gill           | ECE        | Assistant Professor            |
| 78  | Niharika Thakur            | ECE        | Assistant Professor            |
| 79  | Dr. Charu Pathak           | ECE        | Associate Professor            |
| 80  | Jai Prakash Sharma         | M.E        | Assistant Professor            |
| 81  | Piyush Mahendru            | M.E        | Assistant Professor            |
| 82  | Gianender                  | M.E        | Assistant Professor            |
| 83  | Nazish Ahmad Shamsi        | M.E        | Assistant Professor            |
| 84  | Prashant Bhardwaj          | M.E        | Assistant Professor            |
| 85  | Pradeep Kumar Mouria       | M.E        | Assistant Professor            |
| 86  | Mandeep Bhadana            | M.E        | Assistant Professor            |
| 87  | Sudhir Singh               | M.E        | Assistant Professor            |
| 88  | Ajit                       | M.E        | Associate Professor            |
| 89  | Sanjay Taneja              | M.E        | Associate Professor            |
| 90  | Joginder Singh             | M.E        | Associate Professor            |
| 91  | Dr. Sujata Nayak           | M.E        | Professor                      |
| 92  | Pragati Chauhan            | Management | Associate Professor            |
| 93  | Dr. Pooja Kapoor           | Management | Associate Professor            |
| 94  | Dr.Priyanka Srivatava      | Management | Assistant Professor            |
| 95  | Parul Jhajharia            | Management | Professor & Dean               |
| 96  | Rashi Banerji              | Management | Assistant Professor            |
| 97  | Manmeet Nag                | Management | Associate Professor            |
| 98  | Subodh Saluja              | Management | Associate Professor            |
| 99  | Srishti Bathla             | Management | Assistant Professor            |
| 100 | Dr. Sachita Yadav          | Management | Associate Professor            |
| 101 | Dr. Animesh Singh          | Management | Associate Professor            |
| 102 | Dr. Priyanka Singh         | Management | Assistant Professor            |
| 103 | Vandna Bhat                | Management | Assistant Professor            |
| 104 | Dr Babita Sharma           | Education  | Associate Professor & Dean     |
| 105 | Dr Shreyasi                | Education  | Assistant Professor            |
| 106 | Ridhi Khanna               | Education  | Assistant Professor            |
| 107 | Dr. Rashee Singh           | Education  | Associate Professor            |
| 108 | Dr Savita Sharma           | Education  | Assistant Professor            |
| 109 | Dr. Ritu Sharma            | Education  | Assistant Professor            |
| 110 | Dr Janhawi                 | Education  | Assistant Professor            |
| 111 | Shail Bala Mishra          | Education  | Assistant Professor            |
| 112 | Dr. Geeta R. Thakur        | Education  | Professor & Head Staff College |
| 113 | Dr Namrata Jhajharia       | Education  | Assistant Professor            |
| 114 | Dr Pooja Teotia            | Education  | Assistant Professor            |
| 115 | Sharv Datt Anand           | Education  | Assistant Professor            |
| 116 | Chandra Prakash Singh      | Education  | Assistant Professor            |
| 117 | Dr. Akhilesh Kumar Dwivedi | Humanities | Assistant Professor            |
| 118 | Chhavi Kulshrestha         | Humanities | Assistant Professor            |
| 119 | Dr. Versha Vahini          | Law        | Professor                      |
| 120 | Dr. Tarundeep Kaur         | Law        | Associate Professor            |
| 121 | Dr. Kiran Gupta            | Law        | Assistant Professor            |
| 122 | Aditi Choudhary            | Law        | Assistant Professor            |

|     |                      |     |                     |
|-----|----------------------|-----|---------------------|
| 123 | Priyanka Maderna     | Law | Assistant Professor |
| 124 | Dr. Somdutt Bhardwaj | Law | Associate Professor |
| 125 | Saratendu Kumar Bose | Law | Associate Professor |
| 126 | Seema Gupta          | Law | Associate Professor |
| 127 | Sakshi Bahuguna      | Law | Assistant Professor |
| 128 | Sanya Yadav          | Law | Assistant Professor |
| 129 | Amit Kumar           | Law | Assistant Professor |
| 130 | Ajay Bhatia          | Law | Assistant Professor |
| 131 | Ashima Saxena        | Law | Assistant Professor |
| 132 | Pooja Trehan         | Law | Assistant Professor |
| 133 | Shashi Kant Yadav    | Law | Assistant Professor |
| 134 | Shobhit Mohan        | Law | Assistant Professor |
| 135 | Shivam Gaur          | Law | Assistant Professor |

## 2.5 Students

### 2.5.1 Enrolment of Students

Expansion of any institution can be gauged by the number of students enrolled in its programs. The increase in number of enrolment of students, year after year, indicates the popularity of University programmes.

| Programme / Branch Name                          | Total No. of Students |
|--|-----------------------|
| Faculty of Engineering                           | 974                   |
| Applied Sciences                                 | 136                   |
| BBA  | 245                   |
| Law  | 243                   |
| Education  | 230                   |
| <b>Total Students (UG)</b>                       | <b>1828</b>           |
| <b>Total Students (PG) (M.Tech &amp; M. Sc.)</b> | <b>75</b>             |
| <b>Total Students Ph. D.</b>                     | <b>106</b>            |

## 2.6 Scholarship Policy

In the year 2019-20, a substantial sum of more than one crore, three lakhs was awarded as scholarship. Scholarship policy of University encourages a good number of students every year and kindles the spirit of consistent performance. Elaborative policy details are as follows:

### 2.6.1 Merit Scholarship:

Aimed at promoting meritorious students, scholarship includes tuition fee waiver and is awarded to the students of UG/ PG Programmes) on the basis of marks/CGPA in

the qualifying examination as per following scale, however the students are required to pay other fees as applicable to the programme concerned.

| <b>UG Programmes</b>          |      |                    |
|-------------------------------|------|--------------------|
| 90.00% & above                | 100% | Tuition Fee waiver |
| 85.00% above but below 90.00% | 50%  | Tuition Fee waiver |
| 80.00% above but below 85.00% | 25%  | Tuition Fee waiver |
| <b>PG Programmes</b>          |      |                    |
| 80.00% & above                | 100% | Tuition Fee waiver |
| 75.00% above but below 80.00% | 50%  | Tuition Fee waiver |
| 70.00% above but below 75.00% | 25%  | Tuition Fee waiver |

### **2.6.2 Merit cum Means Scholarship**

MRU offers Scholarship based on merit cum means, to the candidates admitted under reservation for Haryana Candidates. Scheme shall be applicable to all Undergraduate and Post Graduate Programs. The Scheme is applicable to all students whose parents have annual income up to Rs. 2.80 Lac from all sources. Under the scheme, the students shall be given fee waiver limited to the tuition fee as per the following scale. Candidates are required to pay other fee as applicable to the programme concerned.

- (a) One fifth of the twenty five percent shall be granted full tuition fee concession,
- (b) Two fifth of the twenty five percent shall be granted fifty percent fee concession,
- (c) The balance two fifth of the twenty five percent shall be granted twenty five percent fee concession.

### **2.6.3 Merit Scholarship to Semester / Branch Toppers**

In order to motivate the students for better and sustained academic performance, MRU offers 'Merit Scholarship to Semester/ Branch Toppers' for students bagging 1st, 2nd and 3rd positions in the Odd & Even semester exams (Based on the amalgamated SGPA / CGPA) every year for each programme being run at MRU, as under:

|                    |   |
|--------------------|---|
| a) First position  | 25% of Tuition Fee or Rs.25,000/- whichever is less |
| b) Second Position | 15% of Tuition Fee or Rs.15,000/- whichever is less |
| c)Third Position   | 10% of Tuition Fee or Rs.10,000/- whichever is less |

The following are the guidelines for granting these Merit Scholarships:

- 1) Any programme must have strength of 90 or more in semester exam to qualify for first, second and third position scholarship, otherwise only a solitary topper shall be given a solitary first position scholarship.
- 2) If the strength of a course is 10 or less no scholarship will be awarded for that course.
- 3) A student shall be eligible to benefit for tuition fee waiver only from one source only.

#### 2.6.4 Special Scholarship Awarded

a) **Scholarship to Ph.D. Students:** Faculty members working with MREI for three or more years duration are entitled for a scholarship while they enroll for their career enhancement and join the doctoral program. It is done to promote a culture of research in the organization and honour the association of employ with MREI.

b) **Scholarship to MREI Students:** Students completing their School/UG/PG programs from MREI and enrolling MRU for further studies are also awarded scholarship. With an objective of promoting the trust in the parent organization.

c) **Manav Rachna Student Staff Alumni Welfare Fund:** Since merit cum means scholarships are awarded to Haryana domicile holders with annual income less than 2.8 lac, a provision of relief through scholarships for other needy cases is there under MR Student Staff Alumni Welfare fund.

#### 2.6.5 Scholarship Data

| 2019-20  |                |                 |
|--|----------------|-----------------|
| Type of Scholarship  | No. of Student | Amount          |
| Tuition Fee Waiver   | 284            | 14089250        |
| Merit Cum Means  | 60             | 3510750         |
| Manav Rachna Student Staff Alumni Welfare Fund & Others      | 112            | 3159267         |
| MREI Student   | 9              | 45000           |
| Concession to PhD Students on The Basis of Length of Service | 32             | 590000          |
|  | <b>497</b>     | <b>21394267</b> |

### Details of Scholarship from 2014-2019

|              | MERIT SCHOLARSHIP |                 | MERIT CUM MEANS SCHOLARSHIP |                | BRANCH TOPPERS  |               | MGT APPROVALS   |                | PHD SCHOLARS    |                | MREI STUDENT    |               | TOTAL           |                 |
|--------------|-------------------|-----------------|-----------------------------|----------------|-----------------|---------------|-----------------|----------------|-----------------|----------------|-----------------|---------------|-----------------|-----------------|
|              | NO. OF STUDENTS   | AMOUNT          | NO. OF STUDENTS             | AMOUNT         | NO. OF STUDENTS | AMOUNT        | NO. OF STUDENTS | AMOUNT         | NO. OF STUDENTS | AMOUNT         | NO. OF STUDENTS | AMOUNT        | NO. OF STUDENTS | AMOUNT          |
| <b>2014</b>  |                   |                 |                             |                |                 |               | 1               | 52400          |                 |                |                 |               | <b>1</b>        | <b>52400</b>    |
| <b>2015</b>  | <b>11</b>         | 747500          | 8                           | 287500         | 7               | 115000        | 4               | 238250         | 15              | 210000         |                 |               | <b>45</b>       | <b>1598250</b>  |
| <b>2016</b>  | <b>61</b>         | 2425500         | 9                           | 269500         | 8               | 157000        | 7               | 241500         | 9               | 190000         |                 |               | <b>94</b>       | <b>3283500</b>  |
| <b>2017</b>  | <b>91</b>         | 3351875         | 15                          | 390375         | 10              | 154625        | 16              | 512150         | 1               | 15000          | 1               | 5000          | <b>134</b>      | <b>4429025</b>  |
| <b>2018</b>  | <b>84</b>         | 3573875         | 26                          | 1120000        |                 |               | 47              | 318492         | 9               | 80000          | 21              | 105000        | <b>187</b>      | <b>5197367</b>  |
| <b>2019</b>  | 284               | 14089250        | 60                          | 3510750        | 0               | 0             | 112             | 3159267        | 32              | 590000         | 9               | 45000         | <b>497</b>      | <b>21394267</b> |
| <b>Total</b> | <b>531</b>        | <b>24188000</b> | <b>118</b>                  | <b>5578125</b> | <b>25</b>       | <b>426625</b> | <b>186</b>      | <b>4469659</b> | <b>66</b>       | <b>1085000</b> | <b>31</b>       | <b>155000</b> | <b>957</b>      | <b>35902409</b> |

## CHAPTER: 3

### ASSESSMENT AND EVALUATION

University follows a policy of continuous evaluation with the objective of training a student to put in sustained, steadfast and disciplined effort over the entire period of study. The semester evaluation of a course consist of Part A and Part B. Part A comprises the formal evaluation for which student is evaluated through an examination (modes of which may vary such as written exam, open book examination, viva voce etc). Part B comprises the evaluation that is done by the individual instructor based on specific criteria. The weightage of Part A: Part B is 4:1. In case of Part A evaluation, the student is evaluated thrice in a semester and the weightage of this examination is 1:1:2. Thus, unlike the conventional examination system, here the weightage for end semesters examination is 50% whereas 50% of marks are awarded based on evaluation during the semester.

#### 3.1 Calendars (Academic & Examination)

| ACADEMIC CALENDAR 2019-20 (Odd Semester)               |  |   |               |                                      |   |                |   |   |                |
|--|--|---|---------------|--------------------------------------|---|----------------|---|---|----------------|
|  | Faculty of Engineering, Sciences, Management & Commerce & Education (Except BEd. 3rd Sem.) |   |               | Faculty of Law                       |   |                | Faculty of Education B.Ed. 3 <sup>rd</sup> Semester   |   |                |
|  | ACTIVITY   | DATE S                                  | DAY           | ACTIVITY                             | DATE S                                  | DAY            | ACTIVITY  | DATE S                                  | DAY            |
| Com<br>me<br>nce<br>me<br>nt<br>of<br>Se<br>ssi<br>on: | B.Tech. 1st Year   | 8 <sup>th</sup> July                    | Monday        |                                      |   |                | Internship at Schools B Ed 3 <sup>rd</sup> Semester   | 8 <sup>th</sup> July                    | <b>Monday</b>  |
|  | 1st Year of all UG Programmes other than B.Tech  | 10 <sup>th</sup> July                   | Wednesd ay    | 1st Year of all UG Programmes in Law | 10 <sup>th</sup> July                   | Wedne sday     | Internship Assessm ent Phase I                        | 13 <sup>th</sup> Aug.                   | <b>Tuesday</b> |
|  | 1st Year of all PG Programmes & B.Tech Lateral Entry                                       | 15 <sup>th</sup> July                   | Monday        | 1st Year of all PG Programmes        | 22 <sup>nd</sup> July                   | Monda y        | Internship Assessm ent Phase II                       | 16 <sup>th</sup> Sept.                  | <b>Monday</b>  |
|  | All UG & PG Programmes 2nd Year & above  | 22 <sup>nd</sup> July                   | Monday        | All UG Programmes 2nd Year & above   | 29 <sup>th</sup> July                   | Monda y        | Last day of BEd 3 <sup>rd</sup> Sem School Internship | 25 <sup>th</sup> Oct.                   | <b>Friday</b>  |
|  | Semester Registration Confirmation   | 22 <sup>nd</sup> -26 <sup>th</sup> July | Monday-Friday | Semester Registration Confirmation   | 29 <sup>nd</sup> -2 <sup>nd</sup> Aug . | Monda y-Friday | Final Assessm ent                                     | 30 <sup>th</sup> -31 <sup>st</sup> Oct. | <b>Monday</b>  |



|  |  |  |                 |  |  |                 |  |           |               |
|--|--|--|-----------------|--|--|-----------------|--|-----------|---------------|
|  | Formative Feedback                           | 19 <sup>th</sup> -23 <sup>rd</sup> Aug.    | Monday-Friday   | Formative Feedback                           |  | Monday-Friday   | Even Semester Commences for B.Ed. 2 <sup>nd</sup> Year                                     | 11th Nov. | <b>Monday</b> |
|  | 1st Attendance Review                        | 23 <sup>rd</sup> Aug.                      | Friday          | 1st Attendance Review                        | 23 <sup>rd</sup> Aug.                      | Friday          | <i>Total Internship Duration: 8<sup>th</sup> July - 25<sup>th</sup> October = 16 Weeks</i> |           |               |
|  | Test T1                                      | 26 <sup>th</sup> -31 <sup>st</sup> Aug.    | Monday-Saturday | Test T1                                      | 26 <sup>th</sup> -31 <sup>st</sup> Aug.    | Monday-Saturday |  |           |               |
|  | Parent Teacher Interaction Day 1             | 7 <sup>th</sup> Sept.                      | Saturday        | Parent Teacher Interaction Day               | 7 <sup>th</sup> Sept.                      | Saturday        |  |           |               |
|  | Submission of marks on ERP for T1 & PT1      | 10th Sept.                                 | Tuesday         | Submission of marks on ERP for T1 & PT1      | 10th Sept.                                 | Tuesday         |  |           |               |
|  | 2nd Attendance Review                        | 27 <sup>th</sup> Sept.                     | Friday          | 2nd Attendance Review                        | 27 <sup>th</sup> Sept.                     | Friday          |  |           |               |
|  | Test T2                                      | 30 <sup>th</sup> Sept-5 <sup>th</sup> Oct. | Monday-Saturday | Test T2                                      | 30 <sup>th</sup> Sept-5 <sup>th</sup> Oct. | Monday-Saturday |  |           |               |
|  | Submission of marks on ERP for T2 & PT2      | 19 <sup>th</sup> Oct.                      | Saturday        | Submission of marks on ERP for T2 & PT2      | 19 <sup>th</sup> Oct.                      | Saturday        |  |           |               |
|  | Parent Teacher Interaction Day 2             | 19 <sup>th</sup> Oct.                      | Saturday        | Parent Teacher Interaction Day 2             | 19 <sup>th</sup> Oct.                      | Saturday        |  |           |               |
|  | Presentations on Electives for Next Semester | 21 <sup>st</sup> -25 <sup>th</sup> Oct.    | Monday-Friday   | Presentations on Electives for Next Semester | 21 <sup>st</sup> -25 <sup>th</sup> Oct.    | Monday-Friday   |  |           |               |
|  | Pre Registration for Next Semester & PT3     | 4 <sup>th</sup> -8 <sup>th</sup> Nov.      | Monday-Friday   | Pre Registration for Next Semester & PT3     | 4 <sup>th</sup> -8 <sup>th</sup> Nov.      | Monday-Friday   |  |           |               |

|  |  |   |                      |  |  |                       |  |  |  |
|--|--|---|----------------------|--|--|-----------------------|--|--|--|
|  | Resessional Exams (T1 & T2) exceptional cases as approved by Dean of Faculty | 11 <sup>th</sup> -16 <sup>th</sup> Nov.     | Monday-Saturday      | Resessional Exams (T1 & T2) exceptional cases as approved by Dean of Faculty | 11 <sup>th</sup> -16 <sup>th</sup> Nov.      | Monday-Saturday       |  |  |  |
|  | Summative Feedback   | 11 <sup>th</sup> -16 <sup>th</sup> Nov.     | Monday-Saturday      | Summative Feedback   | 11 <sup>th</sup> -16 <sup>th</sup> Nov.      | Monday-Saturday       |  |  |  |
|  | 3 <sup>rd</sup> Attendance Review & Last Day of Classes                      | 22 <sup>nd</sup> Nov.                       | Friday               | 3 <sup>rd</sup> Attendance Review & Last Day of Classes                      | 29 <sup>th</sup> Nov.                        | Friday                |  |  |  |
|  | Preparatory Leave  | 23 <sup>rd</sup> -27 <sup>th</sup> Nov.     | Saturday - Wednesday | Preparatory Leave  | 30 <sup>th</sup> Nov. - 3 <sup>rd</sup> Dec. | Friday - Tuesday      |  |  |  |
|  | Announcement of Detention  | 25 <sup>th</sup> Nov.                       | Monday               | Announcement of Detention  | 2 <sup>nd</sup> Dec.                         | Tuesday               |  |  |  |
|  | Issue of Admit Cards from Academic Section                                   | 26 <sup>th</sup> -27 <sup>th</sup> Nov.     | Tuesday-Wednesday    | Issue of Admit Cards from Academic Section                                   | 2 <sup>nd</sup> -3 <sup>rd</sup> Dec.        | Wednesday-Thursday    |  |  |  |
|  | Test T3 & PT3  | 28 <sup>th</sup> Nov.-17 <sup>th</sup> Dec. | Thursday - Tuesday   | Test T3  | 4 <sup>th</sup> -18 <sup>th</sup> Dec.       | Wednesday - Wednesday |  |  |  |
|  | Submission of Internal Awards on ERP   | 30 <sup>th</sup> Nov.                       | Saturday             | Submission of Internal Awards on ERP   | 6 <sup>th</sup> Dec.                         | Friday                |  |  |  |
|  | Submission of T1, T2 and Internal Awards with Exam Cell                      | 7 <sup>th</sup> Dec.                        | Saturday             | Submission of T1, T2 and Internal Awards with Exam Cell                      | 11 <sup>th</sup> Dec.                        | Wednesday             |  |  |  |
|  | Open House   | 21 <sup>st</sup> Dec.                       | Saturday             | Open House   | 24 <sup>th</sup> Dec.                        | Tuesday               |  |  |  |
|  | Result Declaration   | 30 <sup>th</sup> Dec.                       | Monday               | Result Declaration   | 30 <sup>th</sup> Dec.                        | Monday                |  |  |  |

|  |  |          |  |  |          |  |  |  |
|--|--|----------|--|--|----------|--|--|--|
| Even Semester Commences  | 2 <sup>nd</sup> Jan.'20  | Thursday | Even Semester Commences                                      | 2 <sup>nd</sup> Jan. '20   | Thursday |  |  |  |
| <i>Total Semester Duration 22<sup>nd</sup> July to 22<sup>nd</sup> Nov=88 Days</i> | <i>Teaching days=71; T1&amp;T2 =12 Days Preparatory Leave =05 Days; End Semester Exam days=16 Days</i> |          | <i>Total Semester Duration 29th July to 29th Nov=88 Days</i> | <i>Teaching days=72; T1&amp;T2 =12 Days Preparatory Leave =04 Days; End Semester Exam days=12 Days</i> |          |  |  |  |

Important Note: It is the Responsibility of Head of the Department to submit all awards (T1, T2, & Internal Assessment) of every subject in Soft as well as Hard duly Certified by Subject Faculty & HoD, with the examination cell as per date mentioned in Academic Calendar.

### ACADEMIC CALENDAR 2019-20 (EVEN SEMESTER)- B.TECH 8TH SEMESTER

| ACTIVITY  | DATES  | DAY  |
|---|--|--|
| <b>Commencement of classes for 8th Sem Crash Course B.Tech CSE &amp; B.Tech ME</b>  | 9th Dec, 2019  | Monday   |
| <b>1st Attendance Review</b>  | 17th Dec 2019  | Tuesday  |
| <b>Test T1</b>  | 18th Dec, 2019   | Wednesday  |
| <b>Formative Feedback</b>   | 19th Dec, 2019   | Thursday   |
| <b>Test T2</b>  | 27th Dec, 2019   | Friday   |
| <b>2nd Attendance Review</b>  | 30th Dec, 2019   | Monday   |
| <b>Summative Feedback</b>   | 3rd Jan, 2020  | Friday   |
| <b>3<sup>rd</sup> Attendance Review &amp; Last Day of Classes</b>   | 6th Jan, 2020  | Monday   |
| <b>Test T3 + PT3</b>  | <b>T3</b> : 8th & 10th Jan, 2020<br><b>PT3</b> : 13th & 14th Jan, 2020 | <b>T3</b> : Wednesday & Friday<br><b>PT3</b> : Monday & Tuesday  |
| <b>Date of start of Project Work</b>  | 15th Jan, 2020   | Wednesday  |
| <b>Open House</b>   | 1st Feb, 2020  | Saturday   |
| <b>1st Project Evaluation</b>   | 7th March , 2020   | Saturday   |
| <b>2nd Project Evaluation</b>   | 18th April, 2020   | Saturday   |
| <b>Final Project Evaluation</b>   | 30th May, 2020   | Saturday   |
| <b>Result Declaration</b>   | June, 2020   |  |
| Total 8th Semester Duration - 9th Dec, 2019 - 6th Jan, 2020 = 22 Days<br>* All working Saturdays (21st Dec & 4th Jan) would be considered as teaching days. |  | <b>Teaching Days = 20 Days;</b><br><b>T1 &amp; T2 Days = 2 Days;</b><br><b>Preparatory Leave = 1 Day;</b><br><b>End Semester</b> |

|  |                           |
|--|---------------------------|
|  | <b>Examination Days=4</b> |
| <b>No. of Courses offered - 2 Courses, L-3:T-1:P-2</b>               |                           |
| <b>No. of Weeks – 13</b>   |                           |
| <b>No. of Contact hrs per course - L-13 * 3 = 36</b>                 |                           |
| <b>T - 13 * 1 = 12</b>   |                           |
| <b>P- 13 * 2 = 24</b>  |                           |
| <b>Total Contact Hrs per Course = 78 hrs</b>                         |                           |
| <b>For TWO courses - 156 hrs (available 160 hours 20days*8hours)</b> |                           |

### ACADEMIC CALENDAR 2019-20 (EVEN SEMESTER)

| <b>ALL PROGRAMMES OTHER THAN ( B. Tech, B.Ed.&amp; MSc Chem. (Final Sem.), BBA HCM (IV &amp; VI Sem.)</b> |   |                      |
|---|---|----------------------|
| <b>ACTIVITY</b>   | <b>DATES</b>                                  | <b>DAYS</b>          |
| Semester Commencement   | 6th January 2020                              | (Monday)             |
| Semester Registration Confirmation  | 6 <sup>th</sup> - 11 <sup>th</sup> Jan, 2020  | Monday-Friday        |
| 1st Attendance Review   | 31st January 2020                             | (Friday)             |
| Test T1   | 1st February-7th February 2020                | (Saturday-Friday)    |
| Formative Feedback  | 10th February-14th February 2020              | (Monday-Friday)      |
| Parent Teacher Interaction Day (short attendance cases + performance in T1)                               | 15th February 2020                            | (Saturday)           |
| 2nd Attendance Review   | 13th March 2020                               | (Friday)             |
| Test T2   | 16th-21st March 2020                          | (Monday-Saturday)    |
| Parent Teacher Interaction Day (short attendance cases + performance in T1 &T2)                           | 27th March 2020                               | (Friday)             |
| 3rd Attendance Review   | 24th April 2020                               | (Friday)             |
| Resessional Exams (T1 & T2) exceptional cases as approved by Dean of Faculty                              | 18th to 24th April 2020                       | (Saturday to Friday) |
| Summative Feedback  | 27th April to 1st May 2020                    | (Monday-Friday)      |
| Presentations on Electives for Next Semester  | 13 <sup>th</sup> -17 <sup>th</sup> April 2020 | Monday-Friday        |
| Pre-Registration for Next Semester  | 27th April to 1st May 2020                    | (Monday-Friday)      |
| Final Attendance Review   | 8th May 2020                                  | (Tuesday)            |
| Last Day of Classes   |   |                      |
| Announcement of Detention   | 12th May 2020                                 | (Friday)             |
| Issue of Admit Card   | 13th & 14th May 2020                          | (Monday-Tuesday)     |
| Preparatory Leave   | 9th May to 14th May 2020                      | (Saturday-Thursday)  |
| Test T3 & PT3   | 15th May to 6th June 2020                     | (Friday-Saturday)    |
| Submission of Internal Awards on ERP  | 15 <sup>th</sup> May 2020                     | Saturday             |
| Submission of T1, T2 and Internal Awards with Exam Cell   | 22 <sup>nd</sup> May 2020                     | Friday               |
| Summer Training   | 8th June 2020- 18th July 2020                 | (Monday-Saturday)    |

|   |   |            |
|---|---|------------|
| Open House  | 13th June 2020  | (Saturday) |
| Result Declaration  | 22nd June 2020  | (Monday)   |
| Odd Semester Commences for Higher Semesters                       | 20 <sup>th</sup> July, 2020   | (Monday)   |
| <b>Total Semester Duration= 2nd Jan. to 8th May, 2019=92 Days</b> | <b>Teaching Days (including T1 &amp; T2): 87 Days; Examination Days:18 Days; Preparatory Leaves: 6 Days</b> |            |

### EXAMINATION CALENDAR 2019-20 (ODD SEMESTER)

| EXAMINATION<br>(Odd Semester)  | CALENDAR  | 2019-20   |
|--|-----------|-----------|
| ACTIVITY   | DATES     | DAYS      |
| HOD's to provide the list of course co-ordinators/faculty teaching in the format mailed and departmental examination coordinators along with their cell numbers. | 18th July | Thursday  |
| List of examination material to be sent to the Registrar   | 19th July | Friday    |
| Registrar office to provide roll list of students according to the course registered (MRU).  | 22nd July | Monday    |
| Send grade card data for printing for May-2019 Examination   | 5th Aug   | Monday    |
| Registrar office to provide current list of Lab assistants and Faculty.  | 5th Aug   | Monday    |
| Downloading of Registration Data from ERP  | 5th Aug   | Monday    |
| Evaluation of Supplementary Answer Scripts to be Completed & Submission of Marks of Supplementary Practical Exams  | 9th Aug   | Friday    |
| Settlement of T3 May-2019 Evaluators Bills   | 9th Aug   | Friday    |
| Display of Date-Sheet of MRU T1 on Notice Board/Website  | 14th Aug  | Wednesday |
| Spiral Bindings of Question Paper to be Completed  | 14th Aug  | Wednesday |
| Department Coordinator to provide the list of examination material required for the T1 examination.  | 17th Aug  | Saturday  |
| Question papers for T1 to be typed by course coordinators in the required format in PC's kept in Examination Cell  | 19th Aug  | Monday    |
| Declaration of all Supplementary Examination Results   | 20th Aug  | Tuesday   |
| Finalization of Seating Plan and Attendance Sheet for T1   | 20th Aug  | Tuesday   |
| T1 Examination duties sent by e-mail to the Registrar & HOD's  | 21st Aug  | Wednesday |
| Submission of Report of T1 to Dean Academics   | 23rd Aug  | Friday    |

|   |                        |                   |
|---|------------------------|-------------------|
| Send mail for list of paper setters for T3  | 26th Aug.              | Monday            |
| Test T1   | 26th Aug. to 31st Aug. | Monday – Saturday |
| Receiving of Examination Stationary from Registrar Office/ Central store  | 2nd Sept.              | Monday            |
| Showing of answer scripts of T1 (Take Student's signature)  | 6th Sept               | Friday            |
| Submission of marks on ERP and answer scripts of T1/PT1   | 10th Sept              | Tuesday           |
| HOD's to provide list of External Paper Setters (approved by BOS) with prior consent from them, list of Internal Paper Setters also for T3 MRU examinations and list of paper setters for Supplementary examinations. | 16th Sept              | Monday            |
| Send grade card data for printing for July-2019 Supplementary Examination   | 16th Sept              | Monday            |
| Finalization of datesheet for MRU T2  | 17th Sept              | Tuesday           |
| Display of Date-Sheet of MRU T2 on Notice Board/ Website  | 17th Sept              | Tuesday           |
| Department Coordinator to provide the list of examination material required for MRU T2.   | 20th Sept              | Friday            |
| Finalization of Seating Plan and Attendance Sheet for MRU T2  | 24th Sept              | Tuesday           |
| Question papers for MRU T2 to be typed by course coordinators in the required format in PC's kept in Examination Cell   | 24th Sept              | Tuesday           |
| MRU T2 Examination duties sent by e-mail to the Registrar & HOD's   | 24th Sept              | Tuesday           |
| Finalization of Paper setters for T3 after approvals  | 26th Sept              | Thursday          |
| Submission of Report of T2 to Dean Academics  | 27th Sept              | Friday            |
| MRU T2 Examination  | 30th Sept. to 5th Oct. | Monday – Saturday |
| Showing of answer scripts (Take Student's signature)  | 11th Oct.              | Friday            |
| Send all documents for setting question papers of T3 to all those external paper setters by mail/Courier/Hand Delivery (external and Internal paper setters)  | 11th Oct.              | Friday            |
| Registration forms for Supplementary Examination for previous semesters   | 14th Oct. to 15th Nov  | Monday-Friday     |
| Submission of marks on ERP and answer scripts of T2/PT2   | 19th Oct               | Saturday          |
| Data for Recessional Exams (T1 & T2) exceptional cases from Departments   | 25th Oct               | Friday            |

|  |                               |                        |
|--|-------------------------------|------------------------|
| Send number of duties required for T3 to HOD's   | 1st Nov.                      | Friday                 |
| Finalization of Recessionals list of students after approvals  | 1st Nov.                      | Friday                 |
| PT3  | 4th Nov. to 8th Nov.          | Monday-Friday          |
| Question papers for T3 of MRU to be submitted by paper setters in the required format                                | 5th Nov                       | Tuesday                |
| Submission of Question Papers for Re-sessional Exams   | 6th Nov                       | Wednesday              |
| Display of T3 datesheet on Notice Boards and on Website  | 6th Nov                       | Wednesday              |
| Recessional Exams (T1 & T2) exceptional cases as approved by Dean of Faculty   | 11th to 16th Nov.             | Monday-Saturday        |
| Scheduling of T3 to be completed on ERP  | 11th Nov                      | Monday                 |
| Downloading & Printouts of Admit Cards to be completed   | 15th Nov                      | Friday                 |
| Finalization of Seating Plan and Attendance sheets for T3  | 20th Nov                      | Wednesday              |
| T3 Examination duties sent by e-mail to the Registrar, HOD's, Center Superintendents and Evaluation Centre Incharges | 20th Nov                      | Wednesday              |
| Announcement of Detentions   | 25th Nov                      | Monday                 |
| Handing over of Admit Card to DR Admin   | 26th to 27th Nov.             | Tuesday-Wednesday      |
| Submission of Report of status of preparation of T3 to Dean Academics  | 27th Nov                      | Wednesday              |
| Test T3  | 28th Nov. to 17th Dec.        | Thursday to Tuesday    |
| Test T3 (Law)  | 4th Dec. to 18th Dec.         | Wednesday to Wednesday |
| Evaluation Centre Opening for T3   | 29th Nov.                     | Friday                 |
| Submission of Internal Awards on ERP   | 30th Nov.                     | Saturday               |
| Submission of T1, T2 and Internal Awards with Exam Cell  | 7th Dec.                      | Saturday               |
| Closing of Evaluation Centre   | 19th Dec                      | Thursday               |
| Open House   | 21st Dec                      | Saturday               |
| Compilation of All results   | 24th Dec                      | Tuesday                |
| Result Declaration   | 30th Dec                      | Monday                 |
| Registration forms for Supplementary Examination for current semesters   | 31st Dec,2019 to 2nd Jan,2020 | Tuesday – Thursday     |
| Supplementary Examination  | 17th Jan,2020 Onwards         | Friday                 |

## EXAMINATION CALENDAR 2019-20 (EVEN SEMESTER)

| EXAMINATION<br>(Even Semester)   | CALENDAR             | 2019-20           |
|--|----------------------|-------------------|
| ACTIVITY   | DATES                | DAYS              |
| HOD's to provide the list of course co-ordinators/faculty teaching in the format mailed and departmental examination coordinators along with their cell numbers. | 2nd January          | Thursday          |
| List of examination material to be sent to the Registrar   | 3rd January          | Friday            |
| Registrar office to provide roll list of students according to the course registered (MRU).  | 6th January          | Monday            |
| Display of Date-Sheet of MRU T1 on Notice Board/Website  | 21st January         | Monday            |
| Registrar office to provide current list of Lab assistants and Faculty.  | 21st January         | Monday            |
| Downloading of Registration Data from ERP  | 21st January         | Monday            |
| Department Coordinator to provide the list of examination material required for the T1 examination.  | 24th Jan             | Friday            |
| Hard & Soft copy of Question papers for T1 to be provided by Departments   | 24th Jan             | Friday            |
| Finalization of Seating Plan and Attendance Sheet for T1   | 27th Jan             | Monday            |
| T1 Examination duties sent by e-mail to the Registrar & HOD's  | 27th Jan             | Monday            |
| Submission of Report of T1 to Dean Academics   | 31st Jan             | Friday            |
| Test T1  | 1st Feb. to 7th Feb. | Saturday - Friday |
| Showing of answer scripts of T1 (Take Student's signature)   | 13th Feb             | Thursday          |
| Submission of marks on ERP and answer scripts of T1/PT1  | 14th Feb             | Friday            |
| Evaluation of Supplementary Answer Scripts to be Completed & Submission of Marks of Supplementary Practical Exams  | 15th Feb             | Saturday          |
| Settlement of T3 Dec-2019 Evaluators Bills   | 15th Feb             | Saturday          |
| Send mail for list of paper setters for T3   | 18th Feb             | Tuesday           |
| Spiral Bindings of Question Paper to be Completed  | 18th Feb             | Tuesday           |
| Finalization of datesheet for MRU T2   | 5th March            | Thursday          |
| Declaration of all Supplementary Examination Results   | 5th March            | Thursday          |
| Display of Date-Sheet of MRU T2 on Notice Board/Website  | 7th March            | Saturday          |
| Department Coordinator to provide the list of examination material required for MRU T2.  | 7th March            | Saturday          |
| Hard & Soft copy of Question papers for T2 to be provided by Departments   | 7th March            | Saturday          |



|   |                          |                   |
|---|--------------------------|-------------------|
| Send grade card data for printing for Dec-2019 Examination  | 11th March               | Wednesday         |
| MRU T2 Examination duties sent by e-mail to the Registrar & HOD's   | 11th March               | Wednesday         |
| Receiving of Examination Stationary from Registrar Office/ Central store  | 11th March               | Wednesday         |
| Finalization of Seating Plan and Attendance Sheet for MRU T2  | 11th March               | Wednesday         |
| Submission of Report of T2 to Dean Academics  | 13th March               | Friday            |
| MRU T2 Examination  | 16th March to 21st March | Monday - Saturday |
| Registration forms for Supplimentary Examination for previous semesters   | 16th March to 16th April | Monday-Thursday   |
| HOD's to provide list of External Paper Setters (approved by BOS) with prior consent from them, list of Internal Paper Setters also for T3 MRU examinations and list of paper setters for Supplementary examinations. | 20th March               | Friday            |
| Showing of answer scripts (Take Student's signature)  | 26th March               | Thursday          |
| Submission of marks on ERP and answer scripts of T2/PT2   | 27th March               | Friday            |
| Send grade card data for printing for July-2019 Supplementary Examination   | 1st April                | Wednesday         |
| Finalization of Paper setters for T3 after approvals  | 1st April                | Wednesday         |
| Send all documents for setting question papers of T3 to all those external paper setters by mail/Courier/Hand Delievery (external and Internal paper setters)   | 5th April                | Saturday          |
| Data for Resessional Exams (T1 & T2) exceptional cases from Departments   | 6th April                | Monday            |
| Finalization of Resessionals list of students after approvals   | 10th April               | Friday            |
| Submission of Question Papers for Re-sessional Exams  | 15th April               | Wednesday         |
| Resessional Exams (T1 & T2) exceptional cases as approved by Dean of Faculty  | 18th April to 24th April | Saturday - Friday |
| Finalization of datesheet for MRU T3  | 24th April               | Friday            |
| Send number of duties required for T3 to HOD's  | 28th April               | Monday            |
| Question papers for T3 of MRU to be submitted by paper setters in the required format   | 1st May                  | Friday            |
| Display of T3 datesheet on Notice Boards and on Website   | 1st May                  | Friday            |
| Scheduling of T3 to be completed on ERP   | 1st May                  | Friday            |
| Downloading & Printouts of Admit Cards to be completed  | 4th May                  | Monday            |
| T3 Examination duties sent by e-mail to the Registrar, HOD's, Center Suprintendents and Evaluation Centre Incharges   | 7th May                  | Thursday          |
| Finalization of Seating Plan and Attendance sheets for T3   | 11th May                 | Monday            |

|  |                       |                      |
|--|-----------------------|----------------------|
| Announcement of Detentions   | 12th May              | Tuesday              |
| Handing over of Admit Card to DR Admin                                 | 12th May              | Tuesday              |
| Distribution of Admit Cards  | 13th & 14th May       | Wednesday & Thursday |
| Submission of Report of status of preparation of T3 to Dean Academics  | 14th May              | Thursday             |
| Submission of Internal Awards on ERP                                   | 15th May              | Saturday             |
| Test T3/ PT3   | 15th May to 6th June  | Friday to Saturday   |
| Evaluation Centre Opening for T3                                       | 16th May              | Saturday             |
| Submission of T1, T2 and Internal Awards with Exam Cell                | 22nd May              | Friday               |
| Closing of Evaluation Centre   | 5th June              | Friday               |
| Open House   | 15th June             | Monday               |
| Compilation of All results   | 20th June             | Saturday             |
| Result Declaration   | 22nd June             | Monday               |
| Registration forms for Supplementary Examination for current semesters | 25th June to 1st July | Thursday - Wednesday |
| Supplementary Examination  | 10th July             | Friday               |

### 3.2 Examination Cell

| S.NO. | NAME               | DESIGNATION                   |
|-------|--------------------|-------------------------------|
| 1     | DR. SANGITA BANGA  | CONTROLLER OF EXAMINATION     |
| 2     | MS. SHEFALI CHOPRA | DEPUTY REGISTRAR- EXAMINATION |
| 3     | MS. LOVLEEN NANGIA | EXAMINATION EXECUTIVE         |
| 4     | MR. NEERAJ SHARMA  | EXAMINATION EXECUTIVE         |

#### 3.2.1 Committees

##### Core Team of Faculty Members:

Core team of the following Faculty members to help & coordinate in examination activities of Examination Cell:

- a. Ms. Nitika (Asth. Professor-Department of ECE)
- b. Ms. Deepanshi Gupta (Asth. Professor-Department of CST)
- c. Mr. Pradeep Maurya (Asth. Professor-Department of ME)
- d. Dr. Seema Sharma (Asth. Professor-Department of Education)
- e. Mr. Satender Sharma (Research Associate-Department of Chemistry)

### 3.2.2 Committee for prevention of Unfair Means:

The Committee for prevention of Unfair Means comprises the following members:

- a. Dr. Parul Jhaharia (HOD, Management- Chairperson)
- b. Dr. A.K.Gupta (Professor, Department of Chemistry- Member)
- c. Mr. Somdutt Bhardwaj (Assoc. Professor, Law- Member)
- d. Ms. Shefali Chopra (Dy. Registrar Examination- Member)

### 3.2.3 Examination Grievance Committee:

The Committee will deal with grievances received in writing from the students about any examination related matters

- a. Dr. Parul Jhaharia (HOD, Management- Chairperson)
- b. Dr. Shruti Vashist (HOD, ECE- Member)
- c. Dr.A.K.Gupta (Professor, Department of Chemistry- Member)
- d. Ms.Priyanka Maderna (Asth. Professor, Law- Member)
- e. Ms. Shefali Chopra (Dy. Registrar Examination- Member Secretary)

### 3.2.4 Departmental Coordinators:

- a. Ms. Meenakshi Gupta (Asth. Professor, ECE)
- b. Ms. Deepanshi Gupta (Asth. Professor, CST)
- c. Mr. Manoj Kumar (Asth. Professor, CST)
- d. Mr. Sudhir Singh (Asth. Professor, ME)
- e. Dr. Tarundeep Kaur (Asth. Professor, Law)
- f. Dr. Seema Sharma (Asth. Professor, Education)
- g. Dr. Pragati Chauhan (Assoc. Professor, Management)
- h. Ms. Seema Aggarwal (Asth. Professor, Mathematics)
- i. Dr. Anshuman Sahai (Asth. Professor, Physics)
- j. Dr. Ekta Rawat (Asth. Professor, Chemistry)

### 3.3. Result Analysis- For Academic Session 2019-20

| ODD SEMESTER (JULY-DEC-2019) |                 |     |                |                           |              |        |
|------------------------------|-----------------|-----|----------------|---------------------------|--------------|--------|
| FACULTY                      | PROGRAM         | SEM | TOTAL STRENGTH | NO.OF CANDIDATES APPEARED | TOTAL PASSED | PASS % |
| FACULTY OF ENGINEERING       | B.TECH CSE      | VII | 194            | 193                       | 154          | 79.79  |
|                              |                 | V   | 185            | 185                       | 148          | 80.00  |
|                              |                 | III | 141            | 137                       | 85           | 62.04  |
|                              |                 | I   | 177            | 177                       | 85           | 48.02  |
|                              | B.TECH CSE-DSML | III | 23             | 23                        | 22           | 95.65  |
|                              |                 | I   | 30             | 30                        | 22           | 73.33  |

|   |                    |     |    |    |        |        |
|---|--------------------|-----|----|----|--------|--------|
|   | B.TECH<br>CSE-DTE  | III | 10 | 10 | 8      | 80.00  |
|   |                    | I   | 23 | 23 | 21     | 91.30  |
|   | B.TECH ECE         | VII | 22 | 22 | 16     | 72.73  |
|   |                    | III | 4  | 4  | 3      | 75.00  |
|   | B.TECH ME          | I   | 12 | 11 | 4      | 36.36  |
|   |                    | VII | 50 | 50 | 34     | 68.00  |
|   |                    | V   | 42 | 42 | 32     | 76.19  |
|   |                    | III | 28 | 28 | 17     | 60.71  |
|   | B.TECH IEM         | I   | 24 | 23 | 10     | 43.48  |
|   |                    | V   | 3  | 3  | 3      | 100.00 |
| M.TECH ME                                 | III                | 4   | 4  | 3  | 75.00  |        |
|   | I                  | 5   | 5  | 5  | 100.00 |        |
| FACULTY OF<br>APPLIED<br>SCIENCES         | B.SC CHEM          | V   | 25 | 25 | 19     | 76.00  |
|   |                    | III | 19 | 18 | 15     | 83.33  |
|   |                    | I   | 16 | 16 | 9      | 56.25  |
|   | B.SC MATH          | V   | 19 | 19 | 14     | 73.68  |
|   |                    | III | 22 | 22 | 11     | 50.00  |
|   |                    | I   | 11 | 11 | 6      | 54.55  |
|   | B.SC PHY.          | V   | 8  | 8  | 6      | 75.00  |
|   |                    | III | 8  | 8  | 6      | 75.00  |
|   |                    | I   | 8  | 8  | 7      | 87.50  |
|   | M.Sc CHEM          | III | 20 | 20 | 19     | 95.00  |
|   |                    | I   | 13 | 13 | 11     | 84.62  |
|   | M.Sc<br>MATHS      | III | 6  | 6  | 5      | 83.33  |
|   |                    | I   | 6  | 6  | 3      | 50.00  |
|   | M.SC PHY.          | III | 6  | 6  | 6      | 100.00 |
| I   |                    | 5   | 5  | 5  | 100.00 |        |
| FACULTY OF<br>MANAGEMENT<br>&<br>COMMERCE | BBA (FAA)          | V   | 66 | 61 | 41     | 67.21  |
|   |                    | III | 41 | 41 | 30     | 73.17  |
|   |                    | I   | 33 | 33 | 18     | 54.55  |
|   | BBA (EFB)          | V   | 10 | 9  | 4      | 44.44  |
|   |                    | III | 23 | 23 | 9      | 39.13  |
|   |                    | I   | 22 | 20 | 6      | 30.00  |
|   | BBA (HCM)          | V   | 9  | 9  | 6      | 66.67  |
|   |                    | III | 8  | 6  | 5      | 83.33  |
|   |                    | I   | 11 | 10 | 4      | 40.00  |
|   | BBA (OM)           | III | 8  | 8  | 3      | 37.50  |
| I   |                    | 13  | 12 | 6  | 50.00  |        |
| FACULTY OF<br>LAW                         | B.A. LLB<br>(Hon.) | V   | 46 | 45 | 34     | 75.56  |
|   |                    | III | 36 | 30 | 9      | 30.00  |
|   |                    | I   | 56 | 54 | 14     | 25.93  |
|   | BBA. LLB<br>(Hon.) | V   | 31 | 31 | 15     | 48.39  |
|   |                    | III | 23 | 18 | 9      | 50.00  |
|   |                    | I   | 25 | 24 | 6      | 25.00  |

|                                   |                                      |            |                           |  |                         |                   |
|-----------------------------------|--------------------------------------|------------|---------------------------|--|-------------------------|-------------------|
|                                   | B.Com.<br>LLB(Hon.)                  | V          | 5                         | 5  | 3                       | 60.00             |
|                                   |                                      | III        | 13                        | 13                                       | 10                      | 76.92             |
|                                   |                                      | I          | 6                         | 6  | 1                       | 16.67             |
|                                   | LLM                                  | I          | 10                        | 10                                       | 10                      | 100.00            |
| FACULTY OF<br>EDUCATION           | B.Ed                                 | III        | 67                        | 67                                       | 67                      | 100.00            |
|                                   |                                      | I          | 50                        | 50                                       | 49                      | 98.00             |
|                                   | B.A B.Ed<br>Integrated               | V          | 11                        | 11                                       | 9                       | 81.82             |
|                                   |                                      | III        | 16                        | 16                                       | 11                      | 68.75             |
|                                   |                                      | I          | 32                        | 32                                       | 18                      | 56.25             |
|                                   | B.ScB.Ed<br>Integrated               | V          | 6                         | 6  | 6                       | 100.00            |
|                                   |                                      | III        | 18                        | 18                                       | 11                      | 61.11             |
|                                   |                                      | I          | 29                        | 29                                       | 22                      | 75.86             |
|                                   | <b>EVEN SEMESTER (JAN-JUNE-2020)</b> |            |                           |  |                         |                   |
| <b>FACULTY</b>                    | <b>PROGRAM</b>                       | <b>SEM</b> | <b>TOTAL<br/>STRENGTH</b> | <b>NO.OF<br/>CANDIDATES<br/>APPEARED</b> | <b>TOTAL<br/>PASSED</b> | <b>PASS<br/>%</b> |
| FACULTY OF<br>ENGINEERING         | B.TECH CSE                           | VIII       | 194                       | 192                                      | 183                     | 95.31             |
|                                   |                                      | VI         | 184                       | 184                                      | 184                     | 100.00            |
|                                   |                                      | IV         | 141                       | 141                                      | 131                     | 92.91             |
|                                   |                                      | II         | 176                       | 176                                      | 157                     | 89.20             |
|                                   | B.TECH<br>CSE-DSML                   | IV         | 23                        | 23                                       | 23                      | 100.00            |
|                                   |                                      | II         | 30                        | 30                                       | 27                      | 90.00             |
|                                   | B.TECH<br>CSE-DTE                    | IV         | 10                        | 10                                       | 10                      | 100.00            |
|                                   |                                      | II         | 23                        | 23                                       | 21                      | 91.30             |
|                                   | B.TECH ECE                           | VIII       | 22                        | 22                                       | 22                      | 100.00            |
|                                   |                                      | IV         | 3                         | 3  | 3                       | 100.00            |
|                                   |                                      | II         | 12                        | 11                                       | 11                      | 100.00            |
|                                   | B.TECH ME                            | VIII       | 50                        | 50                                       | 43                      | 86.00             |
|                                   |                                      | VI         | 42                        | 42                                       | 42                      | 100.00            |
|                                   |                                      | IV         | 28                        | 28                                       | 27                      | 96.43             |
|                                   |                                      | II         | 24                        | 24                                       | 21                      | 87.50             |
|                                   | B.TECH IEM                           | VI         | 3                         | 3  | 3                       | 100.00            |
| M.TECH ME                         | IV                                   | 4          | 4                         | 4  | 100.00                  |                   |
|                                   | II                                   | 5          | 5                         | 5  | 100.00                  |                   |
| FACULTY OF<br>APPLIED<br>SCIENCES | B.SC CHEM                            | VI         | 25                        | 25                                       | 25                      | 100.00            |
|                                   |                                      | IV         | 19                        | 19                                       | 16                      | 84.21             |
|                                   |                                      | II         | 16                        | 15                                       | 15                      | 100.00            |
|                                   | B.SC MATH                            | VI         | 19                        | 19                                       | 19                      | 100.00            |
|                                   |                                      | IV         | 22                        | 22                                       | 21                      | 95.45             |
|                                   |                                      | II         | 10                        | 9  | 9                       | 100.00            |
|                                   | B.SC PHY.                            | VI         | 8                         | 8  | 8                       | 100.00            |
|                                   |                                      | IV         | 8                         | 8  | 8                       | 100.00            |
|                                   |                                      | II         | 8                         | 8  | 8                       | 100.00            |
|                                   | M.Sc CHEM                            | IV         | 20                        | 20                                       | 18                      | 90.00             |

|                                       |                        |    |    |    |       |        |
|---------------------------------------|------------------------|----|----|----|-------|--------|
|                                       |                        | II | 13 | 13 | 13    | 100.00 |
|                                       | M.Sc<br>MATHS          | IV | 6  | 6  | 6     | 100.00 |
|                                       |                        | II | 6  | 6  | 6     | 100.00 |
|                                       | M.SC PHY.              | IV | 6  | 6  | 6     | 100.00 |
|                                       |                        | II | 5  | 5  | 5     | 100.00 |
| FACULTY OF<br>MANGEMENT<br>& COMMERCE | BBA (FAA)              | VI | 64 | 61 | 61    | 100.00 |
|                                       |                        | IV | 41 | 41 | 40    | 97.56  |
|                                       |                        | II | 34 | 33 | 31    | 93.94  |
|                                       | BBA (EFB)              | VI | 9  | 9  | 9     | 100.00 |
|                                       |                        | IV | 23 | 23 | 23    | 100.00 |
|                                       |                        | II | 22 | 20 | 15    | 75.00  |
|                                       | BBA (HCM)              | VI | 9  | 9  | 9     | 100.00 |
|                                       |                        | IV | 8  | 7  | 6     | 85.71  |
|                                       |                        | II | 11 | 10 | 8     | 80.00  |
|                                       | BBA (OM)               | IV | 8  | 7  | 7     | 100.00 |
| II                                    |                        | 13 | 10 | 9  | 90.00 |        |
| FACULTY OF<br>LAW                     | B.A. LLB<br>(Hon.)     | VI | 47 | 45 | 41    | 91.11  |
|                                       |                        | IV | 36 | 36 | 32    | 88.89  |
|                                       |                        | II | 56 | 52 | 35    | 67.31  |
|                                       | BBA. LLB<br>(Hon.)     | VI | 31 | 31 | 30    | 96.77  |
|                                       |                        | IV | 22 | 22 | 22    | 100.00 |
|                                       |                        | II | 26 | 25 | 17    | 68.00  |
|                                       | B.Com.<br>LLB(Hon.)    | VI | 5  | 5  | 4     | 80.00  |
|                                       |                        | IV | 13 | 13 | 13    | 100.00 |
|                                       |                        | II | 6  | 5  | 5     | 100.00 |
|                                       | LLM                    | II | 10 | 10 | 8     | 80.00  |
| FACULTY OF<br>EDUCATION               | B.Ed                   | IV | 67 | 67 | 67    | 100.00 |
|                                       |                        | II | 50 | 49 | 49    | 100.00 |
|                                       | B.A B.Ed<br>Integrated | VI | 11 | 11 | 11    | 100.00 |
|                                       |                        | IV | 16 | 16 | 9     | 56.25  |
|                                       |                        | II | 32 | 31 | 31    | 100.00 |
|                                       | B.ScB.Ed<br>Integrated | VI | 6  | 6  | 6     | 100.00 |
|                                       |                        | IV | 18 | 18 | 16    | 88.89  |
|                                       |                        | II | 29 | 28 | 15    | 51.72  |

### 3.4 Open House Reports- For Odd Sem. (2019-20)

#### FACULTY OF LAW

**Open House of Department of Law held** for all the students on Thursday 26.12.2019 at G Block First Floor to discuss the answer scripts of End Term Examination December 2019. The Number of Students, who had reported, are as follows:

| S. No | Class                         | Semester | Total Number of Student Reported |
|-------|-------------------------------|----------|----------------------------------|
| 1     | BA LL.B. (H)                  | V        | 24                               |
| 2     | BBA LL.B (H) & B.COM LL.B.(H) | V        | 21                               |
| 3     | BA LL.B. (H)                  | III      | 14                               |
| 4     | BBA LL.B (H) & B.COM LL.B.(H) | III      | 20                               |
| 5     | BA LL.B. (H)                  | I        | 20                               |
| 6     | BBA LL.B (H) & B.COM LL.B.(H) | I        | 13                               |

### **DEPARTMENT OF CHEMISTRY: REPORT ON OPEN HOUSE FOR DEC- 2019**

Department of Chemistry in Manav Rachna University conducted an open house for showing T3 Examination answer scripts to the students on 26th Dec, 2019. The answer scripts were shown to the students to gauge their performance in the end semester examination. Both UG and PG programmes participated in the open house.

- (d) 8/20 students of MSc 3rd semester have seen their answer sheets and no report of any discrepancies were reported.
- (e) 3/13 students of MSc 1st semester have seen their answer sheets and 1 discrepancy was reported.
- (f) 11/25 students of BSc 5th semester have seen their answer sheets and 8 discrepancies were reported.
- (g) 04/19 students of BSc 3rd semester have seen their answer sheets and 2 discrepancies were reported.
- (h) 14/16 students of BSc 1st semester have seen their answer sheets and 2 discrepancies were reported.

### **DEPARTMENT OF PHYSICS: REPORT ON OPEN HOUSE FOR DECEMBER 2019**

Department of Physics, Manav Rachna University, conducted an open house for showing T3 Examination answer scripts to the students on 26th Dec, 2019. The answer scripts were shown to the students to measure their performance in the end semester examination. Students of both UG and PG programmes participated in the open house.

- (i) 4/8 students of BSc 1st semester have seen their answer sheets and 4 discrepancies were reported.

- (j) 01/8 student of BSc 3rd semester has seen his answer sheet and no discrepancy was reported.
- (k) 4/8 students of BSc 5th semester have seen their answer sheets and 1 discrepancy was reported.
- (l) 4/5 students of MSc 1st semester have seen their answer sheets and 1 discrepancy was reported.
- (m) 4/6 students of MSc 3rd semester have seen their answer sheets and no discrepancy was reported.



### 3.5 AUTOMATION OF EXAMINATION ON ERP

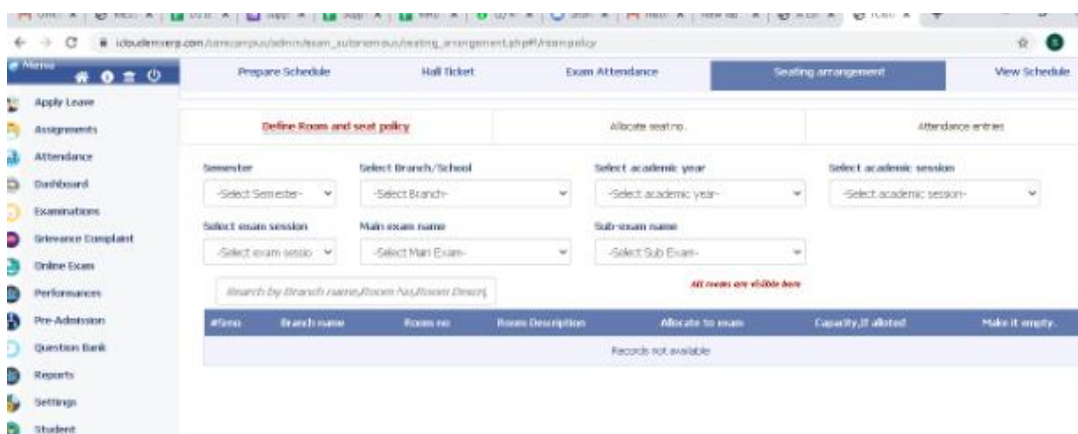
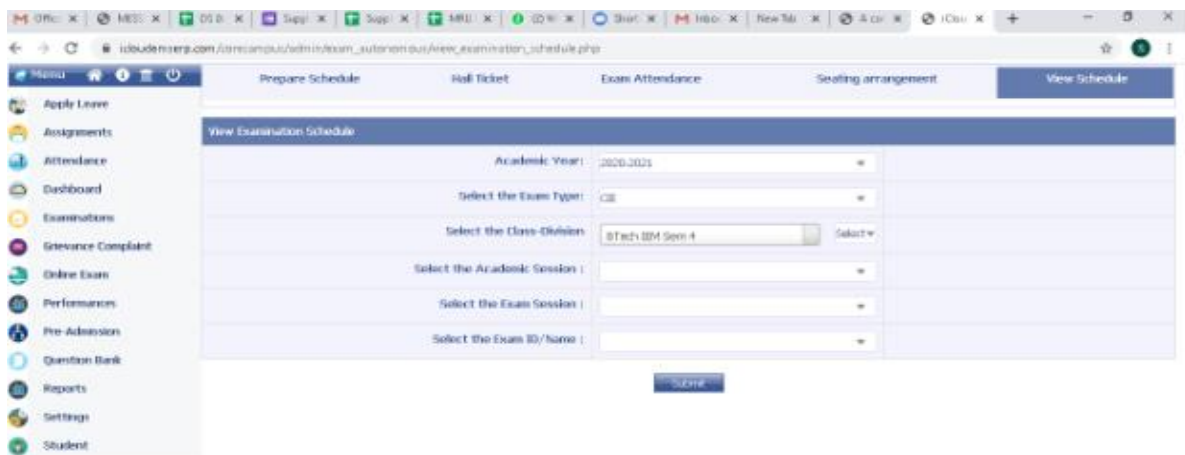
ERP / EMS (Education Management System) is a comprehensive software which provides integrated solution to enhance and digitize the processes like Admissions, Fee, Student's academic life cycle, Employee's Profile, Transport, Hostel, Feedback, Grievance, Recruitment & HR processes and other administrative operations in the university through its web & mobile based applications.

#### **Examination Module:**

- Parameter wise internal assessment marks is entered by course faculty and the same can be viewed by students.
- Question Paper of Internal assessment tests is created by mapping each question with the Cognitive Level (Bloom's Taxonomy of (Cognitive) Learning Level) and Course Outcome, Question wise marks scored by the student is entered which further helps in measuring the student's attainment level of Course outcome.
- Scheduling of all Exams along with Admit card generation for T3 and Supplementary examinations can be done.
- Attendance and Assignment marks are automatically picked from the respective module and gets converted to Maximum marks of the parameter.
- Students can view marks scored by them in every parameter, thus increasing transparency of their academic performance.



- Students can view their results on ERP and can register for Supplementary Examinations on the portal itself.
- Student/ Staff members can raise Grievance's from the portal and depending upon the nature of grievance, system allocates the issue automatically to the set competent authority at Level I. If the matter is not resolved by the Level I staff, the issue is escalated to the next Level mapped in the system against the same issue for timely solution of the issues.
- There are numerous reports through which record is maintained for all academic activities. To name some reports Exam wise Internal Marks Report, Cut-list for Supplementary Examination etc.



| Menu        |  | Jan-Dec - Odd - 13 StachMech Sem 5-A |            |                      |                   |  |
|-------------|--|--------------------------------------|------------|----------------------|-------------------|--|
| Course Code | Course   | Course Type                          | Date       | Time                 | Check Eligibility |  |
| ME4316-T    | machine design   | PP                                   | 2019-11-29 | 08:30-AM To 12:00-PM | Mark Eligible     |  |
| ME4320-T    | computer aided manufacturing & computer integrated manufacturing     | PP                                   | 2019-12-02 | 08:30-AM To 12:00-PM | Mark Eligible     |  |
| ME4319-T    | measurement & instrumentation  | PP                                   | 2019-12-02 | 09:00-AM To 12:00-PM | Mark Eligible     |  |
| ME4321-T    | quality engineering  | PP                                   | 2019-12-02 | 09:00-AM To 12:00-PM | Mark Eligible     |  |
| COO301      | professional competency enhancement-II                               | PP                                   | 2019-12-03 | 09:00-AM To 10:30-AM | Mark Eligible     |  |
| ME4317-T    | hydraulic machines   | PP                                   | 2019-12-05 | 09:00-AM To 12:00-PM | Mark Eligible     |  |
| ME4318-T    | internal combustion engines  | PP                                   | 2019-12-09 | 09:00-AM To 12:00-PM | Mark Eligible     |  |
| LWS323-T    | cyber law  | PP                                   | 2019-12-11 | 09:00-AM To 10:30-AM | Mark Eligible     |  |
| LWS321-T    | law of patent  | PP                                   | 2019-12-11 | 09:00-AM To 10:30-AM | Mark Eligible     |  |
| MEW322      | design software-II   | PR                                   | 2019-12-11 | 12:30-PM To 04:00-PM | Mark Eligible     |  |
| MEW322      | design software-I  | PR                                   | 2019-12-11 | 12:30-PM To 04:00-PM | Mark Eligible     |  |
| MEH318-P    | internal combustion engines lab                                      | PR                                   | 2019-12-12 | 08:30-AM To 12:00-PM | Mark Eligible     |  |
| MEH321-P    | quality engineering lab  | PR                                   | 2019-12-12 | 12:30-PM To 04:00-PM | Mark Eligible     |  |
| MEH320-P    | computer aided manufacturing & computer integrated manufacturing lab | PR                                   | 2019-12-12 | 12:30-PM To 04:00-PM | Mark Eligible     |  |
| MEH319-P    | measurement & instrumentation lab                                    | PR                                   | 2019-12-12 | 12:30-PM To 04:00-PM | Mark Eligible     |  |
| MEH317-P    | hydraulic machines lab   | PR                                   | 2019-12-13 | 08:30-AM To 12:00-PM | Mark Eligible     |  |
| ROO303      | technical seminar-II   | PP                                   | 2019-12-16 | 08:30-AM To 12:00-PM | Mark Eligible     |  |

Print Close

| Menu          |              | Reports             |
|---------------|--------------|---------------------|
| Apply Leave   | Assignments  | Attendance          |
| Dashboard     | Examinations | Grievance Complaint |
| Online Exam   | Performances | Pre-Admission       |
| Question Bank | Reports      | Settings            |
| Student       |              |                     |

ALL

Search Here

- Barcode Generation
- Exam wise student marks
- Examination Cutlist
- Examination Reports
- Student Attendance Reports
- Students Strength Reports
- Subject Wise Exam Report
- Teaching Plan

## **CHAPTER: 4**

### **RESEARCH DEVELOPMENT AND INNOVATIONS**

#### **4.1 RESEARCH AND PUBLICATIONS**

As researchers, we at Manav Rachna are seeking answers to questions of great interest to us. Our research problems are socially and politically relevant, scientific, technical and or interdisciplinary in nature. This knowledge created by research, invariably leads to innovations, new technologies, commercial products and development of startups/industries that have a significant impact on the country's economy. University facilitates research through "Research Clusters" in different disciplines serving as the specialized groups to foster research culture across the university. Further 'Center of Excellence' having collaboration with various industries help in conducting research and development work in the areas such as: Solar Energy Applications, Atmospheric and environmental sciences, Clean Water Technology, Green Chemistry, Corrosion Science, Communication Technology, Integrated System Design, Soft Computing, Business Process Modeling and Data Warehousing. Office of Dean Research promotes and facilitates research within various faculty of MRU by providing necessary support for designing and creating new products and conducting experiments and providing advance training to its faculty members in specialized fields. Through Research Integrated UG Program, students are involved in research activities at undergraduate level and are mentored by faculty members. This partnership between faculty and students culminates in the form of scientific paper or development of prototypes.

Manav Rachna University is actively involved in research and publishes papers in National and International Journals of repute. A list of Publications of MRU (2019-20) in Journals and chapters published in various books are listed. A summary of publications along with highlights is given below:

The Research and publication endeavors of the faculty during the year 2019-20 are summarized below: -

| <b>Category</b>                          | <b>Number</b> | <b>Details</b> |
|--|---------------|----------------|
| No. of Publication in Journals           | 70            | Annexure 4.1   |
| No. of Publication in Conference         | 32            | Annexure 4.2   |
| No. of Patents                           | 3             | Annexure 4.3   |
| No. of Books/Book Chapters               | 11            | Annexure 4.4   |
| Seminar, Conference & Workshop Organised | 51            | Annexure 4.5   |
| Expert Talk Organised                    | 32            | Annexure 4.6   |
| Consultancy                              | 5             | Annexure 4.7   |
| Externally Funded Projects               | 3             | Annexure 4.8   |
| Interdisciplinary Research               | 46            | Annexure 4.9   |

## **4.2. MAJOR RESEARCH & DEVELOPMENT EVENTS ORGANIZED**

- Department of Mathematics organized a two-day workshop on “Scientific Writing using LaTeX”, held on 17 -18 Jan 2020 where faculty members and students had a session for learning tool for research writing.
- Department of Faculty of Education and Humanities organized one week workshop on “Creating Moocs (Massive Online Open Courses)”, held on 7 -11 Dec 2019 where faculty members learned to make content and design MOOC courses.
- Department of Chemistry organized a two-day Conference on “Green Initiative on sustainable chemistry (GSCC-2019)”, held on 7 -8 Nov 2019.
- Department of Mechanical Engineering organized a one-day webinar on “Calculation of Heating and cooling load by using Psychromatic Chart”, held on 25 May 2019.
- Department of Electronics and Communication Engineering organized a one-day workshop on “Logic design using CMOS logic & Familiarization with Tanner EDA tool”, held on 23 May 2020.
- Department of Mechanical Engineering organized a one-day webinar on “UG-NX Mold Wizard”, held on 6 Jun 2020 delivered by Mr. Jeeven Saini & Mr. Ghan Vashishtha Head CoE & Product Development, Blockchain Architect.
- Department of Electronics and Communication Engineering organized an expert talk on “Artificial Intelligence for future”, held on 11 Feb 2020, delivered by Mr.Kushal Tondon, Sr. Data Analyst, Mu Sigma Incorporation", Bangalore.

## **4.3 RESEARCH ENDEAVORS, INNOVATION & INCUBATION (START-UPS)**

MANAV RACHNA UNIVERSITY is committed to vision of our Founder Dr. O.P. Bhalla having dream to boost research, innovation and entrepreneurship activities that can benefit the faculty and students to develop entrepreneurship attitude and aptitude, for enterprise set up. MRU is determined to progress itself into foundation of excellence in education and research in compliance with the contemporary and future needs of India through meaningful education, quality research and technological innovations for the industrial growth of the Country. In addition to offering formal Undergraduate and Post-graduate Programs, it actively encourages its faculty and students to undertake in-house and sponsored research and consultancy projects in order to strengthen the research profile of the Institutions. Presently MRU is actively engaged in research in several areas of Engineering, Manufacturing, Management, Basic and Applied Sciences and Energy, Environment and Law through research and Innovation Clusters and Centre of Excellence. These are providing technology driven support to the students, to help them in incubating

business models as startups or spin offs to become student entrepreneurs for working towards Government of India policy of “Make in India”, “Stand Up India” and “Startup India”.

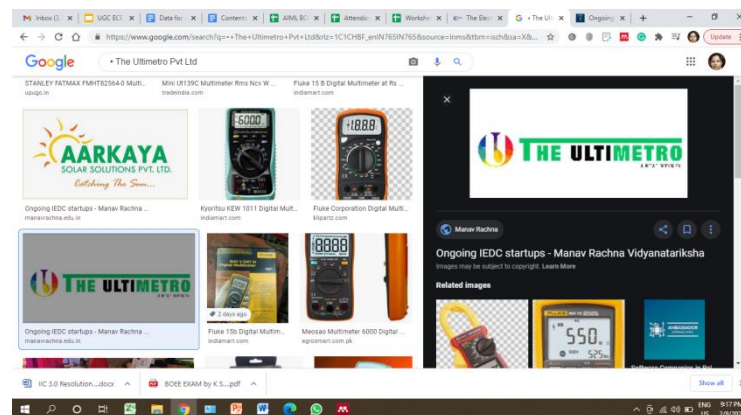
- Kalaversity: Students from ECE, Shivansh is the owner of kalaversity. It is an educational skill development platform started by 2nd year students where focus is to empower youth with multiple skill sets which not only provides them with useful knowledge but also helps them to earn income by implementing it in real time situations and opportunities.



- Aether Technologies: It is a technology consultancy firm which also manufactures and sells its own patent devices like streaksha and D’scent. The services that are taken up by this venture include software, hardware development, product development and may be more started by Shivansh from (ECE).

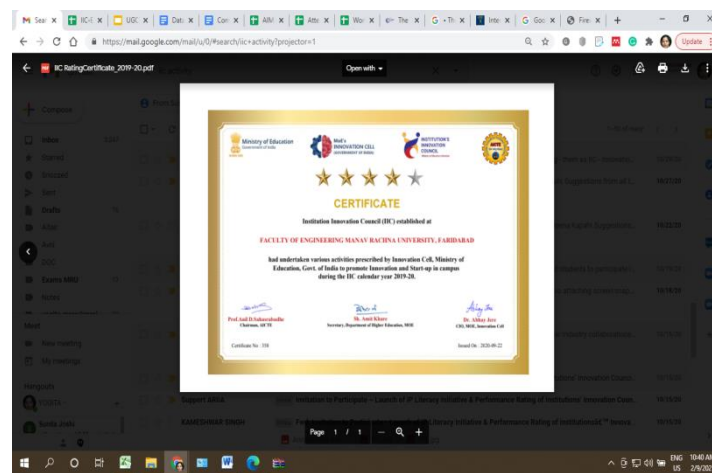


- The Ultimetro Pvt Ltd.: It is a startup by CST department Suraj Kumar (FCA) under the mentorshio of Dr. Parneeta Dhaliwal and supported by NewGen IEDC Manav Rachna with a vision to establish a firm specialized in web/mobile application development.



### 4.3.1 INNOVATION & INCUBATION CENTER (IIC)

Mission of IIC is “To inspire, build and encourage innovative thinking and development of new products that will create an ecosystem which provides social enterprise knowledge through research and empowering students to implement their entrepreneurship capabilities to design solutions for countries socio-economic development through academia.” Also, providing supportive ecosystem for both student and faculty researchers interested in research and development activities and encouraging innovators and entrepreneurs by assisting in the development of products beneficial for society.



### 4.3.2 LEADERSHIP TALKS SERIES ATTENDED BY FACULTY & STUDENTS:

- Leadership talks by Prof. Anil D. Sahasrabudhe from Chairman of AICTE on 9/4/2020
- Leadership talks by Dr. Anand Deshpande from Founder, Chairman and Managing Director of Persistent Systems Ltd. on 14/4/2020
- Leadership talks by Prof. K. Vijay Raghavan from Principal Scientific Adviser, Government of India on 8/4/2020
- Leadership talks by Padma Bhushan Dr. V.K. Saraswat from Member Niti Aayog, Ex-Chief Scientific officer with Ministry of Defense on 13/4/2020
- Leadership talks by Ms. Shradha Sharma from Founder and CEO of YourStory on 15/4/2020
- Leadership talks by Dr. Vinay Sahasrabuddhe from President, Indian Council for Cultural Relations (ICCR) on 16/4/2020
- Leadership talks by Mr. Ronnie Screwvala from An Indian entrepreneur and philanthropist, cofounder of UpGrad and founder and CEO of UTV Group on 17/4/2020



- Leadership talks by Dr B.V.R Mohan Reddy from First generation entrepreneur, Ex-Chairman of NASCOM and currently Chairman of Multinational Conglomerate Cyient on 27/4/2020
- Leadership talks by Mr. Abishek Singh from CEO, MyGov on 11/4/2020
- Leadership talks by Mr. Yashraj Bharadwaj from Co-founder of Zenith Vipers, on 20/4/2020.
- Leadership talks by Dr. Madhuri Kanitkar from Lieutenant General on 2/5/2020
- Leadership talks by Prof. D.P. Singh from Chairman UGC on 9/5/2020
- Leadership talks by Mr. Mahesh Babu from CEO, Mahindra Electric Mobility Ltd on 23/5/2020
- Leadership talks by Dr. Nilesh Oak from Expert, Indian Civilization & History on 30/5/2020
- Leadership talks by Ms. Ashwini Deshpande from Co-Founder, and Director, Elephant Design on 6/6/2020
- Leadership talks by Mr. R Subramanyam from Secretary, Department of Social Justice and Empowerment on 13/6/2020
- Leadership talks by Shri Sridhar Venkat from CEO, Akshay Patra Foundation on 20/6/2020.



#### **4.3.3 IIC ONLINE SESSIONS ATTENDED BY FACULTY & STUDENTS:**

- Session on National Innovation and Startup Policy (NISP) on 28/4/2020 by Mr. Dipan Sahu Assistant Innovation Director, National Co-coordinator of NISP, IIC and ARIIA.

- Session on Role and Importance of Pre-Incubators, Incubators and Accelerators in HEIs on 29/4/2020 by Mr. Muthu Singaram CEO, IIT Madras, HTIC incubator, Chennai.
- Session on Role and Importance of Pre-Incubators, Incubators and Accelerators in HEIs on 29/4/2020 by Mr. Muthu Singaram CEO, IIT Madras, HTIC incubator, Chennai.
- Session on Hangout with Emerging Innovator & Entrepreneurs Supported through MIC & AICTE on 30/4/2020 by Ms. Vandana Thakur: Female Innovator cum Entrepreneur, Canada India Acceleration Program 2020, PhD Scholar, L M College of Pharmacy, Ahmedabad and Mr. Amit Sanjay Lokhande : Innovator Cum Entrepreneur, India-South Korea Startup Exchange Program 2020, PhD Scholar, Institute of Chemical Technology, Mumbai..
- Session on Role of Network Enablers in driving I&E in HEIs - A Case of TiE, India on 1/5/2020 by Ms. Geetika Dayal Executive Director, TiE Delhi- NCR.
- Session on Product Design and Engineering for Developing a Product, a Start-up's perspective on 4/5/2020 by Dr. Pankaj Parashar Founder & CEO of Cuttingedge Technology Pvt. Ltd., Indore.
- Session on Entrepreneurship, Business Idea, Business Model Canvas on 5/5/2020 by Dr. Sunil Shukla: Director general, EDII, Ahmedabad Dr. Amit Dwivedi: Associate senior faculty, EDII, Ahmedaba, Mr. Mayank Patel: CEO, Cradle, Incubator, EDII, Ahmedabad.
- Session on How to identify Right Problem and Solution Using the Double Diamond Approach in Design on 6/5/2020 by Ms. Prajakta Kulkarni: Founder, Director, Nodes Pvt. Ltd., Pune and Mr. Sanket Inamdar: Co-founder, CEO, Nodes Pvt. Ltd, Pune.
- Session on Intellectual Property (IP) Management at Early Stage of Innovation and Start-ups on 7/5/2020 by Dr Sanjeeva Kumar Majumdar Manager-IPR, StartUp & Incubation, National Research Development Corporation, New Delhi,
- Session on Understand Angel and Venture Capital Funding –What is there for Early-Stage Innovator & Entrepreneurs on 8/5/2020 by Mr. Sushanto Mitra Founder & CEO of Lead Angel Network.
- Session on Legal and Ethical Steps - Productive Entrepreneurship and Startup on 5/12/2020 by Mr. Harit Mohan Founder & CEO of Signicent LLP in India and Signicent LLC in the US.
- Session on Innovating Self-Screen and Identify Right Opportunities on 13/5/2020 by Prof. Sanjay Inamdar Chairman, AICTE Startup Policy Implementation Committee and Entrepreneur.
- Session on Understanding Role and Application of Marketing Research at Idea to Start up Stage - Foundation Level on 14/5/2020 by Dr. Preet Deep Singh AVP, Invest India.



- Session on Innovation Risk Diagnostic — Product Innovation Rubric (PIR) on 15/5/2020 by Dr. Lakshmi Meera Program Director, Forge incubator, Coimbatore.
- Session on Idea, Entrepreneurship Opportunities, Business Model and Business Plan on 19/5/2020 by Dr. Amit Dwivedi: Associate senior faculty, EDII, Ahmedabad & Dr S. R. Acharya: Associate Sr. Faculty, EDII, Ahmedabad.
- Session on Use of Market Data and Application of Marketing Research Tools and Methodology - Increasing Chances of Survivability of Innovation and Venture - Advance Level on 20/5/2020 by Dr. Preet Deep Singh AVP, Invest India.
- Session on Frugal Innovations and Social Entrepreneurship on 21/5/2020 by Dr. Raman Gujral Sr. Faculty, EDII, Ahmedabad.
- Session on Interaction with Student Innovators and Entrepreneurs Emerged from Smart India Hackathon (SIH) on 22/5/2020 by Pulkit Jain of Team Vidyut, Lokesh Goswami of Team SLICK and Arpit Nandi of Team Quarks & Leptons.

#### **4.3.4 PRE-LOCKDOWN EVENTS AT MRU:**

- Internal Hackathon for Smart India Hackathon (SIH) 2020 AVISHKAR 2020, organized by IIC, on 28th Jan 2020
- Innovation Contest of MRU in association with FGSi YASH 2020, organized by IIC, from 16th to 18th Jan 2020
- Workshop at MRU Idea Generation Workshop and GitHub Workshop, organized by IIC, on 43862
- Workshop at MRU DAIK IN Workshop, organized by IIC, on 1-Feb-2020 1st Feb 2020
- Workshop at MRU Entrepreneurship Workshop, organized by IIC attended by Mr. Anil Kumar Gupta, a Business Empowerment Coach and Dr. Puneet Malhotra from Centre of Knowledge Management Excellence (CKME).
- Essay Competition & ARDUINO Workshop at MRU Celebration of Innovation Day on 15th October 2019 to mark Dr. A.P.J. Abdul Kalam's Birth Anniversary, organized by IIC, on 26th Sept & 5th Oct 2019.



#### **4.4 IPR CELL**

Intellectual property (IP) encompasses the expression of ideas, information, and knowledge. IP includes scientific inventions but also music, literary and other artistic works, trademarks and trade symbols, Geographical indications, and integrated circuit layouts. Intellectual Property Rights (IPR) confer exclusive right over the intellectual property created. The purpose of IPRs is encourage innovation and development. Academic and Research Institutions not only contribute to the creation of IP but also help the researchers, creators, and inventors to protect their IP rights. Manav Rachna I.P.R. Cell is governed by the University Intellectual Property Rights Policy. Details of Patents filed during the period are as under:

- (a) Prateek, Sorabh, Shailesh from Chemistry have filed a patent on Filter cum Stirrer Mechanism for stir casting of composite having filing no./ Patent no: 201911023212 on 6/12/2019.
- (b) Dr. Sabiha Imran from Physics have Filed a patent on Isolation and characterization of broad-spectrum having filing no. /Patent no: 201911023213 on 6/12/2019.
- (c) Gurpreet Singh Matharou, Ritesh Kumar Nagar from Mechanical have Filed a patent on External Handbrake with Mechanical park assist having filing no. /Patent no: 201911023214 on 6/12/2019.
- (d) Shaveta Bhatia, Shiv Shankar Rai from Chemistry have Filed a patent on Handheld Self Examine Brest Cancer having filing no. /Patent no: 201911033647 on 21/8/2019.
- (e) Mr.Shivansh Sharma (Student) from ECE have Filed a patent on Streeksha , D'Scent having filing no./ Patent no: 201911018360 on 6/8/2019.
- (f) Ms. Yogita Khanna from ECE have Filed a patent on Microwave Sensing Device for Dielectric Characterization of Materials having filing no. 201911031072 (TEMP/E-1/32827/2019-DEL) on 1/8/2019.
- (g) Dr.Prem K.Patnala from Chemistry have Filed a patent on Production of Clean Water From Clay Mud Pot Filters having filing no./ Indian Patent no: 201911029396 on 22/7/2019.

##### **4.4.1 IPR ACTIVITIES**

IPR Team, Manav Rachna University organized an IP Awareness Session on 'Law of Patents' for the Faculty of Management and Commerce, Faculty of Applied Sciences and Faculty of Education on 10th October 2019, with a view to enhance the awareness about protecting innovative ideas through Intellectual Property. The

speaker of the session was Mr. Amit Kumar, Assistant Professor, Faculty of Law, Manav Rachna University.

- The World IP Day is celebrated every year on 26th April 2020. The objective of World IP Day is to raise awareness about intellectual property rights, to celebrate creativity and contribution made by creators and innovators to the development of societies across the globe and to encourage respect for IP rights. To raise awareness and respect for Intellectual Property among the students and to commemorate the World IP Day IPR cell Manav Rachna University organized a 2D Art competition on the theme “Relive the Creators”. The students enthusiastically participated in the competition by 2D artistic medium such as painting, drawing, mixed media, printmaking, digital art, video art and photography.
- IPR Team, Manav Rachna University organized an IP Awareness Session on ‘Law of Patent’ for the Faculty of Mechanical Engineering and the Faculty of Electronics and Communication Engineering on 31st October 2019 with a view to sensitize all the participants about Intellectual Property Rights and their protection, identifying protectable innovations. The speaker of the session was Mr. Amit Kumar, Assistant Professor at Faculty of Law, Manav Rachna University.
- IPR team, Manav Rachna University organized an expert talk on “Drafting of Patent and Litigation” for faculty members of Manav Rachna University, on 29th February 2020. The guest speaker for the session was Ms. Pragati Khadse, Consulting Director – IP, South Asia, Questel. Ms. Pragati has over 6 years of experience in the field of IP Consulting. She has vast experience of drafting various types of patent applications including provisional, complete, and complete after provisional, defensive, continuation, etc., for various jurisdictions including India, EP and the U.S. She has worked with big firms as Solomon & Co. and Thomson Reuters.
- IPR Team, Manav Rachna University organized an IP Awareness Session on ‘Law of Patent’ for Faculty of Computer Science & Technology on 14th November 2019, to create awareness among the faculty members about the patent system in India and provide user friendly guidelines for obtaining and maintaining patents under the existing Patent laws.

#### **4.5 MANAV RACHNA BUSINESS INCUBATORS**

##### **Activities under E-Cell**

- Manav Rachna University E- Cell hosted a five-day online celebration of E week started involving participation from students beyond our university and covering around 350 participants across India from colleges like FORE School of Management, Kanpur Institute of Technology, National Institute of Technology Jamshedpur, Tribhuvan University (Nepal), K.J. Somaiya Institute of

Management Studies and Research, Bharati Vidyapeeth's College of Engineering and many more. The events that were planned included Cyrus Against Virus-Ideathon, Tagline competition, MEME Marketing competition, Business Quiz, and Case Study Analysis. The final day of the E-week culminated with an online webinar "ENLIGHTEN- The Paradigm Shift in the key areas of Entrepreneurship" which was taken by Dr. Yogita Sharma an academican, an entrepreneur and a certified trainer with NIESBUD. The student committee of MRU E-cell headed by Mr. Mukesh Das (Student Head) and the entire team did a commendable job from the planning of the events, their marketing across different universities and colleges to the seamless execution of the entire event.

- Vansh, BBA EFB, Abhishek Gupta BBA EFB, Smriti Verma BBA HCM, Yagya Malik, BBA HCM Students participated in a two day Global Youth Conference on Entrepreneurship, Innovation and Venture Development at SGT UNIVERSITY, Gurugram on 19th- 20th FEB 2020. One team of Mr. Vansh Mittal and Mr. Abhishek Gupta (BBA-EFB 2018) secured first position and won "Best Case Analysis Award and a cash prize of Rs 10,000. Another team with Ms. Smriti Verma and Mr. Yagya Malik (BBA-HCM II 2019) secured third pos
- MRU Entrepreneurship Cell organized a session on Idea Pitching and team-building exercise on 3rd and 11th March 2020. The event began with a brief introduction to MRU Entrepreneurship Cell (E-Cell).
- Management students from got an opportunity to learn about the growth story at the Britannia Marie Gold Start up India Contest. This was India's first- ever skill development programme customized for women with entrepreneurial aspirations.
- A one-day workshop on Discovering Entrepreneurial Skills and Competencies was conducted by the Department of Management & Commerce, Manav Rachna University for the BBA (Entrepreneurship & family Business) students.
- MARCH 3,2020-Manav Rachna University students attended the B K Birla Global Innovation Challenge (BGIC 2020) recently at BIMTECH, Noida. Three students from BBA program, Rahul Goyal (Sem II), Smriti Verma (Sem-II), Simran Mehta (Sem VI) and Naman Gupta form CSE (Sem VI) along with Dr Pragati Chauhan, Faculty –Department of Management & Commerce, MRU attended the event

#### **4.6 INNOVATIONS AND COMPETITIONS WON**

- Team Error=404 comprising of B.Tech CSE 7th Sem students – Rishabh Dhiman, Mrinmoy Mitra, Aayush Singh, Deepak Bhardwaj, Vishakha Tyagi, and Aman Gupta, of B Tech. Computer Science & Engineering, Manav Rachna University, Faridabad, and along with their mentors Prof Anu Priya Sharma and Prof Ankur Kumar Aggarwal was the proud winner of SMART INDIA HACKATHON 2020 under Software Category. They represented MRU on problem statement of Ministry of Rural Development 'MK206' (Non-network-intensive record-keeping system for Self Help Group) virtually in online mode.

- Students from Department of Management & Commerce Smriti Verma and Yagya Malik (Student) under the mentorship of Dr. Pragati Chauhan won Third Position in “Case Analysis Competition” organized by SGT University on 19-20 February 2020.
- Students of CST department Parul Taneja, Minhajul Hossain, Parikshit Sharma, Ravi Prakash, won Bronze Medal in “HackPhoria” organized by Bennett University. They won First Position in “Case Analysis Competition” organized by SGT University on 19-20 February 2020.
- Students of CST department Parikshit Sharma, Ravi Prakash, Shivam Shukla, Shiv Kumar, won 1st Position in “Hackrcdu, Hackathon” organized by Ramanujan College, University of Delhi.
- Students of CST department Yogesh Dixit, Deepak Bhardwaj, Hitesh Sood, Aman Gupta, bagged Appreciation for project in “Hackrcdu, Hackathon” organized by Ramanujan College, University of Delhi.
- Students of CST department Rishabh Gupta, Gagan Yadav, Sanchit Khandelwal, Ritvik Mukheja, were 4th runner-up for project in “Hackbvicam, Hackathon” organized by Bharati Vidyapeeth's Institute of Computer Applications and Management. The solution \*SELFAWARE\* was comprised of web-based application.
- Student of CST department Abhishek Sontakke, bagged 9th Position for project in “Singapore India Hackathon 2019” organized by India and Singapore.
- Students of CST department Parul Taneja, Deepak Rana, Mukul Singh, bagged 3rd Position for project in “Vihaan 2.” organized by MHRD Innovation Cell (MIC).
- Students of CST department Mukul Singh, Parul Taneja, Ridhi Sethi, Deepak Rana, Abhishek Pandey, bagged 2nd Position for project in “Technovation” organized by IEEE, DTU.
- Students of CST department Mukul Singh, Parul Taneja, bagged Silver Medal for project in “YASH 2020” organized by Foundation of Global Science Initiatives (FGSI). Bliss Board has been implemented in such a way that any person can type using Braille Script(language). It helps Blind people to connect with Social Life and access various features of their phone manually and by voice too.
- Students of CST department Karan Aditya Ghoshal, Prince Kaliraman, Deepak Rana, bagged Silver Medal for project in “YASH 2020” organized by Foundation of Global Science Initiatives (FGSI).

- Students of ECE & CST department, Ashwani, Yatharth, Shivansh, under mentorship of Ms. Yogita Khanna bagged Silver Medal for project in “YASH 2020” organized by Foundation of Global Science Initiatives (FGSI). Giving blind people the ability to live independently and freely.
- Students of ECE & CST department, Aishvraj Gupta, Ananya Kamara Tushar Sharma under mentorship of Ms. Yogita Khanna bagged Gold Medal for project in “YASH 2020” organized by Foundation of Global Science Initiatives (FGSI) for Portable ECG monitor.
- Students of CST department Ashish Chaudhary, Balbeer Singh, Nilansh Khurana bagged 3rd Position for project PurAire in Anveshan 2020 organized by Association of Indian Universities.
- Students of CST department Deepak, Lizel Mehta, Prince Kaliraman, Karan Aditya Ghoshal bagged 2nd Position for project Hi Jeck-et organized by Sharda University, Noida.
- Students of CST department Parikshit Sharma, Ravi Prakash, Shivam Shukla, Shiv Kumar bagged 2nd Position for project Vacciblock in Hackrcdu, Hackathon organized by Ramanujan College (DU).
- Students of CST department Rishabh Gupta, Gagan Yadav, Sanchit Khandelwal, Ritvik Mukheja bagged 4th Runner-up Position for project Selfaware in Hackbvicam Hackathon organized by Bharati Vidyapeeth's Institute of Computer Applications and Management.
- Students of CST department Nilansh, Balbir, Ashish bagged 1st Position for project Selfaware in Anveshan 2020 organized by Amity University, Manesar, Haryana.
- Students of ME department Mohd Tariq, Dheeraj Malik, Puneet sharma under the mentorship Mr. Pradeep Mauriya bagged 3rd Position for project Selfaware in Anveshan 2020 organized by Amity University, Manesar, Haryana.
- Students of CST department Students under the guidance of Dr. Parneeta (Faculty) won 1st Runner up Position for project Selfaware in Technovation Hackathon 2020 organized by Sharda University, Noida.
- BBA students participated in “CAPRICE”- Global youth Conference on Entrepreneurship, Innovation and Venture development held recently. Team of Mr Vansh Mittal and Mr Abhishek Gupta (BBA-Entrepreneurship and Family



Business- IV Sem) secured the first position and won the “Best Case Analysis Award and a cash prize of Rs 10,000.

- Students of B.Tech. Computer Science & Engineering, Manav Rachna University: Deepak, Lizel Mehta, Prince Kaliraman and Karan Aditya Ghoshal, won Second prize in 24hrs HACKATHON TECHNOVATION at Sharda University. They won the prize under the theme – “Security and Surveillance”, amongst 238 teams across the country.
- Student Team Psycrypters of B.Tech (CSE) of Manav Rachna University comprising Parul Taneja, Minhjul Hossain, Parikshit Sharma and Ravi Prakash, participated in ‘HackPhoria, 24 hrs Hackathon’ on 14 - 16 Feb 2020 and bagged the third position in the same. They were awarded Bronze Medals, Cash Prize of 5000/- and goodies.
- Student of Chemistry department, Kashish Kohli won 1st Position for project in The Scientific Kaledoscope 2020 organized by Amity University, Noida.
- Student of Chemistry department, Kashish Kohli won 3rd Position for project in Online Youth Festival organized by Amity University, Noida



#### **4.7 RESEARCH COMPUTING CLUSTER**

- (a) In March 2020, Bhavya Satija, student of 4th year CST started his own Gaming Tournament Organizing Company by the name KS gaming <http://ksgaming.ultimatefreehost.in/>.
- (b) Research Cluster of Computing Team +impact of B.Tech CSE students of Manav Rachna University, comprising of Parikshit Sharma, Ravi Prakash, Shivam Shukla, and Shiv Kumar, participated in 'HackRcdU', a Hackathon on 27th feb and 28th feb 2020 held at Ramanujan College, University of Delhi and bagged the First Position in the same and received 8000 prize money.

#### **Consultancy Projects Undertaken by Computing Cluster:**

- Students team comprising of Prince Kaliraman, Deepak Rana, Karan Aditya and Mukul Singh under the guidance of Dr. Parneeta Dhaliwal have developed a "Panic Button For Doctor's Use", as a consultancy project for Sarvodaya Hospital, Faridabad.
- Students of B.Tech CST, Ravi Prakash , Sanchit Bajaj and Harsh Mittal, successfully developed a static website as a consultancy project for "Delish Homemades, Gurgaon" under the mentorship of Dr. Parneeta Dhaliwal.
- Sourabh Chhabra and Vaibhav Bhatia students of CST, developed the digital content: Website and Video, for in Youth Activities for Superior Humanity – YASH 2020, organized by Foundation for Global Science Initiatives (FGSI) from 16-18th Jan 2020.
- Cyber security team of Research Cluster of Computing participated in various online jeopardy and attack/Defense type CTF competitions under the alias Kaizoku. By August 2020, the team is among top 5% global teams and top 4% among Nationwide. Students who participated include Anmol, Deepak, and Prince.
- A team of students under the mentorship of Dr. Parneeta Dhaliwal, worked as part of the core team for a National Initiative- Samarth Helpline for Elderly against Covid19. The helpline supported by Hindustan Times, SBI, Coca Cola India and Unilever as a social initiative with Samarth Eldercare. It helped 1500 cases so far in 40+ cities across India. The student Team included: Ashwani, Saksham, Harshita, Animesh, Riya, Pranav, Aarzo Kapoor and Siya Sharma.

#### **4.8 RESEARCH INTEGRATED UG PROGRAMS**

Manav Rachna has a well-established teaching and learning process guided by the global best practices and a culture of academic excellence promoting research, innovation & entrepreneurship. So, to inculcate the research practices in UG students some courses are incorporated in the curriculum.



The following courses are incorporated in UG programs to enhance research activities:

- Introduction to Research
- Research and Innovation
- Scientific Research
- Research Methodology
- Research Colloquium
- Research Seminar
- Promoting Research Based Teacher Education

Outcome of these courses is in terms of student's participation in conferences and publications in journals. All such student contributions in research are mentioned below:

### **Students Participation in Conferences & Research Publications**

- Himani Saraswat and Surekha Chaudhary, from the Physics department, have attended X-ray absorption spectroscopy summer school workshop, organised by *Stanford synchrotron radiation light source*, 8-10 September 2020.
- Himani Saraswat and Surekha Chaudhary, from Physics department, presented research papers (Oral Presentation Himani Saraswat, Surekha Chaudhary, Himanshu Kasyap and Mansi Tuteja from Physics department have attended Webinar on "X-ray scattering and its applications in Nano & Material science research" organized by Department of Physics, Manav Rachna University, Faridabad, 2nd July 2020.
- Himani Saraswat and Surekha Chaudhary, from Physics department, presented research papers (Oral Presentation) in International Online Conference on Sustainable Research Technology and Development (IOCSRT-2020) on September 24, 2020 and September 25, 2020. Punjab University, Chandigarh-India.
- Himani Saraswat, Surekha Chaudhary, Himanshu Kasyap and Mansi Tuteja from Physics department attended One Week Short Term Course (STC) on "Advanced Energy Materials" from October 12-16, 2020. Organized by National Institute of technology, Jalandhar, India.
- Raj Kumar, M.Sc. Mathematics student presented the paper titled, "A Literature Review of Linear Programming Problems:Based on Case," in the 2nd International Conference On Innovative Studies Of Contemporary Sciences-II, Tokyo , Japan, (Aug17-19, 2020).

- Ridhi Bhatnagar, M.Sc. Mathematics student, presented the paper entitled, Image Processing Using Multiscale Transform: A Review, in the Tokyo Summit II: 2nd International Conference on Innovative Studies of Contemporary Sciences, held during August 17-19, 2020 at Tokyo, Japan.
- Ridhima Nehra, M.Sc. Mathematics student, presented the paper entitled, Comparison of Image Denoising Using Wavelet Transform and Wavelet Packet Transform, in the Tokyo Summit II: 2nd International Conference on Innovative Studies of Contemporary Sciences, held during August 17-19, 2020 at Tokyo, Japan.
- Mansi Mangla and Chhavi Baliyan, BSc(H) Mathematics students published the paper entitled, Future Population and Literacy Rate Projection in India, in the TEST Engineering & Management, Vol (83),10128-10138 in May 2020
- Varun Prakash, Raghav Sagar, students of B.Tech CSE specialization in DSML 3rd year, presented Research Paper on "When Cartoon Meets Anime - Distinguishing Animation Styles with Convolutional Neural Networks" (Online) Paper Presentation at ICIEM 2020 (Scopus Indexed IEEE conference) organized in collaboration with IEEE UK and Ireland Section 18 June 2020.
- Students of BBA program, presented a research paper at the National Young Economist Conclave-2020 on the use of Artificial Intelligence in the Indian Banking Sector on 27<sup>th</sup> Feb 2020-
- Pratibha, M.Sc (Mathematics) student presented research papers entitled 'On Skew strong McCoy Rings' in 67th Annual Conference of Bharat Ganita Parishad – 'Conference on Modern Analysis and Applications – An International Meet' organized by Department of Mathematics & Computer Science, sponsored by SERB & DST held on 16th & 17th November 2019 at BBDU, Lucknow.
- Ridhima Nehra, M.Sc (Mathematics) student awarded with Best Oral presentation award for the paper entitled 'Application of Wavelets in Chemistry' in Green & Sustainable Chemistry Conference GSCC 2019 sponsored by (SERB, DST, IOCL & RSC) held on 7th & 8th November 2019, at Department of Chemistry, ManavRachna University, Faridabad.
- Alka, M.Sc (Mathematics) student, presented research paper entitled 'A Note on Enestrom- Kakeya Theorem' in 67th Annual Conference of Bharat Ganita Parishad – 'Conference on Modern Analysis and Applications – An International Meet' organized by Department of Mathematics & Computer Science,

sponsored by SERB & DST held on 16th& 17th November 2019 at BBDU, Lucknow

- Ms. Akshita and Ms. Ekta from B.Ed. Semester IV (2018-20) presented their papers on the theme of 'Education for Sustainable Development' in a conference held at IIPM Ghaziabad on 15th Feb 2020.

#### **4.9 INSTITUTIONAL SOCIAL RESPONSIBILITY (ISR)**

Under the 'UNNAT BHARAT ABHIYAN, Ministry of Human Resource Development (MHRD), aiming to connect the higher educational villages around, for transfer of knowledge to enrich rural India, MRU has adopted five villages.

- To promote human values of "care and share", students' visit to villages at the close vicinity of the University has been an essential part of the Orientation program of first year students. This time, it was scheduled on 23/07/2019, wherein a group of 80 students had visited the four villages. To encourage environment preservation and to motivate children towards benefits of greenery, under tree plantation initiative, saplings, were planted by children and our students in the school campus as a token of the need to take self-responsibility to spread greenery wherever and whenever possible. Students and the faculty members of the school were very excited to receive saplings. The first-year students got divided into groups wherein they formed groups of school children and conducted several activities like music contest, dance contest, games like kabaddi, kho kho etc. Children participated with great zeal and rejoiced every moment of the activity. The best performing groups were gifted and encouraged with lot of motivation and applause.
- Students from different clans visited Anangpur village - govt school for Diwali celebrations under clan activities on 24th October 2019. More than 40 students along with faculty coordinators enthusiastically volunteered for the activities. The students and faculty distributed gifts and prizes for winners in various competitions. The students participated with zeal and enjoyed themselves.
- Diwali of 2019 was celebrated by spreading happiness and joy amongst the children of Prakashdeep NGO. The volunteers interacted with the children and entertained them by playing games and doing various fun activities. The children also got the opportunity to showcase their creativity and decorated diyas with the help of our volunteers. The diyas were later put for sale in the University in the Diwali Mela on 18th of October 2019 and all the money collected through selling them was donated to the NGO for the benefit of the children
- The LEO CLUB organised a visit for the children of Prakashdeep NGO to the University where they explored the university, learned some things, and also

showcased their talents. The children were engaged in a day full of fun and learning. The children truly showed that a book should not be judged by its cover by doing some amazing dance performances.

- On 20th and 27th February 2020, 110 student volunteers along with 25 faculty and staff members from different faculties of Manav Rachna University carried out donation drive and a survey in all the villages to find out their basic requirements. Objective of conducting the survey was to identify issues and problems to further prepare a proposal for village upliftment. Villagers whole heartedly participated in the survey process and provided requisite information.
- In Mewla Maharajpur 400 books related to pedagogy skills for teachers and 700 subject books were donated. Along with the books 200 dresses (shirt, trousers, tie and jackets) and 200 pair of socks were also donated. In Fatehpur 669 books on pedagogy and 29 subject books were donated along with 200 dresses and 200 pair of socks.
- Leo Club decided to organize a rally in order to raise awareness regarding the harms of single use plastic. The morning began with enthusiasm as around 100 students and staff members participated in the cause. The rally witnessed placards and signboards like “Green Manav Rachna” and “Stop bagging the planet, say no to plastic”. The rally also suggested affordable alternatives to plastic.
- Clan Water Sharks of Manav Rachna University invited Sh. Ravi Kalra (Founder of The Earth Saviours Foundation) on account of Children’s Day, for a session to enlighten students on human values. Students were inspired by his great personality and were motivated to take care of our Mother Earth and help everyone in any possible way that they can.
- MRU conducted “EK MUTTHI DAAN” drive in the month of March and April 2020 with the theme “no one sleeps hungry”. In each of these drives all MRU Faculty members and students donated a total of about 1500 Kg of rice to make a little difference to the life of the underprivileged by donating just a handful of grains.
- MRU organized Blood Donation Camp on 16th September 2020 in which both Faculty and staff members donated blood
- Faculty members and students of Computer Science & Technology Department, Manav Rachna University, visited Earth Saviour Foundation. Students interacted with residents, heard their stories, and also involved them in some special activities like dancing and singing. The residents not just enjoyed the

performances but also involved themselves in the activities which brought immense happiness and made them feel loved & cared.

### Glimpse of some activities



## **CHAPTER - 5**

### **SUMMER TRAINING/ INTERNSHIPS**

Competition in the employment market is growing more stringent day by day. Passing semester exams and completing academic projects is an important thing, but summer training and internship gives industrial exposure to students. It is essential and helps to attain in-depth knowledge of the engineering stream. Today all organizations are looking for those graduates/degree holders who are technically sound, creative, and analytical. They don't want to spend time and money on training before putting employees on the job. That's the main problem faced by fresh graduates who apply for a job.

A quality solution for this problem is to take industrial exposure very seriously and gain practical knowledge as much as you can do. Manav Rachna University takes every possible effort to give the industrial exposure to students. Students also put their best efforts into attaining summer internship in order to be ready to face challenges in their career ahead. Modules covered for In House summery training by the departments are mentioned below:

#### **5.1. SUMMER TRAINING MODULES (IN HOUSE SUMMER TRAINING)**

##### **5.1.1 Department of Chemistry**

Summer training: B.Sc. 2nd semester; (2019-2022 batch) Chemistry

Topics to be covered:

1. Chemistry of water and its distribution
2. Global water footprint
3. Wastewater generation and characteristics
4. Wastewater parameters and its analysis
5. Water quality standards (WHO, BIS)
6. Water quality index (calculation)
7. Monitoring of water quality (secondary data)
8. Conventional wastewater treatment process
9. Concept of decentralized wastewater treatment
  - (a) Anaerobic treatment
  - (b) Aerobic treatment
  - (c) Bioremediation
  - (d) Solar desalination
  - (e) Case studies on decentralized wastewater treatment system.

## **Summer training: B.Sc. (4th semester, 2018-2021 Batch) Chemistry**

Topics to be covered:

1. Introduction of research methodology
2. Ethical issues in research: Anti-Plagiarism Strategies for Research
3. Identification of research problem
4. Literature review
5. Research design : problems with research design
6. Sampling methods
7. Methods of data collection and presentation

### **5.1.2 Department of Physics**

Topics to be covered:

1. Physics of plasma system.
2. Linux
3. Nanomaterial

### **5.1.3 Department of Mathematics**

Summer Training Module for Post 2nd & 4th Semester B.Sc.(Hons) and Post 2nd Semester M.Sc

1. Introduction to MIT App Inventor 2 and Arduino Uno
2. Basic of Arduino Uno Led Blinking and Switch Pattern
3. Arduino Uno With Relay and RIFD
4. Arduino Uno LCD Interfacing
5. Arduino Uno with DC Motor and L293D
6. Project
7. TEST/ Viva/ Project Display

### **5.1.4 Department of Computer Science & Technology**

Post 6th Sem. Internship,

Duration: 6 Weeks

Modules

- Internship/Project: Physical/Remote Internship or Web based/App based/ML based Project/Research Paper
- Online Course: Coursera/Saylor Academy/Any other E-Learning Platform

Post 4th Sem. Internship

Duration: 6 Weeks

Modules

- Internship/Project: Physical/Remote Internship or Web based/App based/ML based Project/Research Paper
- Online Course: Coursera/Saylor Academy/Any other E-Learning Platform



POST 2nd SEM

Duration: 4 Weeks

Modules

- Project: C/Python/UI Project
- Online Course: Coursera/Saylor Academy/Any other E-Learning Platform

### **5.1.5 Department of Mechanical Engineering**

HVAC Module

Projects on Altair Software related to Design

- Turbulent flow through a pipe in Hypermesh
- Turbulent flow through acuconsole
- Post processing CFD results with hyperview
- Post processing CFD results with hyperview

### **5.1.6 Department of Electronics and Communication Engineering**

Modules Covered

1. Altair Activate
2. Altair FEKO
3. Digital Image Processing
4. MIT App Inventor

The lists of Industries where students have completed their internships are mentioned in **Annexure 5.1**.

## **5.2 Students Placement Opportunities**

The Placement Cell of Manav Rachna University has successfully climaxed another fruitful year of placements for the academic session 2019-20. With a remarkable increase in the number of recruiters and the number of offers made, the session ended on a high note.

- Even in an already miserable job market wherein the current Covid-19 outbreak has taken a significant toll on the economy, the Cell observed recruiting a considerable number of students from our campus.
- Department of Computer Science & Technology witnessed esteemed recruiters including TCS, INFOGAIN, IBM, Extra Marks, NIIT Technologies, COGNIZANT, Cavisson Systems, WIPRO, LIDO Learning, NOKIA, Damco Solutions, Bristlecone, JARO Education and many more.
- Students of Electronics and Communication Department successfully employed by NIIT Technologies, TCS, Infogain, ACS Solutions Tianyin Worldtech India Pvt Ltd Lido Learning, 3 Pillar Global, Expert Lancing Research Services and Varite India Private Limited with average salary 4.11 LPA.



- Faculty of Management and Commerce could get recruiters like Amazon, Bangalore, Mixture DTDC, Wipro HR Services etc. Students from Department of Mechanical Engineering are successfully recruited by reputed companies like Sonalika Tractors, Indigo, Expert Lancing, Polymedicure, OSM Projects Private Ltd and Oswal Casting Pvt Ltd with average salary of 3.17 LPA.
- Teacher trainees of Faculty of Education and Humanities got opportunity to be appointed as teachers in various reputed schools like Manav Rachna International School Charmwood, Faridabad, St. Columbus School, Dayal Bagh, Shri Dhronacharya Public School, Faridabad, New Green Field School, Saket New Delhi, Saint Raman Public School, Delhi. Dynasty International School, Faridabad, Nav Jyoti Senior Secondary School, Ballabhgarh, St. Peter School, Kalka Public School, New Delhi, Ferns and Petals, Ease Admissions JanakPuri, Delhi etc. Placement details are available in **Annexure 5.2**.

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|  HSBC   |  MARUTI SUZUKI                              |  MobiKwik                                       |  S&P CAPITAL IQ          |  valtech.   |
|  Agilent Technologies                               |  Adobe                                      |  GM   |  Microsoft               |  ICL  |
|  एन एच पी सी<br>NHPC                                |  Deloitte.                                  |  POLYMED<br>Medical Devices                     |  wipro                   |  N.S.D.C<br>National Skill Development Corporation<br>...Transforming the skill landscape |
|  WADHWANI<br>FOUNDATION<br>ENTREPRENEURSHIP NETWORK |  MIRIS<br>Manav Rachna International School |  INTEL  |  Pidilite                |  इंडियन ऑयल<br>Indian Oil Corporation Limited   |
|  Dr.Reddy's                                       |  JUBILANT<br>INDUSTRIES                   |  FEDERAL BANK<br>YOUR PERFECT BANKING PARTNER |  sarvodaya<br>HOSPITAL |  asian<br>Institute of Medical Sciences   |
|  Siddharth<br>GREASE AND LUBRICANTS PVT. LTD.     |  technoPlanet                             |  Shiprocket                                   |  DECATHLON             |  KEEROS™  |

## **CHAPTER: 6**

### **ACHIEVEMENTS OF FACULTY**

The faculty members of Manav Rachna keep themselves updated in consonance with emerging trends in education and latest thrust areas in research by involving in various academic activities. Following details throw light on their remarkable achievements, participation along with their endeavors in different associated fields. Their contribution is commendable in empowering learned society either by becoming member of committees, invited speaker, reviewer /editor of research journal or external examiner etc., Several Faculty members are given special recognition and awarded for their exemplary work during session 2019-20. Listed below are some of their participations, awards and recognitions.

#### **6.1 E-Content Developed**

- Dr.Savita Sharm, Assistant Professor, Department of Education, Developed four weeks MOOC on the Topic, ‘Nurturing Mindfulness in Educators and Learners ‘ at IIT Kanpur Online Platform (Mookit) from 25th March - 21st April 2020
- Dr Sachita Yadav, Associate Professor, Department of Management, Developed a Mooc Course on Basics of Financial Modeling for MOOKIT platform and running the same.

#### **6.2 Membership of International/National Societies/Committees/ Sessions Chaired/Lectures Delivered:**

- Ajay Thomas, Director Faculty of Law was appointed as a member of the prestigious Paris-based ICC Commission on Arbitration and ADR. This Commission is the International Chamber of Commerce’s (ICC) primary think tank and rule making body in the field of international dispute resolution. (February 2020).
- Dr. Aditya Sharma, Assistant Professor, Department of Physics, was invited as a invited speaker in International Symposium on synthesis and characterization of smart material and their potential applications, 14-17 June 2020, Guru Gobind Singh, Indraprastha University, New Delhi.
- Dr. Aditya Sharma, Assistant Professor, Department of Physics, has been appointed as Associate Editor of Interface Assisted Phenomena for Advanced Applications in Applied Nanoscience (SCI, Journal with I.F.3.5) of Springer-Nature. ISSN- 2190-5517.
- Dr. Aditya Sharma, Assistant Professor, Department of Physics, has been selected as role of reviewer in the journal: Material Science and Engineering B and Vacuum offered by Elsevier (ScienceDirect).

- Dr. Aparna Vyas, Associate Professor, Department of Mathematics, has been appointed as Editorial Manager for Journal of Computational and Applied Mathematics, June 2020.
- Dr. Megha Bansal, Associate Professor, Department of Chemistry, was Invited as External Examiner in Ph.D. assessment committee for evaluating the progress of PhD students' research work of Medicinal Chemistry of the first, second, and third batch at NIPER-R, Lucknow, Campus, Lucknow.
- Dr. Babita Parashar, Dean Faculty of Education & Humanities, was invited as a resource person in an International Webinar on Digitalization of Education conducted by OSH University and Manav Rachna University on June 20th, 2020.
- Dr. Savita, Assistant Professor, Department of Education was Invited as a resource person to conduct the Expert Session on 'Mindfulness and Self Awareness' on 13th March 2020 as part of two days Early Years Training Programme for teachers of Manav Rachna International Schools.
- Ms. Manpreet Kaur, Associate Professor, Department of Computer Science & Technology, was attended invited as a Session Chair, WIE Track, 17th conference of IEEE India Council, IEEE Indicon 2020 at Netaji Subhas University of Technology
- Dr. Mrinal Pandey, Associate Professor, Department of Computer Science & Technology was appointed as a member of Project Review steering group (PRSG) for the Project Entitled " Machine learning approach for suspect face retrieval using verbal description given by an eye witness" associated with Ministry of Electronics and IT (MeitY) for the implementation by GLA University Mathura.
- Dr. Mrinal Pandey, Associate Professor, Department of Computer Science & Technology, was appointed as a member of Project Review and Steering Group (PRSG) for the Project Entitled "Design & Development of Artificial Intelligence framework using Data Analytics for detection of Chronic Illness from Retinal Images" being implemented by Centre for Development of Advanced Computing (Mohali) and Government Medical College & Hospital (GMCH)(Chandigarh).
- Dr. Parneeta Dhaliwal, Associate Professor, Department of Computer Science & Technology, delivered an expert talk on Handling Data Diversity using Machine Learning during the one Week Faculty Development Program on "Computational Intelligence Techniques for Machine Learning" organized by JAY PEE UNIVERSITY OF INFORMATIONTECHNOLOGY, Shimla
- Dr. Parneeta Dhaliwal, Associate Professor, Department of Computer Science & Technology, was selected for the role of reviewer for the ICMAI-2021 Conference at SGT University.
- Dr. Manmeet Bali Nag, Associate Professor, Department of Management is Nominated as Innovation Ambassador by IIC & MHRD

- Dr. Manmeet Bali Nag, Associate Professor, Department of Management has been appointed as Reviewer for Book Chapters on "Entrepreneurship & Big Data" of CRC Taylor & Francis Publications
- Dr. Sujata Nayak, Professor & Head Department of Mechanical Engineering chaired a Session at Scopus Index International Conference, on 18th & 19th Dec 2019, GLA University, Mathura.
- Mr. Ajay Thomas, Director Faculty of Law, delivered Expert lecture on "Arbitration and Alternative Dispute Resolution" at the Online Management Development Programme on Public Procurement organised by the National Institute for Financial Management for Brigadier-rank officers of the Indian Army on 30th January & 14th February 2020
- Mr. Ajay Thomas, Director Faculty of Law, delivered Keynote Address at a National Seminar on Alternative Dispute Resolution organised by Department of Law of Bharati Vidyapeeth Institute of Management & Research (BVIMR) on 24th February 2020
- Mr. Ajay Thomas, Director Faculty of Law, delivered Expert lecture on "What's in a name? The seat and venue conundrum" to the legal and commercial teams at GAIL India Limited on 2nd March 2020.
- Mr. Ajay Thomas, Director Faculty of Law, was Resource person at a two-lecture webinar series on "Amendments to the Arbitration & Conciliation Act, 1996" organised by the Central Public Works Department (CPWD) National Training Academy on 10th & 22nd June 2020.
- Dr Manmeet Bali Nag, Associate Professor, Department of Management was selected for the role of reviewer for the prestigious NAFSA Conference.
- Dr Manmeet Bali Nag, Associate Professor, Department of Management was Invited as resource person speaker, representing Center for Peace & Sustainability.
- Dr Pragati Chauhan is appointed as a member of the Faridabad BYST mentors' group
- Dr. Savita Sharma, Assistant Professor, Department of Education, Delivered Expert Talk at the official online platform of GGSIPU on 29th May 2020 on the Topic 'Integrating Mindfulness in the Classroom' and on 5th June 2020 on the Topic 'Relationship of Knowledge and Curriculum'

### **6.3 Webinars & Workshops Organized**

- Dr Savita Sharma, Assistant Professor, Department of Education, Organised an Expert lecture 'WOMEN EMPOWERMENT THROUGH EDUCATION: UNDERSTANDING EMERGING TRENDS' delivered by Dr. Harpreet Kaur Jass

(Jamia Millia Islamia) on 5th March 2020 as part of the celebration of Women's Day.

- Dr Savita Sharma, Assistant Professor, Department of Education, Conducted Workshop for the Teachers of Manav Rachna International Schools on the Topic 'Mindfulness for Teachers' on 13th March 2020.
- Dr. Megha Bansal, Associate Professor and Dr. Ekta Rawat, Assistant Professor, Department of Chemistry, conducted a workshop entitled "Virtual Chemistry: Innovative Solutions". The workshop focused on making online teaching learning processes of Chemistry in an effective manner especially for Laboratory work. Faculties from different schools of MRIS participated in the workshop.
- Dr. Megha Bansal, Associate Professor, Department of Chemistry, Conducted a Webinar on Leading Sustainable Chemistry: Education and Career Aspects. Learn about sustainable chemistry and explore various career aspects.
- Dr. Sandeep Kumar, Associate Professor, Department of Physics, Organized a webinar on "Organic optoelectronic sensors for biomedical Applications", Dr. Ashu K. Bansal, School of Physics and Astronomy, University of St Andrews, St Andrews, U.K at Dept. of Physics, MRU Faridabad on 11th June 2020
- Dr. Sandeep Kumar, Associate Professor, Department of Physics, organized a webinar on "Interferometry based Microscopy for cell biomechanics", Speaker-Dr. Vijay Raj SINGH, Laser Biomedical Research Center (LBRC), MIT Bostan, USA at Department of Physics, MRU Faridabad on 5th June 2020
- Dr. Sandeep Kumar, Associate Professor, Department of Physics, Organized a webinar on "Two-photon absorption in bulk semiconductors and QW structures and its applications", Speaker-Dr. Himansu S. Pattanaik, CREOL, The College of Optics & Photonics, University of Central Florida, USA at Dept. of Physics, MRU Faridabad on 28th May 2020
- Dr. Rashi Banerji, Assistant Professor, Department of Management organised a webinar on Importance of Technical Analysis in Stock Market in association with EMKAY, Securities
- In an attempt to forge academic cooperation ties with other law schools, the Faculty of Law partnered with National Law University Odisha (NLUO) and the Salgaocar College of Law, Goa to host an international webinar on "Clinical Legal Education: International Perspectives". The speakers were leading clinicians and clinical professors from the USA, Brazil, South Africa, Bangladesh, Thailand and India on 10th July 2020.
- The Faculty of Law was a co-host at an international webinar on the theme "Legal Education in the BRICS". The other co-hosts were the University of KwaZulu Natal (South Africa), South Ural State University (Russia), Wuhan University's School of Law (China), and the Brazilian Centre for Mediation and Arbitration (CBMA) organized on 11th August 2020.

#### **6.4 Certification Awarded to the Faculty:**

- Ms. Hanu Bhardwaj, Head & Associate Professor, Department of Computer Science & Technology successfully completed the “CMI Level 5 Certificate in Management and Leadership” certification of CMI (Chartered Management Institute) on Jan 2020.
- Dr. Jyoti Pruthi, Professor Department of Computer Science & Technology successfully completed the “CMI Level 5 Certificate in Management and Leadership” certification of CMI (Chartered Management Institute) on Jan 2020.
- Dr. Megha Bansal, Associate Professor Department of Chemistry successfully completed certification course on Design e-course with Canvas-LMS for 21st Century, Organized by RK University, Gujarat.
- Dr. Megha Bansal, Associate Professor Department of Chemistry completed AICTE Training And Learning (ATAL) Academy Online FDP on "GIS & Remote Sensing" organized by Siksha 'O' Anusandhan University with distinction.
- Dr. Megha Bansal, Associate Professor Department of Chemistry successfully completed the E-Shodh Sindhu Web of Science Certification Series course and Web of Science/ Clarivate Analytics Certification Program.
- Dr. Megha Bansal, Associate Professor Department of Chemistry Completed Certificate courses in (a) Achieving Sustainable Development Goals on Water and Sanitation (b) Energy Economics, Environment, and Policy by ADBI.
- Dr. Megha Bansal, Associate Professor Department of Chemistry successfully completed Faculty Development Programme on "Designing Outcome Based Education organized by Manav Rachna International Institute of Research and Studies in collaboration with Centre for Academic Leadership, Manav Rachna University as "Certified OBE Mentor"
- Dr. Pragati Chauhan, Associate Professor, Department of Management, received Certification from MHRD Innovation Cell for attending Leadership talk series with Shri Mahesh Babu, CEO, Mahindra Electric Mobility Ltd on 23rd May 2020
- Dr. Pragati Chauhan, Associate Professor, Department of Management, received Certification from MHRD's Innovation Cell for attending 16 online sessions on various themes of Innovation, Entrepreneurship, IPR and Startups from 28th April to 21st May 2020 and submitted e assessment for 12 sessions.
- Srishti Bathla, Assistant Professor, Department of Management, attended Three Day Online Training Programme on Research Methodology and Data Analysis, Conducted By Primax Foundation, Bangaluru, Karnataka.
- Srishti Bathla, Assistant Professor, Department of Management, attended National Webinar On Cyber Security: Challenges & Wayouts, Conducted By Dyal Singh College, Karnal



- Srishti Bathla, Assistant Professor, Department of Management, attended Webinar on "Research Methodology: An Overview" conducted by Atma Ram Sanatan Dharma College, University of Delhi
- Dr. Animesh Singh, Associate Professor, Department of Management, Attended Webinar on Future of education Post Covid by McGraw Hill. Participation certificate received
- Dr. Pragati Chauhan, Associate Professor, Department of Management, received Certification from MHRD Innovation Cell for attending First Leadership Talk Series with Ms. Ashwini Deshpande, Co-Founder and Director, Elephant Design on 6th June 2020.
- Dr. Rashi Banerji Assistant Professor, Department of Management participated in NITTTR STC on Big Data Analytics between 3-7 Feb 2020
- Dr. Pooja Kapoor, Associate Professor, Department of Management Participated in a NIIITR certified & AICTE approved FDP on "Research oriented project work"- 24-28 Feb 2020
- Dr Animesh Singh, Associate Professor, Department of Management Participated in NITTTR STC on Big Data Analytics held between 3-7 February 2020.
- Dr. Sachita Yadav, , Associate Professor, Department of Management Participated in a NIIITR certified & AICTE approved FDP on "Research oriented project work"-24-28 Feb 2020 Completed a 2-Week Faculty Development Programme on Research Methodology, Teaching Learning Centre, Ramanujan College and obtained a grade A+University of Delhi
- Dr Manmeet Bali Nag, Associate Professor, Department of Management received Certification from MHRD's Innovation Cell for the various online sessions on themes of Innovation, Entrepreneurship, IPR and Startups attended from 28th April to 21st May 2020 and submitted E- assessment for 12 sessions.
- Dr Manmeet Bali Nag, Associate Professor, Department of Management Participated in Moodle LMS FDP Organized by SRM Chennai. Certificate awarded-20/5/2020-29/05/2020
- Dr. Subodh Saluja, Associate Professor, Department of Management participated in Digital Transformation NXT: "Xperimental" to "Xponential"- Wiley Global Innovation Conclave at ITC, Bangalore on 5th Feb 2020
- DR Rashi Banerji, Assistant Professor, Department of Management Received Elite + Silver award certificate in 8 weeks CRM course by NPTEL (AICTE approved FDP)
- Dr. Savita Sharma, Assistant Professor, Department of Education, also completed the Following MOOCs offered by Mookit with Distinction

- Basis of Financial Modelling (6th April to 2nd May 2020)- 4 Weeks
- Designing Flexible Approach of Learning (10th May to 31st May)- 3 Weeks
- Cooperative Learning Pedagogy under UNESCO Open Education for Better World Initiative (4 weeks from 22nd May to 18th June 2020)
- Mr. Joginder Singh, Associate Professor, Department of Mechanical Engineering completed FDP on Product Design & Drafting Using Catia V5 organised by ICT Academy, from 17th to 23rd Nov 2019.
- Dr. sachita Yadav Publisher paper on “A Study on the Initiatives Taken by Bankers for Promoting Financial Literacy in Bangalore, India” in International Journal of Banking, Risk & Insurance, in Vol 8, Issue 1, March 2020, Pafe no. 43-61, ISSN Number 2320-7507. Indexed: Proquest, i-scholar database, EBSCO, <http://publishingindia.com/ijbri/56/856/2020/>
- Dr Sachita Yadav Presented Paper on Impact of Covid 19 on the Performance of Asian Stock Markets in theOne Day International Conference on Advances in Business, Commerce & Information TechnologyOrganized by the Department of Computer Applications, Management & Commerce, T. John College Bangalore
- Dr Pooja Kapoor and Dr Pragati Chauhan paper titled “Women Entrepreneurship through network marketing: the positive insight”, published in International Journal of Disaster Recovery and Business Continuity, Vol.11, No. 1 (2020), pp. 688-696, Indexed: Proquest, J-Gate Database, EBSCO, <http://serisc.org/journals/index.php/IJDRBC/article/view/7617>, March 2020
- Dr. Rashi Banerji’s paper titled “Cashless Payments in India: An Empirical Study on Credit Card Selection and Usage Preferences” accepted for Publication in International Journal of Financial Services. Indercience Publishers Ltd. Listed in ABDC, EBSCO.
- A Review Paper on Accounting Practices for Exploration and Evaluation Expenditure in Extractive Industry by Dr Pragati Chauhan at International Conference on Digitalization of Management and Social Sciences (ETTIC 2020) at Jaypee Institute of Information Technology (JIIT) on 6-8 Feb 2020.
- A paper on Inclusion of Bioethics in performance appraisal for promoting ethical behavior among doctors in hospital by Dr Parul Jhajharia at International Conference on Digitalization of Management and Social Sciences (ETTIC 2020) at Jaypee Institute of Information Technology (JIIT) on 6-8 Feb 2020.

## **CHAPTER – 7**

### **OUTREACH & PROFESSIONAL ACTIVITIES**

#### **7.1 Student Activities & Achievements**

Students are the stakeholders of the university who keeps the flag flying high. Student activities are an integral feature to promote a vibrant, stimulating, engaging and respectful campus culture. Manav Rachna University creates a balance between academic, curricular, and extracurricular activities for preparing the young adults for life.

The office of the Dean of Students is primarily concerned with students' welfare from entry to graduation. University life marks the beginning of one's career and requires one to make mental, physical, and emotional adjustments. MRU promotes the participation of students at International & National Level Activities, Institute & Department Level Activities and Social Activities. MRU Students Council Body works through its different clubs such as Technical Club, Cultural Club, Literary Club and Sports Club.

To get the students engaged and trained for the passion they pursue and to promote Institution social responsibilities, Clan was formulated in MREI. To strengthen the Clan activities, Institution Wise slots were allocated for all five verticals such that Literary, Cultural, Sports, Media, and ISR. In Manav Rachna University, Thursday is allocated for Manav Rachna Life Skills Program.

The accolades and achievements of students across various verticals are summarized, as under:

#### **7.1.1 Technical Activities**

##### **IEEE Society**

- Karan Rajoria, 3rd year student of B.Tech. Computer Science & Engineering, was "Selected as "Industrial Relation Coordinator" by Member of ""Delhi Section Student Network Team"" IEEE Delhi Section" on 27 May 2020, IEEE Delhi Section.
- IEEE, MRU organized a Webinar on Introduction to Augmented Reality for all aspiring developers using Unity 3D on 20th June 2020.
- IEEE, MRU organized a workshop on Industry development cycles and opportunities in market "A structured way of industry development cycles and opportunities in the market" on 13th June 20.

- IEEE MRU had organized a webinar on “Opportunities in Entrepreneurship“by the vibrant personality Miss Akshita Kapur on 4th June, 2020.
- A competitive programming **Codechef Campus Chapter** run by Hackers\_Creed Club established at Manav Rachna University. The first 2 hr Online Competitive programming contest under Codechef Campus Chapter was organized on 14th February 2020 by Hackers\_Creed

### **IN-House Trainings:**

- **Machine Learning Using Python:** One month Training on Machine Learning using Python was conducted by Yogesh -B.Tech CST student, to develop the technical skills of students interested to pursue Machine Learning as their career domain.
- One month training on Cyber security was conducted by Deepak Rana, Prince Kaliraman and Lakshya; to train the students to successfully work in this domain and fetch highly paid jobs in the Industry. In addition to the summer training, regular in-house semester training is being organized to develop the Cyber security brains.
- One month IoT Training with primary emphasis on Hands-On Projects was conducted by the student coordinators Prince Kaliraman, Deepak Rana and Mukul Singh.
- In-House training on Web Applications was conducted by Palash Dubey during the semester, preparing students for developing quality apps. This was followed by hands-on-training on Android and iOS Mobile application development.

### **Society of Automobile Engineers society**

- Workshop on “Assembly and disassembly of engine components” was organized on 13th Feb 2020 to give a glimpse of all the necessary components and their function to the students of a 4 stroke 4-cylinder diesel engine.
- SAE organised workshop on “Introduction to Internal combustion engines” on 3rd March 2020 to give an introductory knowledge about the automobile.



## **ISHARE**

- Guest lecture by Mr. Suhaas Mathur, Senior Technical Manager at Green Building Council of India delivered lecture on Energy Simulation Software was organised on 10th February 2020.
- Mr. Vasu M S, Head, R&D, Voltas India Ltd. delivered lecture on Career opportunity in HVAC Industry after Covid Pandemic on 29th April 2020.
- Mr. Gianender Kajal conducted a workshop on Heat Load Calculation for Mechanical Students on 25th May 2020.

### **7.1.2 Achievements in Extra Curricular Activities:**

- Ms. Ena Manchanda (BBA-FAA) Participated in Raw'20 Annual Cultural Fest of Rawal Institute of Technology held on 29 Feb 2020. There were 7 teams in which her team stood first in the Fashion Show and won a cash prize of RS 10000.
- Ms. Ekta from department of Education represented the department in teaching skill competition organized by Khalsa college of Education, Amritsar in May 2020 and secured third prize at all India online national skills.
- Ms. Shruti, from B.Ed. Semester IV bagged second position in the E-xtempore competition 'Youth and Empowerment' organized by School of Education and NSS Apeejay Satya University in collaboration with Mahatma Gandhi National Council for Rural Education on 6th June 2020.
- Ms. Manisha Arya a student of B.Sc. B. Ed. Semester VII received a National ICON award from Global Records and Research Foundation on 15th July 2020 for her contribution for Promoting Yoga.
- Ayush Gupta, B.Tech CSE 4th year student successfully completed "Oracle Certified Associate, Java SE 8 Programmer" certification by Oracle on 28 January 2020
- Umang, 1st year student of B.Tech. Computer Science & Engineering, received 1st position in Matribhasha Diwas in poetry competition on 20th February 2020, organized by Manav Rachna Center of Foreign Languages
- Students of Mathematics department Geetika, bagged 2nd Position for project in "Annual Cultural Fest" organized by J C. Bose University of Science & Technology, YMCA, Faridabad on 29 Feb 2020.
- Gauri, 3rd year student of B.Tech. Computer Science & Engineering, received 3rd position in Matribhasha Diwas in poetry competition on 20th February 2020, organized by Manav Rachna Center of Foreign Languages.
- Prince Kaliraman, 4th year student of B.Tech. Computer Science & Engineering, gave a Technical Talk and received Certificate of Appreciation on 15 May 2020 from Mar Baselios Christian College of Engineering and Technology, Peermade.

- Srushti Suresh, 4th year student of B.Tech. Computer Science & Engineering, was invited as Panelist in "Big Talks for Young Folks - Weekly Talk Show Series and received Certificate of Appreciation on 22 May 2020 by QS I-GAUGE
- Parul Taneja, 4th year student of B.Tech. Computer Science & Engineering, gave an Online Talk @ IPS school and received Certificate of Appreciation on 22 May 2020 by IPS School.
- Niharika, 4th year student of B.Tech. Computer Science & Engineering, Manav Rachna University, was Semi Finalist of Re Think Tank Session, organised by QS I Gauge on 10th June 2020.
- Pranjali Bharti- a third-year student of BBA LLB. (Hons) brought laurels by being selected as the Best Speaker in S.K. Puri Memorial International Moot Court Competition "JUSTIFIED19" in September 2019. Over 30 teams participated from various Law Schools in India. She was also awarded a cash prize of INR 15,000. The Moot Court Competition was held at Law Centre-II, University of Delhi.
- Tejaswi Dudeja, a student of 6th semester, BA.LLB. (Hons.) was selected as an Ambassador for All India Reporter and Bar Council of India after undergoing training at the AIR headquarters in Nagpur in association with the Government of Maharashtra.
- At the Inter-College Sports fest of Jesus and Mary College, Shanu Agarwal, a student of second year Law secured the first rank in the mixed doubles tennis match.
- The students of Manav Rachna University participated in BITS Open Sports Meet (BOSM) which is the annual sports festival of BITS Pilani, Pilani Campus from 13th September to 17th September. TEAM of POWERLIFTING brought laurels to the university by grabbing medals in various categories
- Students of Education & Humanities department Payal Solanki, Deepanshi Gupta, Anjali, Aparajita, Jyotsna, Priya Madhulika, Akshita, Pooja Chaurasia, Pooja Gupta, Ruby, Qualified Central Teacher Eligibility Test (CTET)- Result declared by CBSE.
- Students of Education & Humanities department Geetika, bagged 2nd Position for project in "National Level Micro Skill in Teaching Competition" organized by Khalsa College of Education, Amritsar on 28th May 2020

## **7.2 Events Organized**

- The Legal Aid Clinic, in collaboration with the District Legal Service Authority (DLSA) and Haryana Legal Service Authority (HLSA), organised a legal aid camp at Surajkund Craft Mela from 2 February 2020 to 16 February 2020. Students actively helped visitors by addressing their law related queries and guided them on the usage of services available on National Judicial Data Grid and websites of the High Courts and District Courts.







- Legal Aid and Awareness camps at Faridpur Village and Faridabad District in the months of February and March 2020 was organised. The group of 25 students sensitised the villagers about the laws against child abuse, consumer rights, RTI, FIR (First Information Report) and free legal aid.
- Facilitated by the DLSA, Faridabad, the Clinic organised a legal aid visit to Neemka Jail on 6 March 2020. The students performed Nukkad Natak to spread awareness among the prisoners about their rights.
- Manish Kumar Rai (BBA-HCM) won the 1st Prize in Online Open MIC organized by Clan Wild Cats, Manav Rachna University.
- Ms. Aparna (BBA-FAA) won the 2nd Prize in Poster Making Competition- Topic - Showing gratitude towards the warriors of COVID-19, Category
- On the Diwali Festival, the Department of Management and Commerce organized Rangoli Competition on Oct 24, 2019.
- Students and faculty members of Department of Management and Commerce, celebrated Lohri at the campus on 13th Jan 2020
- Department of Management and Commerce organized Teacher's Day celebration on Sept 5, 2019. The students were given blessings and wishes by Prof. (Dr.) Parul Jhajharia, Dean, Department of Management and Commerce and Prof. Jaideep Singh, Director, Industry Interactions.
- Fresh Face 2019 (8<sup>th</sup> August ,2019) was held for the new students or fresher's who had just enrolled in Manav Rachna University. The motive of the competition was to provide fresher's a platform, where they could showcase their talent and compete for the Mr.Fresh Face & Miss.Fresh Face title. More than 100 students enrolled for the event, out of which 22 students were short-listed under various categories.



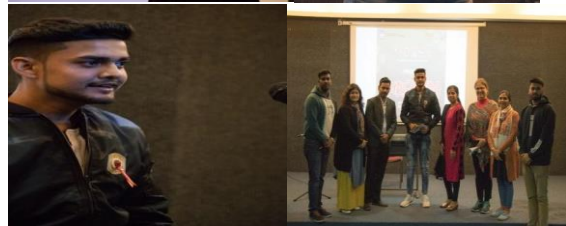
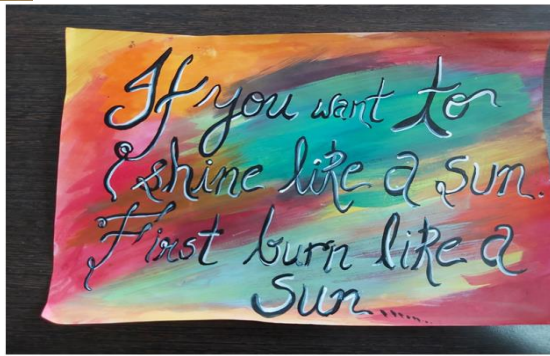
- Felicia the Art Society, Department of Student Welfare organised a logo designing competition on 12th September 2019.
- Felicia, the art society of Manav Rachna University organized a poster making competition on two of the most popular topics, one being centre for peace and other being alternative politics.
- Manav Rachna University organized a Book Lecture on "The Best Life Ever" by Mr.Aditya Shroff on 20 September, 2019.
- Senior students of the University welcomed its young engineers through Esperanza 2k19 on 21st September.
- MRU conducted its first Intra College Model United Conference on September 26th 2019, This was the concept encouraged by the UN itself.
- Rehnuma, Literary Society MRU organised an Essay Writing Competition on the Life of Guru Nanak Dev Ji on 23.11.19 Students of various departments participated in this event. This event was all about write your views on the Life of Guru Nanak Dev Ji the first Guru of Sikh.
- Rehnuma, Literary Society MRU organised a Slogan Writing Competition on National Education Day on 13.11.19 Students of various departments participated in this event with full enthusiasm. The event was organised on lieu of birth anniversary of Maulana Abdul Kalam Azad, great freedom fighter, eminent educationist and the first union minister of education.
- Manav Rachna University celebrated 5th Constitution Day or Samvidhan Diwas on 26th November 2019. The live webcast telecast of the commemoration function of the Constitution Day was addressed by the Hon'ble President of India, Hon'ble Vice President of India and Hon'ble Prime Minister of India at the Central Hall, Parliament House on 26th November 2019 from 11:00 a.m. onwards
- As part of the "Swachhta Pakhwada", an initiative of Ministry of Human Resource Development, Clan Wild Cats and Clan Forest Rhinos of Manav Rachna University consolidated to organise Poem Writing and Slogan Writing Competition on 16.1.20 to raise awareness amongst students about water and forest conservation as both the previous and latter are under constant threat of extinction and have become an endangered global resource.
- As part of the "Swachhta Pakhwada", Clan Wild Cats and Clan Forest Rhinos organised Plantation Drive in MR campus itself on 22.1.20 to raise awareness amongst students about environment protection by planting more and more trees in their surroundings so that problems like deforestation , global warming , climatic changes , pollution can be controlled to some extent.
- The Swachhta Pledge Taking Ceremony" was organized by Manav Rachna University on 16.1.20. Various faculties of the university took the pledge and vowed to make this mission successful

- The Music Society of Manav Rachna University, MRU MOKSH, organized an intra college singing competition, SURSHETRA, on 30th January 2020. Aman Kumar of BBA, MRU, won the competition with his melodious voice and also received cash prize
- The literary society of Manav Rachna University, REHNUMA organised a Debate competition on February 27, 2020 on the topic “Protests against CAA- valid or just another trouble for the common man”. This topic was chosen considering the current situation of Shaheen Bagh and North East Delhi.
- Department of Student Welfare, in collaboration with Clan Water Sharks celebrated International Women’s day along with the upcoming festival Holi on 5th March 2020.
- Manav Rachna Peace and Sustainability Club organized Power To Youth, A Holistic Wellness Programme for the students and faculties of Manav Rachna on 12.3.20. The speaker guest for the session was Mr. Sandeep Sharma who has 25 years of industrial experience and has been conducting sessions and workshops on soft skills, Holistic Wellness, personality development at some of the most premium institutions and corporates across India.
- Felicia, the art society of University, organized its first ever makeup competition, Maquillage, for the students of MREI on 12th March 2020. Tanu and Jyoti Sharma 2nd semester, Faculty of Education from Forest Rhinos won this competition and were honoured with cash prize.
- Felicia, the art society of University, organized a water colour painting and calligraphy workshop for the students and faculty members of MREI on 12th March 2020. The purpose of workshop was to learn, improve and expand watercolour painting and calligraphy skills.
- In this pandemic time when we have to stay at home all day, it’s important to look after our health, to tell the importance of yoga for a healthy body and peaceful mind MANAV RACHNA YOGA SESSION was organized on 21.6.20
- Quarantine talent hunt called ‘Teachers under a Spotlight’ is a continuous talent hunt series for teachers in which different teachers submit a video of them portraying their talents. Each day a different talent was highlighted on the Students welfare Instagram handle. The entries had talents from singing and dancing to cooking and sketching.
- The Department of Student Welfare in collaboration with IUCN CEC organized a photography competition on 6.6.20. Keeping lockdown guidelines and social distancing in mind, the participants were required to capture nature in its true essence. The theme for this photography competition was “Biodiversity”. The competition got around 47 entries and the participants clicked some really beautiful pictures.

- Manav Rachna Peace & Sustainability Club organized a discussion on Role of Youth Against COVID-19. This online discussion was conducted by Mukesh Das, student coordinator for the event under the aegis of Dr. Geeta Thakur, Professor-Manav Rachna University. The participants collectively and enthusiastically participated to discuss the role that youths can play in countering the current outbreak.
- Lockdown Photography Challenge, an online photography challenge was organized, participants were to send one innovative picture which they had clicked during the COVID-19 lockdown on 16.4.20 .The competition saw more than 50 entries.











**LOCKDOWN PHOTOGRAPHY CHALLENGE**  
 YOUR IMAGINATION IS THE ONLY BOUNDARY  
**CASH PRIZE WORTH Rs1000**  
 Last Date - 16th April '20

**Rules for the competition:**  
 1. Only one entry will be considered per participant.  
 2. Participants must follow @bswstudentcouncil and @bswnews.  
 3. Best pictures will be selected by us and will be uploaded on our Instagram page.  
 4. The final result will be according to votes on your photograph posted on our page.  
 5. Each like/comment of 1 vote and only votes of the followers of @bswstudentcouncil and @bswnews will be considered.  
 6. Open to all ages and categories of photography.  
 7. If we are not 100% following the rules, that entry will be disqualified without any prior notice.

BSW STUDENT COUNCIL | @BSWSTUDENTCOUNCIL | @BSWNEWS | @BSWNEWS | @BSWNEWS | @BSWNEWS



### 7.3 Visit to Industries & Exhibitions

- To expose the students to the workings of an arbitration centre, the Centre for Excellence on Alternative Dispute Resolution (CADR) arranged a **field visit to the Delhi International Arbitration Centre (DIAC)**, which is annexed to the Delhi High Court.
- Under the supervision of Dr. S. K. Bose and Mr. Amit Kumar, Faculty of Law, Manav Rachna University, a team of law students visited the **Supreme Court Museum on July 26, 2019**.
- First year law students of Faculty of Law, attended a "**Tribute Paying Ceremony**" to the **Martyrs of 'Pulwama Attack'** on the occasion of **73rd Independence Day**. The program 'Jhanda Uncha Rahe Humara' was organized by ABP News. A tribute was paid to our martyrs by none other than Mr. Akshay Kumar, a very versatile and accomplished actor, who is dedicated to the cause of welfare of the families of those soldiers, who sacrifice their life
- On **21 August 2019**, the law students had the rare opportunity to meet **His Excellency, Mr. Fleming Duarte, the Ambassador of Paraguay**. The delegation of four students led by Mr. Shobhit Mohan, visited the Paraguay Embassy recently.
- Law Students from Faculty of Law attended a seminar on **9 August 2019** on "**Human Resource Development and Right to Information**". The seminar was organized by **Central Information Commission (CIC) at SCOPE Complex, New Delhi**.





- First Year BBA Students visited the Honda Motorcycle and Scooter India Pvt. Ltd. (HMSIL) located in Manesar, Haryana on 1st August 2019. Prof. Jaideep, Director Industry Relations organized this industrial visit. Faculty members- Mr. Subodh Saluja and Dr. Sachita Yadav accompanied the students for the visit.
- Department of Management and Commerce organized an Industrial visit for BBA OM Semester I & II students to Daikin Air Conditioning India Pvt. Ltd, Neemrana warehouse facility on 1st October 2019. Prof. Subodh Saluja and Dr. Rashi Banerji escorted the students to the industrial visit. It was a great learning experience for the students.
- Department of Management and Commerce organized an Industrial visit for BBA Healthcare Management students (Semester 1 and semester 3) to Apollo Hospital, Delhi on 5th Nov 2019.
- The Department of Management & Commerce organized an industrial visit to Medanta Medicity, Gurugram for the students of BBA Healthcare Management on 27th Jan 2020. Prof. Jaideep Singh (Director Industry Interaction) and Dr. Parul Jhajharia (Dean and HOD-Department of Management and Commerce) accompanied the students.
- Department of Management and Commerce organized an Industrial visit for BBA –Operations Management students (Semester II & IV) to Jaypee Sidharth Hotel, Delhi on 4th Feb 2020.
- Manav Rachna University organized an Industrial Visit to Infosys Ltd., Chandigarh Development Centre, for the First Year students of B.Tech. Computer Science & Engineering (CSE), CSE Specialized Programs (Data Science & Machine Learning, Digital Transformation Engineering, being run in collaboration with Xebia) & ECM students recently.



## 7.4 ORIENTATION 2K19

An Orientation Programme was organized to welcome the First Year Engineering, Sciences, Law, Education and Management students to the Manav Rachna family. The 3-week programme was conducted to accustom the students with the work culture at the University. The programme commenced with a havan ceremony to radiate positivity and pray for the student's progress in academics, achieving a bright future. The new entrants and their parents were welcomed, and a presentation was exhibited, giving them glimpses of the galaxy of Manav Rachna Educational Institutions, the regulations and the academic philosophy of the Institution. To create a sense of belonging towards the University, an introduction session of all the Deans, Director's, HODs, Faculties and Administrative staff was given to the new entrants.

As a unique blend of learning, fun and realization, the programme aimed at providing a smooth transition for the students into the new environment. Various bridge courses were run for the students to give them introductory knowledge about the departmental as well as interdisciplinary courses. Industrial talks were planned for the students where the Industry experts shared their technical expertise and the increasing Industry demand for good Engineers. In addition to this, alumni talks were organized who shared their experiential learning at Manav Rachna University and their journey thereafter. The Corporate Relations and Career Management Centre team briefed the students about their placement prospects. Various extra-curricular activities were planned for the holistic development of the new entrants. Literary, performing arts and sports activities were organized to develop a competitive spirit among the students. A concluding session was delivered by our Honourable Vice Chancellor, who motivated the students and enlightened them with the ethos of perseverance and self-belief.

An Industrial visit was planned by all the departments so as to destine the students and motivate them for the same.

### 9th July 2019 Orientation Programme





## 7.5 Third Convocation Ceremony

The Convocation of 2019 remained a day of great joy and exhilaration for the graduands and their parents who went down the memory lane, reminiscing university days while re-uniting with their friends and Alma mater. 226 degrees were awarded to under-graduate and post-graduate students of Manav Rachna University by the Chief Guest Sh. Manoj Kohli, Executive Chairman, Soft Bank Energy in the presence of Smt. Satya Bhalla, Chief Patron, MREI; Dr. Prashant Bhalla, President, MREI; Dr. Amit Bhalla, VP, MREI; Dr. I K Bhat, Vice Chancellor, MRU; Dr. Arundeeep Singh, Principal, MRDC; Dr. Sanjay Srivastava, VC, MRIIRS; and several veterans from the academic, corporate, government and administrative bodies. This was the third convocation of Manav Rachna University. President's Medal, Vice President's Medal, Patron's Medal, Vice Chancellor's Medal, Student Leadership medals and Outstanding Academic Achiever medals were bestowed upon students on the occasion.

On this solemn occasion, MRU also bestowed a Honoris Causa degree upon Dr. Narinder Dhruv Batra, President, Indian Olympic Association in recognition of his conscious contribution in sports, social and cultural philanthropy.

While congratulating all the graduating students, the Chief Guest Sh. Manoj Kohli said: "As you step into the professional world, maintain, and retain the three precious traits of honesty, hard work and humility. In your next ten years from now on, build a domain expertise because the respect of the future will be for people with deep domain knowledge, people who are experts in a particular field". The convocation memoir #Pratibimb was also released on the occasion. The distinguished alumni of the institution were present who handed over the alumni flag to the newest members (graduands) of the alumni association.





## 7.6 Alumni Network

MRU also has an Alumni Association to cater the needs to future students and establishing an everlasting relationship with our Alma matter. Manav Rachna Alumni Association organized a series of Alumni Events, Lectures for the current students during the year. Purpose of this interaction is to make the student aware of culture in the industries, options available to students after B Tech, latest technological trends/upcoming technologies in the relevant streams and to motivate students about progressing from university life to professional life keeping hand in hand with the basic attributes of life which are time management and positive attitude.

### Alumni LECTURES

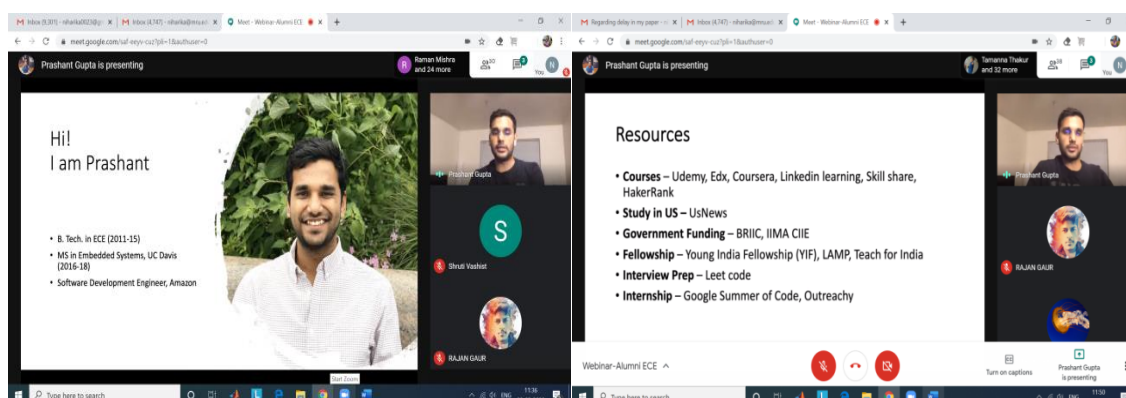
#### Alumni Lecture (2019-20) Mechanical Engineering Department

| Name            | Date       | Batch   | Topic                                     |
|-----------------|------------|---------|---|
| Shailesh Rathe  | 25/01/19   | MRCE-18 | Application of Sap in Mechanical Industry |
| Kirti Virmani   | 22/02/19   | MRCE-17 | Automobiles-Industrial Revolution         |
| Chetan Dilawari | 04-11-2019 | MRCE-17 | Overview of Fan Industry in Hvac          |
| Gautam Ahuja    | 17/09/2019 | MRCE-19 | Automation in Robotics                    |
| Vansh Mudgil    | 19/02/20   | MRCE-17 | Anti-Collision Mechanism for Vehicle      |
| Lakshay Sharma  | 30/04/2020 | MRCE-17 | Industry Consequences Against Covid-19    |
| Chetan Dalwari  | 23/05/2020 | MRCE-17 | HVAC                                      |

- **Interaction with CSE Alumnus - Mr AJ Gauravdeep (BTech CSE 2005-09 Batch) on 7th May 2020:** AJ Gauravdeep, the alumnus of B.Tech CSE 2005-2009 Batch, interacted with the students from USA and enlightened them towards the right path for their wonderful and prosperous future. AJ Gauravdeep is currently working as Risk Foundation Manager with eBay, California and also the founder of O' BRUCE, a non\_profit organization aimed at improving access to quality education for the unprivileged.
- Department of Electronics and Communication Engineering, Manav Rachna University organized a Webinar which was delivered by ECE Alumnus Mr. Prashant Gupta (2K11-15 Batch) on "**Ensuring Certainty in Uncertain Times-Gear up for the Industry**" for B.Tech students on 9th May, 2020. Mr. Prashant is currently working as a Software development Engineer with Amazon, USA. He also presented various career options for students to pursue after graduation as



per the recent trends in the market and also various open resources available for gaining skillset required. The students very keenly interested to talk to him and asked queries regarding startups in India, Career options in abroad etc.



## 7.7 Expert Lectures

- **The Manav Rachna Law Dialogues - First Edition:** The Faculty of Law launched a new initiative, "The Manav Rachna Law Dialogues". The first edition of this series of dialogues was held on 7<sup>th</sup> March 2020 on the theme, "Internships: Bridging the gap between expectations and reality". The panelists at this webinar were **Manish Lamba** Senior Vice President (Legal) DLF, **N Swaminathan** General Counsel, Tower Vision, **Prabhu Tandon** Partner, Sai Krishna Associates and **Sachin Kalra** Deputy General Counsel, HT Media.
- **The Manav Rachna Law Dialogues - Second Edition:** "An Overview of Anti-Corruption Laws in India" was the theme of the second edition of The Manav Rachna Law Dialogues that was held on 29 April 2020. Held in online mode, the distinguished speaker was **Vikas Pahwa** Senior Advocate who is also an Honorary Professor for Criminal Law at the Faculty of Law. The opening remarks were given by **Ajay Thomas** Director, Faculty of Law and the moderator for the session was **Divyakant Lahoti** AOR and Advocate, Lahoti Advocates.
- On **28 November 2019**, Faculty of Law, Manav Rachna University organized the **4th Expert's Lecture on Law**, which was delivered by Honorable Justice A. K. Sikri, Former Judge, Supreme Court of India and presently Judge, International Commercial Court, Singapore. The topic of the lecture was 'Supreme Court as the Custodian of the Constitution'.
- **Mr. Atyab Siddiqui**, an acclaimed Legal professional and educationist, interacted with the law students on **1 August 2019** on the very pertinent topic of 'Attributes of a successful lawyer' at Faculty of Law, Manav Rachna University.
- Resource persons from **Forensic Investigation and Consultancy Services (FICS)** visited the Faculty of Law on **6 August 2019**, to give a lecture on 'Cyber Forensic Investigation' for the students of law.

- The first training workshop on ADR under the aegis of the CADR was conducted by **Advocate AVS Subramanyum**, on 26 September 2019.
- On **18 February 2020**, Centre of Excellence on Alternative Dispute Resolution (CADR) at the Faculty of Law, Manav Rachna University organised a guest lecture by **Mr Abhinav Bhushan, South Asia Director, International Chamber of Commerce Arbitration & ADR.**
- The Moot Court Committee at the Faculty of Law, Manav Rachna University organised a moot court training workshop by **Mr Tariq Khan, Principal Associate, Advani & Co.** on **25 February 2020.**
- The Faculty of Law organised a subject talk on 'Role of Institutions in National Emergency: COVID-19' on April 22, 2020. The speakers for the session were Mr. Anand Sourabh, Indian Information Service Officer, GOI; Prof. Naved Jamal, Professor, Jamia Millia Islamia, and Ms. Neha Sinha, Consultant to ICWA.
- The Faculty of Law organised an **In-house workshop on CV Building and Professional Communication** on 27 February 2020 by Mr Ajay Bhatia. The workshop was attended by law students and faculties and they took a keen interest in knowing how to put their strengths and weakness into their CV. Mr. Bhatia talked about how to highlight achievements in the CV. He also suggested the students about do's and dont's that must be followed during an Interview.



- The Moot Court Committee organised the 2nd Intra Moot Court Competition. The problem involved issues relating to Constitutional Law and Family Law. Each team comprised of two students. The faculty members judged the students on six grounds.



**Online Talk On**

**Role of Institutions in National Emergency: COVID-19**

**Speakers**

- Mr. Anand Sourabh  
Indian Information Service Officer, GOI
- Prof. Naved Jamal  
Professor, Jamia Millia Islamia
- Ms. Neha Sinha  
Consultant to ICWA

Contact for more details: 8527099099

**Enforcement of Foreign Arbitral Awards: Recent Developments**

April 23  
5 pm to 6:15 pm IST

**SPEAKERS**



Justice Prateek Jalan  
Judge High Court of Delhi



Gourab Banerjee  
Senior Advocate

**WEBINAR:**

**Support for or Interference in the Arbitral Process – A Discussion of Recent Decisions in the English and Indian Courts**

April 28  
4:00 pm IST

**SPEAKERS**



David Joseph QC



Ciccu Mukhopadhyaya

## 7.8. Webinars by External Experts

- Webinar on ‘Enforcement of Foreign Arbitral Awards: Recent Developments’ supported by Faculty of Law and CADR on **23 April 2020**. The speakers for the session were, Justice Prateek Jalan, Judge, High Court of Delhi and Gourab Banerji, Senior Advocate, Supreme Court of India and the moderators were, Shashank Garg, Partner, Advani & Co, and Omar Ahmad, Partner, Cyril Amarchand Mangaldas.
- Webinar on ‘Support for or Interference in the Arbitral Process’ was held on April 28, 2020. The speakers were David Joseph QC; Ciccù Mukopadhyaya, Senior Advocate; and the moderators were, Shashank Garg, Partner, Advani & Co and Omar Ahmad, Partner, Cyril Amarchand Mangaldas.
- Webinar on Appointment of Arbitrators: Concepts, Cases and Issues on **April 29, 2020**. The speakers for the day were Honorable Justice Sanjay K Kaul, Supreme Court of India and Honorable Justice Rajiv Shakti, High Court of Delhi.
- Webinar on Arbitration in India: The Good, the Bad, and the Ugly on **May 2, 2020**. The speakers for the session were Honorable Justice Ms. Indu Malhotra; Salim Moollan QC, Former Chairman, UNCITRAL; and Gourab Banerji, Senior Advocate, Supreme Court of India.
- A masterclass on “Fundamentals of Examination-in-Chief and Cross-Examination in a Civil Suit” **was held on 8<sup>th</sup> May 2020**. Justice Pradeep Nandrajog (Former Chief Justice, Bombay High Court) and Justice Rajiv Sahai Endlaw (Judge, Delhi High Court) were the two resource persons.
- The third edition of the “Back to Basics” series of webinars saw a lively discussion on “Claim of Damages under the Indian Contract Act”, where the distinguished speakers were Justice Jayant Nath (Judge, Delhi High Court) and Senior Advocate Amit Sibal. It was organised on **15<sup>th</sup> May 2020**.
- The CADR jointly with UNCITRAL National Coordination Committee for India (UNCCI) held a webinar on **16<sup>th</sup> May 2020** on the emerging area of Investor State Dispute Settlement (ISDS). The panel comprised of Dr Gabrielle Kauffman-Kohler (President, International Council for Commercial Arbitration), Marika Paulsson (Senior Advisor, Albright Stonebridge Group) and Promod Nair (Advocate and Arbitrator, Arista Chambers).
- The CADR jointly with UNCITRAL National Coordination Committee for India (UNCCI) held a webinar on **27<sup>th</sup> May 2020** on “Mediation as a Tool for Conflict Management”.
- A webinar on “Section 9: Power of the Court to grant interim relief in arbitrations” was organised by the Faculty of Law on **31<sup>st</sup> May 2020**.
- The Faculty of Law joined hands with the United Nations Commission on International Trade Law (UNCITRAL) and the UNCITRAL National Coordination

Committee for India (UNCCI) to host a webinar on cross border insolvency on **6<sup>th</sup> June 2020**.

- **23 JUNE 2020**-MRU-DMC organized a training for BBA Final Year students. The course was divided into four modules viz FMCG Overview Typical Organization Structure, Area Planning, Field Systems & Distribution Systems & Incentives, Rewards and Recognitions.
- **27 SEPT, 2019** An interactive session was organised for BBA F&A US CMA Integrated students. The session was taken by Mr. Kuldeep Bhadana, CPA (US); CMA (India), currently working as Senior Manager, Regulatory Reporting, United Health Group.
- **27 JAN 2020**-The Entrepreneurship Cell of Manav Rachna University organized an awareness seminar for the students in association with Bharatiya Yuva Shakti Trust (BYST).
- **Xebia Webinar on 'Unsupervised Learning and Neural Network'****30th June 2020**: Department of Computer Science & Technology, Manav Rachna University organized a webinar on "Unsupervised Learning and Neural Network", in collaboration with Xebia, for the Third year students of B.Tech CSE with specialization in Data Science & Machine Learning. The speaker for the same was Mr. Ashish Pandey, Xebia. He gave the basic idea of machine learning, the difference between supervised and unsupervised learning, artificial intelligence, and neural networks. Various learning algorithms were put forward during the presentation which can be used to implement real life problems. Students also got to know the industrial importance of artificial intelligence and neural networks.
- **Mind & Meditation | Online session on 20<sup>th</sup> May 2020** **"If you have a stress-free mind, your thoughts will be positive"~ Sri Sri Ravi Shankar**: Keeping this in mind, the Department of Computer Science & Technology, Manav Rachna University, organised an online session on "Mind and Meditation" for the students and faculty members. The session was taken by Dr. Shobha, Deputy Registrar, Manav Rachna University.
- Live Talk Show by IndiaSpark| Future of Jobs in Financial & Technology Sector during Covid-19 Times on 18<sup>th</sup> May 2020.
- Seminar by **Brainstorm Achievers On "GATE preparation"**5<sup>th</sup> March 2020: The Department of Computer Science & Technology organized a session for GATE preparation for the students of B.Tech. CSE 2<sup>nd</sup> and 3<sup>rd</sup> year. Mr. Saroj Kumar Suman, IIT Delhi Alumni and Brainstorm Achievers Founder, was the resource person for the session.
- Seminar by **upGrad On "Online Higher Education"**12<sup>th</sup> March 2020: Department of Computer Science & Technology, Manav Rachna University, organized a session on upGrad Online Higher Education Platform for B.Tech. CSE 3rd Year students. Mr. Gaurav Sharma and Ms Meghna, currently working



with India's Largest company for Higher Education - upGrad, were the resource persons for the session.

- **STC by NITTTR (ICT based) On “Big Data Analytics”3rd-7th Feb 2020:** Department of Computer Science & Technology, Manav Rachna University, organized **one week ICT based Short Term Course on Big Data Analytics by NITTTR Chandigarh** during **3<sup>rd</sup> Feb 2020 till 7th Feb 2020**. Around 45 faculty members from MRU and MRIIRS participated in the STC. The event was coordinated by **Prof. Anu Priya Sharma and Prof. Ankur Kumar Aggarwal**.
- Expert Talk by Mr. Kartikeya Raman on “Data Privacy Awareness” 31<sup>st</sup> January 2020.
- ‘Train the Trainer’ Program by Xebia on “Modern Web and Mobile frameworks” and “Unsupervised Learning”23<sup>rd</sup> to 27<sup>th</sup> Nov 2019.
- **Expert Talk by Xebia on “Software Craftsmanship” 18<sup>th</sup> Nov 2019:** Department of Computer Science and Technology, Manav Rachna University, in association with Xebia, organized a workshop on Software Craftsmanship.The expert for the workshop was Mr. Rahul Sharma, Director – Delivery, Xebia with over 14+ years of industry experience. He explained key design concepts like SOLID principles, Technical Debt, Code Smells, Refactoring etc. All concepts were accompanied with example codes to understand them better.Overall it was a knowledgeable session for 2nd Year B.Tech CSE students, specializing in Digital Transformation.
- **Workshop by Xebia on “Understanding Basics of Agile”15<sup>th</sup> Nov 2019:** Department of Computer Science and Technology, Manav Rachna University, in association with Xebia, organized a workshop on ‘Understanding Basics of Agile’ on November 15, 2019.The expert for the workshop was Ms. Meetu Singh, Director – Agile Consulting & Transformation, Xebia. She possesses 20+ years of experience as Business Excellence Leader, Agile Coaching, and Consulting & Training.
- **“Demystifying Artificial & Machine Learning”15<sup>th</sup> Nov 2019:** Department of Computer Science and Technology, Manav Rachna University organized a Workshop on ‘Machine Learning and Supervised Learning’ on November 15, 2019, in association with Xebia.
- **Workshop by Xebia On “Demystifying Artificial & Machine Learning”14<sup>th</sup> Nov 2019:** Workshop on “Demystifying Artificial & Machine Learning” was organised recently by the Department of Computer Science and Technology, Manav Rachna University, in collaboration with Xebia. The resource person for the workshop was Mr Divyanshu Sinha, Program Manager, Xebia. He is IBM certified in Hadoop and Deep Learning using Tensorflow. He is presently pursuing his Doctorate in the area of AI & Machine Learning.
- **Workshop by Dr. Mayank Aggarwal On “BlockChain Technology”16<sup>th</sup> Oct 2019:** One Day Workshop on "Blockchain Technology" was organised on 16th

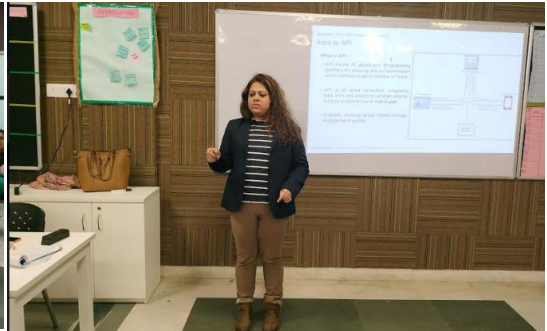
October 2019 by the Department of Computer Science and Technology, Manav Rachna University. The resource person for the workshop was Dr. Mayank Aggarwal, Associate Professor & HoD Computer Science & Engineering at Gurukul Kangri University, Haridwar.

- Expert Talk by Anubudh Academy On “Cracking the Technical Interview”<sup>31<sup>st</sup></sup> July 2019:** Department of **Computer Science & Technology, Manav Rachna University** organized a seminar on **“Cracking the Technical Interview: Get that high paying job”** for B.Tech. CSE 3rd & 4th year students. Vineith Kaul (MS Georgia Tech Atlanta, USA) & Swati Raina (MS University of Maryland College Park, USA), Founders – Anubudh Academy were the resource persons for the talk.
- Workshop on “Matlab and Mathematics Magic” by Mr P. Vikram Kumar on 06th March 2020:** The Department of CST organized a workshop on Matlab and Mathematics Magic. Mr P. Vikram Kumar, who has been conducting similar workshops across the country for the past few years, was the resource person. Mr. Vikram is an IIT Chennai alumni, Founder member of Padaayi and Project Associate since 2018 at IIT Chennai









## 7.9. International Collaborations and Linkages

Manav Rachna University signed two Academic Agreements with two foreign universities during the academic session July 2019-June 2020. The details are as follows:

- Yuan Ze University, Taiwan (6th September 2019)
- Wentworth Institute of Higher Education, Australia (30th September 2019)

The objective of the collaborations is to foster and develop cooperative relationships between the two institutions through activities like student and faculty exchange, joint research and consultancy activities, cooperation in curriculum development, special short-term academic programs and projects and participation in seminars and academic activities.

- The Faculty of Law organised a series of five webinars jointly with UNCITRAL's Regional Centre for Asia Pacific and the UNCITRAL National Coordination Committee for India (UNCCI). UNCITRAL stands for the United Nations Commission on International Trade Law, and it is the Vienna-based primary legal body of the United Nations system in the field of international trade law. These webinars covered topics relating to the current work being done by UNCITRAL, including mediation, commercial arbitration, insolvency, and investor-state dispute settlement (ISDS). The speakers at these webinars were a veritable Who's Who of the legal world and included Justice Indu Malhotra (Supreme Court of India), Justice Madan Lokur (Supreme Court of Fiji), Salim Moollan QC (Mauritius/UK), Judge Allan Gropper (USA), Judge Srdan Simac (Croatia), Gourab Banerji Senior Advocate, Professor Gabrielle Kauffman-Kohler (Switzerland), and Professor Lawrence Boo (Singapore). (May-September 2020).

## 7.10 Green Initiatives of the University

"To produce human resources sensitive to issues of Environment and Sustainable Development" and "To develop Environment and Sustainable development as a thrust area of research and development" as our mission statements, the emphasis is laid on developing a robust institutional culture of sustainability and environmental awareness.

The concept of Sustainable Development has been integrated into all the, academic/co-and extra-curricular/administrative, domains of the university.,

**Introduction of Electives:** Electives like Environment and Sustainability, E-waste Management, Green Computing, Environment Management and Remote Sensing, are offered to the students to inculcate environment awareness and multidisciplinary problem-solving approach and to facilitate collaborative learning across different disciplines.

**Green Mission Policy:** The University has Green Mission Policy in place for Environment Sustainability, Energy and Water Conservation. The objective of this policy is to ensure that the university operates sustainably by managing its energy and water consumption with the usage of energy and water efficiently, wisely and responsibly.,

**Environment Awareness Workshops / Seminars:** The students and faculty members are sensitized on environmental issues like Composting, Bringing butterflies home through various workshops and lectures/seminars/webinars.,

**Research:** The academic workforce of the university - faculty members and students are engaged in the research to find optimal solutions to various environmental challenges like water pollution, solid waste management. Patents like dustbins to handle sanitary wastes, biodegradable sanitary napkins have been filed by the faculty and students.,

**Extra- and Co-curricular Activities:** The students are duly mentored by their faculty members to work on various projects and showcase their talents at various national and international platforms. Manav Rachna has a well-established Manav Rachna Life Skills Programme, MRLSP, – the concept of the CLAN to provide a rich nurturing ground for honing the life skills of the students. There are 4 Clans, each represented by an environmental element and a mascot – The Air Falcons, The Water Sharks, The Forest Rhinos and The Wild Cats. The activities are conducted throughout the year., Holistic Development via various Dean Students' Welfare - Student Council coordinated innovative competitions like "tik- tok challenge", "Surshetra-Online Solo Singing Competition"... and meditation and fitness-oriented online sessions.,

**The university has embraced GREEN PRACTICES, some of the measures are listed below:**

**Water Conservation:**

- Rain Water Harvesting: Manav Rachna University has adopted Rain Water Harvesting and groundwater recharge at three sites on the campus.
- Water treatment: Using recycled/treated water for Horticulture and flushings,

**Alternative Energy:**

Institute has installed a grid-connected 10 KWP solar PV at car parking & grid-connected 308 KWP rooftop, solar PV system.,

- Partial installation of timers on water refrigeration units has helped in energy conservation. LED lamps, motion sensors, solar panels, and solar water heating systems in hostels have helped in power conservation.

- We have separate contracts for disposal of hazardous material such as e-waste, bulbs/tube lights, old, batteries, old engine oil, old batteries, etc. Vendors are approved by Haryana Pollution Control Board.
- Partial installation of timers on water refrigeration units has helped in energy conservation. LED lamps, motion sensors, solar panels have been installed at various points on the campus.

### **Waste Management:**

**Recycling of Wastes:** Metal and paper wastes are disposed of by recyclers. During instructional activities, reducing and reusing paper by adopting measures like using both sides of the paper, online examination, reduced the distribution of printed flyers and training material, printing on-demand, etc.,

**Installation of a composter:** We have installed an organic composter. The composter transforms the food waste from the entire campus and grass into organic compost within 24 hrs. The entire operation is fully automatic, noise-free, odor-free and does not generate any harmful gases or by-products. Its capacity is 75, Kgs per day and will produce approx 7.5 Kg of compost daily.,

**Waste disposal:** There are separate contracts for disposal of hazardous material such as e-waste, bulbs/tube lights, old batteries, old engine oil, old batteries, etc. Vendors are approved by Haryana Pollution, Control Board.

Apart from this, MRU has played a pivotal role in awareness drives conducted under Haryana Env. Protection Foundation, HEPF. Faridabad district was divided into four Zones.

A Nodal center was chosen for each zone where government and public schools students, teachers and leaders participated. A zone was dedicated to colleges and universities too. The objective of the awareness drives was to mobilize the youth to identify their role in environmental protection.

## **CHAPTER: 8**

### **INTERNAL QUALITY ASSURANCE CELL**

Based on the guidelines of the National Assessment and Accreditation council, Manav Rachna University has constituted an Internal Quality Assurance Cell to take quality initiatives for improving the academic and administrative performance of the institution. Key objectives of IQAC include organization of activities relating to the enhancement of educational quality and development & application of quality parameters. IQAC cell is engaged in developing mechanisms for timely, efficient, and progressive performance of the various academic and administrative units of the university. Under the Cell periodic academic review of the various departments were organized, which supports taking specific quality improvement measures for further improvement. The Cell plays a key role in promoting a quality culture in the University. Faculty & Staff training, workshops and expert lectures are organized by the cell from time to time to train faculty and students for enhancing the quality of education and student support services.

In Academic Session 2019-20, following new practices were introduced addressing to quality improvement

Criterion wise departmental quality reviews as required by NAAC

- Quarterly AQAR quality check for departments
- Online teaching and assessment introduced during COVID 2020
- CAPs introduced for BT and CO attainment
- CO assessment introduced in examination system and course plans
- SWOT analysis

#### **8.1. FDP Organized**

| <b>Seminars/ Workshops organized under IQAC/Departments<br/>AY 2019-20</b> |   |  |                     |   |
|--|---|--|---------------------|---|
| <b>S. No</b>   | <b>FDP Title</b>                            | <b>Facilitator Speaker</b>   | <b>Organization</b> | <b>Date/Duration</b>                                    |
| 1  | Workshop on Scientific Writing Using LaTeX. | Dr. Dinesh Tripathi<br>Dr. Ankita Gaur<br>Dr. Advin Masih<br>Mr. Ramapati Maurya | MRU                 | 17 <sup>th</sup> – 18 <sup>th</sup> Jan 2020/<br>2 days |
| 2  | Advance Neural Network                      | Mr. Aashish Sunil Pandey   | Freelancer, Xebia   | 22-24 June 2020/3 days                                  |



|    |   |                                      |                           |                          |
|----|---|--------------------------------------|---------------------------|--------------------------|
| 3  | DevOps and Test Automation                                  | Mr. Mohsin Khursheed                 | Datamatics Digital, Xebia | 25-30 June 2020/ 4 days  |
| 4. | Second series Cloud Degree Faculty Professional Development | Hopkins, Lindsay and Teston, William | AWS                       | 13 May 2020/ 1 day       |
| 5. | Virtual Lab   | Mr. Prateek                          | IIT, Delhi                | 16 May 2020/ 1 day       |
| 6  | Modern Web and Mobile frameworks                            | Ms. Sujata Batra                     | Freelancer with Xebia     | 23-27 Dec 2019/ 5 days   |
| 7  | Unsupervised Learning                                       | Dr Girisha Gar                       | Freelancer with Xebia     | 23-27 Dec 2019/ 5 days   |
| 8  | Supervised Machine Learning                                 | Mr. Nitin Gujral                     | Freelancer with Xebia     | 10 -14 June 2019/ 5 days |
| 9  | Software Craftsmanship                                      | Mr. Vipul Jain                       | Xebia                     | 27- 29 June 2019/ 3 days |
| 10 | Renewable and Sustainable Energy Conversion systems         |                                      | MRU                       | June 15-20, 2020         |

## 8.2 Public Lecture Series

| S. No. | Edition                             | Name of the Speaker                                    | Title of the Lecture   |
|--------|-------------------------------------|--|--|
| 1      | Seventh Manav Rachna Public Lecture | Dr. Aman Hingorani, Advocate at Supreme Court of India | Kashmir Issue: The Way Forward                                     |
| 2      | Eighth Manav Rachna Public Lecture  | Mr Gourab Banerji, Senior Advocate                     | Continuing relevance of Fundamental Duties in these COVID-19 times |



### 8.3 SWAYAM -NPTEL

#### NPTEL Report July-Dec 2019

Manav Rachna University SWAYAM-NPTEL Local Chapter got “Active Status” (2nd Rank in Haryana) with 11 National Toppers, 6 Gold , 56 Silver, 110 Elite and 100 successfully completed certificates (Total 262 certificates).

The MOOCs enrollment and certification details are as under:

|   |      |
|---|------|
| Total Enrollments                                     | 1131 |
| Total Exam registrations                              | 339  |
| Total number of students appeared for Credit Transfer | 181  |
| Faculty certified for NPTEL-FDP courses               | 12   |

The department-wise distribution of students appearing for credit transfer is shown below:

| Dept.                        | CST | EDU | ECE | MATHS |
|------------------------------|-----|-----|-----|-------|
| Students for credit transfer | 117 | 39  | 6   | 19    |

A large number of students and faculty members have achieved National Topper Positions, Elite-Gold, Elite, and successfully completed certificates. The certificate category details are as follows:

| Certificate Category   | No. of Students | No. of Faculty |
|------------------------|-----------------|----------------|
| National Topper        | 8               | 3              |
| Elite                  | 107             | 3              |
| Elite+Gold             | 3               | 3              |
| Elite+Silver           | 50              | 6              |
| Successfully Completed | 88              | 2              |
| Total=262              | 248             | 14             |

**The Faculty and Students National Toppers:** Details are shown In Table 1 and Table 2:

| Sno | Name                      | Course Name                              | Department | Topper       |
|-----|---------------------------|--|------------|--------------|
| 1   | Dr Chhavi<br>Kulshreshtha | Interpersonal Skills                     | English    | Topper of 5% |
| 2   | Mamta Arora               | Python for Data<br>Science               | CST        | Topper of 5% |
| 3   | Dr Versha Vahini          | Gender Justice and<br>Workplace Security | LAW        | Topper of 5% |

### Faculty National Toppers, July –Dec 2019

| S.no | Name            | Course Name                                     | Department | Topper       |
|------|-----------------|---|------------|--------------|
| 1    | Ayushi Maurya   | Corporate Social Responsibility                 | ECE        | Topper of 2% |
| 2    | Rahul Thakur    | Introduction to Machine Learning                | CST        | Topper of 1% |
| 4    | Gaurav Chhikara | Introduction to Internet of Things              | CST        | Topper of 5% |
| 5    | Anurag Rawal    | Introduction to Internet of Things              | CST        | Topper of 5% |
| 6    | Somi Patel      | Developing Soft Skills and Personality          | EDU        | Topper of 2% |
| 7    | Ayushi Maurya   | Innovation Business Models and Entrepreneurship | ECE        | Topper of 5% |
| 8    | Naina Goyal     | Developing Soft Skills and Personality          | EDU        | Topper of 5% |
| 9    | Mansi Mangla    | Discrete Mathematics                            | MATHS      | Topper of 5% |

### Student National Toppers details, July – Dec 2019

The MOOCs enrollment and certification details are as under:

| SEMESTER  | 2019-2020 |
|---|-----------|
|   | EVEN SEM  |
| 1. No of courses offered to students through SWAYAM?          | 25        |
| 2. No of students registered in SWAYAM courses?               | 151       |
| 3. No of students appeared in examination for SWAYAM courses? | 137       |
| 4. No of students passed in SWAYAM courses?                   | 137       |
| 5. No of students benefited with SWAYAM credit transfer?      | 137       |

The department wise distribution of students appearing for credit transfer is shown below:

| Semester   | 2019-2020<br>Even Sem. |     |     |       |         | Total |
|--|------------------------|-----|-----|-------|---------|-------|
|  | CST                    | EDU | ECE | Maths | Physics |       |
| 1. No of Courses Offered to Students Through Swayam? | 12                     | 4   | 7   | 1     | 1       | 25    |
| 2. No of Students Registered in Swayam Courses?      | 41                     | 57  | 22  | 23    | 8       | 151   |

|  |    |    |    |    |   |     |
|--|----|----|----|----|---|-----|
| <b>3. No of Students Appeared in Examination for Swayam Courses?</b> | 39 | 54 | 13 | 23 | 8 | 137 |
| <b>4. No of Students Passed in Swayam Courses?</b>                   | 39 | 54 | 13 | 23 | 8 | 137 |
| <b>5. No of Students Benefited with Swayam Credit Transfer?</b>      | 39 | 54 | 13 | 23 | 8 | 137 |

Due to Covid situation, only course completion letters have been given to students and faculty in place of NPTEL certificates.

## 8.4 VIRTUAL LABS

### Virtual Labs Workshop (9th September, 2019)

Manav Rachna University was declared as Nodal Centre for Virtual Labs, in association with IIT, Delhi, on 10th April, 2018. In continuation with this series for Virtual Labs workshops MRU organized a 4th workshop on “Virtual Labs” in association with IIT Delhi on September 9th , 2019. Subsequently workshops were organised on 30th January 2020 and 16th May 2020. An hour session on “Awareness of Virtual “ was conducted for new entrants on 25th Sep 2020 by Dr. Mrinal Pandey (Nodal Coordinator Virtual labs, MRU ) and Mr. Narender Gauttam ( Coordinator virtual labs(CST,MRU)).



**Semester wise Virtual Labs usage Report  
VIRTUAL LABS USAGE**

| Department            | No. of students | No. of Virtual labs performed | No. of experiments | No. of students x No. of Virtual labs performed x No. of experiments |
|-----------------------|-----------------|-------------------------------|--------------------|--|
| CSE                   | 355             | 5                             | 10                 | 17750  |
| ECE                   | 17              | 4                             | 14                 | 952  |
| ME<br>(B.Tech+M.Tech) | 48              | 12                            | 8                  | 4608   |
|                       | 5               | 7                             | 8                  | 280  |
| Physics               | 200             | 6                             | 4                  | 4800   |
| Workshop by IIT,Delhi | 220             | 9                             | 04                 | 7920   |
| <b>Total usage</b>    |                 |                               |                    | 36310  |

**Number of Virtual Labs Experiments Performed 48**

**VIRTUAL LABS USAGE**

**(January 2020 – May 2020)**

| Department         | No. of students                          | No. of Virtual labs performed                         | No. of experiments | No. of students x No. of Virtual labs performed x No. of experiments |
|--------------------|--|---|--------------------|--|
| CSE                | 352                                      | 5   | 10                 | 17600  |
| ECE                | 11                                       | 2   | 4                  | 88   |
| ME                 | 7  | 7   | 7                  | 343  |
| Physics            | 150                                      | 5   | 10                 | 7500   |
| Chemistry          | 52<br>-Education<br>47<br>-<br>Chemistry | 21 for B.Sc<br>B.Ed<br>[13 for M.Sc +<br>51 for B.Sc] | 21<br>[13 +<br>51] | 22,932<br><br>1,92,512   |
| <b>Total usage</b> |  |   |                    | 240,984  |

**Number of Virtual Labs Experiments Performed: 113**

## 8.5 IQAC Calendar

In the Academic Session 2019-20, various initiatives were taken by IQAC for the quality improvement. The schedule for the activities carried out is shared below:

| S.No. | Activity   | Facilitator  | Conducting Team/Cell / Department | Date                   |
|-------|--|--|-----------------------------------|------------------------|
| 1     | Standard formats for Course plan, tutorials, assignments based on COs revised              | IQAC Executing Team  | IQAC                              | Jul-19                 |
| 2     | FDP on Teaching Learning Pedagogy  | Prof.I.K.Bhat  | VC, MRU                           | 2/07/2019-04/07/2019   |
| 3     | End semester Review  | IQAC audit teams   | IQAC                              | Last week of Nov, 2018 |
| 4     | MoU with Sahai Research Labs (OPC Pvt. Limited) (offers industry internships with stipend) | Dr.Charu Pathak, Prof. Shruti Vasisht                                    | IQAC                              | 6/8/2019               |
| 5     | Expert talk on Innovation and Industry Internships   | Mr. Prateek Sikka  | IQAC and Sahai Research Labs      | 6/8/2019               |
| 6     | Pre -Semester Course file review   | IQAC audit teams   | IQAC                              | January first week     |
| 7     | Expert talk on "Artificial Intelligence for Future"  | Kushal Tandon, Sr. Data analyst, Mu Sigma Corporation                    | Sahai Research Labs               | 11/2/2020              |
| 8     | "Academic audit departmental for Criterion I and II (as per NAAC-SAR 19-20)                | IQAC AQAR Team (cr1 and 2) Dr.Kiran , Dr.Hardeo, Dr.D.K.Sharma, Dr.Arpit | IQAC                              | February fourth week   |
| 9     | Demonstration on Inpods, Accreditation Management Systems IQAC - IMS                       | Mr.Ajay Bhagwat, Inpods Co. Pune   | IQAC                              | 5/03/2020 week         |
| 10    | SWOT analysis (Departments)  | Dr.Charu Pathak  | IQAC                              | first week of March    |

|    |  |                                     |      |                   |
|----|--|-------------------------------------|------|-------------------|
| 11 | "Academic audit departmental for Criterion III and IV (as per NAAC-SAR19-20)                       | IQAC Respective Criterion Incharges | IQAC | March fourth week |
| 12 | AQAR Quarterly report Jan-March Compiled   | Dr.Charu Pathak                     | IQAC | 31st March, 2020  |
| 13 | "Academic audit departmental for Criterion V and VI (as per NAAC-SAR19-20)"                        | IQAC AQAR Team                      | IQAC | April second week |
| 14 | "Academic audit departmental for Criterion VII (as per NAAC-SAR19-20)"                             | IQAC AQAR Team                      | IQAC | April fourth week |
| 15 | MS teams, Zoom, Google Classroom introduced for online teaching (COVID 2020)                       | IQAC Team                           | IQAC | May first week    |
| 16 | CAPS and Attainment of BT, CO added to course plans for next semester (Online teaching July- Sept) | Dr.Charu Pathak                     | IQAC | 10/5/2020         |
| 17 | Online course plan reviews held  | IQAC audit teams                    | IQAC | May second week   |
| 18 | AQAR Quarterly report April -June Compiled   | Dr.Charu Pathak                     | IQAC | 30th June, 2020   |
| 19 | Webinar of Healthcare Technology   | Mr. M.Malaiyappan, Pantech Solution | IQAC | 31st July 2020    |

## 8.6 Internal Academic Audit

**Internal Academic Audit** is conducted quarterly. The activities of each department are analyzed as per seven criteria specified by NAAC. The departments are required to assess themselves on the basis of activities pertaining to each criterion. This is followed by the analysis through the IQAC audit team along with Dean Academics and Vice Chancellor.

The analysis report output provided to individual department by the IQAC contains

- An estimate of the maximum points which were addressed through the activities.
- Analysis of various sub-points under each criteria addressed by the department.
- Suggestions regarding sub- points which were not addressed by the department.

**Action Taken:** The departments are asked to provide an action plan along with a timeline in order to address the suggestions given by IQAC, Dean Academics and Vice Chancellor.” **Minute of IQAC meeting held regarding review of academic audit process are attached in annexure 8.1**

**Teaching Learning Process Review:** In addition to the overall academic audit, IQAC also conducts department level course plan reviews twice a semester. It's conducted in three steps:

**Four Audit teams conduct audits for all the departments twice a semester.** The audit team reviews course plans in the beginning and status of courses in mid semester. The points to be focused in each cycle vary as per requirement eg. Defining COs, CO-PO mapping, Design of tutorials assignments, question papers as per CO and Blooms Taxonomy levels, Defining Course assessment plans, implementation of online teaching learning process etc. Random courses may be picked up by the team for audit from each semester of each program.

- The feedback of the audit is provided to the department and the department is given required time of maximum one week to implement the required modifications.
- After the allotted time duration, the department submits the action taken report wherever necessary.

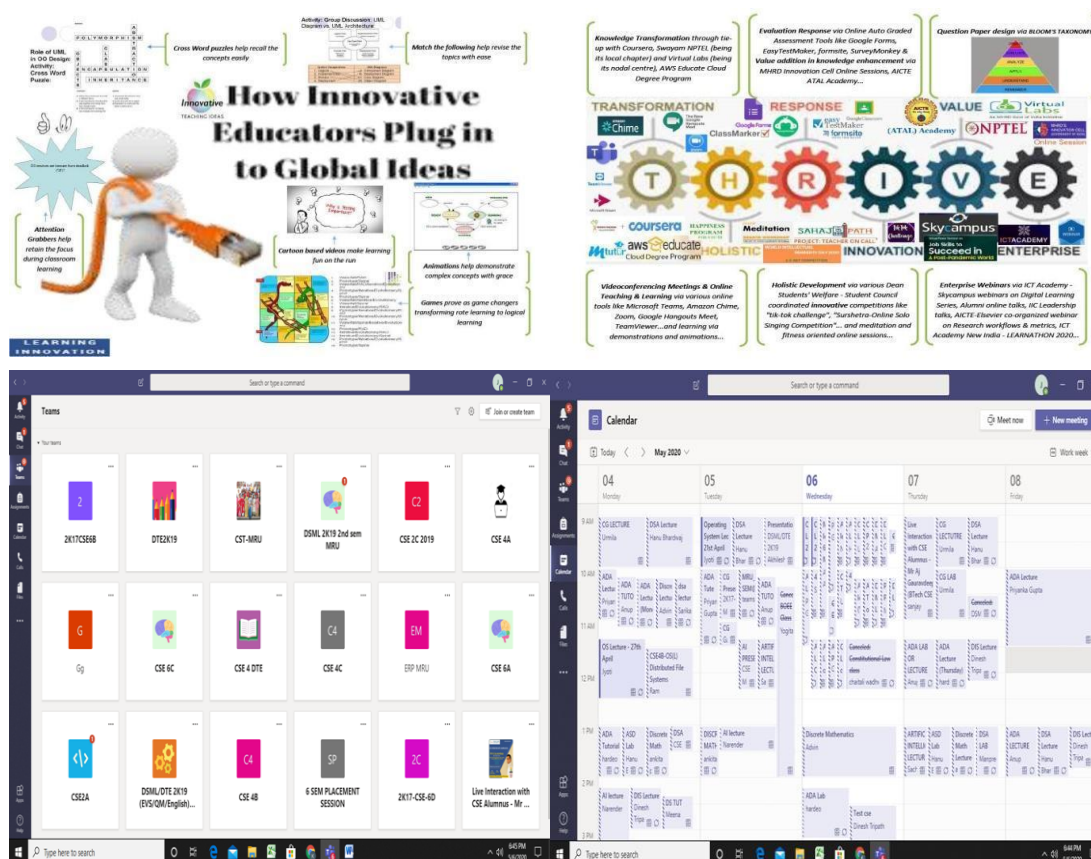


# CHAPTER: 9

## NEW INITIATIVES

### 9.1 Innovative Practices in Teaching Learning

Faculties are focused on great instructing and keep on enhancing to give innovative and safe learning experiences for students during the COVID-19 pandemic. Faculties used various platforms, for example, Zoom, Microsoft Teams, Google Classrooms, Cloud Meeting, Cisco Webex, Udemy, Coursera, and so on. These are a portion of the mainstream platforms utilized by instructors which give a mix of devices separated from general media, for example, making recordings utilizing reports, dominate sheets PDFs, PowerPoint slides, conversation discussions for virtual classrooms, whiteboard highlights to make educating and learning more intuitive, numerous decision tests with moment assignments and conducting exams.



#### 9.1.1 Project Based Learning Under the Industry Mentors

Under Altair CoE established with a vision to promote research and innovation in the area of Product Design and Development live projects were allocated to the students of Mechanical Engineering. Projects were divided into four verticals and each vertical has Project Mentors from Industry and Department. Projects were related to various fields of the industry i.e. Additive Manufacturing (3D Printing), Computational Fluid

Dynamics (CFD), Structural Analysis and Casting. Project Leaders from Mechanical Engineering are Joginder Singh, JP Sharma, Pradeep Mouria and Gianender Kajal. All the assigned projects had been executed under mentorship of Industry mentors, Abhijit Kulkarni, Sharad Mahour and Mr. Gopal Singh Rathore. The review process of Industrial live Projects was carried out by Industry Mentor from ICAT, Mr. Gopal Singh Rathore and DesignTech, Abhijit Kulkarni and Sharad Mahour on 27th February, 2020. Hon'ble Vice Chancellor, MRU, Dean Research, Dr Pradeep Varshney and Internal faculty members were also the part of the review committee. In addition to that 6 final year mechanical students were selected for Altair Virtual Internship Program for the duration 8 weeks during the month of July 2020 and certificates were given to the students at the end of Internship Program on 1st September 2020.

#### Detail of Projects Verticals and Project Leader:-

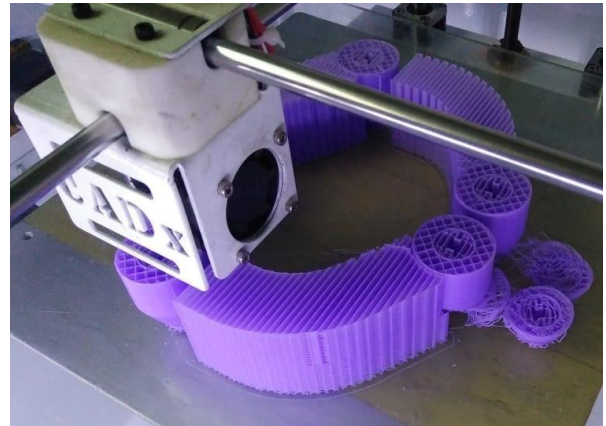
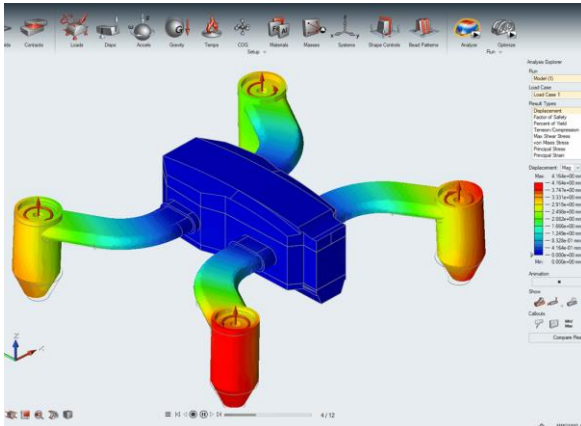
| S. No | Vertical                             | Project Leader       | Project  | Project Completion Date | Team Member  |
|-------|--------------------------------------|----------------------|--|-------------------------|--|
| 1     | Additive Manufacturing (3D Printing) | Joginder Singh       | Design Optimization of Drone Structure                                     | 27-Feb-2020             | * 2 Students of B.Tech 1 <sup>st</sup> Year  |
| 2     | CFD                                  | JP Sharma            | * Conjugate Heat-Transfer<br>* Laminar Pipe-Flow<br>* Turbulent Flow       | 27-Feb-2020             | * Student of B.Tech 3 <sup>rd</sup> Year   |
| 3     | Structural Analysis                  | Pradeep Kumar Mouria | * Bending Load<br>* Lateral Load<br>* Pressure Load<br>* Thermal Load      | 27-Feb-2020             | * 2 Students of B.Tech 2 <sup>nd</sup> Year  |
| 4     | Casting                              | Gianender Kajal      | * Gravity Casting<br>* Pressure Die Casting<br>* High Pressure Die Casting | 27-Feb-2020             | * Student of B.Tech 4 <sup>th</sup> Year<br>* Student of B.Tech 3 <sup>rd</sup> Year<br>* Student of M.Tech 2 <sup>nd</sup> Year |

## Review process of the Projects by Industry Experts





## Certificates Achieved by Students during Virtual internship Program:





**Hardik Chaudhary**

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**CERTIFICATE of ACHIEVEMENT**

This is to certify that

**Hardik Chaudhary**

has completed the course

solidThinking InspireCast 2019 Advanced Examination

September 3, 2020






**Pradeep Yadav**

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**CERTIFICATE of ACHIEVEMENT**

This is to certify that

**Pradeep Yadav**

has completed the course

solidThinking InspireCast 2019 Advanced Examination

September 8, 2020






**Karan Choudhary**

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**CERTIFICATE of ACHIEVEMENT**

This is to certify that

**Karan Choudhary**

has completed the course

SimSolid Advanced Examination

August 30, 2020






**Sanjay Singh**

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**CERTIFICATE of ACHIEVEMENT**

This is to certify that


**Sanjay Singh**

has completed the course

solidThinking InspireCast 2019 Advanced Examination


September 3, 2020



**Prashant Sharma**

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**CERTIFICATE of ACHIEVEMENT**



This is to certify that

**Prashant Sharma**

has completed the course

solidThinking Inspire 2019 Advanced Examination

September 15, 2020

## 9.2 Centre for Academic Leadership

Centre for Academic Leadership is established with the vision of empowering the academic fraternity to make future generation to be responsive, responsible, and productive and assume active roles locally and globally.

Academic Staff Leadership Institute aims to empower the academic fraternity academically, professionally, and technically using systemic approach to play their respective roles, to conduct research in latest pedagogies and educate academic fraternity of its impact and to connect the leading experts working in latest technologies to the academic community for up gradation of their knowledge and skills.

### 9.2.1 Academic Quality Enhancement Programme

- Training on “Designing Outcome based Education”: Training on “Designing Outcome Based Education” was conducted during 23rd December to 27th December 2019 with the aim of making faculty competent to use Outcome based education for their programme.
- Workshops on “Bloom’s Taxonomy and formulating BT based questions”: Workshop is conducted on “Bloom’s Taxonomy and formulating BT based questions” for the department i.e., Law, Education, Mechanical Engineering, EC Engineering, Computer Engineering, Management and Commerce, Chemistry, Physics, Mathematics, Dental Institute. Hon’ble Dr. I K Bhat, Vice Chancellor conducted workshops.
- Workshops on “Communication Enhancement”: Workshops on writing for results, Email –Etiquette, ABCD of presentation, finer aspects of presentation skills, Indianism + Common Errors, Phonetics + Commonly mispronounced words etc. Mr. Nitesh, AGM, CDC conducted the workshop with interactive sessions.
- Be Technocrat: Continuous trainings are being conducted to develop digital skills of faculty. These training were to enhance quality of online learning experiences of the students.
- The short workshops regarding using Zoom, Google classroom were conducted to facilitate faculty to conduct online classes which was urgently demanded due to pandemic. This workshop helped the faculty to cope up the challenges of conducting online class.
- Certificate Course on “Enhancing Online Learning Experience” of 24 hours was conducted on the topic for this course includes Digital tools for teaching learning, Digital tools for students’ engagement, Types of assessment, Digital tools for Assessment, Modes and types of feedback, Digital tools for feedback, Rubric, E-portfolios etc. Dr. Geeta Thakur conducted the course.

- Training on “Essentials of Online Learning with Microsoft Team” 18 hours was conducted on creating team, channel, conducting Team meeting, Microsoft Whiteboard, Online Assignment, creating quizzes and grading with Microsoft Form, One Note, Microsoft Stream, Microsoft Wiki, Flip Grid etc.
- Lightboard Mini studio A ministudio with lightboard is created by students of Mechanical Engineering for the online teaching.
- Identify, Implement and Promulgate (IIP): The purpose of the initiative “IIP’ is to enhance the quality of teaching, learning and assessment. This initiative is for identifying, implementing, and promulgating unique strategies by faculty and department.
- E-content/e-course creation: Centre for Academic Leadership is initiated a Project for "Online Course material (e-content) creation". Sessions on Design e-course with Canvas-LMS for 21st Century Learner was conducted by Dr. Kamlesh Patel Director, CBC, RK University, Gujrat Faculty learnt basics of canvas LMS, Design digital content Design assessment and creating e-course with Canvas LMS and Sessions on “Basics of e-content” and “Creative Commons license”

## **9.2.2 Empowering Academicians**

### **Faculty Competency Repository**

Manav Rachna competency repository of Manav Rachna University faculty is created. The detailed information about faculty’s professional achievement, their likes, dislikes, interest areas, vision, talents, potentials, dream plans is being sought with the help of google form, interview, peer interview, students’ feedback, senior’s feedback etc. This repository would be used for the development and academic empowerment of Manav Rachna University in a structured and systematic way.

### **ASLI CHAI**

**ASLI CHAI** is a conscious informal gathering of faculty members of different areas to provide them a platform to share, express, get answers, contribute, and exchange knowledge with each other and from each other. ASLI CHAI emphasizes on the below mentioned aspects which is part of discussion.

- I have this to contribute: Faculty’s own idea, process, knowledge creation etc that they have implemented
- I have this to share: Knowledge gained from conferences, seminar, visits, meetings, classroom experiments etc that are worth sharing, worth knowing, worth learning.
- I have this to ask: Any question that faculty wish to get answers/ opinions to add to their knowledge/practice.

The first ASLI CHAI was conducted on 6th February 2020.

### 9.3 Manav Rachna Centre for Peace and Sustainability

Manav Rachna Centre for Peace and Sustainability (MRCPS) a center of excellence of Manav Rachna University is a visionary step for the Holistic Development of youth to build Peaceful New Bharat.

Manav Rachna Centre for Peace and Sustainability (MRCPS) was launched on 2nd October 2019. The center is initiated with vision to bring Peace and support the development of India's peace operations which are sustainable will result in emergence of "Peaceful New Bharat".



#### 9.3.1 Activities under MRCPS

##### Collaboration with IPRA

MRCPS has collaborated with the Institute of Peace Research and Action (IPRA) that has been involved in peace activities since the last five decades. It has been involved in the past in dissemination of knowledge in peace, completed many projects, published books. Conducted seminars, organized peace lecture series involving faculty and staff of reputed organizations.

**National Seminar on Alternative Politics: Peace and Sustainability** on October 4th, 2019.



Manav Rachna University (MRU) organized a National Seminar on Alternative Politics: Peace and Sustainability in collaboration with Institute of Peace Research and Action (IPRA). The day-long seminar on October 4th, 2019 sponsored by ICSSR (Indian Council of Social Sciences Research) provided a platform to discuss and debate over the idea of Alternative politics, peace, and its associated dimensions. Prof. Ved Prakash, Former Chairman, UGC; Dr. Susheela Bhan, Chairman-IPRA; Dr. Prashant Bhalla, President, Manav Rachna Educational Institutions (MREI); Dr. Amit Bhalla, VP, MREI; Dr I K Bhat, VC, MRU; Dr Sanjay Srivastava, MD-MREI and other senior academicians as well as industry experts graced the occasion.

To construct and ignite the minds to create Peaceful society, Manav Rachna initiated the series of webinars through which we get direction from spiritual leaders who are truly “Shantidoot” of India.

### **Webinar “Four Pillars of Education” By Padmashree Dr. Karan Singh**

Webinar on “Four Pillars of Education” on 21st May 2020 by Padmashree Dr. Karan Singh Sir, Champion of Interfaith dialogue and understanding, Indian politician and philanthropist.

### **Webinar “Climate Change: Threat to Global Peace: What lessons from COVID19 Pandemic”**

Dr. Rajendra Shende, Chairman of TERRE Policy Centre, former Director UNEP on 29<sup>th</sup> May 2020.

### **Webinar on “Biological Disaster Management:**

Post COVID19” on 13th June 2020 by (Prof.) Dr. Muzaffar Ahmad, Former member, National Disaster Management Authority (NDMA) Government of India.

Manav Rachna Centre for Peace and Sustainability organized a Webinar on “Emotional Balance in current times” on 17th June 2020 by Dr. Mohit Dayal Gupta, Professor of Cardiology & Medical Superintendent of Cardiac Sciences, GB Pant Hospital, New Delhi.

Webinar on 'Balancing Self, Family and Profession' by Sister BK Shivani on 27th June 2020.





### **9.3.2 Manav Rachna Peace and Sustainability Club**

University plays important role as a convener and facilitator of support processes of SDGs to make impact in our society. Manav Rachna University introduced Peace and sustainability Club as University have a strong faith in youth power and their conviction in making a better world.

This peace club is a platform through which Students can pick up social, economic, and environmental issues. Together they can make small but impactful changes in surrounding and to themselves to make a difference and contribute to the better world.

#### **Activities under Peace and Sustainability Club**

1. **Power to Youth: A Holistic Wellness Programm.**
2. **Session on “Inner power for Success”**
3. **'Youth Against COVID-19- An online discussion'**
4. **World Health Day Challenge.**
5. **'Poets in Dark- Poetry Against Social Injustice'**



Online poetry writing competition with the aim to raise voice against social injustices in words was organized. Poems on injustices prevailing in the society bring us to crossroads and make us rethink the way society and all of us are moving. This event involved participation from students beyond our university and covering around 50 participants from universities across India from colleges like FORE School of Management, Delhi Technological University (DTU), Xavier School of Management (XLRI), Jamshedpur and many more on the list.

#### 9.4 Center of Excellence on Alternative Dispute Resolution (CADR)

The Centre of Excellence in Alternative Dispute Resolution was launched by the Hon'ble Minister of Law & Justice, Communications, and Electronics & IT Sh. Ravi Shankar Prasad in the august presence of Justice R. C. Lahoti (former Chief Justice of India).

- Advocate AVS Subramanyum conducted the first training workshop on ADR under the aegis of the CADR, on 26 September 2019.
- On 18 February 2020, a guest lecture was organized by Mr Abhinav Bhushan, South Asia Director, International Chamber of Commerce Arbitration & ADR.
- One-day in-house National Training Workshop was organized on Arbitration for senior officers of RITES Limited at the RITES headquarters in Gurgaon on 27 February 2020.
- To expose the students to the workings of an arbitration centre, a field visit to the Delhi International Arbitration Centre (DIAC), which is annexed to the Delhi High Court was organized. Under the supervision of Ms Chaitali Wadhwa and Ms Pooja Trehan, Faculty of Law, Manav Rachna University, along with fourteen third-year law students visited the DIAC on 19th February 2020.



#### 9.4.2 Webinars organized under CADR

- Subject talk on 'Role of Institutions in National Emergency: COVID-19' on April 22th, 2020. The speakers for the session were Mr. Anand Sourabh, Indian Information Service Officer, GOI; Prof. Naved Jamal, Professor, Jamia Millia Islamia, and Ms. Neha Sinha, Consultant to ICWA.
- Webinar on 'Enforcement of Foreign Arbitral Awards: Recent Developments' on **23<sup>rd</sup> April 2020**. The speakers for the session were, Justice Prateek Janan,



Judge, High Court of Delhi and Gourab Banerji, Senior Advocate, Supreme Court of India and the moderators were, Shashank Garg, Partner, Advani & Co, and Omar Ahmad, Partner, Cyril Amarchand Mangaldas.

- Webinar on ‘Support for or Interference in the Arbitral Process’ on April 28, 2020. The speakers were David Joseph QC; Ciccu Mukopadhyaya, Senior Advocate; and the moderators were, Shashank Garg, Partner, Advani & Co and Omar Ahmad, Partner, Cyril Amarchand Mangaldas.
- Webinar on Appointment of Arbitrators: Concepts, Cases and Issues on **April 29<sup>th</sup>, 2020**. The speakers for the session were Honorable Justice Sanjay K Kaul, Supreme Court of India and Honorable Justice Rajiv Shakti, High Court of Delhi. The moderators for the day were, Shashank Garg, Partner, Advani & Co and Aseem Chaturvedi, Partner Khaitan & Co.
- Webinar on Arbitration in India: The Good, the Bad, and the Ugly on **May 2<sup>nd</sup>, 2020**. The speakers for the session were Honorable Justice Ms. Indu Malhotra; Salim Moollan QC, Former Chairman, UNCITRAL; and Gourab Banerji, Senior Advocate, Supreme Court of India. The moderators were Mr. Ajay Thomas, Faculty of Law, Manav Rachna University and Ms. Adwaita Sharma, Advocate and Secretary, UNCCI. (YouTube Link: <https://youtu.be/BMjAUQxJLqQ>)
- A masterclass on “*Fundamentals of Examination-in-Chief and Cross-Examination in a Civil Suit*” held on **8<sup>th</sup> May, 2020**. Justice Pradeep Nandrajog (Former Chief Justice, Bombay High Court) and Justice Rajiv Sahai Endlaw (Judge, Delhi High Court) were the two resource persons.
- The third edition of the “Back to Basics” series of webinars saw a lively discussion on “Claim of Damages under the Indian Contract Act”, where the distinguished speakers were Justice Jayant Nath (Judge, Delhi High Court) and Senior Advocate Amit Sibal. It was organised on **15<sup>th</sup> May 2020**.
- The CADR jointly with UNCITRAL National Coordination Committee for India (UNCCI) held a webinar on **16<sup>th</sup> May 2020** on the emerging area of Investor State Dispute Settlement (ISDS).
- The CADR jointly with UNCITRAL National Coordination Committee for India (UNCCI) held a webinar on **27<sup>th</sup> May 2020** on “Mediation as a Tool for Conflict Management”.
- A webinar on “Section 9: Power of the Court to grant interim relief in arbitrations” was organised by the Faculty of Law on **31<sup>st</sup> May 2020**.
- The Faculty of Law joined hands with the United Nations Commission on International Trade Law (UNCITRAL) and the UNCITRAL National Coordination Committee for India (UNCCI) to host a webinar on cross border insolvency on **6<sup>th</sup> June 2020**.

**Webinar On**  
**Investor State Dispute Settlement: Thesis, Anti-Thesis and Possible Synthesis**

Distinguished Panelists

Dr. Catherine Kachamraha, Member, Arbitration International Council for Commercial Disputes (ICC)

Heena Pruthi, Senior Counsel, Arbitration International Council

Prakash Nair, Arbitration and Dispute Resolution, India Chamber

Opening Remarks by

Ajay Thomas, Director, Faculty of Law, Maharashtra University

Moderators

Kunal Mahajan, Senior Advocate, Supreme Court of India

Georg Pruthi, Advocate, Supreme Court of India

Date: 16 May 2020  
 Time: 4 PM to 5:30 PM  
 Indian Standard Time

Supporting Organization: **FEI**

Media Partner: **Live Law**

**WEBINAR**  
 Back to Basics Series – Part III  
**Claim of Damages under the Indian Contract Act**

Distinguished Speakers

Justice Jayant Nath, Judge, High Court of Delhi

Amit Sibal, Senior Advocate

Moderators

Ankit Jain, Advocate, Delhi High Court

Vaibhav Agnihotri, Partner, SAC Associates

Friday, 15 May 2020  
 3:00 PM Onwards

Media Partner: **Bar Bench**

United Nations UNCTAD, CADR, MANAV RACHNA, UNCC India

**Webinar On**  
**Arbitration in India: The Good, the Bad and the Ugly**

Saturday, 2 May 2020  
 4:00 PM to 5:15 PM

**WEBINAR:**  
**Appointment of Arbitrators : Concept, Cases and issues.**

29th April  
 5:00 - 6:00 PM IST

**SPEAKERS**

Hon'ble Justice Sanjay K. Kaul, Supreme Court of India

Hon'ble Justice Rajiv Shukder, High Court of Delhi



### 9.5 Teacher on Call

Faridabad Education Council (FEC) is a multi-layered collective impact initiative designed to improve the quality of school education in Faridabad. The objective of the Council is to complement the efforts of the Government and contribute towards innovative development projects in the district through private contributions (CSR and Philanthropy) to improve the quality of education. The main role of FEC will be as an aggregator and facilitator and it will be the nodal point for bringing together the various stakeholders, members of civil society. The timings for the calls are: Mon to Sat –Evening 5:00 PM to 8:00 PM Sunday –Morning 9:00 AM to Evening 8:00 PM.

## 9.6 MOUs Signed

In the academic year 2019-20 university signed MOUs with various organization and industries to strengthen holistic education.

**(1) FGSI & Kidzania:** MoU was signed with FGSI & Kidzania, Delhi NCR on 07.01.2020 under the chairmanship of Dr. Pradeep K. Varshney, Dean Research. The purpose of MOU- was for organizing a joint event / fair / exhibition like YASH 2020.

Activities organized: - Foundation for Glocal Science Initiatives (FGSI) and Manav Rachna University (MRU) are jointly organizing a global science fair – 'YASH 2020' for researchers, innovators, entrepreneurs, and students from January 16-18, 2020.

**(2) Sahai Research Labs:** This Memorandum of understanding entered on 6th August 2019 between Manav Rachna University and Sahai Research Labs, India is involved in promoting research and development of low cost and affordable healthcare devices and technologies.

**(3) SRIJAN SANCHAR:** Manav Rachna University & Srijan Sanchar collaborated for research and industrial live projects in several domains of Electronics and communication. A Memorandum of Understanding was signed on 26th December 2019, between Manav Rachna University (MRU) and Srijan Sanchar to offer the projects and Center of excellence at Manav Rachna University. Under this MOU Srijan Sanchar will connect MRU to Industries, entrepreneurs, Industry associations, and other institutions of learning's to collaborate on research projects • Assist MRU in setting up of Centers of Excellence for focused research, learning and training.

**(4) Truechip Solutions Pvt. Ltd and Future Tech Wizards LLP:** Memorandum of Understanding (MoU) executed on 14th Jan 2020, between Manav Rachna University, Truechip Solutions Pvt. Ltd., and Future Tech Wizards LLP. The MoU was signed between Dr. I.K Bhat, Vice Chancellor, MRU, and Mr. Nitin Kishore, CEO, Truechip.

**(5) National Council for Cement and Building Materials (NCCBM):** MRU signed a MoU with National Council for Cement and Building Materials (NCCBM), Ballabgarh, on September 2, 2019. NCCBM is the premier body under the administrative control of the Ministry of Commerce and Industry, Govt. of India, for technology development, transfer, continuing education and industrial services for cement and construction industries.

**(6) Quick Heal Technologies:** A Memorandum of Understanding was signed 27th December 2019 between Manav Rachna University (MRU) and Quick Heal Technologies to offer B.Tech. Computer Science & Engineering with specialization in Cyber Security and Threat Intelligence program.







**AWS Educate Faculty Professional Development**



# CHAPTER: 10

## MANAV RACHNA CREATING BUZZ....

### Dr. O P Bhalla Foundation donates Automatic Sanitizer Dispensers to 10 adopted villages

**New Delhi/NCR (TIT NEWS) :** Dr. OP Bhalla Foundation in collaboration with Prayas Initiative has donated Contactless Automatic Sanitizer Dispensers to 10 villages adopted by Manav Rachna Educational Institutions. The beneficiary villages include Mohna, Nariyala, Maujput, Hirapur, Panhera Khurd, Pali, Ankhbeer, Anangput, Mewla Maharajput, Fatehpur Chandila. The machines have been installed in the school campus at the respective villages and will also be utilized at other open places of the village as per the requirement and advised by the village Sarpanch. The donation drive will impact around 90,000 people in all the villages. These automatic sanitizer dispensers have been made by the Prayas Initiative from re-usable plastic.



### RATED THE BEST IN INNOVATION YET AGAIN

MRU has maintained a 4-star rating for 2019-2020 that has been awarded by AICTE- Ministry of Innovation Cell for our Institute Innovation Council. Ministry of Human Resource Development (MHRD), Govt. of India has established MHRD's Innovation Cell (MIC) to systematically nurture the Innovation culture among all Higher Education Institutions (HEIs).

### Corporate leaders deliberate upon 'Leadership and Innovation for Atmanirbhar Bharat'

Deepthi Arora  
info@manavrachna.com

**New Delhi/ Ncr:** ManavRachna Educational Institutions (MREI) along with Education Promotion Society for India (EPSI), NHRD, BIRTECH and O P Jindal Global University organized a talk on 'Leadership and Innovation for an Atmanirbhar Bharat' in the memory of renowned Management Guru Padma Shri Dr. Pritam Singh. Around 1000 participants from leading institutes of India and the corporate world took part in the deliberations. Mr. P. Dwarkanath, Chairman-Non Executive, CSK Horticks; Mr. S Y Siddiqui, Executive Advisor, Mantri Suzuki; Dr. H. Chaturvedi, Director-BIRTECH; Dr. PrashantBhalla, President, MREI; Dr. Sanjay Srivastava, MD, MREI and Dr. AshaBhandarker, professor, IIM shared their perspectives on various facets of leadership with the august gathering. Reminiscing the unique storytelling approach through which Dr. Pritam Singh would make the most difficult topics interesting, Dr. PrashantBhalla said, "I had the opportunity to observe several talks delivered by Dr.



**This was the first in the series of Leadership Talks being organized in the memory of Padma Shri Dr. Pritam Singh**

Pritam Singh who often used to focus on competitiveness. He would often ask not just students, but even corporate leaders to think and put down on paper – 'what is your purpose in life'. In that context, only when we strengthen innovation and research will our country remain competitive and move ahead. It is heartening to note that the government has been taking important steps in this direction. The National Research Foundation, envisaged under the New Education Policy shall support the culture of research and innovation in India's higher education institutions.



It will strengthen the culture of 'inclusion', 'innovation' and 'institutions' in the sphere of education. While writing the perspective for the talk, Dr. Asha reiterated that Atmanirbhar typically relates to self-resilience, self-confidence and self-responsibility. This was further reinforced by Mr. P. Dwarkanath, who said, "The principles of self-reliance and resilience are very imperative for a leader to possess. Deliberating upon the strong relationship between innovation and Atmanirbharta, Mr. Dwarkanath added that, "innovation need not come from the strategic level in an organization; innovation can come from the shop floor as well. All ideas need to be respected, whether or not being implemented. Make in India is not complete unless we say Make in India for the world... that is the transformation



we have to achieve." Dr. Chaturvedi said: "In an economy struggling with the impact of Covid, innovation and the Atmanirbhar Bharat campaign can give a fillip to our economy." Dr. S Y Siddiqui added: "For our country to be moving towards self-reliance, the biggest example that I have learnt from Dr. Pritam Singh is transformational leadership. The capability to adopt and adapt and adjust to the new business environment steers businesses towards growth. We will require virtuous leadership in the coming days. The next few years, will require distributive leadership to steer businesses out of the current crisis." This was the first in the series of leadership talks being organized in the memory of Dr. Pritam Singh. The other talks in the series will be held on October 1 and November 19.

### स्मार्ट इंडिया हैकैरॉन 2020 की सॉफ्टवेयर श्रेणी में मानव रचना विजेता

फरीदाबाद, 10 अगस्त (यूरो) : मानव रचना यूनिवर्सिटी के छात्रों ने स्मार्ट इंडिया हैकैरॉन को सॉफ्टवेयर श्रेणी में पहला स्थान हासिल किया है। बी.टेक कंप्यूटर साइंस इंजीनियरिंग के सतलु सेमेस्टर के छात्रों ने मिनिस्ट्री ऑफ सरल टेक्नोलॉजी को परेशानी को मुलाहाने के लिए 'एमके206' सॉफ्टवेयर बनाया है। यह सेल्फ हेल्प पुस के लिए नैन-नेटवर्क-टूटिंग रिफाईंड कोरिंग सिस्टम सॉल्यूशन है। इस सॉल्यूशन का मकसद, गांव में रहने वाले सेल्फ हेल्प पुस के लिए एक ऐसा रिफाईंड सिस्टम तैयार करना था जो कि कम नेटवर्क गैपों कि 2जी नेटवर्क में भी काम करे और उनके रिफाईंड मुश्किल रहे। चंडीगढ़ यूनिवर्सिटी नेटवर्क सेंटर में आयोजित ऑनलाइन प्रतियोगिता में प्रदर्शित किए गए इस सॉल्यूशन को ज्यूरी द्वारा काफ़ी पुराई किया गया. विजेता: विजय, भाव्य रघु



मानव रचना यूनिवर्सिटी के विजेता छात्र।

यूनिवर्सिटी को टीम एर404 को पहला स्थान और एक लाख रुपये से स मानित किया गया। बी.टेक कंप्यूटर साइंस इंजीनियरिंग के छात्र ऋषभ पिपय, मुनमोय विजय, आयुष रिश, दीप भारद्वाज, विशाला तन्वी और अमय गुप्त ने अपने मंत्र प्रोफेसर अनुपिया शर्मा और प्रोफेसर अंकुश अराकान के साथ यह सॉल्यूशन तैयार किया है।



Manav Rachna University signed an MOU with ICT Academy

Manav Rachna University (MRU) and ICT Academy (an initiative of the Government of India) signed an MoU that encompasses Faculty Development, Skill Development, Joint Research and Publications, Entrepreneurship Development, Digital Empowerment, and a strong Industry-Academia Interface.

## मानव रचना विश्वविद्यालय ने आईसीटी अकादमी के साथ एमओयू पर हस्ताक्षर किए

परीक्षाएं, 4 सितंबर (मुंबई)। मानव रचना विश्वविद्यालय (एमआरयू) और आईसीटी अकादमी, (भारत सरकार की एक पहल) ने आज एक समझौते के तहत एक MoU पर हस्ताक्षर किए जिसमें संशोधन विकास, फेलोशिप विकास, संयुक्त अनुसंधान और प्रकाशन, उद्यमिता विकास, डिजिटल सशक्तिकरण और एक मजबूत उद्योग शिक्षा इंटरफेस शामिल हैं। डॉ. के. वि. श्रीवास्तव, डॉ. सोनिया शर्मा, डॉ. एन. ए. अर्जुनरेड्डी, डॉ. प्रदीप प्रसाद, डॉ. प्रदीप शर्मा, डॉ. सुनील शर्मा, एमओसी मैकेनिक्स, डॉ. प्रदीप शर्मा, एमओसी एमआरएचएमसी और आईसीटी अकादमी एमआरयू के सचिव/प्रमुख और डॉ. प्रदीप शर्मा, एमओसी मैकेनिक्स, डॉ. प्रदीप शर्मा, एमओसी एमआरएचएमसी और आईसीटी अकादमी के अध्यक्ष हैं। डॉ. प्रदीप शर्मा, एमओसी मैकेनिक्स, डॉ. प्रदीप शर्मा, एमओसी एमआरएचएमसी और आईसीटी अकादमी के अध्यक्ष हैं। डॉ. प्रदीप शर्मा, एमओसी मैकेनिक्स, डॉ. प्रदीप शर्मा, एमओसी एमआरएचएमसी और आईसीटी अकादमी के अध्यक्ष हैं।



मानव रचना विश्वविद्यालय (एमआरयू) और आईसीटी अकादमी, (भारत सरकार की एक पहल) के बीच किए गए समझौते (आय: एन.एन.टी.) के तहत एक समझौते पर हस्ताक्षर किए जा रहे हैं। डॉ. प्रदीप शर्मा-एमओसी मैकेनिक्स (पीसीटी) और डॉ. प्रदीप शर्मा-एमओसी एमआरएचएमसी (पीसीटी) दोनों के बीच एक समझौते पर हस्ताक्षर किए जा रहे हैं। डॉ. प्रदीप शर्मा-एमओसी मैकेनिक्स (पीसीटी) और डॉ. प्रदीप शर्मा-एमओसी एमआरएचएमसी (पीसीटी) दोनों के बीच एक समझौते पर हस्ताक्षर किए जा रहे हैं।



INVITING OUR ALUMNI TO RE-CONNECT

The annals of MREI are replete with Young Achievers who have dazzled on national and international platforms. Manav Rachna is proud of each one of its alumni! The alumni portal (<http://alumni.manavrachna.edu.in/>) is feature-rich and provides a platform for alumni to interact individually and as a group.

## NEP 2020 Knowledge Series by ASSOCHAM

ASSOCHAM's National Council of Education, chaired by our President Dr. Prashant Bhalla has been organizing the NEP 2020 Knowledge Series bringing together various stakeholders to deliberate upon the different facets of the New Education Policy. Under the series, various webinars are being organized to deliberate upon the successful implementation of NEP 2020.



**Orientation Classes across all courses begin at Manav Rachna**

Let's Begin a New Journey!  
**100+ NICHE PROGRAMS**

MREI commenced orientation for the batch of 2020 from September 1. The orientation classes across 100+ niche programs at Manav Rachna started off virtually with excited freshers, faculty, and alumni as well.

Apply now in a course of your choice  
[www.apply.manavrachna.edu.in](http://www.apply.manavrachna.edu.in)



## Dr O P Bhalla Foundation in conversation with Daleep Akoi

Under the series of inspirational talks being organized by Dr. O P Bhalla Foundation; Mr. Daleep Akoi, a passionate environmentalist who has spent a lot of his childhood days in the beautiful and exciting surroundings of the Jim Corbett shared his experiences.

## Union Minister Nitin Jairam Gadkari addresses hundreds of enthusiasts on how India can emerge as Global Manufacturing Hub and a 5 trillion economy!!

More than 500 industrialists, and educationists from all over the nation participated in the web dialogue on: India- Emerging Global Manufacturing Hub presented by Bharat Niti in association with Manav Rachna Educational Institutions

**Nitin Gadkari**  
[nitg@opsindia.net](mailto:nitg@opsindia.net)

New Delhi / NCR: Stakeholders from the industry and academia gathered today at a webdialogue on 'Atmanirbhar Bharat, India- Emerging Global Manufacturing Hub'. Nitin Gadkari focused on how we can find a solution of this everlasting debate of what will happen to economy POST COVID 19, he said "MSMEs and agriculture work in symphony with the growing world market



and we can become a massive manufacturer by carefully planning and implementing the vision we have for a 3-trillion economy. The deficit of demand and supply is what we should consider and by liquidity crunch can be achieved for a developed and self-reliant economy we

aspire to be one day." It was a collective call that a paradigm shift is required in order to narrow the demand and supply gap as the industry runs by practice, skill acquired and experience but it can function and perform well only with astute planning, infrastructure and FDI. Each and every sector is a huge contributor in the economy and jobs need to be created for marginally weaker section as well. Dr. Prashant Bhalla rightfully quoted, "Educational Institutions and Industries together will have to prepare and boost the economy to fight the aftermath of COVID 19. Inspiring innovation despite the challenges that exist in the system is need for the hour & we shall work along together to change the educational landscape of India. India has the youngest workforce and when the world is in need we can be the massive manufacturer by promoting MAKE IN INDIA, MAKE FOR INDIA, and MAKE FOR WORLD."



### डॉ. ओ पी भल्ला की 7वीं वर्षगांठ पर रक्तदान शिविर का आयोजन



**20 OCT** रक्त के दान से शिबिर में भागीदारों को प्रेरित किया गया...

**17 OCT** शिबिर में भागीदारों को रक्त के दान के लिए प्रेरित किया गया...

**13 OCT** साहय्या परिवार ट्रस्ट ने रक्तदान शिविर का आयोजन किया...

**09 OCT** रक्तदान शिविर में भागीदारों को प्रेरित किया गया...

## डॉ. ओ पी भल्ला की 7वीं वर्षगांठ पर उनको श्रद्धांजलि देने के लिए लगाया रक्तदान शिविर

By ANKUSH • September 14, 2020



### मानव रचना यूनिवर्सिटी में पढ़ाया जाएगा एडव्लयूएस ब्लाउड कंप्यूटिंग

दिल्ली (एनआईएन) - मानव रचना विश्वविद्यालय (MRU) में एडव्लयूएस (E-Learning) ब्लाउड कंप्यूटिंग का पाठ्यक्रम शुरू किया गया है। यह पाठ्यक्रम मानव रचना विश्वविद्यालय के छात्रों के लिए है।

मानव रचना विश्वविद्यालय के छात्रों को एडव्लयूएस ब्लाउड कंप्यूटिंग के बारे में अधिक जानकारी के लिए हमें फॉलो करें।

### कोविड-19 के खतरे को शिक्षा के नए मॉडल में बदलने पर चर्चा

कोविड-19 के खतरे को शिक्षा के नए मॉडल में बदलने पर चर्चा हुई। शिक्षा के नए मॉडल में बदलने पर चर्चा हुई। शिक्षा के नए मॉडल में बदलने पर चर्चा हुई।

शिक्षा के नए मॉडल में बदलने पर चर्चा हुई। शिक्षा के नए मॉडल में बदलने पर चर्चा हुई। शिक्षा के नए मॉडल में बदलने पर चर्चा हुई।

## Manav Rachna family pays homage to Founder Visionary Dr. O. P. Bhalla on his 73rd Birth Anniversary

**Manav Rachna**

**Delhi/NCR:** More than 400 staff members of Manav Rachna along with their families participated in an online Bhajan Ceremony today to pay homage to our Founder Visionary Dr. O P Bhalla on his 73rd birth anniversary which also marks the 7th Founder's day of Manav Rachna Educational Institutions (MREI). This vast online gathering is testimony to the resolve of the Manav Rachna family that stands committed to making a difference in the lives of communities. While urging all members to remain safe in their homes, Satya Bhalla, Chief Patron, MREI said: "This unprecedented moment will definitely go down in history as a test of our resilience, courage and adaptability". Dr. Prashant Bhalla, VP-MREI thanked members of the MR family for their contribution in ensuring that "learning does not come under a lockdown". It is noteworthy, that with salary of all teaching and non-teaching staff towards the Haryana Chief Minister's Relief Fund. Under the aegis of Dr. O P Bhalla Foundation, MREI has been supporting the District Administration of Faridabad through the 'Ek Muthi Doodh' campaign benefiting people who have been rendered homeless because of the sudden lockdown. Behavioral and social science experts from Manav Rachna have been providing online counseling and hand-holding sessions. To keep motivation levels high, trainers and experts at the Manav Rachna Sports Science Centre have been running regular online tips for communities on physical health, yoga and meditation. On this day and forever, Manav Rachna family bows down with gratitude to the man who imbued in us the spirit of emerging stronger in

**President MREI Dr. Prashant Bhalla, VP Dr. Amit Bhalla and Chief Patron Mrs. Satya Bhalla and family members while online Bhajan Ceremony to pay homage to our Founder Visionary Dr. O P Bhalla on his 73rd birth anniversary which also marks the 7th Founder's day of MREI.**

Dr. Amit Bhalla, VP-MREI thanked members of the MR family for their contribution in ensuring that "learning does not come under a lockdown". It is noteworthy, that with

### "Learning does not stop" during the COVID-19 crisis: Manav Rachna University

As India reported its first Corona positive case, the government began to issue directives for states to ensure people are safeguarded. The Ministry of Education advised necessary measures so that the virus does not spread.

Manav Rachna International Institute of Research & Studies [MRIIRS] and Manav Rachna University [MRU] underwent immediate changes in teaching, research and other administrative plans in the face of COVID-19 lockdown.



## Annexure 4.1

## Research Publications in Journals

| S.No | Department | Faculty Name                                      | Paper Title  | Authors   | Journal Name   | Details of Publication                            | Publication Month | Year |
|------|------------|---|--|---|--|---|-------------------|------|
| 1    | CST        | Shailja Gupta<br>Manpreet Kaur &<br>Sachin Lakra  | Performance Evaluation of Supervised Learning Algorithm on Hate Speech Detection | Shailja Gupta,<br>Manpreet Kaur,<br>Sachin Lakra,<br>Yogesh Dixit | Journal of Advanced Research and Control Systems               | Vol. 12,<br>07 pp.<br>2953-2960,<br>June 2020     | June              | 2020 |
| 2    | CST        | Shailja Gupta,<br>Manpreet Kaur &<br>Sachin Lakra | A comparative theoretical and empirical analysis of machine learning algorithms  | Gupta S.,<br>Kaur M.,<br>Lakra S.,<br>Dixit Y.                    | Webology   | Vol. no.-17,<br>Issue-1, Pg. no.377-397           | June              | 2020 |
| 3    | CST        | Shailja Gupta,<br>Sachin Lakra                    | Sentiment Analysis: A Framework for TextMining                                   | Shailja Gupta,<br>Sachin Lakra                                    | Test Engineering and Management                                | 83,<br>pp.131 17-13129,<br>2020                   | May-June          | 2020 |
| 4    | CST        | Riya Sapra,<br>Parneeta Dhaliwal                  | Missing Chain: A Novel Blockchain System for Missing or Found Cases              | Riya Sapra,<br>Parneeta Dhaliwal                                  | Test Engineering and Management                                | 83,<br>May-June 2020,<br>pp.126 70-12677,<br>2020 | June              | 2020 |
| 5    | Law        | S.K. Bose   | European and Indian Legal Education-A Comparative Study                          | SK Bose (single author)   | International Journal of Humanities & Management Studies       | Vol. 6,<br>No.5,<br>2020                          | May               | 2020 |
| 6    | Law        | Dr SK Bose  | The Intersectionality of Literature Law Culture and Society                      | SK Bose (single author)   | International Journal of Arts, Humanities & Management Studies | Vol. 6,<br>Issue-11<br>November,<br>2020          | November          | 2020 |



|    |                          |               |   |  |  |   |         |      |
|----|--------------------------|---------------|---|--|--|---|---------|------|
| 7  | Law                      | S.K. Bose     | Law & Federalism-In the Grip of Politics  | SK Bose (single author)                    | White & Black Legal International Journal                | Vol. 2, Issue-2, June 2020              | June    | 2020 |
| 8  | Education and Humanities | Rashee Singh  | Ethical Dilemmas of a Teacher   | Rashee Singh, Sheena Sabharwal             | Pramana Research Journal                                 | Vol. 10, Issue 6, June 2020             | June    | 2020 |
| 9  | Law                      | Ajay Bhatia   | Determinants of College Teachers' happiness- A Comprehensive Review   | Ajay Bhatia & Farhat Mohsin                | Journal of Critical Reviews                              | Vol. 7, Issue 9, 2020                   | May     | 2020 |
| 10 | Law                      | Ajay Bhatia   | Measuring Happiness of University Teachers during Challenging Times   | Ajay Bhatia, Dr. Farhat Mohsin             | International Journal of Advanced Science and Technology | Vol. 29, No. 10S, (2020), pp. 7805-7817 | June    | 2020 |
| 11 | Management & Commerce    | Animesh Singh | Green Consumer: Study of Demographic and Psychographic Behavioural Segments   | Samriti Mahajan, Rajat Gera, Animesh Singh | Journal of Critical Reviews                              | Vol. 7, Issue 18, 2020. pp. 582-588     | June    | 2020 |
| 12 | Physics                  | Haider Abbas  | Capacity of C <sub>4</sub> H <sub>8</sub> Ti <sub>4</sub> cluster for adsorption of CO <sub>2</sub> and CO: a computational study | Ankur Chahal, Haider Abbas                 | Journal of Molecular Modelling                           | 26:126, 2020                            | MAY     | 2020 |
| 13 | Mathematics              | L. Govindarao | A fourth-order numerical scheme for singularly perturbed delay parabolic problem arising in population dynamics                   | L. Govindarao                              | Journal of Applied Mathematics and Computing             | 63, pages 171-195                       | January | 2020 |

|    |             |                   |  |   |  |                               |          |      |
|----|-------------|-------------------|--|---|--|-------------------------------|----------|------|
| 14 | Mathematics | Ruchi Gupta       | A new extension of Kannan contractions and related fixed point results   | Rakesh Batra, Ruchi Gupta & Priyanka Sahni  | The Journal of Analysis,                                     | Vol.28(2), May 2020           | May      | 2020 |
| 15 | Mathematics | Dinesh Tripathi   | A note on Eneström–Kakeya theorem for a polynomial with quaternionic variable  | Dinesh Tripathi   | Arabian Journal of Mathematics                               | Vol. 10, 1-8, May 2020        | May      | 2020 |
| 16 | ECE         | Niharika Thakur   | Advanced hybrid intelligent model and algorithm for de-regulated electricity market  | Hooda, M., Awasthi, Y., Thakur, N. and Siddiqui, A.   | Australian Journal of Electrical and Electronics Engineering | 36-46, 27 Apr 2020            | April    | 2020 |
| 17 | CST         | Parneeta Dhaliwal | An approach for Concept Drifting Streams: Early Dynamic Weighted Majority  | Parneeta Dhaliwal, Ajay Kumar, Poonam Chaudhary   | Procedia Computer Science                                    | Vol. 167, pp. 2653-2661, 2020 | April    | 2020 |
| 18 | Law         | Som Dutt Bhardwaj | Big Data and Network Effect of Facebook: Critical Analysis of Indian and German Competition Commission                                 | Som Dutt Bhardwaj   | Test Engineering & Management                                | Jan-Feb 2020/ 24 Feb. 2020    | February | 2020 |
| 19 | Chemistry   | A. Jayamani       | Colorimetric and fluorescence sensing of Zn <sup>2+</sup> ion and its bio-imaging applications based on macrocyclic “tet a” derivative | M. Sethupathi, A. Jayamani, G. Muthusankar, P. Sakthivel, K. Sekar, S. Gandhi, N. Sengottuvelan, G. | Journal of Photochemistry and Photobiology B: Biology        | Vol. 207, 111854              | June     | 2020 |

|    |           |                     |  |  |   |   |          |      |
|----|-----------|---------------------|--|--|---|---|----------|------|
|    |           |                     |  | Gopu, C. Selvaraju   |   |   |          |      |
| 20 | Chemistry | Pradeep K. Varshney | Current trends and future perspectives in the recycling of spent lead acid batteries in India  | Pradeep K. Varshney  | Materials Today Proceedings                   | Vol. 26, Part 2, 2020, Pages 592-602  | January  | 2020 |
| 21 | CST       | M.Thurai Pandian    | Design, analysis and characterization of four port multiple-input-multiple-output UWB-X band antenna with band rejection ability for wireless network applications | V Dhasarathan, TK Nguyen, M Sharma, SK Patel, SK Mittal, MT Pandian              | Wireless Network                              | <a href="https://link.springer.com/article/10.1007/s11276-020-02343-x">https://link.springer.com/article/10.1007/s11276-020-02343-x</a> | April    | 2020 |
| 22 | Physics   | Sandeep Kumar       | Effect of a tightly focused chirped Gaussian laser pulse on electron acceleration in helical undulator   | Sandeep Kumar, D. N. Gupta, H. K. Malik, Devi Singh, Jaeyu Lee, and Moohyun Yoon | Physics of Plasmas                            | Vol. 27, Issue 4  | April    | 2020 |
| 23 | Law       | Ashima Saxena       | Environmental Accounting Practices in India  | Ashima Saxena  | International Journal of Science and Research | Vol. 9, Issue 2, February 2020  | February | 2020 |
| 24 | Physics   | Sandeep Kumar       | Equations: Linear Algebra  | Hitendra K. Malik, Rashmi Srivastava, Sandeep Kumar & Devi Singh                 | Advance and Innovative Research               | Vol. 14, NO. 1, 417–422, 2020   | March    | 2020 |

|    |                   |                                |  |   |  |   |          |      |
|----|-------------------|--------------------------------|--|---|--|---|----------|------|
| 25 | CST               | Mrinal Pandey & Monika Goyal   | Extreme Gradient Boosting Algorithm for Energy Optimization in buildings pertaining to HVAC plants   | Monika Goyal, Mrinal Pandey   | EAI Endorsed Transactions on Energy Web                          | <a href="http://dx.doi.org/10.4108/eai.13-7-2018.164562">http://dx.doi.org/10.4108/eai.13-7-2018.164562</a> | May      | 2020 |
| 26 | Mechanical        | I.K. Bhat                      | Factors influencing mechanical and wear performance of dental composite: A review  | S.R. Kumar A. Patnaik I.K. Bhat   | Materials Science & Engineering Technology                       | <a href="https://doi.org/10.1002/mawe.201900029">https://doi.org/10.1002/mawe.201900029</a>                 | January  | 2020 |
| 27 | Mathematics & CST | Ruchi Gupta & Hardeo K. Thakur | Future Population and Literacy Rate Projection in India  | Ruchi Gupta, Hardeo Kumar Thakur, Chhavi Baliyan, Mansi Mangla  | Test Engineering and Management                                  | Vol. 83, Page no. 10128-10138<br>May/June, 2020   | May      | 2020 |
| 28 | Law               | S.K. Bose                      | Gender Sex Progressive Society and Justice   | S.K. Bose   | International Journal of Arts, Humanities and Management Studies | Vol.6, Number 2, 2/1/2020   | February | 2020 |
| 29 | Management        | Priyanka Srivastava            | Impact of artificial intelligence in customer satisfaction for banking industries  | Teena Hassija, Dr. Priyanka Srivastava  | International Journal of Advanced Science and Technology         | Vol. 29 No. 9s (2020)   | May      | 2020 |
| 30 | PHYSICS           | Aditya Sharma                  | Influence of high energy ion irradiation on structural, morphological and optical properties of high-k dielectric hafnium oxide (HfO <sub>2</sub> ) thin films grown by atomic layer | Rajesh Kumar, Vishnu Chauhan, N. Koratkar, Shalendra Kumar, Aditya Sharma, Keun-Hwa Chae, Sung Ok Won | Journal of Alloys and Compounds                                  | Vol. 831 page-154698 - 154713   | March    | 2020 |

|    |            |                     |   |                                 |  |   |          |      |
|----|------------|---------------------|---|---------------------------------|--|---|----------|------|
|    |            |                     | deposition  |                                 |  |   |          |      |
| 31 | CST        | Jyoti Pruthi        | Machine learning based aspect level sentiment analysis for Amazon products  | Neha Nandal, Jyoti Pruthi       | Spatial Information Research                                     | 28, pages 601–607(2020)   | February | 2020 |
| 32 | Management | Rajat Gera          | Mobile app usage and adoption: A literature review  | Gera, R., Chadha, P., Ahuja, V. | International Journal of Electronic Business                     | <a href="https://doi.org/10.1504/IJEB.2020.106546">https://doi.org/10.1504/IJEB.2020.106546</a> | April    | 2020 |
| 33 | CST        | Hardeo Kumar Thakur | Multi-class Instance incremental Framework for classification in fully Dynamic Graphs   | Hardeo Kumar Thakur             | International Journal of Computational Science and Engineering   | Vol. 21, No. 1, pp. 69-83   | January  | 2020 |
| 34 | Physics    | Aditya Sharma       | Nano-structured phases of gallium oxide (GaOOH, $\alpha$ -Ga <sub>2</sub> O <sub>3</sub> , $\beta$ -Ga <sub>2</sub> O <sub>3</sub> , $\gamma$ -Ga <sub>2</sub> O <sub>3</sub> , $\delta$ -Ga <sub>2</sub> O <sub>3</sub> , and $\epsilon$ -Ga <sub>2</sub> O <sub>3</sub> ): fabrication, structural, and electronic structure investigations | Aditya Sharma                   | International Nano Letters                                       | 10 Pages, 1-9, year 2020,   | February | 2020 |
| 35 | Law        | S.K. Bose           | Nationalism, Global Politics and International Relations  | S.K.Bose                        | International Journal of Arts, Humanities and Management studies | Vol. 6, Number 2, 2/1/2020  | February | 2020 |

|    |                        |                         |  |  |  |   |          |      |
|----|------------------------|-------------------------|--|--|--|---|----------|------|
| 36 | Law                    | S.K. Bose               | Rhetoric-The Art of Persuasion, legal professional Lawyees   | S.K.Bose   | Journal of Emerging Technologies and Innovative Research | Vol. 7, Issue 4, April 2020   | April    | 2020 |
| 37 | Mathematics            | Ruchi Gupta             | Some results related to fixed points of F-G contractions on metric spaces equipped with w-distance | Rakesh Batra, Ruchi Gupta & Priyanka Sahni                       | Journal of Interdisciplinary Mathematics                 | 23:2,413-423, May 2020  | MAY      | 2020 |
| 38 | Mathematics            | Y. K Sharma             | Study of Stability and Solution of a system of Ordinary differential                               | Y.K Sharma, Sachin, Deepak Kumar                                 | International Journal of Advance & Innovative Research   | Vol.7, Issue-1(XVIII), Page no. 320-323   | March    | 2020 |
| 39 | Chemistry, Mathematics | Arpit Sand, Aparna Vyas | Superabsorbent polymer based on guar gum-graft-acrylamide: synthesis and characterization          | Arpit Sand, Aparna Vyas  | Journal of polymer research, Springer                    | Vol. 27, 2020   | January  | 2020 |
| 40 | Education & Humanities | Chhavi Kulshreshtha     | Walt Whitman: The shaping of his la mente  | Chhavi Kulshreshtha  | International Journal of Research and Analytical Reviews | Vol. 7, Issue 2, May 2020   | May      | 2020 |
| 41 | Physics                | Sandeep Kumar           | Small amplitude dust acoustic solitary wave in magnetized two ion temperature plasma               | Hitendra K. Malik, Rashmi Srivastava, Sandeep Kumar & Devi Singh | Journal of Taibah university for Science                 | Vol. 14, NO. 1, 417-422, 2020   | March    | 2020 |
| 42 | Management             | Rajat Gera              | On comparing the performances of MLP and RBFN on sales forecasting problem                         | Tiwari R., Kumar R., Gera R., Srivastava S.                      | International Journal of Information Technology          | <a href="https://www.scopus.com/inward/record.uri?eid=2-s2.0-850917">https://www.scopus.com/inward/record.uri?eid=2-s2.0-850917</a> | November | 2019 |



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|----|-----------|------------------|---|---|--|---|----------|------|
|    |           |                  |   |   |  | 39050&doi=10.1007%2fs41870-019-00402-x&partnerID=40&md5=bd1707d65b95921ba88aa56b359cc0c1            |          |      |
| 43 | CST       | Suraj Makkar     | A Face Detection Using Support Vector Machine: Challenging Issues, Recent Trend, Solutions and Proposed Framework | Makkar, S., Sharma, L.  | Communications in Computer and Information Science       | Issue 1046, Pg. no. 3-12  | July     | 2019 |
| 44 | Chemistry | Vinayak V Pathak | Algal-based biofuel generation through flue gas and wastewater utilization: a sustainable prospective approach    | Richa Kothari, Shamshad Ahmad, Vinayak V. Pathak, Arya Pandey, Ashwani Kumar, Raju Shankarayan, Paul N. Black & V. V. Tyagi | Biomass Conversion and Biorefinery                       | <a href="https://doi.org/10.1007/s13399-019-00533-y">https://doi.org/10.1007/s13399-019-00533-y</a> | December | 2019 |
| 45 | CST       | Jyoti Pruthi     | An improved approach for aspect level sentiment analysis using bipolar words extraction                           | Nandal, N., Pruthi, J., Choudhury, A.   | International Journal of Advanced Science and Technology | Vol. 28 No. 13 (2019)   | November | 2019 |
| 46 | CST       | Aarti Sangwan    | An Organ Criticality and Session Preserved iM-SIMPLE Protocol to  | Aarti Sangwan   | International Journal of Advanced Science and Technology | Vol 129, PP. 11-28, 2019  | August   | 2019 |

|    |            |                   |  |  |   |  |          |      |
|----|------------|-------------------|--|--|---|--|----------|------|
|    |            |                   | Optimize WBAN for Different Application Areas                                    |  |   |  |          |      |
| 47 | Chemistry  | Meena Kapahi      | Bioremediation Options for Heavy Metal Pollution                                 | Meena Kapahi, Dr. Sarita Sachdeva  | Journal of Health and Pollution (published by Pure Earth (formerly Blacksmith Institute)) | 7(15), 2017, 1-7                       | December | 2019 |
| 48 | Law        | Som Dutt Bhardwaj | Competition advocacy: an unused tool in India                                    | Dr. Som Dutt Bhardwaj, Dr Archana Sehrawat   | Journal of the Gujarat Research Society   | Vol. 22, Issue-14, December-2019       | December | 2019 |
| 49 | Management | Sachita Yadav     | Contemporary Financial Risk Management Strategies for Emerging Startups in India | Sachita Yadav & Akash  | International Journal of Advance & Innovative Research                                    | Vol. 6, Issue 1, pg. 61-67, March 2019 | March    | 2019 |
| 50 | Physics    | Aditya Sharma     | Copper-Halide Polymer Nanowires as Versatile Supports for Single-Atom Catalysts  | Min-Seok Kim<br>Haedong Park<br>Sung Ok Won<br>Aditya Sharma<br>Jimin Kong<br>Hyun S. Park<br>Yun-Mo Sung<br>Tae Joon Park<br>Myoung-Woon Moon<br>Kahyun Hur | Small   | Vol.-15, Issue-40<br>October 1, 2019   | October  | 2019 |
| 51 | Law        | Versha Vahini     | Corporate Social Responsibility : Privatization of welfare state                 | Versha Vahini  | Vivekananda Journal of Research   | Vol. 8 Issue 2                         | December | 2019 |

|    |            |                                       |   |  |                                       |   |          |      |
|----|------------|---------------------------------------|---|--|---------------------------------------|---|----------|------|
| 52 | Physics    | Haider Abbas                          | Density functional study of spectroscopy, electronic structure, linear and nonlinear optical properties of L-proline lithium chloride and L-proline lithium bromide monohydrate: For laser applications | Haider Abbas a, Mohd. Shkir b,* , S. AlFaify                 | Arabian Journal of Chemistry          | Vol. 12 Issue 8, December 2019, Pages 2336-2346 | December | 2019 |
| 53 | Mechanical | Joginder Singh, M.R. Tyagi            | Design, Analysis and Manufacturing of Front Sprocket of a Bicycle using Carbon Fiber Reinforced Plastics  | Singh, J., Tyagi, M.R., Singh, G., Sharma, R.D.              | Journal of Physics: Conference Series | Vol. 1240, Issue-1, Art no.- 12071              | August   | 2019 |
| 54 | ECE        | Yogita Khanna, Yogendra Kumar Awasthi | Dual-Band Microwave Sensor for Investigation of Liquid Impurity Concentration Using a Metamaterial Complementary Split-Ring Resonator   | Khanna, Y., Awasthi, Y.K.                                    | Journal of Electronic Materials       | 49, pages 385–394                               | November | 2019 |
| 55 | Physics    | Sandeep Kumar                         | Erratum: Isolated terawatt attosecond hard X-ray pulse generated from single current spike  | C.H. Shim, Sandeep Kumar, Y.W. Park, In Soo Ko, and D.E. Kim | Scientific Reports (Nature)           | Vol. 9, 8521, 2019                              | July     | 2019 |
| 56 | Chemistry  | A. Jayamani                           | Ethylene oligomerization reactions catalyzed by homogeneous   | A. Jayamani, G.S. Nyamato, S.O.                              | Journal of Organometallic Chemistry   | 10/2019; 903: 120987                            | October  | 2019 |

|    |            |                                     |   |  |  |   |          |      |
|----|------------|-------------------------------------|---|--|--|---|----------|------|
|    |            |                                     | and silica immobilized N <sup>o</sup> Fe(II) and Co(II) complexes   | Ojwach   |  |   |          |      |
| 57 | CST        | Nikita Taneja & Hardeo Kumar Thakur | Evaluation of Collaborative Filtering and Knowledge Transfer Based Cross Domain Recommendation Models                       | Nikita Taneja, Hardeo K thakur   | Jour of Adv Research in Dynamical & Control Systems,               | Vol. 11, 10-Special Issue, 2019             | December | 2019 |
| 58 | ECE        | Shruti Vashist                      | Evaluation of Non-Orthogonal Techniques for Advance Wireless System   | Dipa Kokane, Ge eta Nijhawan and Shruti Vashist  | International Journal of Recent Technology and Engineering (IJRTE) | 8(2), Issue 2, July 2019                    | July     | 2019 |
| 59 | Mechanical | Joginder Singh                      | Evaluation Of Tensile Properties Of Hot Rolled Carbon Steel Using Finite Element Analysis                                   | Joginder Singh, M. R. Tyagi, Abdul Ahad, Abhinav Chawla, Dinesh Kashyap, Vinay Prabhakar | Advances in Engineering Design                                     | pp 395-403, April 2019                      | April    | 2019 |
| 60 | Chemistry  | Vinayak V Pathak                    | Fuel Quality Index: A Novel Experimental Evaluation Tool for Biodiesel Prepared from Waste Cooking Oil                      | S Ahmad, R Kothari, VV Pathak, MK Pandey   | Waste and Biomass Valorization                                     | Vol. 10, Issue 8, pp 2237–2247, August 2019 | August   | 2019 |
| 61 | Physics    | Sandeep Kumar                       | Longitudinal phase space dynamics of witness bunch during the Trojan Horse injection for plasma-based particle accelerators | K. Moon, Sandeep Kumar, M. Hur, and M. Chung   | Physics of Plasma  | Vol. 26, Issue 7, id.073103, July 2019      | July     | 2019 |

|    |             |                             |  |  |   |                               |           |      |
|----|-------------|-----------------------------|--|--|---|-------------------------------|-----------|------|
| 62 | Mathematics | L. Govindarao               | Numerical analysis and simulation of delay parabolic partial differential equation involving a small parameter                     | L. Govindarao and J. Mohapatra                               | Engineering Computations  | 37(1), 289-312, (2019)        | August    | 2019 |
| 63 | Mathematics | Dinesh Tripathi             | On Location of the Zeros of Polynomial (Lacunary Type)   | D. Tripathi, H.G. Hyun, S. Hans                              | Journal-Non-Linear Functional Analysis and Application                            | 24(3), 555-564                | August    | 2019 |
| 64 | Education   | Akhilesh Kumar Dwivedi      | Partition and Violence: Shifting Intercommunal Relations in Chaman Nahal's Azadi   | Akhilesh Kumar Dwivedi                                       | The Criterion: An International Journal in English 8.2                            | Vol. 10, Issue 6              | December  | 2019 |
| 65 | Mathematics | Y.K Sharma                  | Prevalence of Diabetes Mellitus in two Vicinal Nations   | Richa Gupta, Deepak Kumar, Bhawna Mehta, Y K Sharma          | International Journal of Innovative Technology and Exploring Engineering (IJITEE) | Vol.-9-Issue-2, November 2019 | November  | 2019 |
| 66 | CST         | Narender                    | Role of Swarm Intelligence based Algorithms and their applications in Software Reliability Optimization                            | Narender, Sona Malhotra                                      | International Journal of Recent Technology and Engineering (IJRTE 2019)           | Vol. 8, Issue 2               | July      | 2019 |
| 67 | Physics     | Aditya Sharma & Jai Prakash | Structural and electronic structure investigations on sonication based synthesized Graphene oxide and reduced-Graphene oxide nano- | Aditya Sharma, Jai Parkash, Shiv Kumar, K.H. Chae, S.O. Won, | Physica Scripta   | Vol. 94, Number 12            | September | 2019 |

|    |           |                   |   |  |   |                                 |          |      |
|----|-----------|-------------------|---|--|---|---------------------------------|----------|------|
|    |           |                   | sheets  |  |   |                                 |          |      |
| 68 | CST       | Manpreet Kaur     | Text Summarisation Using Laplacian Centrality-Based Minimum Vertex Cover  | Anand Gupta and Manpreet Kaur            | Journal of Information and Knowledge Management | Vol.-18, Issue-4, December 2019 | December | 2019 |
| 69 | Education | Malini            | The Narratives of Patriarchal Resistance: Ismat Chughtai's Short Stories  | Malini                                   | Pramana (International Refereed)                | Vol. 8, Issue 31, Pages 640-643 | October  | 2019 |
| 70 | Law       | Som Dutt Bhardwaj | The scope and ambit of amendment of the constitution: A comparative study of the constitutions of India, USA and Switzerland. | Dr. Som Dutt Bhardwaj, Ms Divya Kathuria | Think India Journal                             | Vol. 21 Issue 14, December 2019 | December | 2019 |



## MANAV RACHNA UNIVERSITY

### Research Publications in Conferences

| S. No | Department | Faculty Name        | Paper Title   | Authors                               | Conference Details  | Year of Publication | ISSN / ISBN       |
|-------|------------|---------------------|---|---------------------------------------|---|---------------------|-------------------|
| 1     | Mechanical | Joginder Singh      | Variation of Shear Properties in Carbon Fiber Composites as Extensional Forces Applied with Different Fiber Orientation | Joginder Singh & M.R.Tyagi            | International Conference on Mechanical and Energy Technologies (ICMET-2019)   | Nov-19              | 2190-3026         |
| 2     | CST        | Hardeo Kumar Thakur | Survey of various AI ChatBots based on Technology Used  | Sidhant Singh and Hardeo Kumar Thakur | Published in IEEE 2020 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO) | Jun-20              | 978-1-7281-7016-9 |
| 3     | Chemistry  | Priti Gupta         | Efficacy of natural adsorbents for treatment of industrial waste water contaminated with iron and lead                  | Deepanshu, Aanchal Gupta, Priti Gupta | 2nd International Conference on Scientific Research   | 2020                | 978-625-7898-23-2 |
| 4     | Management | Animesh Singh       | Effect of Human Resource Development Climate Practices on Employee Service Behaviour: An Empirical Investigation        | Animesh Singh                         | Business Strategy in the VUCA World   | Mar-20              | NA                |

|    |            |                             |   |  |   |        |  |
|----|------------|-----------------------------|---|--|---|--------|--|
| 5  | Management | Animesh Singh               | Predictors Patron's of Green Food Product Purchase Behaviour                                | Samriti Mahajan, Dr. Rajat Gera, Dr. Animesh Singh | International Conference on Contemporary Issues in Management   | Jun-20 | NA                                     |
| 6  | CST        | Manpreet Kaur               | When Cartoon Meets Anime Distinguishing Animation Styles with Convolutional Neural Networks | Kaur M., Prakash V., Raghav S.                     | Proceedings of International Conference on Intelligent Engineering and Management (Online), ICIEM 2020  | Jun-20 | 978-1-7281-4097-1<br>978-1-7281-4098-8 |
| 7  | Management | Raman Tiwari                | Investigation of Artificial Intelligence Techniques in Finance and Marketing                | Tiwari R., Srivastava S., Gera R.                  |   | Jun-20 | 1735-188X                              |
| 8  | CST        | Hardeo Kumar Thakur         | Survey of various AI ChatBots based on Technology Used                                      | Sidhant Singh and Hardeo Kumar Thakur              | Published in IEEE 2020 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO) | Jun-20 | 978-1-7281-7016-9                      |
| 9  | ECE        | Yogita Khanna               | Wideband Ultra-thin Metamaterial Absorber for Ku & K- Band Applications                     | Yogita Khanna, Yogendra Kumar Awasthi              | SPIN 2020   | Feb-20 | 0367-0371                              |
| 10 | CST        | Mamta Arora & Mrinal Pandey | Sentiment Analysis for Predicting the Popularity of Web Series.                             | Garg P.K., Pandey M., Arora M.                     | International Conference on Recent Developments in Science, Engineering and Technology REDSET 2019  | Nov-19 | 978-981-15-5830-6                      |

|    |            |                                      |  |   |   |        |                   |
|----|------------|--------------------------------------|--|---|---|--------|-------------------|
| 11 | ECE        | Yogita Khanna                        | Wideband Ultra-thin Metamaterial Absorber for Ku & K- Band Applications  | Yogita Khanna, Yogendra Kumar Awasthi   | SPIN 2020   | Feb-20 | 978-1-7281-5475-6 |
| 12 | CST        | Susmita Ray                          | An Analysis of Computational Complexity and Accuracy of two Supervised Machine Learning Algorithms – K-Nearest Neighbor And Support Vector Machine | Susmita Ray   | International Conference on Data Management , Analytics and Innovation 2020, ICDMAI 2020  | Jan-20 | NA                |
| 13 | CST        | Susmita Ray                          | A Survey on Application of Machine Learning Algorithms in Cancer Prediction and Prognosis  | Deepti, Susmita Ray   | ICDMAI 2020 (International Conference on Data Management , Analytics and Innovation 2020) | Jan-20 | NA                |
| 14 | Mechanical | Joginder Singh                       | Variation of Shear Properties in Carbon Fiber Composites as Extensional Forces Applied with Different Fiber Orientation                            | Joginder Singh M.R.Tyagi  | International Conference on Mechanical and Energy Technologies (ICMET-2019)               | Nov-19 | 2190-3026         |
| 15 | Chemistry  | Pradeep K. Varshney                  | Current Trends in the recycling of Spent Lead Acid Batteries in India  | Pradeep K. Varshney, Kalpna Varshney, Kajal Gautam, Meghna Chaudhary, Monika Tanwar | 3rd International Conference on Science & Engineering of Materials                        | Jul-19 | NA                |
| 16 | CST        | Ram Chatterjee & Hardeo Kumar Thakur | Hoax and Faux of Information Credibility in Social Networks: Explored, Exemplified and Experimented  | Ram Chatterjee , Hardeo Kumar Thakur, Ridhi Sethi and Abhishek                      | Soft Computing: Theories and Applications (SoCTA 2019)                                    | Dec-19 | 978-981-15-4031-8 |

|    |            |                                       |   |                                       |  |        |                   |
|----|------------|---------------------------------------|---|---------------------------------------|--|--------|-------------------|
|    |            |                                       |   | Pandey                                |  |        |                   |
| 17 | Mechanical | Joginder Singh                        | Variation of Shear Properties in Carbon Fiber Composites as Extensional Forces Applied with Different Fiber Orientation | Joginder Singh, M.R.Tyagi             | International Conference of Mechanical and Energy Technologies (ICMET-2019)                        | Nov-19 | 978-981-15-2646-6 |
| 18 | CST        | Nikita taneja & Hardeo Kumar Thakur   | Handling Sparsity in Cross-Domain Recommendation Systems: Review  | Nikita taneja & Hardeo Kumar Thakur   | Micro-Electronics and Telecommunication Engineering, Proceedings of 3rd ICMETE 2019                | Aug-19 | 978-981-15-2329-8 |
| 19 | CST        | Neelu Chaudhary & Hardeo Kumar Thakur | Parametric Classification of Dynamic Community Detection Techniques   | Neelu Chaudhary & Hardeo Kumar Thakur | Micro-Electronics and Telecommunication Engineering, Proceedings of 3rd ICMETE 2019                | Aug-19 | 978-981-15-2329-8 |
| 20 | CST        | Goyal M., Pandey Mrinal               | Towards Prediction of Energy Consumption of HVAC Plants Using Machine Learning  | Goyal M., Pandey Mrinal               | International Conference on Recent Developments in Science, Engineering and Technology REDSET 2019 | Nov-19 | 978-981-15-5826-9 |
| 21 | CST        | Urmila Pilania, Prinima Gupta         | Analysis and Implementation of IWT-SVD Scheme for Video Steganography   | Urmila Pilania & Prinima Gupta        | Micro-Electronics and Telecommunication Engineering, Proceedings of 3rd ICMETE 2019                | Aug-19 | 978-981-15-2329-8 |

|    |     |                 |  |   |   |        |                   |
|----|-----|-----------------|--|---|---|--------|-------------------|
| 22 | ECE | Niharika Thakur | Congestion Reduction under IPFC based deregulated electricity market using AKH algorithm                                       | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | FEST 2019 - Future of Engineering Systems and Technologies 2019.  | Dec-19 | 1478/012027       |
| 23 | ECE | Niharika Thakur | Profit based Unit Commitment Problem solving using Hybrid CUCKOO- GWO Algorithm  | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | FEST 2019 - Future of Engineering Systems and Technologies 2019.  | Dec-19 | 1478/012027       |
| 24 | ECE | Meenakshi Gupta | Design and Simulate the Modified Circuits of Switched Capacitor Filter using mentor graphics tool                              | Meenakshi Gupta, V.K Sharma                               | 3rd International Conference on Recent Developments in Control, Automation and Power Engineering, RDCAPE 2019 | Oct-19 | 978-1-7281-2068-3 |
| 25 | ECE | Niharika Thakur | Parametric Analysis of Adaptive Whale Optimization Technique for Power Quality Enhancement in Restructured Electricity Market. | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | 2019 IEEE 2nd International Conference on " Power Energy, Environment and Intelligent Control"                | Oct-19 | 978-1-7281-1793-5 |
| 26 | ECE | Niharika Thakur | Algorithmic Analysis on Hybrid-Intelligent Deregulated Electricity Market.   | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | 2019 IEEE 2nd International Conference on " Power Energy, Environment and Intelligent Control"                | Oct-19 | 978-1-7281-1793-5 |
| 27 | CST | Sachin Lakra    | Green Cloud Job Scheduling and Load Balancing using Hybrid Biogeography based Optimization and                                 | Yashika Sharma, Sachin Lakra                              | International conference on Micro-Electronics and Telecommunication   | Aug-19 | 978-981-15-2328-1 |

|    |           |                              |  |                                 |   |        |                   |
|----|-----------|------------------------------|--|---------------------------------|---|--------|-------------------|
|    |           |                              | Genetic Algorithm: A proposed approach   |                                 | Engineering   |        |                   |
| 28 | CST       | Sachin Lakra                 | A Transition towards Green IT: An Initiative   | Yashika Sharma, Sachin Lakra    | International conference on Micro-Electronics and Telecommunication Engineering       | Aug-19 | 978-981-15-2328-1 |
| 29 | CST       | Parneeta Dhaliwal            | An Approach for handling concept drifting streams: Early Dynamic Weighted Majority     | P.Dhaliwal, A.Kumar, P. Potalia | International Conference on Computational Intelligence and Data Science (ICCIDS-2019) | Sep-19 | 2653-2661         |
| 30 | CST       | Gaganjot Kaur, Prinima Gupta | Hybrid Approach for detecting DDOS Attacks in Software Defined Networks                | Kaur, G., Gupta, P.             | 2019 12th International Conference on Contemporary Computing, IC3 2019                | Aug-19 | 978-1-7281-3591-5 |
| 31 | ECE       | Nitika                       | Effect of Thermal Annealing on the Performance of PCDTBT:PC 71 BM composite solar cell | Nitika, Shiv kumar, B.M.Bahal   | Green and Sustainable Chemistry Conference 2019                                       | Nov-19 | NA                |
| 32 | Education | Geeta Thakur                 | Let's make the Augmented Reality the 'Reality'   | Geeta Thakur                    | National seminar on Designing the 21st century Classroom                              | 2019   | 978-93-82626-46-6 |



## Annexure 4.3

## MANAV RACHNA UNIVERSITY

## Patents Details (Filed/ Published / Granted)

| S. No | Name of Faculty                  | Department | University     | Title of the Patent   | Name of All Inventors in sequence          | Inventors with MRU/ MRIIRS affiliation / others | Date of Filing Patent (dd/mm/yyyy) | Patent Application Filing Number       | Patent Details (Published / Filed / Granted) |
|-------|----------------------------------|------------|----------------|---|--|---|------------------------------------|--|--|
| 1     | Shaveta Bhatia, Shiv Shankar Rai | FCA        | MRIIRS and MRU | Handheld Self Examine Brest Cancer                                    | Shaveta Bhatia, Shiv Shankar Rai           | Both  | 21/08/2019                         | 201911033647                           | Filed  |
| 2     | Yogita Khanna                    | ECE        | MRU            | Microwave Sensing Device for Dielectric Characterization of Materials | Yogita Khanna, Y K Awasthi, Anshuman Gupta | MRU   | 01/08/2019                         | 201911031072 (TEMP/E-1/32827/2019-DEL) | Filed  |
| 3     | Prem K.Patnala                   | Chemistry  | MRU            | Production of Clean Water From Clay Mud Pot Filters                   | Prem Kishore Patnala                       | MRU   | 22/7/2019                          | 2.01911E+11                            | Filed  |

## Annexure 4.4

### Manav Rachna University, Faridabad

| <b>Books /Chapters /Monograph/Case Study authored by faculty members</b> |                           |                          |   |  |                     |                            |
|--|---------------------------|--------------------------|---|--|---------------------|----------------------------|
| S.No.  | Name of faculty Members   | Department Name          | Type of publication<br>1. Book<br>2. Chapter<br>3. Monograph<br>4. Case study | Name of the Book / Chapter / Monograph                         | ISBN Number         | Year of publication (yyyy) |
| 1  | Versha Vahini             | Law                      | Book  | Text book on Competition Law                                   | 978-93-8999-128-4   | Jan-20                     |
| 2  | Arpit Sand                | Chemistry                | Book (Edited)   | Organic Polymers   | 978-1-78984-618-8   | Mar-20                     |
| 3  | Arpit Sand<br>Aparna Vyas | Chemistry<br>Mathematics | Book Chapter  | Organic Polymer - Graft Copolymers                             | 978-1-78984-618-8   | Mar-20                     |
| 4  | Rashee Singh              | Education and Humanities | Book Chapter  | Concept and Ethical issues in counselling                      | 978-81-945153-4-0   | May-20                     |
| 5  | Aditya Sharma             | Physics                  | Book Chapter  | Bottom-Up and Top-Down Approaches for MgO                      | 978-1-83880-1-002-4 | Feb-20                     |
| 6  | Jyoti Pruthi              | CST                      | Book Chapter  | Data Visualization Techniques: Traditional Data to Big Data    | 978-981-15-2282-6   | Mar-20                     |
| 7  | Hanu Bhardwaj             | CST                      | Book Chapter  | Business Indicators for Data Warehouse Requirement Engineering | 9781799829751       | Jan-20                     |
| 8  | Versha Vahini             | Law                      | Book  | Textbook on Indian Competition Law                             | 978-93-8999-128-4   | Jan-20                     |

|    |                                 |         |              |  |                   |               |
|----|---------------------------------|---------|--------------|--|-------------------|---------------|
| 9  | Shiv Kumar                      | Physics | Book Chapter | Effect of thermal stress on power conversion efficiency of PCDTBT: PGIBM Organic Solar Cells, The Physics of Semiconductor devices                           | 978-3-319-97604-4 | 8th Nov 2019  |
| 10 | Versha Vahini                   | Law     | Book Chapter | Triple Talak - Judgment, Legislation and Beyond in book Dispelling Rhetorics: Law of Divorce and Gender inequality in Islam, Indian Law Institute, New Delhi | 978-81-927926-7-5 | Jul-19        |
| 11 | Parneeta Dhaliwal<br>Riya Sapra | CST     | Book Chapter | Blockchain for security issues of Internet of Things (IoT)   | 9783030335953     | 14th Nov 2019 |

## Annexure 4.5

## MANAV RACHNA UNIVERSITY

## Seminar/ Conference/ Workshop organised

| S.No. | Department Name        | Type of Event<br>1. Seminar<br>2. Workshop<br>3. Conference<br>4. Colloqium<br>5. Symposium<br>6. Fair / Exhibition | Title of the Event  | Level (National / International) | Venue          | Duration       | Date(s) (dd/mm/yyyy) |            | Year |
|-------|------------------------|---|---|----------------------------------|----------------|----------------|----------------------|------------|------|
|       |                        |   |   |                                  |                | No. of Day (s) | From                 | To         |      |
| 1     | CST                    | Seminar   | Xebia Specialization Course : Unsupervised Learning & Neural Network                    | University                       | Online-MS Team | 1              | 30.06.2020           | 30.06.2020 | 2020 |
| 2     | Education & Humanities | Workshop  | Research Methodology  | National                         | ZOOM           | 2              | 27.06.2020           | 28.06.2020 | 2020 |
| 3     | CST                    | Workshop  | FDP on Devops and Test Automation organized by CST, dept. MRU in association with Xebia | University                       | Online-MS Team | 5              | 25.06.2020           | 30.06.2020 | 2020 |

|    |            |          |   |            |                               |   |            |            |      |
|----|------------|----------|---|------------|-------------------------------|---|------------|------------|------|
| 4  | Management | Webinar  | Participation in E quiz Vocal for Local: The Self Reliance Mantra                   | University | MRU E Cell                    | 1 | 25.06.2020 | 25.06.2020 | 2020 |
| 5  | CST        | Workshop | FDP on Advance Nerual Network organized by CST, dept. MRU in association with Xebia | University | Online-MS Team                | 3 | 22.06.2020 | 24.06.2020 | 2020 |
| 6  | Management | Webinar  | Family Buisness strategy week 2020  | University | MRU                           | 4 | 15.06.2020 | 19.06.2020 | 2020 |
| 7  | Mechanical | Webinar  | UG-NX Mold Wizard   | University | MRU Campus                    | 1 | 06.06.2020 | 06.06.2020 | 2020 |
| 8  | Management | Webinar  | E-Week "संRachna" celebration   | University | MRU                           | 5 | 01.06.2020 | 05.06.2020 | 2020 |
| 9  | Management | Webinar  | Two Day Mentor Development programme was organized                                  | University | MRU E Cell and BYST Faridabad | 2 | 29.05.2020 | 30.05.2020 | 2020 |
| 10 | Mechanical | Webinar  | Calculation of Heating and cooling load by using Psychromatic Chart                 | Others     | MRU                           | 1 | 25.05.2020 | 25.05.2020 | 2020 |
| 11 | ECE        | Workshop | Logic design using CMOS logic & Familiarization                                     | Others     | Online                        | 1 | 23.05.2020 | 23.05.2020 | 2020 |

|    |     |          |  |            |            |         |            |            |      |
|----|-----|----------|--|------------|------------|---------|------------|------------|------|
|    |     |          | with Tanner EDA tool   |            |            |         |            |            |      |
| 12 | CST | Seminar  | Mind & Meditation  | University | Online     | 1       | 20.05.2020 | 20.05.2020 | 2020 |
| 13 | CST | Seminar  | Future of Jobs in the Financial & Technology Sectors during Covid-19 Times             | University | Online     | 1       | 18.05.2020 | 18.05.2020 | 2020 |
| 14 | CST | Workshop | Virtual Lab Faculty Training Program   | University | Online     | 1       | 16.05.2020 | 16.05.2020 | 2020 |
| 15 | CST | Seminar  | Board of Studies   | University | Online     | 1       | 15.05.2020 | 15.05.2020 | 2020 |
| 16 | CST | Workshop | AWS Educate   Second Webinar in Series   Cloud Degree Faculty Professional Development | University | Online     | 1       | 13.05.2020 | 13.05.2020 | 2020 |
| 17 | CPS | Training | Essentials of Online learning  | University | MRU Campus | 2 Weeks | 11.05.2020 | 22.05.2020 | 2020 |
| 18 | CST | Seminar  | Interactive Session by CRC   BTech Pre-Final Year students   Placement Process         | University | Online     | 1       | 08.05.2020 | 08.05.2020 | 2020 |
| 19 | CST | Seminar  | Interaction with CSE Alumnus - Mr Aj   | University | Online     | 1       | 07.05.2020 | 07.05.2020 | 2020 |



|    |            |             |  |            |                    |         |            |            |      |
|----|------------|-------------|--|------------|--------------------|---------|------------|------------|------|
|    |            |             | Gauravdeep<br>(BTech CSE<br>2005-09 Batch)   |            |                    |         |            |            |      |
| 20 | CPS        | Training    | Enhancing online<br>learning<br>experience   | University | MRU<br>Campus      | 4 Weeks | 09.04.2020 | 05.05.2020 | 2020 |
| 21 | CST        | Competition | 2-D Art<br>Competition on<br>the theme "Relive<br>the Creators"  | National   | Online             | 1       | 30.04.2020 | 30.04.2020 | 2020 |
| 22 | CST        | Workshop    | AWS Educate<br>Cloud Degree<br>Faculty<br>Professional<br>Development<br>Orientation                           | University | Online             | 1       | 24.04.2020 | 24.04.2020 | 2020 |
| 23 | Management | Webinar     | Online Group<br>discussion<br>organized for all<br>students of<br>Manav Rachna<br>Tomorrow After a<br>Pandemic | University | MRU E Cell         | 1       | 11.04.2020 | 11.04.2020 | 2020 |
| 24 | Mechanical | Webinar     | Patenting  | Others     | MRU                | 1       | 11.04.2020 | 11.04.2020 | 2020 |
| 25 | Mechanical | FDP         | NBA Accreditation<br>for Engg.<br>Program  | National   | ICT Based<br>NITTR | 5       | 11.04.2020 | 15.04.2020 | 2020 |
| 26 | CST        | Seminar     | Online Higher<br>Education   | University | MRU                | 1       | 12.03.2020 | 12.03.2020 | 2020 |
| 27 | CST        | Workshop    | Matlab and<br>Mathematics<br>Magic   | University | MRU                | 1       | 06.03.2020 | 06.03.2020 | 2020 |

|    |            |            |  |            |  |   |            |            |      |
|----|------------|------------|--|------------|--|---|------------|------------|------|
| 28 | Mechanical | Workshop   | Computational Fluid dynamics   | University | MRU Campus                               | 2 | 05.03.2020 | 06.03.2020 | 2020 |
| 29 | CST        | Seminar    | Gate Preparation   | University | MRU                                      | 1 | 05.03.2020 | 05.03.2020 | 2020 |
| 30 | Management | Workshop   | Idea Pitching Session for students selected to present the business Ideas to BYST(Bhartiya Yuva Shakti Trust) for securing funding | University | MRU E Cell                               | 1 | 03.03.2020 | 03.03.2020 | 2020 |
| 31 | Management | Workshop   | Idea Pitching Workshop for all students  | University | MRU E Cell                               | 1 | 27.02.2020 | 27.02.2020 | 2020 |
| 32 | Management | Conference | Two Day Global Youth Conference on Entrepreneurship, Innovation and Venture development at SGT University, Gurugram.               | University | Department of Management & Commerce, MRU | 1 | 19.02.2020 | 20.02.2020 | 2020 |
| 33 | CST        | Seminar    | Interaction with CSE Alumnus - Mr Aj Gauravdeep  | University | MRU                                      | 1 | 17.02.2020 | 17.02.2020 | 2020 |
| 34 | Mechanical | Workshop   | Weight Optimization of Design by using Altair INSPiRE Software   | University | MRU Campus                               | 1 | 13.02.2020 | 13.02.2020 | 2020 |

|    |             |          |  |            |   |   |            |            |      |
|----|-------------|----------|--|------------|---|---|------------|------------|------|
| 35 | CST         | Workshop | Workshop on Blockchain Technology            | University | MRU   | 1 | 12.02.2020 | 12.02.2020 | 2020 |
| 36 | CST         | Workshop | Big Data Analytics                           | University | MRU   | 5 | 03.02.2020 | 07.02.2020 | 2020 |
| 37 | Management  | Workshop | Workshop on Idea Generation                  | University | MRU E Cell  | 1 | 30.01.2020 | 30.01.2020 | 2020 |
| 38 | Management  | Workshop | Industrial Visit to a start-up Firm          | University | Department of Management & Commerce, MRU                  | 1 | 23.01.2020 | 23.01.2020 | 2020 |
| 39 | Management  | Seminar  | Awareness Seminar with Buisness Idea Contest | University | MRU in association with BYST( Bhartiya Yuva Shakti Trust) | 1 | 22.01.2020 | 22.01.2020 | 2020 |
| 40 | Mathematics | Workshop | Scientific Writing using LaTeX               | National   | MRU   | 2 | 17.01.2020 | 18.01.2020 | 2020 |
| 41 | Mechanical  | Workshop | 3D Printing                                  | Others     | MRU   | 1 | 15.01.2020 | 15.01.2020 | 2020 |
| 42 | Management  | Seminar  | Session on Funding and Mentoring             | University | MRU   | 1 | 23.10.2019 | 23.10.2019 | 2019 |
| 43 | Management  | Workshop | Entrepreneurial Meet                         | University | MRU   | 1 | 26.04.2019 | 26.04.2019 | 2019 |
| 44 | Management  | Workshop | Entrepreneurial workshop & learning session  | University | MRU   | 1 | 20.03.2019 | 20.03.2019 | 2019 |

|    |                                     |            |   |               |  |         |            |            |      |
|----|-------------------------------------|------------|---|---------------|--|---------|------------|------------|------|
| 45 | Management                          | Seminar    | A five week long women entrepreneurship development program(WEDP) under the aegis of DST-NIMAT scheme | University    | Manav Rachna -New Gen IEDC and NIMAT DST | 5 Weeks | 25.02.2019 | 27.03.2019 | 2019 |
| 46 | Faculty of Education and Humanities | Workshop   | Creating Moocs (Massive Online Open Courses)  | Other         | MRU                                      | 5       | 07.12.2019 | 11.12.2019 | 2019 |
| 47 | CST                                 | Workshop   | Software Craftsmanship  | National      | MRU                                      | 1       | 18.11.2019 | 18.11.2019 | 2019 |
| 48 | Chemistry                           | Conference | Green Initiative on sustainable chemistry (GSCC-2019)   | International | MRU                                      | 2       | 07.11.2019 | 08.11.2019 | 2019 |
| 49 | Mechanical                          | Workshop   | Introduction to Hypermesh   | National      | MRU                                      | 1       | 02.11.2019 | 02.11.2019 | 2019 |
| 50 | Mechanical                          | STC        | Short Term Course on Advances in Manufacturing  | National      | MRU                                      | 5       | 09.09.2019 | 13.09.2019 | 2019 |
| 51 | Physics                             | Workshop   | Workshop on Raman spectroscopy  | National      | MRU                                      | 1       | 09.08.2019 | 09.08.2019 | 2019 |

## Annexure 4.6

| <b>MANAV RACHNA UNIVERSITY</b>                |                                     |   |  |                      |                                 |            |
|---|-------------------------------------|---|--|----------------------|---------------------------------|------------|
| <b>Expert talks / Guest Lecture Organised</b> |                                     |   |  |                      |                                 |            |
| <b>S. No.</b>                                 | <b>Department Name</b>              | <b>Nature of Tal<br/>1. Academic<br/>2. Research<br/>3. Innovation<br/>4. IPR<br/>5. Entrepreneurship<br/>6. Others</b> | <b>Title of the Event</b>  | <b>Duration</b>      | <b>Date(s)<br/>(dd/mm/yyyy)</b> |            |
|   |                                     |   |  | <b>No. of Day(s)</b> | <b>From</b>                     | <b>To</b>  |
| 1   | Education and Humanities            | Others  | Science of Mind  | 1                    | 27.06.2020                      | 27.06.2020 |
| 2   | Centre of Academic Development      | Colloquim   | Asli Chai  | 1                    | 30.05.2020                      | 30.05.2020 |
| 3   | Centre for Peace and Sustainability | Webinar   | Biological Disaster Management-Post covid 19   | 1                    | 13.06.2020                      | 13.06.2020 |
| 4   | Centre for Peace and Sustainability | Webinar   | Emotional balance in current times   | 1                    | 17.06.2020                      | 17.06.2020 |
| 5   | Centre for Peace and Sustainability | Webinar   | Balancing Self, Family and Profession by BK Sister Shivani   | 1                    | 27.06.2020                      | 27.06.2020 |
| 6   | ECE                                 | Academic  | Artificial Intelligence for future   | 1                    | 11.02.2020                      | 11.02.2020 |
| 7   | Mechanical                          | Academic & Research   | Energy Simulation Software   | 1                    | 11.02.2020                      | 11.02.2020 |
| 8   | Mechanical                          | Academic & Research   | Introducing the students to the COVID-19 and its implications on the global market and our daily lives | 1                    | 30.04.2020                      | 30.04.2020 |
| 9   | Education                           | Academic  | Fostering a Stress Free Environment  | 1                    | 12.03.2020                      | 12.03.2020 |
| 10  | Mathematics                         | Others  | Inner Power for Success  | 1                    | 19.02.2020                      | 19.02.2020 |
| 11  | Education & Humanities              | Academic  | Discourse Analysis and Speech Mechanism: A Pragmatic Approach to English Language                      | 1                    | 06.03.2020                      | 06.03.2020 |
| 12  | Physics                             | Research  | Two Photon   | 1                    | 28.05.2020                      | 28.05.2020 |

|    |                                     |                     |  |   |            |            |
|----|-------------------------------------|---------------------|--|---|------------|------------|
|    |                                     |                     | Absorption in Bulk Semiconductors and Quantum Well Structures and its Applications   |   |            |            |
| 13 | Education & Humanities              | Academic            | Women Empowerment through Education: Exploring emerging trends                       | 1 | 05.03.2020 | 05.03.2020 |
| 14 | CST                                 | Academic            | Data Privacy Awareness Session   Data Privacy Day 2020                               | 1 | 31.01.2020 | 31.01.2020 |
| 15 | MECHANICAL                          | Innovation          | Computer Aided Engineering (CAE)   | 1 | 27.02.2020 | 27.02.2020 |
| 16 | Mechanical                          | Academic            | HVAC&R Future after COVID-19   | 1 | 23.05.2020 | 23.05.2020 |
| 17 | Mechanical                          | Academic            | Impact on Industries after COVID-19  | 1 | 30.04.2020 | 30.04.2020 |
| 18 | Centre for Peace and Sustainability | Others              | Four Pillars of Education  | 1 | 20.05.2020 | 20.05.2020 |
| 19 | Centre for Peace and Sustainability | Others              | Climate change:Threat to peace   | 1 | 29.05.2020 | 29.05.2020 |
| 20 | Education                           | Innovation          | Creative Teaching Tools  | 1 | 05.03.2020 | 05.03.2020 |
| 21 | CST                                 | Academic            | Machine Learning and Supervised Learning   | 1 | 15.11.2019 | 15.11.2019 |
| 22 | CST                                 | Academic            | Understanding Basics of Agile  | 1 | 15.11.2019 | 15.11.2019 |
| 23 | CST                                 | Academic            | Demystifying Artificial & Machine Learning   | 1 | 15.11.2019 | 15.11.2019 |
| 24 | CST                                 | Academic            | On account of Children's Day, for a session to enlighten our students on human value | 1 | 16.11.2019 | 16.11.2019 |
| 25 | Mechanical                          | Research            | Introduction to Biofuels   | 1 | 02.10.2019 | 02.10.2019 |
| 26 | Mathematics                         | Academic & Research | Optimization Algorithms  | 1 | 25.09.2019 | 25.09.2019 |
| 27 | CST                                 | Academic            | Cracking the Technical Interview: Get that high paying job                           | 1 | 25.08.2019 | 25.08.2019 |



|    |           |          |  |   |            |            |
|----|-----------|----------|--|---|------------|------------|
| 28 | Education | Academic | Aligning Learning Objectives with Bloom's Taxonomy | 1 | 20.07.2019 | 20.07.2019 |
| 29 | Education | Academic | Abacus   | 1 | 11.07.2019 | 11.07.2019 |
| 30 | CST       | Academic | Software Craftmanship                              | 1 | 18.11.2019 | 18.11.2019 |
| 31 | Education | Academic | Ikigai : Finding the purpose of Life               | 1 | 18.09.2019 | 18.09.2019 |
| 32 | Education | Academic | Mindfulness  | 1 | 24.10.2019 | 24.10.2019 |

**Annexure 4.7**

| <b>MANAV RACHNA UNIVERSITY</b>              |                 |  |                                   |                        |                            |                   |                         |                                    |                             |              |   |
|---|-----------------|--|-----------------------------------|------------------------|----------------------------|-------------------|-------------------------|------------------------------------|-----------------------------|--------------|---|
| <b>Consultancy Earned by the Department</b> |                 |  |                                   |                        |                            |                   |                         |                                    |                             |              |   |
| S. No.                                      | Department Name | Project Title                                      | Sponsoring Agency                 | Project Team           |                            | Amount Sanctioned | Month and Year of start | Current status Ongoing / Completed | Consultancy amount received |              | Date of final report submission                                   |
|   |                 |  |                                   | Principal Investigator | Other investigator, if any |                   |                         |                                    | Date                        | Amount       |   |
|   |                 |  |                                   | Name                   | Name                       |                   |                         |                                    |                             |              |   |
| 1   | CST             | Dynamic Website for Delish Homemades               | Delish Homemades                  | Dr. Parneeta Dhaliwal  | NA                         | 12390             | May, 2020               | Ongoing                            | 28.10.2020                  | 6000         | Expected to be complete by 31.3.2021                              |
| 2   | Mechanical      | Quality tools & inspection with company policy     | Talbros automotive component Ltd. | Prof. Jaideep Singh    | Mr. J.P. Sharma            | 480000            | 2019                    | Ongoing                            |                             | 480000       | 15000/- Per Monday + Taxes * 4 per month*8 months                 |
| 3   | CST             | Website Development for "Delish Homemades"         | Delish Homemades                  | D. Parneeta Dhaliwal   | NA                         | 11930             | 2019                    | Ongoing                            | 13.12.2019<br>24.02.2020    | 6000<br>5930 | Completed on 24.02.2020   |
| 4   | CST             | Mobile Application Development for "The Ultimetro" | Ultimetro                         | D. Parneeta Dhaliwal   | NA                         | 34220             | 2019                    | Ongoing                            | 29.12.2019                  | 15000        | discontinued due to Venture Capitalist issues and Covid-19 issues |
| 5   | CST             | Panic Button for Doctor's Use                      | Sarvodaya Hospital                | D. Parneeta Dhaliwal   | Dr. Brijesh Kumar          | 28592             | 2019                    | Ongoing                            | 04.01.2020                  | 14010        | Completed but testing is delayed due to Covid-19 pandemic         |

## Annexure 4.8

## MANAV RACHNA UNIVERSITY

## Sponsored Research Projects

| S. No. | Financial Year | Name of Faculty (Principal Investigator) | Name of the Funding Agency | Title of the Project  | Sanctioned Date | Amount Sanctioned (In Rs.) |
|--------|----------------|--|----------------------------|---|-----------------|----------------------------|
| 1      | 2019-20        | Dr.Pragati Chauhan                       | CL Educate                 | Women Entrepreneurship Development  | 08.07.2019      | 150000                     |
| 2      | 2019-20        | Dr. Arpit Sand                           | CL Educate                 | Swelling properties of the polymeric materials for sanitary applications      | 08.07.2019      | 175000                     |
| 3      | 2019-20        | Ms. Yogita Khanna                        | CL Educate                 | Detection and elimination of pest in paddy fields using electromagnetic waves | 08.07.2019      | 125500                     |
|        |                |  |                            | <b>Total Amount (in Rs.)</b>  |                 | <b>450500</b>              |

## Annexure 4.9

**MANAV RACHNA UNIVERSITY**



Research Publications in Journals in collaboration with other departments and institutions


| S. No. | Department               | Faculty Name | Paper Title  | Authors                            | Name and department of Authors belong to other institution other than MRU                                | Journal Name                | Details of Publication          | Year of Publication | ISSN/ ISBN      |
|--------|--------------------------|--------------|--|------------------------------------|--|-----------------------------|---------------------------------|---------------------|-----------------|
| 1      | Mathematics              | Advin Masih  | Radical Screen transversal slant lightlike Submanfolds of indefinite Kaehler manifolds | Mamta Thakur, Advin & S.M.K Haider | Dr. Mamta Thakur, Deptt. of Maths. , Al-Falah University, Prof. S.M.K Haider, Deptt. of Mathematics, JMI | FILOMAT                     | 34(6),2020, 2037-2046, Jan 2020 | 2020                | ISSN: 2406-0933 |
| 2      | Education and Humanities | Rashee Singh | Ethical Dilemmas of a Teacher  | Rashee Singh, Sheena Sabharwal     | Dr Sheena Sabharwal, Principal, RSGCOEd  | Pramana Research Journal    | Vol.10, Issue 6, June2020       | 2020                | 2249-2976       |
| 3      | Law                      | Ajay Bhatia  | Determinants of College Teachers' happiness - A Comprehensive Review                   | Ajay Bhatia & Farhat Mohsin        | Farhat Mohsin, MRIIRS, Faridabad.  | Journal of Critical Reviews | Vol. 7, Issue 9, May 2020       | 2020                | 2394-5125       |

|   |                       |                 |   |   |   |  |   |      |           |
|---|-----------------------|-----------------|---|---|---|--|---|------|-----------|
| 4 | Law                   | Ajay Bhatia     | Measuring Happiness of University Teachers during Challenging Times   | Ajay Bhatia, Dr. Farhat Mohsin                      | Farhat Mohsin, MRIIRS, Faridabad.                             | International Journal of Advanced Science and Technology     | Vol.29, No. 10S, (2020), pp. 7805-7817, June 2020 | 2020 | 2005-4238 |
| 5 | Management & Commerce | Animesh Singh   | Green Consumer : Study of Demographic and Psychographic Behavioural Segments                                    | Samriti Mahajan, Rajat Gera, Animesh Singh          | Dr. Rajat Gera, Management Dept., MRIIRS, Faridabad.          | Journal of Critical Reviews                                  | Vol. 7, Issue 18, 2020. pp. 582-588, June 2020    | 2020 | 2394-5125 |
| 6 | Mathematics           | L. Govindarao   | A fourth-order numerical scheme for singularly perturbed delay parabolic problem arising in population dynamics | L. Govindarao                                       | J. Mohapatra, NIT Rourkela                                    | Journal of Applied Mathematics and Computing                 | 63, pages 171–195, Jan 2020                       | 2020 | 1598-5865 |
| 7 | Mathematics           | Ruchi Gupta     | A new extension of Kannan contractions and related fixed point results  | Rakesh Batra, Ruchi Gupta & Priyanka Sahni          | Rakesh Batra, Delhi University                                | The Journal of Analysis,                                     | Vol. 28(2), May 2020                              | 2020 | 2367-2501 |
| 8 | ECE                   | Niharika Thakur | Advanced hybrid intelligent model and algorithm for de-regulated electricity market                             | Hooda, M., Awasthi, Y., Thakur, N. and Siddiqui, A. | Y.K. Awasthi, FET, MRIIRS A.S. Siddiqui, Jamia Millia Islamia | Australian Journal of Electrical and Electronics Engineering | 36-46, 27 Apr 2020                                | 2020 | 1448-837X |

|    |           |                     |  |   |   |                               |                                     |      |           |
|----|-----------|---------------------|--|---|---|-------------------------------|-------------------------------------|------|-----------|
|    |           |                     |  |   |   | ering                         |                                     |      |           |
| 9  | CST       | Parneeta Dhaliwal   | An approach for Concept Drifting Streams: Early Dynamic Weighted Majority                              | Parneeta Dhaliwal, Ajay Kumar, Poonam Chaudhary | Ajay Kumar, ME SGT University Gurugram, Poonam Chaudhary, CSE North CAP University Gurugram | Proceeding Computer Science   | Vol.167, pp. 2653-2661, April 2020  | 2020 | 1877-0509 |
| 10 | Law       | Som Dutt Bhardwaj   | Big Data and Network Effect of Facebook: Critical Analysis of Indian and German Competition Commission | Som Dutt Bhardwaj                               | Divya Kathuria, Research Scholar, NLU Delhi Dr Archana Sehrawat, Amity University, Gurgaon  | Test Engineering & Management | Jan-Feb 2020/ 24 Feb. 2020          | 2020 | 0193-4120 |
| 11 | Chemistry | Pradeep K. Varshney | Current trends and future perspectives in the recycling of spent lead acid batteries in India          | Pradeep K. Varshney                             | Kalpna Varshney, FET, MRIIRS, Faridabad.  | Materials Today Proceedings   | Vol.26, Part 2, 2020, Pages 592-602 | ###  | 2214-7853 |



|    |            |                  |  |   |   |  |   |      |   |           |
|----|------------|------------------|--|---|---|--|---|------|---|-----------|
| 12 | CST        | M.Thurai Pandian | Design, analysis and characterization of four port multiple-input-multiple-output UWB-X band antenna with band rejection ability for wireless network applications | V Dhasarathan, TK Nguyen, M Sharma, SK Patel, SK Mittal, MT Pandian | Chitkara University, Marwadi University   | Wireless Network                           | <a href="https://link.springer.com/article/10.1007/s11276-020-02343-x">https://link.springer.com/article/10.1007/s11276-020-02343-x</a> | ###  |    | 1572-     |
| 13 | Physics    | Sandeep Kumar    | Equations: Linear Algebra  | Hitendra K. Malik, Rashmi Srivastava, Sandeep Kumar & Devi Singh    | H. K. Malik, Department of Physics, Indian Institute of Technology, New Delhi, Hauzkhass 110016, India<br>Devi Singh, FET, MRIIRS, Faridabad 121004, Haryana, India | Advanced and Innovative Research           | Vol.14, No. 1, 417–422, 2020, March 2020  | 2020 |  | 1658-     |
| 14 | Mechanical | I.K. Bhat        | Factors influencing mechanical and wear performance of dental composite : A review   | S.R. Kumar A. Patnaik I.K. Bhat                                     | S.R. Kumar & A. Patnaik, MNIT, Jaipur   | Materials Science & Engineering Technology | <a href="https://doi.org/10.1002/mawe.201900029">https://doi.org/10.1002/mawe.201900029</a>   | ###  |   | 1521-4052 |

|    |             |                  |   |  |  |   |  |      |   |      |
|----|-------------|------------------|---|--|--|---|--|------|---|------|
| 15 | PHY<br>SICS | Aditya<br>Sharma | Influence<br>of high<br>energy ion<br>irradiation<br>on<br>structural,<br>morpholog<br>ical and<br>optical<br>properties<br>of high-k<br>dielectric<br>hafnium<br>oxide<br>(HfO <sub>2</sub> )<br>thin films<br>grown by<br>atomic<br>layer<br>deposition | Rajesh<br>Kumar,<br>Vishnu<br>Chauhan<br>, N.<br>Koratkar,<br>Shalendr<br>a Kumar,<br>Aditya<br>Sharma,<br>Keun-<br>Hwa<br>Chae,<br>Sung Ok<br>Won | <b>Rajesh<br/>Kumar,<br/>Vishnu<br/>Chauhan,</b><br>University<br>School of<br>Basic and<br>Applied<br>Sciences,<br>Guru Gobind<br>Singh<br>Indraprastha<br>University,<br>New Delhi,<br>110078, India<br><b>N. Koratkar,</b><br>Department of<br>Mechanical,<br>Aerospace and<br>Nuclear<br>Engineering,<br>Rensselaer<br>Polytechnic<br>Institute, Troy,<br>NY, 12180,<br>United States<br><b>Shalendra<br/>Kumar,</b><br>Department of<br>Physics,<br>College of<br>Science, King<br>Faisal<br>University,<br>Hofuf, Al-Ahsa,<br>31982, Saudi<br>Arabia<br><b>Keun-Hwa<br/>Chae &amp; Sung<br/>Ok Won,</b><br>Advanced<br>Analysis<br>Centre, Korea<br>Institute of<br>Science and<br>Technology,<br>Seoul, 02792,<br>South Korea | Journal<br>of<br>Alloys<br>and<br>Compo<br>unds | Vol.<br>831<br>page-<br>154698<br>-<br>154713<br>, March<br>2020 | 2020 |  | 9258 |
|----|-------------|------------------|---|--|--|---|--|------|---|------|

|    |             |                     |   |  |  |  |   |      |           |
|----|-------------|---------------------|---|--|--|--|---|------|-----------|
| 16 | Management  | Rajat Gera          | Mobile app usage and adoption: A literature review  | Gera, R., Chadha, P., Ahuja, V.            | Dr. Rajat Gera, Management Dept., MRIIRS, Faridabad.         | International Journal of Electronic Business                   | <a href="https://doi.org/10.1504/IJEB.2020.106546">https://doi.org/10.1504/IJEB.2020.106546</a> | ###  | 1470-6067 |
| 17 | CST         | Hardeo Kumar Thakur | Multi-class Instance incremental Framework for classification in fully Dynamic Graphs   | Hardeo Kumar Thakur                        | Anand Gupta, Sreyashi Nag and Ritvik Shrivastava, NSIT Delhi | International Journal of Computational Science and Engineering | Vol. 21, No. 1, pp. 69-83, Jan 2020   | 2020 | 1742-7185 |
| 18 | Physics     | Aditya Sharma       | Nano-structured phases of gallium oxide (GaOOH, $\alpha$ -Ga <sub>2</sub> O <sub>3</sub> , $\beta$ -Ga <sub>2</sub> O <sub>3</sub> , $\gamma$ -Ga <sub>2</sub> O <sub>3</sub> , $\delta$ -Ga <sub>2</sub> O <sub>3</sub> , and $\epsilon$ -Ga <sub>2</sub> O <sub>3</sub> ): fabrication, structural, and electronic structure investigations | Aditya Sharma                              | KIST, Hyun-Joon Shin Keun-Hwa Chae Sung-Ok Won               | International Nano Letters                                     | 10 Pages, 1-9, year Feb 2020,   | 2020 | 2228-5326 |
| 19 | Mathematics | Ruchi Gupta         | Some results related to fixed points of F-G contractions on metric spaces   | Rakesh Batra, Ruchi Gupta & Priyanka Sahni | Rakesh Batra, DU   | Journal of Interdisciplinary Mathematics                       | 23:2,413-423, MAY 2020  | 2020 | 0972-0502 |

|    |             |               |  |  |   |   |   |      |           |
|----|-------------|---------------|--|--|---|---|---|------|-----------|
|    |             |               | equipped with w-distance   |  |   |   |   |      |           |
| 20 | Mathematics | Y. K Sharma   | Study of Stability and Solution of a system of Ordinary differential                 | Y.K Sharma, Sachin, Deepak Kumar                                 | Deepak Kumar, FET, MRIIRS, Faridabad.                                     | International Journal of Advance & Innovative Research      | Vol. 7, Issue 1(XVIII), 320-323, March 2020   | 2020 | 2394-7780 |
| 21 | Physics     | Sandeep Kumar | Small amplitude dust acoustic solitary wave in magnetized two ion temperature plasma | Hitendra K. Malik, Rashmi Srivastava, Sandeep Kumar & Devi Singh | Hitendra K. Malik, IIT Delhi, Rashmi Srivastava, MRIIS, Devi Singh, MRIIS | Journal of Taibah university for Science                    | Vol.14, No. 1, 417-422, March 2020  | 2020 | 1658-3655 |
| 22 | Management  | Rajat Gera    | On comparing the performances of MLP and RBFN on sales forecasting problem           | Tiwari R., Kumar R., Gera R., Srivastava S.                      | Sanjay Srivastava, MRIIRS, Faridabad.                                     | International Journal of Information Technology (Singapore) | <a href="https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091739050&amp;doi=10.1007%2fs41870-019-00402-x&amp;partnerID=40&amp;md5=bd1707d65b95921ba88aa56b359cc0c1">https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091739050&amp;doi=10.1007%2fs41870-019-00402-x&amp;partnerID=40&amp;md5=bd1707d65b95921ba88aa56b359cc0c1</a> | ###  |           |

|    |           |                   |  |   |  |  |   |      |           |
|----|-----------|-------------------|--|---|--|--|---|------|-----------|
| 23 | Chemistry | Vinayak V Pathak  | Algal-based biofuel generation through flue gas and wastewater utilization: a sustainable prospective approach | Richa Kothari, Shamshad Ahmad, Vinayak V. Pathak, Arya Pandey, Ashwani Kumar, Raju Shankarayan, Paul N. Black & V. V. Tyagi | Richa Kothari, Shamshad Ahmad, Arya Pandey, Ashwani Kumar, Raju Shankarayan, Paul N. Black & V. V. Tyagi | Biomass Conversion and Biorefinery                       | <a href="https://doi.org/10.1007/s13399-019-00533-y">https://doi.org/10.1007/s13399-019-00533-y</a> | ###  | 2190-6815 |
| 24 | CST       | Jyoti Pruthi      | An improved approach for aspect level sentiment analysis using bipolar words extraction                        | Nandal, N., Pruthi, J., Choudhury, A.   | Choudhury, A, Maharaja Surajmal Institute, New Delhi, INDIA  | International Journal of Advanced Science and Technology | Vol.28, No. 13 (Nov 2019)   | 2019 | 2005-4238 |
| 25 | Law       | Som Dutt Bhardwaj | Competition advocacy: an unused tool in India  | Dr. Som Dutt Bhardwaj, Dr Archana Sehrawat  | Dr Archana Sehrawat, Amity University, Gurgaon   | Journal of the Gujarat Research Society                  | Vol-22-Issue-14-December-2019   | 2019 | 0374-8588 |
| 26 | Physics   | Aditya Sharma     | Copper-Halide Polymer Nanowires as Versatile Supports for Single-Atom Catalysts                                | Min-Seok Kim Haedong Park Sung Ok Won Aditya Sharma Jimin Kong Hyun S. Park Yun-Mo  | KIST   | Small  | Vol.15, Issue-40, October 1, 2019   | 2019 | 1613-6829 |

|    |             |   |   |  |   |  |  |      |               |
|----|-------------|---|---|--|---|--|--|------|---------------|
|    |             |   |   | Sung<br>Tae Joon<br>Park<br>Myoung-<br>Woon<br>Moon<br>Kahyun<br>Hur |   |  |  |      |               |
| 27 | Physi<br>cs | Haider<br>Abbas   | Density<br>functional<br>study of<br>spectrosc<br>opy,<br>electronic<br>structure,<br>linear and<br>nonlinear<br>optical<br>properties<br>of L-<br>proline<br>lithium<br>chloride<br>and L-<br>proline<br>lithium<br>bromide<br>monohy<br>ate: For<br>laser<br>applicatio<br>ns | Haider<br>Abbas a,<br>Mohd.<br>Shkir b,*<br>S. AlFaify               | Haider Abbas<br>a, Mohd. Shkir<br>b,* , S. AlFaify<br>b<br>a Department<br>of Physics,<br>Manav Rachna<br>University,<br>Faridabad,<br>Haryana<br>121001, India<br>b Department<br>of Physics,<br>Faculty of<br>Science, King<br>Khalid<br>University,<br>P.O. Box 9004,<br>Abha 61413,<br>Saudi Arabia | Arabian<br>Journal<br>of<br>Chemis<br>try        | Vol.12,<br>Issue 8,<br>Decem<br>ber<br>2019,<br>Pages<br>2336-<br>2346 | 2019 | 1878-<br>5352 |
| 28 | ECE         | Yogita<br>Khanna<br>,<br>Yogend<br>ra<br>Kumar<br>Awasthi | Dual-Band<br>Microwav<br>e Sensor<br>for<br>Investigati<br>on of<br>Liquid<br>Impurity<br>Concentra<br>tion Using<br>a<br>Metamate<br>rial<br>Complem<br>entary<br>Split-Ring<br>Resonator  | Khanna,<br>Y.,<br>Awasthi,<br>Y.K.                                   | Y.K. Awasthi,<br>FET, MRIIRS  | Journal<br>of<br>Electro<br>nic<br>Materia<br>ls | 49,<br>pages3<br>85–<br>394,<br>Nov<br>2019                            | 2019 | 0361-<br>5235 |



|    |           |                  |  |  |  |  |  |      |  |
|----|-----------|------------------|--|--|--|--|--|------|--|
| 29 | Physics   | Sandeep Kumar    | Erratum: Isolated terawatt attosecond hard X-ray pulse generated from single current spike             | C.H. Shim, Sandeep Kumar, Y.W. Parc, In Soo Ko, and D.E. Kim | C.H. Shim, Sandeep Kumar, Y.W. Parc, In Soo Ko, and D.E. Kim, Department of Physics, Ulsan National Institute of Science and Technology, Ulsan, South Korea  | Scientific Reports (Nature)  | Vol. 9, 8521, July 2019                    | 2019 | <br>2045-   |
| 30 | ECE       | Shruti Vashist   | Evaluation of Non-Orthogonal Techniques for Advance Wireless System                                    | Dipa Kokane, Geeta Nijhawan and Shruti Vashist               | Geeta Nijhawan, ECE, FET, MRIIRS   | International Journal of Recent Technology and Engineering (IJRTE) | 8(2), Issue 2, July 2019                   | 2019 | 2277-3878  |
| 31 | Chemistry | Vinayak V Pathak | Fuel Quality Index: A Novel Experimental Evaluation Tool for Biodiesel Prepared from Waste Cooking Oil | S Ahmad, R Kothari, VV Pathak, MK Pandey                     | S Ahmad, R Kothari, VV Pathak: Department of Environmental Science, Babasaheb Bhimrao Ambedkar University (Central University) Lucknow. MK Pandey: DE Kanpur | Waste and Biomass Valorization                                     | Vol.10, Issue 8, pp 2237–2247, August 2019 | 2019 | <br>1877- |
| 32 | Physics   | Sandeep Kumar    | Longitudinal phase space dynamics of witness bunch during the Trojan Horse injection for               | K. Moon, Sandeep Kumar, M. Hur, and M. Chung                 | K. Moon, M. Hur, and M. Chung, Department of Physics, UNIST Ulsan, South Korea   | Physics of Plasma  | Vol. 26, Issue 7, id.073103, July 2019     | 2019 | 1089-7674  |

|    |             |                 |   |   |  |   |                               |      |           |
|----|-------------|-----------------|---|---|--|---|-------------------------------|------|-----------|
|    |             |                 | plasma-based particle accelerators  |   |  |   |                               |      |           |
| 33 | Mathematics | Dinesh Tripathi | On Location of the Zeros of Polynomials (Lacunary Type)   | D. Tripathi, H.G. Hyun, S. Hans                     | S.Hans, Amity University: H G Hyun, Kyungnam University, Korea | Journal -Non-Linear Functional Analysis and Application                           | 24(3), 555-564, Aug 2019      | 2019 | 1229-1595 |
| 34 | Mathematics | Y.K Sharma      | Prevalence of Diabetes Mellitus in two Vicinal Nations  | Richa Gupta, Deepak Kumar, Bhawna Mehta, Y K Sharma | Richa Gupta, Deepak Kumar, MRIIRS, Faridabad.                  | International Journal of Innovative Technology and Exploring Engineering (IJITEE) | Vol.9, Issue-2, November 2019 | 2019 | 2278-3075 |
| 35 | CST         | Narender        | Role of Swarm Intelligence based Algorithms and their applications in Software Reliability Optimization | Narender, Sona Malhotra                             | Sona Malhotra  | International Journal of Recent Technology and Engineering(IJRTE 2019)            | Vol. 8, Issue 2, July 2019    | 2019 | 2277-3878 |

|    |         |                             |  |  |  |   |                                  |      |           |
|----|---------|-----------------------------|--|--|--|---|----------------------------------|------|-----------|
| 36 | Physics | Aditya Sharma & Jai Prakash | Structural and electronic structure investigations on sonication based synthesized Graphene oxide and reduced-Graphene oxide nano-sheets | Aditya Sharma, Jai Parkash, Shiv Kumar, K.H. Chae, S.O. Won, | K.H. Chae, S.O. Won  | Physica Scripta                                 | Vol.94, Number 12, Sept 2019     | 2019 | 1941-4919 |
| 37 | CST     | Manpreet Kaur               | Text Summarisation Using Laplacian Centrality-Based Minimum Vertex Cover   | Anand Gupta and Manpreet Kaur                                | Anand Gupta, NSUT Delhi                                    | Journal of Information and Knowledge Management | Vol.18, Issue-4, December 2019   | 2019 | 0219-6492 |
| 38 | Law     | Som Dutt Bhardwaj           | The scope and ambit of amendment of the constitution: A comparative study of the constitutions of India, USA and Switzerland.            | Dr. Som Dutt Bhardwaj, Ms Divya Kathuria                     | Ms Divya Kathuria, Newgen Knowledge Works Pvt Ltd, Chennai | Think India Journal                             | Vol. 21, Issue 14, December 2019 | 2019 | 0971-1260 |

**Annexure 4.9 (2)**

**MANAV RACHNA UNIVERSITY**

**Research Publications in Conferences in collaboration with other departments and institutions**

| S.No. | Department | Faculty Name        | Paper Title   | Authors  | Name and department of Authors belong to other institution other than MRU                       | Conference Details   | Year of Publication | ISSN /ISBN        |
|-------|------------|---------------------|---|--|---|--|---------------------|-------------------|
| 1     | Physics    | Shiv Kumar          | Improved power conversion efficiency of conducting polymer solar cells via incorporation of a DNA-CTMA electron blocking interlayer | Nitika, Shiv Kumar Dixit, Chhavi Bhatnagar, B.M. Bahal, Anita Kumari, P.K. Bhatnagar | Chhavi Bhatnagar, Anita Kumari, P.K. Bhatnagar, Dept of Electronic science, University of Delhi | International Conference on Advanced Materials (ICAM-2019)         | 2020                | 978-0-7354-4006-7 |
| 2     | ECE        | Yogita Khanna       | Wideband Ultra-thin Metamaterial Absorber for Ku & K-Band Applications  | Yogita Khanna, Yogendra Kumar Awasthi  | Yogendra Kumar Awasthi, ECE, FET, MRIIRS  | SPIN 2020  | Feb 2020            | 978-1-7281-5475-6 |
| 3     | Chemistry  | Pradeep K. Varshney | Current Trends in the recycling of Spent Lead Acid Batteries in India   | Pradeep K. Varshney, Kalpna Varshney, Kajal Gautam, Meghna Chaudhary, Monika Tanwar  | Kalpna Varshney, Chemistry, FET, MRIIRS   | 3rd International Conference on Science, Engineering and Materials | Jul-19              | No                |
| 4     | ECE        | Niharika Thakur     | Congestion Reduction under IPFC based deregulated electricity market using AKH algorithm  | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui                            | Yogendra Kumar Awasthi, ECE, FET, MRIIRS and AS Siddiqui, Jamia Millia Islamia                  | FEST 2019 - Future of Engineering Systems and Technologies 2019.   | Dec-19              | 1478/012027       |

|   |     |                   |  |   |  |  |        |                   |
|---|-----|-------------------|--|---|--|--|--------|-------------------|
| 5 | ECE | Niharika Thakur   | Profit based Unit Commitment Problem solving using Hybrid CUCKOO-GWO Algorithm   | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | Yogendra Kumar Awasthi, ECE, FET, MRIIRS and AS Siddiqui, Jamia Millia Islamia                                 | FEST 2019 - Future of Engineering Systems and Technologies 2019.                               | Dec-19 | 1478/012027       |
| 6 | ECE | Niharika Thakur   | Parametric Analysis of Adaptive Whale Optimization Technique for Power Quality Enhancement in Restructured Electricity Market. | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | Yogendra Kumar Awasthi, ECE, FET, MRIIRS and AS Siddiqui, Jamia Millia Islamia                                 | 2019 IEEE 2nd International Conference on " Power Energy, Environment and Intelligent Control" | Oct-19 | 978-1-7281-1793-5 |
| 7 | ECE | Niharika Thakur   | Algorithmic Analysis on Hybrid-Intelligent Deregulated Electricity Market.   | Niharika Thakur, Y.K Awasthi, Manisha Hooda, A.S Siddiqui | Yogendra Kumar Awasthi, ECE, FET, MRIIRS and AS Siddiqui, Jamia Millia Islamia                                 | 2019 IEEE 2nd International Conference on " Power Energy, Environment and Intelligent Control" | Oct-19 | 978-1-7281-1793-5 |
| 8 | CST | Parneeta Dhaliwal | An Approach for handling concept drifting streams: Early Dynamic Weighted Majority   | P.Dhaliwal, A.Kumar, P. Potalia                           | Ajay Kumar, Shree Guru Gobind Singh Tricentenary University Gurugram Poonam Chaudhary, The Northcap University | International Conference on Computational Intelligence and Data Science (ICCIDS-2019)          | Sep-19 | 2653 – 2661       |

## ANNEXURE 5.1

| Sr. No | Dept. | Student Name            | Company Name                   | Duration                   | Package  |
|--------|-------|-------------------------|--------------------------------|----------------------------|----------|
| 1      | ECE   | Arika Singla            | NIIT Technologies              | 6 months                   | NIL      |
| 2      |       | Ayush Goyal             | Expert Lancing                 | 6 months                   | NIL      |
| 3      |       | Ayushi Maurya           | IBI                            | 6 months                   | NIL      |
| 4      |       | Daman Jeet Singh Bhatia | Reliance Jio Infocomm Ltd.     | 6 months                   | NIL      |
| 5      |       | Dhruv Kapoor            | Encoder India Pvt. Ltd.        | 6 months                   | NIL      |
| 6      |       | Madan Mohan Dhir        | Advancetech India Pvt. Ltd.    | 6 months                   | NIL      |
| 7      |       | Manish Kumar Sharma     | Arodhaya Buildcom Pvt. Ltd.    | 6 months                   | NIL      |
| 8      |       | Manpreet Singh          | Vinsm Starclinch Pvt. Ltd      | 6 months                   | NIL      |
| 9      |       | Mayank Hans             | Truechip                       | 6 months                   | NIL      |
| 10     |       | Mohit Yadav             | Truechip                       | 6 months                   | NIL      |
| 11     |       | Rajan Gaur              | Ghrs Pvt. Ltd.                 | 6 months                   | NIL      |
| 12     |       | Raman Mishra            | 24*7around                     | 6 months                   | NIL      |
| 13     |       | Ravi Kumar              | Panasonic                      | 6 months                   | NIL      |
| 14     |       | Rohit Gupta             | Advancetech India Pvt. Ltd.    | 6 months                   | NIL      |
| 15     |       | Sanchita Dhar           | NIIT Technologies              | 6 months                   | NIL      |
| 16     |       | Shailesh Tiwari         | S. I. Energy Ventures Pvt. Ltd | 6 months                   | NIL      |
| 17     |       | Shivam Bhatia           | Prime Infra                    | 6 months                   | NIL      |
| 18     |       | Shreya Gupta            | Google Digital Unlocked        | 6 months                   | NIL      |
| 19     |       | Vansh Tara              | Revolt Motors                  | 6 months                   | NIL      |
| 20     |       | Vijay Arora             | 3 Pillar Global                | --                         | NIL      |
| 21     |       | Vishal Prasad           | Panasonic                      | --                         | NIL      |
| 22     |       | Vishwajeet Mallick      | Bytedance Ltd.                 | --                         | NIL      |
| 24     |       | LAW                     | Nikhil Indora                  | Law Office Of Shimpy Arman | 2 months |

|    |  |                    |   |           |     |
|----|--|--------------------|---|-----------|-----|
|    |  |                    | Sharma  |           |     |
| 25 |  | Anoushka Singh     | Lall & Sethi                                  | 1 month   | NIL |
| 26 |  | Madhoo Kant Bhatia | Deepak Gera & Co                              | 3 months  | NIL |
| 27 |  | Neha Tiwari        | Adv Rajpal Tanwar                             | 1 month   | NIL |
| 28 |  | Ramdatt Bhati      | Juhi Arora, Supreme Court of India            | 1 month   | NIL |
| 29 |  | Taruna Panwar      | Kamaljeet Kataria                             | 1 month   | NIL |
| 30 |  | Tejaswi Dudeja     | Juhi Arora, Supreme Court of India            | 1 month   | NIL |
| 31 |  | Deepak Sharma      | Advocate K.P.Shah                             | 1 month   | NIL |
| 32 |  | Amit Yadav         | Indian Law Partners Advocates And Consultants | 2 months  | NIL |
| 33 |  | Deepanshi Bhutani  | Adv Faiyaz Khalid                             | 1 month   | NIL |
| 34 |  | Muskan Goyal       | Adv Faiyaz Khalid                             | 1 month   | NIL |
| 35 |  | Pratyush Chhabra   | Adv Arun Sharma & Javed Khan                  | 2 months  | NIL |
| 36 |  | Shubham Aggarwal   | Adv Arun Sharma & Javed Khan                  | 2 months  | NIL |
| 37 |  | Vansh Sharma       | Himanshu Sachdeva                             | 1 month   | NIL |
| 38 |  | Vatsala Bhusari    | Adv Sujit Ghosh                               | 1.5 month | NIL |
| 39 |  | Divya Mishra       | Advocatespedia Foundation                     | 1 month   | NIL |
| 40 |  | Riya Sharma        | Chander Prakash Taneja                        | 3 months  | NIL |
| 41 |  | Shubhangi Sharma   | Renu Sharma                                   | 3 months  | NIL |
| 42 |  | Sneha Ranjan       | CHSS Organisation                             | 1 month   | NIL |
| 43 |  | Sudha Jawla        | Advocates Pedia Foundation                    | 1 month   | NIL |
| 44 |  | Yashika Yadav      | Advocates Pedia Foundation                    | 2 months  | NIL |
| 45 |  | Deeksha            | Madhuri Bakshi                                | 1 month   | NIL |
| 46 |  | Rashi Dudeja       | Madhuri Bakshi                                | 1 month   | NIL |



|    |  |                     |   |            |     |
|----|--|---------------------|---|------------|-----|
| 47 |  | Deeksha Vashisht    | Bakshi & Associates   | 1 month    | NIL |
| 48 |  | Abdul Momin Mullick | Center Of Peace & Sustainability                                      | 1 month    | NIL |
| 49 |  | Gaurav Chaudhary    | Saket District Court  | 1 month    | NIL |
| 50 |  | Kapil Lohia         | Teens Of God  | 1 month    | NIL |
| 51 |  | Kartik Sharma       | Trans-India Law Associates (2) Indian Police Foundation And Institute | 4 months   | NIL |
| 52 |  | Shobhna Bhushan     | Muskurahat Foundation   | 1 month    | NIL |
| 53 |  | Yash Sharma         | Kamal Kant Sharma   | 1 month    | NIL |
| 54 |  | Shanu Agarwal       | Jain & Company  | 1.5 months | NIL |
| 55 |  | Abhey Gupta         | Hindustan Power   | 1 month    | NIL |
| 56 |  | Akash Bhatia        | Dr Aruna Namballa   | 1 month    | NIL |
| 57 |  | Dev Chechi          | Rural Litigation & Entitlement Kendra (Rlek)                          | 1 month    | NIL |
| 58 |  | Durga Bhardwaj      | CADR/ Joel  | 3 months   | NIL |
| 59 |  | Khushi Sharma       | Jagminder Singh Khanagwal PP , DP.DA                                  | 1 month    | NIL |
| 60 |  | Namrata Chauhan     | Alok Kumar Rai  | --         | NIL |
| 61 |  | Nikita Dhankar      | Shitanshu Kumar Gaur  | --         | NIL |
| 62 |  | Priyanka Walter     | CADR  | --         | NIL |
| 63 |  | Sakshi Sharma       | Nishant Sharma  | 3 months   | NIL |
| 64 |  | Tanya               | Jagminder Singh Khanagwal PP , DP.DA                                  | 1 month    | NIL |
| 65 |  | Ankit Baisla        | Dalip Singh   | 1 month    | NIL |
| 66 |  | Anshu Janmeda       | Ramnik Singh  | 1 month    | NIL |
| 67 |  | Harsh               | Ajit Dagar  | --         | NIL |

|    |                   |                   |  |            |     |
|----|-------------------|-------------------|--|------------|-----|
|    |                   | Sehrawat          |  |            |     |
| 68 |                   | Kesar Attri       | District Court                               | --         | NIL |
| 69 |                   | Prachi Chaurasiya | Ramnik Singh                                 | --         | NIL |
| 70 |                   | Pragya Choudhri   | Air Law Academy & Research Centre            | 1 month    | NIL |
| 71 |                   | Rishabh Tyagi     | Shitanshu Gaur                               | 1.5 months | NIL |
| 72 |                   | Salman Ansari     | Shivani Rafi                                 | 2 months   | NIL |
| 73 |                   | Snigdha Kiran     | Sun Legal                                    | 1 month    | NIL |
| 74 |                   | Yashika Malhotra  | Ramnik Singh                                 | --         | NIL |
| 75 |                   | Neha Uttam Gupta  | Associates Law Offices/ CADR                 | --         | NIL |
| 79 | <b>MANAGEMENT</b> | Krati             | Miles Education                              | 1 month    | NIL |
| 80 |                   | Ishita Khanna     | Miles Education                              | 1 month    | NIL |
| 81 |                   | Simran Tiwari     | Miles Education                              | 1 month    | NIL |
| 82 |                   | Jishnu Kopparapu  | "YEF" Youth Empowerment Foundation           | 1 month    | NIL |
| 83 |                   | Aviral Bhola      | Delloitte From Insideshrepa                  | 7 days     | NIL |
| 84 |                   | Anmol Prakash Sai | Red Book Snow LLP                            | 10 days    | NIL |
| 85 |                   | Ishita Khanna     | Kpmg   | 2 months   | NIL |
| 86 |                   | Gursanjog Singh   | Marketing Division Of "Unleash Your Passion" | 2 weeks    | NIL |
| 87 |                   | Khushi Goyal      | Nav Abhayan School                           | 4 months   | NIL |
| 88 |                   | Sony Kumari       | Kpmg   | 2 months   | NIL |
| 89 |                   | Jishnu Kopparapu  | KPMG   | --         | NIL |
| 90 |                   | Anmolprakash Sai  | Shine Projects                               | --         | --  |
| 91 |                   | Abhishek Singh    | Mg Motor India.                              | 2 months   | NIL |
| 92 |                   | Jishnu Kopparapu  | Arrina Education Services Pvt. Ltd           | 2 months   | --  |
| 93 |                   | Khushi Goyal      | Book URPG                                    | 1 week     | NIL |

|     |                |  |   |          |      |
|-----|----------------|--|---|----------|------|
| 94  |                | Khushi Goyal                             | Socio Labs                              | 2 months | NIL  |
| 95  |                | Nitin Gupta                              | HOUSEITT                                | 1 week   | NIL  |
| 96  |                | Deepsi Batra                             | Pace Innovations                        | 1 month  | NIL  |
| 98  | <b>CST</b>     | Ankur Singh                              | Power Grid Corp Of India Ltd            | 6 months | NIL  |
| 99  |                | Komal Goswami                            | Nirman Advertising                      | 6 months | NIL  |
| 100 |                | Sahil Sharma                             | SWS Technologies                        | 6 months |      |
| 101 |                | Abhishek Rai                             | W3Dev Pvt Ltd                           | 6 months | NIL  |
| 102 |                | Gajender Chauhan                         | Damco Solutions                         | 6 months | NIL  |
| 103 |                | Harshri Gaba                             | Pie Infosystems                         | 6 months | YES  |
| 104 |                | Jaspreet Singh                           | Inch Engineering And Services Pvt. Lmt. | 6 months | NIL  |
| 105 |                | Karan                                    | Powergrid Corp Of India Ltd             | 6 months | NIL  |
| 106 |                | Mohit Arora                              | Damco Solutions                         | 6 months | NIL  |
| 107 |                | Piyush Anand                             | Railtel Corp Ltd                        | 6 months | NIL  |
| 108 |                | Rahul Chauhan                            | Digiaark                                | 6 months | NIL  |
| 109 |                | Ravinder Yadav                           | Railtel Corporation India Ltd.          | 6 months | NIL  |
| 111 |                | Yogesh Chaudhary                         | World Yard                              | 6 months | 15K  |
| 112 |                | Akash Rai                                | Aroma Computer Systems                  | 6 months | 2.5K |
| 113 |                | Anusha Gupta                             | Spice Jet Limited                       | 6 months | NIL  |
| 114 |                | Chetan Singh                             | Damco                                   | 6 months | NIL  |
| 115 |                | Gulab Kapila                             | Colston                                 | 6 months | NIL  |
| 116 |                | Khushal Yadav                            | Dror Labs Private Ltd.                  | 6 months | NIL  |
| 117 | Lavanya Anand  | Use The Greeks Pvt Ltd.                  | 6 months                                | NIL      |      |
| 118 | Mayank Garg    | Successive Technology Pvt Ltd.           | 6 months                                | 12K      |      |
| 120 | Sahil Sachdeva | Digital Impact Square Foundation, Tcs    | 6 months                                | 15K      |      |
| 121 | Vaibhav Hooda  | Shri Guru Nanak Mission, Greater Kailash | 6 months                                | NIL      |      |

|     |                   |  |          |     |
|-----|-------------------|--|----------|-----|
| 123 | Abdul Rub Saifi   | Technosprings Pvt. Ltd.                            | 6 months | NIL |
| 124 | Aman Yadav        | Surat Infotech, Gujrat                             | 6 months | NIL |
| 125 | Amit Rawat        | Ministry Of Electronics And Information Technology | 6 months | NIL |
| 126 | Ankit Talwar      | laugmentor Labs (P) Ltd                            | 6 months | 10K |
| 128 | Dhruv Kumar       | Eavisson Systems                                   | 6 months |     |
| 129 | Harman Singh      | Sggn.Org   | 6 months | NIL |
| 130 | Himanshu Thakur   | Glob GIS   | 6 months | NIL |
| 131 | Lokesh Chaudhary  | Techstack Institute                                | 6 months | NIL |
| 132 | Rinny Gupta       | Website Sketchers Pvt. Ltd.                        | 6 months | NIL |
| 133 | Riya Sandhu       | Intellect Partners                                 | 6 months | 11K |
| 134 | Ruchi Bhatt       | Intellect Partners                                 | 6 months | 11K |
| 135 | Sanyam `Popli     | Brand Visage                                       | 6 months | 5K  |
| 136 | Shubham Yadav     | Imarticus Learning                                 | 6 months | NIL |
| 137 | Aashish Rawat     | Imarticus Learning                                 | 6 months | NIL |
| 138 | Amrit Kaur Narang | Dreamhii Creatives                                 | 6 months | 12K |
| 139 | Ankit Mann        | Webhelpy   | 6 months | NIL |
| 140 | Mohit Kumar       | Nirman Advertising Pvt. Ltd.                       | 6 months | NIL |
| 141 | Ravi Joshi        | Alpha Design Technologies                          | 6 months | NIL |
| 142 | Shiva Vats        | Tenwave Infotech Pvt. Ltd                          | 6 months | NIL |
| 143 | Yadu Nandan       | Coditas Technologies                               | 6 months | NIL |
| 144 | Rohit             | Join The Dots                                      | 6 months | NIL |
| 145 | Aarush Sharma     | Acs Solution Pvt. Ltd.                             | 6 months | NIL |
| 146 | Arjun Guleria     | Codec Networks Pvt Ltd                             | 6 months | NIL |
| 147 | Arun Kumar        | College  | 6 months | NIL |
| 148 | Kandy Arora       | To The New   | 6 months | 15K |

|     |  |                        |                                      |          |       |
|-----|--|------------------------|--------------------------------------|----------|-------|
| 149 |  | Krishna Chaturvedi     | Crowe                                | 6 months | 17.5K |
| 150 |  | Rajeev Singh           | Investors Home                       | 6 months | NIL   |
| 151 |  | Shobhen Tewatia        | Lido Learning                        | 6 months | 22K   |
| 152 |  | Yashwant Singh         | Codec Networks                       | 6 months | NIL   |
| 153 |  | Akash                  | Webhelpy                             | 6 months | NIL   |
| 154 |  | Anshika Sachdeva       | Intellect Partners                   | 6 months | 11 K  |
| 155 |  | Ayush Srivastava       | Lido Learning                        | 6 months | 22 K  |
| 156 |  | Bhavishya Raheja       | E & Y                                | 6 months | NIL   |
| 157 |  | Chirag Jain            | Cogniscent Business Solutions        | 6 months | NIL   |
| 158 |  | Gaurav Mazumder        | Croma Campus Training & Developement | 6 months | NIL   |
| 159 |  | Jatin Jangra           | Webhelpy Technologies                | 6 months | NIL   |
| 160 |  | Manish Khurana         | Shoes On Loose                       | 6 months | NIL   |
| 161 |  | Nishant Dhingra        | Cavisson Astar Netsolutions          | 6 months | NIL   |
| 162 |  | Prashant Kumar Singhal | Qspider, Bangalore                   | 6 months | NIL   |
| 163 |  | Rajender Kr. Shaw      | Croma Campus Training & Developement | 6 months | NIL   |
| 164 |  | Raviraj Chauhan        | Croma Campus Training & Developement | 6 months | NIL   |
| 165 |  | Shambhavi Saini        | Cords Cable Pvt Ltd.                 | 6 months | NIL   |
| 166 |  | Aditya Sharma          | Infogain India Private Ltd.          | 6 months | NIL   |
| 168 |  | Ankita Singh           | Cavisson Astar Netsolutions          | 6 months | NIL   |
| 169 |  | Himanshu Sharma        | Vserv Business Solutions Pvt Ltd.    | 6 months | NIL   |
| 170 |  | Himanshu               | Self Project                         | 6 months | NIL   |

|     |  |                  |  |          |     |
|-----|--|------------------|--|----------|-----|
|     |  | Thapliyal        |  |          |     |
| 171 |  | Ishaan Bansal    | Zimozi Solutions                                   | 6 months | NIL |
| 172 |  | Manish Pokhriyal | Ministry Of Electronics And Information Technology | 6 months | NIL |
| 173 |  | Nilender Nath    | Filix Consulting                                   | 6 months | NIL |
| 174 |  | Pranjal Garg     | Zimozi Solutions                                   | 6 months | NIL |
| 175 |  | Rachit Dhariwal  | S.O.Infotech                                       | 6 months | NIL |
| 176 |  | Rohit Rawat      | Socialache Pvt Ltd                                 | 6 months | NIL |
| 177 |  | Shashank Uppal   | College  | 6 months | NIL |
| 178 |  | Sourabh Sharma   | Bses Delhi   | 6 months | NIL |
| 179 |  | Surbhi Makkar    | Ducat  | 6 months | NIL |
| 180 |  | Vaibhav          | Empyrean Events                                    | 6 months | NIL |
| 181 |  | Vishal Yadav     | Webhelpy Technologies Pvt Ltd                      | 6 months | NIL |
| 182 |  | Yash Bakshi      | Eclipse Nation                                     | 6 months | NIL |
| 183 |  | Hemant Kumar     | Swadhya Publishing House                           | 6 months | NIL |
| 184 |  | Piyush Dwivedi   | Damco Solutions                                    | 6 months | NIL |
| 185 |  | Shubham Sharma   | Collabera Technologies Pvt Ltd                     | 6 months | NIL |
| 186 |  | Shubhankar Verma | Orbeez   | 6 months | NIL |
| 187 |  | Vishnu Sharma    | Damco Solutions                                    | 6 months | NIL |
| 188 |  | Manish Sharma    | Gsm Engineers Pvt                                  | 6 months | NIL |
| 189 |  | Aakash Chaudhary | Empyrean Events, Gurgaon                           | 6 months | NIL |
| 190 |  | Vishal Sehgal    | Nhpc,  | 6 months | NIL |
| 191 |  | Moksh Trivedi    | Ontech Digital Technologies Pvt, Delhi             | 6 months | NIL |
| 192 |  | Raman Deep Singh | Exoticano Travels Pvt, Sonipat                     | 6 months | NIL |

|     |  |                  |                                      |          |     |
|-----|--|------------------|--------------------------------------|----------|-----|
| 193 |  | Bhavya           | Mru Research Center                  | 6 months | NIL |
| 194 |  | Deepika Ghotra   | Damco Ltd,                           | 6 months | NIL |
| 195 |  | Divij Jindal     | Exoticano,                           | 6 months | NIL |
| 196 |  | Hitesh Khanna    | So Infotech Pvt,                     | 6 months | NIL |
| 197 |  | Ishu Goel        | Ibm, Gurgaon                         | 6 months | NIL |
| 198 |  | Kunal Bhardwaj   | Varite India Pvt, Gurgaon            | 6 months | NIL |
| 199 |  | Madhur Ahuja     | Self                                 | 6 months | NIL |
| 200 |  | Mayank Mehmi     | So Infotech,                         | 6 months | NIL |
| 201 |  | Rahul Mathur     | Solicon,Okhla                        | 6 months | NIL |
| 202 |  | Rupali Bhatnagar | National Informatics Center,Shahadra | 6 months | NIL |
| 203 |  | Ujjwal Gaur      | Rural Electrification Corporation    | 6 months | NIL |
| 204 |  | Vikash Singh     | Damco Solutions,                     | 6 months | NIL |
| 205 |  | Vishrut Sharma   | Tech Mahindra                        | 6 months | NIL |
| 206 |  | Yash Pal Baghel  | Cetpa Infotech Pvt Ltd               | 6 months | NIL |
| 207 |  | Aakash Goyal     | Codelipi Infotech Pvt Ltd            | 6 months | NIL |
| 208 |  | Abhay Sharma     | Codelipi Infotech Pvt Ltd            | 6 months | NIL |
| 209 |  | Ashish Kumar     | Cogniscent Business Sol,Noida Sec-62 | 6 months | NIL |
| 210 |  | Gaurav Joshi     | Arpanet Softwares ,Greater Noida     | 6 months | NIL |
| 211 |  | Harsh Aggarwal   | Infogain Systems                     | 6 months | NIL |
| 212 |  | Hitesh Bajaj     | Cavisson Systems                     | 6 months | NIL |
| 213 |  | Ishika Singla    | Vee4 Technologies Pvt.Ltd            | 6 months | NIL |
| 214 |  | Lucky            | Code Lipi Infotech Pvt. Ltd.         | 6 months | NIL |
| 215 |  | Rishabh Garg     | Besseggen Infotech Ltd               | 6 months | NIL |
| 216 |  | Sagar Garg       | Besseggen Infotech Ltd               | 6 months | NIL |



|     |  |                             |                                    |          |     |
|-----|--|-----------------------------|------------------------------------|----------|-----|
| 217 |  | Sarthak Setia               | Primathon Technologies Ltd.        | 6 months | NIL |
| 218 |  | Sonalika Singh              | Virate India Pvt. Ltd.             | 6 months | NIL |
| 219 |  | Subodh Gupta                | Code Lipi Infotech Pvt. Ltd.       | 6 months | NIL |
| 220 |  | Tushar Mittal               | Cavisson Systems                   | 6 months | NIL |
| 221 |  | Varun Sharma                | Easygov                            | 6 months | NIL |
| 222 |  | Vasu Dev Bansal             | Phable                             | 6 months | NIL |
| 223 |  | Vishal Sharma               | Intellect Partners                 | 6 months | NIL |
| 224 |  | Yash                        | Visual Design                      | 6 months | NIL |
| 225 |  | Abhijatya Kalp Ritwiz Johri | Orgofirst                          | 6 months | NIL |
| 226 |  | Abhishek Jain               | Placed In Tcs . Self Internship    | 6 months | NIL |
| 227 |  | Ayushi Aggarwal             | Binario Technologies               | 6 months | NIL |
| 228 |  | Jagmohan                    | Website Sketchers                  | 6 months | NIL |
| 229 |  | Kartik Kumar                | Tothenew                           | 6 months | NIL |
| 230 |  | Manav Vashisht              | Slashdot Solutions                 | 6 months | NIL |
| 231 |  | Rishabh Sharma              | So Infotech Pvt Ltd                | 6 months | NIL |
| 233 |  | Shivam Kalia                | Hyfn Technologies                  | 6 months | NIL |
| 234 |  | Yash Raghuvanshi            | Code Lipi Infotech Pvt Ltd         | 6 months | NIL |
| 235 |  | Jeremy Jason Kujur          | Sri Guru Nanak Mission             | 6 months | NIL |
| 237 |  | Raunak Kumar                | Tai Schools                        | 6 months | NIL |
| 238 |  | Shailja Yadav               | Till 30 March -- Varite Gurgaon    | 6 months | NIL |
| 239 |  | Yatin Sharma                | Dotline Infotech - Sector 1, Noida | 6 months | NIL |
| 240 |  | Harsh Sharma                | Cavissonpvt.Ltd                    | 6 months | NIL |
| 241 |  | Tejasv Tanwar               | Gip Infosystems Pvt Ltd, Delhi     | 6 months | NIL |
| 242 |  | Mudit Bhandari              | Birlasoft                          | 6 months | NIL |
| 243 |  | Abhishek Sontakke           | Ad-Pushups, Delhi                  | 6 months | NIL |
| 244 |  | Aditya                      | Ibm,Noida                          | 6 months | NIL |

|     |  |                      |                                    |          |       |
|-----|--|----------------------|------------------------------------|----------|-------|
|     |  | Bhushan Sharma       |                                    |          |       |
| 245 |  | Aishwarya Nair       | Koyo Electronics India Pvt.Ltd     | 6 months | NIL   |
| 246 |  | Aishwarya Khera      | Intellect Partners                 | 6 months | NIL   |
| 247 |  | Aman Diwakar         | Lido Quality Tutorials Pvt Ltd     | 6 months | NIL   |
| 248 |  | Anurag Rawal         | Exoticano                          | 6 months | 4K    |
| 249 |  | Ashish Verma         | Ibm India Pvt Ltd.                 | 6 months | 15 K  |
| 250 |  | Gaurav               | Exoticano                          | 6 months | 4 K   |
| 251 |  | Jaisraj Bhatnagar    | Nic                                | 6 months | NIL   |
| 252 |  | Kaustubh Dhasmana    | Ex2 Solutions Pvt Ltd              | 6 months | NIL   |
| 253 |  | Naman Jain           | Gaffar Mart                        | 6 months | 10 K  |
| 254 |  | Nikita Sanghi        | Ibm India Pvt Ltd.                 | 6 months | 15K   |
| 255 |  | Palash Dubey         | Ibm India Pvt Ltd.                 | 6 months | 15K   |
| 256 |  | Sakshi Arora         | Hyfn Technologies                  | 6 months | NIL   |
| 257 |  | Saurabh Sethi        | My Operator- Voice Tree Technology | 6 months | 15K   |
| 258 |  | Suraj Yadav          | Solicon Pvt Ltd                    | 6 months | NIL   |
| 259 |  | Tridev Nath Tripathi | Rec                                | 6 months | NIL   |
| 260 |  | Virender Kadian      | Empyrean Events                    | 6 months | NIL   |
| 261 |  | Anurag Tripathi      | Cavison System                     | 6 months | 10.7K |
| 262 |  | Arish Fatima         | NIIT Technologies                  | 6 months | 15 K  |
| 263 |  | Chirag Walecha       | Abacus Desk                        | 6 months | NIL   |
| 264 |  | Deepanshu Aggarwal   | Phocket Infotech Pvt. Ltd.         | 6 months | NIL   |
| 265 |  | Karan Garg           | TCS                                | 6 months | NIL   |
| 266 |  | Pooja Seth           | Netilly                            | 6 months | 12K   |
| 267 |  | Ritesh Nagpal        | Croma Campus Pvt Lt.               | 6 months | NIL   |
| 268 |  | Sumeet Chandel       | Aqugen Technologies Pvt Ltd        | 6 months | 7K    |
| 269 |  | Yuvraj Sharma        | Startahead Pvt. Ltd.               | 6 months | NIL   |

|     |    |                   |                            |          |     |
|-----|----|-------------------|----------------------------|----------|-----|
| 270 |    | Akash Srivastava  | Hyfn                       | 6 months | NIL |
| 271 |    | Ankur Bhatt       | Hyfn                       | 6 months | NIL |
| 272 |    | Ashutosh Vaish    | Contata Solutions          | 6 months | NIL |
| 273 |    | Dhruv Yadav       | Hyfn                       | 6 months | NIL |
| 274 |    | Kanika Gupta      | Cevision                   | 6 months | NIL |
| 275 |    | Paras Aggarwal    | Temp Solutions Pvt. Lmt.   | 6 months | NIL |
| 276 |    | Pawan Gupta       | Mini Project For Tcs       | 6 months | NIL |
| 277 |    | Praveen Sharma    | Codes Lipi                 | 6 months | NIL |
| 278 |    | Rupal Gupta       | Website Sketchers Pvt. Ltd | 6 months | NIL |
| 279 |    | Sudhansu Das      | Bevrix Pvt. Lmt            | 6 months | NIL |
| 280 |    | Sumit Kumar Jha   | Croma Campus               | 6 months | NIL |
| 281 |    | Sonal Singhla     | Infogain                   | 6 months | NIL |
| 282 |    | Srishti Setia     | Nagarro Software Pvt Ltd   | 6 months | NIL |
| 283 |    | Suraj Makkar      | Techchefz                  | 6 months | 5K  |
| 284 |    | Tegveer Singh     | Andy Infosec               | 6 months | NIL |
| 285 |    | Vishal Tyagi      | Self Project               | 6 months | NIL |
| 286 |    | Abhiroop Chopra   | Nuvogen Limited            | 6 months | 10K |
| 287 |    | Kanika Bhatia     | Empyrean Event             | 6 months | 15K |
| 288 |    | Kartik Kansal     | Under Dr. Aarti, Mru       | 6 months | NIL |
| 289 |    | Mayank Nagpal     | Ico-Technocloud Pvt. Ltd.  | 6 months | 8K  |
| 290 |    | Palak Arora       | NIIT Technologies          | 6 months | 15K |
| 291 |    | Prerna Sharma     | Infogain, Noida            | 6 months | 18K |
| 294 | ME | Abdul Ahad        | Poly Medicure Ltd          | 6 months | NIL |
| 295 |    | Abhinav Chawla    | Poly Medicure Ltd          | 6 months | NIL |
| 296 |    | Abhishek Bhardwaj | "Imperial Auto Pvt. Ltd    | 6 months | NIL |
| 297 |    | Abhishek Mishra   | Agro Engineering Works     | 6 months | NIL |

|     |                       |                                      |          |     |
|-----|-----------------------|--------------------------------------|----------|-----|
| 298 | Aman Khatana          | “Starlite Moulding Product Pvt Ltd.” | 6 months | NIL |
| 299 | Anas Mansoori         | Poly Medicure Ltd,                   | 6 months | NIL |
| 300 | Anuj Yadav            | “Starlite Moulding Product Pvt Ltd.” | 6 months | NIL |
| 301 | Ayush Chaudhary       | Karpedium Solutions Pvt. Ltd.        | 6 months | NIL |
| 302 | Bhagat Singh          | Expert Lancing, Ggn                  | 6 months | NIL |
| 303 | Boby                  | Divye Precise Engineering            | 6 months | NIL |
| 304 | Dinesh Kashyap        | Gkn Driveline                        | 6 months | NIL |
| 305 | Harpreet Singh        | Raptor Supplies                      | 6 months | NIL |
| 306 | Himanshu Rawat        | Sonalika Tractors                    | 6 months | NIL |
| 307 | Isha Sharma           | Imperial Auto Ltd.                   | 6 months | NIL |
| 308 | Jatin Guglani         | Poly Medicure Ltd                    | 6 months | NIL |
| 309 | Krishan Mohan Vashist | Sarvae Mangalam Petroleum Pvt. Ltd.  | 6 months | NIL |
| 310 | Maninder Singh        | Escorts Limited,                     | 6 months | NIL |
| 311 | Manish Kumar Mandal   | Pie Tech Projects Pvt Ltd            | 6 months | NIL |
| 312 | Mayank Sadhra         | Poly Medicure Ltd.,                  | 6 months | NIL |
| 313 | Mukul Bhatia          | Karpedium Solutions Pvt. Ltd.        | 6 months | NIL |
| 314 | Nipun Aggarwal        | Escorts Construction Limited         | 6 months | NIL |
| 315 | Nishant Pal           | Gkn Driveline                        | 6 months | NIL |
| 316 | Pankaj Arya           | Escorts                              | 6 months | NIL |
| 317 | Pawan Kaushik         | Ace Pvt. Ltd                         | 6 months | NIL |
| 318 | Priyansh Singh        | Pie Tech Projects Pvt Ltd            | 6 months | NIL |
| 319 | Rahul Sharma          | Samsung                              | 6 months | NIL |
| 320 | Rahul Singh Sorout    | Escorts Limited,                     | 6 months | NIL |
| 321 | Rajat Luthra          | Nanosonic India Pvt. Ltd.            | 6 months | NIL |

|     |  |                     |   |          |     |
|-----|--|---------------------|---|----------|-----|
| 322 |  | Ranjan              | Hindustan Petroleum Corporation Limited,  | 6 months | NIL |
| 323 |  | Rishabh Kumar Singh | Advanced Appliances Pvt Ltd".   | 6 months | NIL |
| 324 |  | Sagar Jaglan        | "Anand Nvh Pvt"   | 6 months | NIL |
| 325 |  | Sagar Bisla         | Frick India Ltd.  | 6 months | NIL |
| 326 |  | Sahil Jaglan        | Anand Nvh Pvt   | 6 months | NIL |
| 327 |  | Sahil Verma         | Times Internet Limited, Ecstasy It Park   | 6 months | NIL |
| 328 |  | Shadab Mansoori     | Poly Medicure Ltd.  | 6 months | NIL |
| 329 |  | Shubham Mavi        | Sonalika Tractors, Hoshiarpur   | 6 months | NIL |
| 330 |  | Somesh S            | Indigo(Interglobe Aviation Limited)   | 6 months | NIL |
| 331 |  | Subham Jha          | Expert Lancing  | 6 months | NIL |
| 332 |  | Sumit Kumar Shaw    | (Interglobe Aviation Limited)   | 6 months | NIL |
| 333 |  | Suraj Sharma        | Expert Lancing, Ggn   | 6 months | NIL |
| 334 |  | Suraj Kumar Singh   | C&S Electric Ltd  | 6 months | NIL |
| 335 |  | Vikram Sharma       | Escorts India Pvt. Ltd  | 6 months | NIL |
| 336 |  | Vinay Khemka        | Gkn Driveline.  | 6 months | NIL |
| 337 |  | Vinay Prabhakar     | Divye Precise Engineering   | 6 months | NIL |
| 338 |  | Vishal              | Plastic Mold And Rubber Mold,   | 6 months | NIL |
| 339 |  | Yash Chaudhary      | Voith Paper Fabric India,   | 6 months | NIL |
| 340 |  | Nikhil Kumar        | Assessment Of Landslides Using Drone Photogrammetry Models, Drdo, Delhi (Project Done By Student In Drdo) | 6 months | NIL |
| 341 |  | Shivansh Sethi      | New Rindhir Press Tools,  | 6 months | NIL |
| 342 |  | Sagar Verma         | Groz Tools Pvt. Ltd.,   | 6 months | NIL |

|     |  |                      |                                    |           |     |
|-----|--|----------------------|------------------------------------|-----------|-----|
| 343 |  | Shubham Rohilla      | Anand Motors Products (Amp)        | 6 months  | NIL |
| 344 |  | Aashutosh Kumar      | Maruti Suzuki India Ltd.           | 1.5 month | NIL |
| 345 |  | Abhishek Singh       | Cadx Tools And Technologies        | 1.5 month | NIL |
| 346 |  | Akshay Kumar Yadav   | Mitaso                             | 1.5 month | NIL |
| 347 |  | Alish Taman Madhukar | Shreeshyam Wire                    | 1.5 month | NIL |
| 348 |  | Amit Kumar           | Mitaso                             | 1.5 month | NIL |
| 349 |  | Ankit Singh          | Sspl,Drdo                          | 1.5 month | NIL |
| 350 |  | Ashwani Kumar        | Jcb                                | 1.5 month | NIL |
| 351 |  | Ayushman             | Skh Metal                          | 1.5 month | NIL |
| 352 |  | Bhupender Bawa       | Jcb India Pvt. Ltd.                | 1.5 month | NIL |
| 353 |  | Brahamdeep Singh     | Mitaso                             | 1.5 month | NIL |
| 354 |  | Gaurav Kaushik       | Jbm Gurugram                       | 1.5 month | NIL |
| 355 |  | Gautam Sharma        | Escorts Farmtrac                   | 1.5 month | NIL |
| 356 |  | Himanshu Choudhary   | Escorts Farmtrac                   | 1.5 month | NIL |
| 357 |  | Kanuj Nagar          | Audi Workshop,                     | 1.5 month | NIL |
| 358 |  | Kartik Singh Bangari | Escorts Powertrac Plant            | 1.5 month | NIL |
| 359 |  | Kartik Virmani       | JBM Gurgaon                        | 1.5 month | NIL |
| 360 |  | Kunal Rohilla        | JBM Neel Metal Products            | 1.5 month | NIL |
| 361 |  | Kushagra Munjal      | Escorts Corporate Centre,Kmc       | 1.5 month | NIL |
| 362 |  | Mohit Nehra          | Maruti Suzuki India Ltd. (Manesar) | 1.5 month | NIL |
| 363 |  | Naveen Kumar         | Segofi Mnr Engine System Pvt. Ltd. | 1.5 month | NIL |

|     |  |                   |                                      |           |     |
|-----|--|-------------------|--------------------------------------|-----------|-----|
| 364 |  | Prashant Singh Tu | Ganesh Engineering                   | 1.5 month | NIL |
| 365 |  | Rahul Yadav       | Di-Tech Engineering Pvt. Ltd.        | 1.5 month | NIL |
| 366 |  | Rajat Goel        | Shree Shyam Wires                    | 1.5 month | NIL |
| 367 |  | Rishabh Chawla    | JBM Group                            | 1.5 month | NIL |
| 368 |  | Shivam Pasricha   | Talbro's Automotive Components Ltd.  | 1.5 month | NIL |
| 369 |  | Siddharth Chandel | JCB India Limited Headquarter        | 1.5 month | NIL |
| 370 |  | Tanveer Singh     | Escorts Corporate Centre,Kmc         | 1.5 month | NIL |
| 371 |  | Tushar Goel       | JBM Neel Metal Products              | 1.5 month | NIL |
| 372 |  | Vikas Upadhyay    | Di-Tech Engineering Pvt. Ltd.        | 1.5 month | NIL |
| 373 |  | Vipul Thapar      | Yamaha Motors                        | 1.5 month | NIL |
| 374 |  | Abhishek Verma    | Northern Railway                     | 1.5 month | NIL |
| 375 |  | Akash Tewatia     | JCB Ballabgarh                       | 1.5 month | NIL |
| 376 |  | Akhil Arora       | JCB Ballabgarh                       | 1.5 month | NIL |
| 377 |  | Aman Khurana      | Amar Udyog Plant li, Sector-25       | 1.5 month | NIL |
| 378 |  | Ankit             | Project                              | 1.5 month | NIL |
| 379 |  | Ankit Dagar       | JCB                                  | 1.5 month | NIL |
| 380 |  | Ankur Singh Gulia | Cenlub Ballabgarh                    | 1.5 month | NIL |
| 381 |  | Anshuman Khare    | Orient Electric                      | 1.5 month | NIL |
| 382 |  | Anubhav Sharma    | Sidwal Refrigeration Private Limited | 1.5 month | NIL |
| 383 |  | Anurag Katara     | Els-Tkd,Indian Railways              | 1.5 month | NIL |
| 384 |  | Ayush Bansal      | Procast India , Sector-24            | 1.5 month | NIL |



|     |  |                     |   |           |     |
|-----|--|---------------------|---|-----------|-----|
| 385 |  | Chetan Dalawari     | Aptiv - Delphi Automotive Systems Pvt Ltd - Bhiwadi | 1.5 month | NIL |
| 386 |  | Chirag Khetarpal    | Star Wire India Limited, Ballabgarh                 | 1.5 month | NIL |
| 387 |  | Deepak              | Di-Tech Engineering Pvt. Ltd.                       | 1.5 month | NIL |
| 388 |  | Deepak Gupta        | Victoria Auto Pvt Ltd                               | 1.5 month | NIL |
| 389 |  | Deepak Sharma       | Victoria Auto Pvt Ltd                               | 1.5 month | NIL |
| 390 |  | Deepansh Kamboj     | Indo Autotech Pvt Ltd, Sector 24,                   | 1.5 month | NIL |
| 391 |  | Hardeep Dagar       | Imperial Auto Industries Ltd                        | 1.5 month | NIL |
| 392 |  | Harshit Singhal     | Indigo, Gurgaon                                     | 1.5 month | NIL |
| 393 |  | Himanshu Kaundal    | Project   | 1.5 month | NIL |
| 394 |  | John Reji           | Avibha Industries Pvt Ltd                           | 1.5 month | NIL |
| 395 |  | Kanishk Tyagi       | Neel Metal Products Ltd - Jbm Gurugram              | 1.5 month | NIL |
| 396 |  | Kapil               | Ocean   | 1.5 month | NIL |
| 397 |  | Manu Aggarwal       | Imperial Auto Industries Ltd.                       | 1.5 month | NIL |
| 398 |  | Mayank Sharma       | Sidwal Refrigeration Pvt Ltd                        | 1.5 month | NIL |
| 399 |  | Megin S Mathew      | Santrupti Engineers Pvt. Ltd.                       | 1.5 month | NIL |
| 400 |  | Mohd Adil Bazeed    | Jcb   | 1.5 month | NIL |
| 401 |  | Neeraj              | Bharat Gears Pvt. Ltd.                              | 1.5 month | NIL |
| 402 |  | Nikhil Pratap Singh | Amar Udyog Plant Ii, Sector-25 78                   | 1.5 month | NIL |
| 403 |  | Prateek             | Sunbeam Auto Pvt. Ltd, Narsingpur,                  | 1.5 month | NIL |
| 404 |  | Rishabh Sikka       | Neel Metal Products Ltd - Jbm Gurugram              | 1.5 month | NIL |
| 405 |  | Sagar               | Imperial Auto                                       | 1.5       | NIL |

|     |  |                           |   |           |     |
|-----|--|---------------------------|---|-----------|-----|
|     |  |                           |   | month     |     |
| 406 |  | Sahil Saini               | Maruti Suzuki India Ltd. (Manesar)        | 1.5 month | NIL |
| 407 |  | Saurav Singh              | Escorts                                   | 1.5 month | NIL |
| 408 |  | Shailesh Rathi            | Neel Metal Products Ltd – JBM             | 1.5 month | NIL |
| 409 |  | Shubham Aggarwal          | Indo Autotech Pvt Ltd                     | 1.5 month | NIL |
| 410 |  | Shubhendu Kumar Chaudhary | Maruti Suzuki India Ltd.                  | 1.5 month | NIL |
| 411 |  | Udit Grover               | Tykesha                                   | 1.5 month | NIL |
| 412 |  | Vijay Sharma              | Bharti Constructions Pvt. Ltd.            | 1.5 month | NIL |
| 413 |  | Vishal Kumar              | Prashad Engg. Works ,                     | 1.5 month | NIL |
| 414 |  | Abhishek                  | Di-Tech Engg. (P) Ltd.                    | 1.5 month | NIL |
| 415 |  | Abhishek Mittal           | CNH Industrial (India) Private Limited    | 1.5 month | NIL |
| 416 |  | Abhishek Sharma           | Hero Motocorp ,Dharuhera,                 | 1.5 month | NIL |
| 417 |  | Aditya Chhabra            | Project                                   | 1.5 month | NIL |
| 418 |  | Akash Shrivastava         | Paharpur Business Centre, Nehru Place     | 1.5 month | NIL |
| 419 |  | Anuj Anand                | Fena Pvt. Ltd.                            | 1.5 month | NIL |
| 420 |  | Arjun Singh               | Escorts Construction Equient, Ballabgarha | 1.5 month | NIL |
| 421 |  | Arun Kundu                | Maruti Suzuki India Ltd.                  | 1.5 month | NIL |
| 422 |  | Ayush Gupta               | A Square Innovation                       | 1.5 month | NIL |
| 423 |  | Chirag Arora              | IPGCL(Ppcl)                               | 1.5 month | NIL |
| 424 |  | Deepak Bhatia             | Kopack India                              | 1.5 month | NIL |
| 425 |  | Devesh Bhatia             | Expert Lancing Gurgaon                    | 1.5 month | NIL |

|     |  |                          |  |           |     |
|-----|--|--------------------------|--|-----------|-----|
| 426 |  | Dinesh                   | Maruti Suzuki India Limited,Gurgaon              | 1.5 month | NIL |
| 427 |  | Gurinder Pal Singh Jeiya | Indo Autotech Pvt,Ltd                            | 1.5 month | NIL |
| 428 |  | Karan Mehta              | Sidwal Refrigeration Industries Private Limited  | 1.5 month | NIL |
| 429 |  | Kuldeep Singh            | Goodyear India Limited ,Mathura Road ,Ballabgarh | 1.5 month | NIL |
| 430 |  | Kumar Gaurav             | GKN Driveline                                    | 1.5 month | NIL |
| 431 |  | Mayank Khattar           | Ocean Overseas,                                  | 1.5 month | NIL |
| 432 |  | Mayank Singh Katheria    | AGS Filters Pvt. Limited Gujarat                 | 1.5 month | NIL |
| 433 |  | Md. Aamir Suhail         | Prashad Engg. Works                              | 1.5 month | NIL |
| 434 |  | Nav Rattan               | CS International                                 | 1.5 month | NIL |
| 435 |  | Naveen Kumar             | JCB India Limited Ballabgarh                     | 1.5 month | NIL |
| 436 |  | Nikhil Arora             | GKN Driveline                                    | 1.5 month | NIL |
| 437 |  | Nishant Mishra           | Expert Lancing                                   | 1.5 month | NIL |
| 438 |  | Nitin Kumar Singh        | Bosch Chasis Systems India Pvt. Ltd. Manesar     | 1.5 month | NIL |
| 439 |  | Piyushnagpal             | JCB India  | 1.5 month | NIL |
| 440 |  | Prashant Mendiratta      | Daikin Airconditioning India Pvt Ltd             | 1.5 month | NIL |
| 441 |  | Prateek Sachdeva         | Escorts Railway Equient Division                 | 1.5 month | NIL |
| 442 |  | Pulkit Arora             | Imperial Auto Industries Ltd.                    | 1.5 month | NIL |
| 443 |  | Rahul Gautam             | Imperial Auto Industries Ltd.                    | 1.5 month | NIL |
| 444 |  | Rahul Kalra              | Bony Polymers (P)Ltd                             | 1.5 month | NIL |
| 445 |  | Rahul Saini              | Maruti Suzuki India                              | 1.5       | NIL |

|     |                     |  |           |     |
|-----|---------------------|--|-----------|-----|
|     |                     | Ltd, Gurgaon                               | month     |     |
| 446 | Rajeev Haritish     | GKN Driveline                              | 1.5 month | NIL |
| 447 | Sachin Jaiswal      | Huhu Center                                | 1.5 month | NIL |
| 448 | Sagar Arora         | CNH Industrial (India) Private Limited     | 1.5 month | NIL |
| 449 | Saransh Srivastava  | Indraprastha Gas Limited                   | 1.5 month | NIL |
| 450 | Shivam Jadon        | GKN Drive Line (India )Ltd,                | 1.5 month | NIL |
| 451 | Shubham             | Expert Lancing                             | 1.5 month | NIL |
| 452 | Sudhir Kumar Prasad | Aarkaya Solar Solution Private Limited     | 1.5 month | NIL |
| 453 | Tarun Tiwari        | Micro Precision Products Private Limited   | 1.5 month | NIL |
| 454 | Tushar Arora        | Aries India Earth Movers                   | 1.5 month | NIL |
| 455 | Vikram Raj Purohit  | RV Wire Technologies                       | 1.5 month | NIL |
| 456 | Vipul Chouhan       | Schenck Rotec India Pvt. Ltd               | 1.5 month | NIL |
| 457 | Aakash Chaudhary    | National Thermal Power Corporation Limited | 1.5 month | NIL |
| 458 | Aakash Panchal      | DMRC,Ybd                                   | 1.5 month | NIL |
| 459 | Abhishek Chauhan    | Di-Tech Engg. (P) Ltd.                     | 1.5 month | NIL |
| 460 | Adarsh Kumar Mishra | DMRC,Ybd                                   | 1.5 month | NIL |
| 461 | Aakash Verma        | Indraprastha Power Generation Company Lyf  | 1.5 month | NIL |
| 462 | Akshay Nayan        | Shreeshyam Wire                            | 1.5 month | NIL |
| 463 | Amit Bhardwaj       | Indo Autotech Limited                      | 1.5 month | NIL |
| 464 | Ankit Aggarwal      | Volvo                                      | 1.5       | NIL |

|     |  |                     |  |           |     |
|-----|--|---------------------|--|-----------|-----|
|     |  |                     |  | month     |     |
| 465 |  | Anuj Gupta          | Bses Rajdhani Power Limited                | 1.5 month | NIL |
| 466 |  | Dheeraj Kumar Singh | Pooja Forge                                | 1.5 month | NIL |
| 467 |  | Gaurav Sehloth      | NTPC                                       | 1.5 month | NIL |
| 468 |  | Gaurav Sharma       | Expert Lancing                             | 1.5 month | NIL |
| 469 |  | Hemant Chauhan      | Imperial Auto Industries,                  | 1.5 month | NIL |
| 470 |  | Himanshu Jain       | Imperial Auto Industries,                  | 1.5 month | NIL |
| 471 |  | Himanshu Kumar      | Indraprastha Power Generation Company Ltd  | 1.5 month | NIL |
| 472 |  | Jatin Sharma        | Northern Railways                          | 1.5 month | NIL |
| 473 |  | Jitender            | Honda Motorcycle & Scooter India Pvt. Ltd. | 1.5 month | NIL |
| 474 |  | Jitender Kumar      | Minda Automotive Solutions Limited         | 1.5 month | NIL |
| 475 |  | Karan Singh         | Indraprastha Power Generation Company Ltd  | 1.5 month | NIL |
| 476 |  | Lalit Singh         | Sandhar Automotives, Gurgaon               | 1.5 month | NIL |
| 477 |  | Manu Sharma         | JCB India Limited Ballabgarh               | 1.5 month | NIL |
| 478 |  | Nippun Sharma       | JCB India Limited Ballabgarh               | 1.5 month | NIL |
| 479 |  | Nishant             | Escorts                                    | 1.5 month | NIL |
| 480 |  | Nitin Kumar Atri    | Maruti Suzuki India Ltd, Gurgaon           | 1.5 month | NIL |
| 481 |  | Nitin Patyal        | DMRC                                       | 1.5 month | NIL |
| 482 |  | Pritam Kumar        | Escorts Coporate Centre, KMC               | 1.5 month | NIL |
| 483 |  | Rajat Dalal         | Escorts Coporate                           | 1.5       | NIL |

|     |                       |                                    |           |          |
|-----|-----------------------|------------------------------------|-----------|----------|
|     |                       | Centre, KMC                        | month     |          |
| 484 | Sachin Sharma         | Shreeshyam Wire                    | 1.5 month | NIL      |
| 485 | Saurav Sharma         | Shreeshyam Wire                    | 1.5 month | NIL      |
| 486 | Tushar Sharma         | JBM Pvt Ltd. Plot No.133 Sector 24 | 1.5 month | NIL      |
| 487 | Vikas Kumar           | DMRC                               | 1.5 month | NIL      |
| 488 | Vikas Singh Bisht     | Laxman Mistry                      | 1.5 month | NIL      |
| 489 | Vinay Malik           | DMRC                               | 1.5 month | NIL      |
| 490 | Vishant Singh         | Pie Tech Projects Pvt. Ltd.        | 1.5 month | NIL      |
| 491 | Amit Kumar            | Star Wire                          | 6 months  | NIL      |
| 492 | Avneet Singh          | Tata Steel                         | 6 months  | 2.4/5.25 |
| 493 | Azharuddin            | Star Wire                          | 6 months  | NIL      |
| 494 | Deepanshu Kalra       | Star Wire                          | 6 months  | NIL      |
| 495 | Dheeraj               | Gulati Auto Electricals Pvt. Ltd   | 6 months  | 2.4      |
| 496 | Fateh Singh           | Graphic Designo                    | 6 months  | NIL      |
| 497 | Gautam Ahuja          | Stryker                            | 6 months  | 3        |
| 498 | Gurpreet Singh        | Uno Minda                          | 6 months  | 3        |
| 499 | Himanshu Garg         | Stryker                            | 6 months  | 3        |
| 500 | Himanshu Gulati       | Tomita India Pvt Ltd               | 6 months  | 2.2      |
| 501 | Himanshu Gupta        | Star Wire                          | 6 months  | NIL      |
| 502 | K.Aditya              | Gulati Auto Electricals Pvt. Ltd   | 6 months  | 2.4      |
| 503 | Karan Sehgal          | Gulati Auto Electricals Pvt. Ltd   | 6 months  | 2.4      |
| 504 | Kunal Singh           | Gulati Auto Electricals Pvt. Ltd   | 6 months  | 2.4      |
| 505 | Manjeet Singh         | Star Wire                          | 6 months  | NIL      |
| 506 | Mehrishi Shivam Malik | Star Wire                          | 6 months  | NIL      |

|     |  |                     |                                  |           |      |
|-----|--|---------------------|----------------------------------|-----------|------|
| 507 |  | Motiur Rahman       | Gulati Auto Electricals Pvt. Ltd | 6 months  | 2.4  |
| 508 |  | Mukul Chaudhary     | Star Wire                        | 6 months  | NIL  |
| 509 |  | Nazim Hussain       | Star Wire                        | 6 months  | NIL  |
| 510 |  | Nitin Jaiswal       | Honda                            | 6 months  | NIL  |
| 511 |  | Pushpinder Singh    | Indigo                           | 6 months  | 2.4  |
| 512 |  | Rahul Malik         | Star Wire                        | 6 months  | NIL  |
| 513 |  | Rahul Lamba         | Poly Medicare                    | 6 months  | 3.25 |
| 514 |  | Rajeev Ranjan Singh | Gulati Auto Electricals Pvt. Ltd | 6 months  | 2.4  |
| 515 |  | Shivam Bansal       | Tata Steel                       | 6 months  | 5.25 |
| 516 |  | Shivam Mahajan      | Stryker                          | 6 months  | 3    |
| 517 |  | Shrey Rajput        | Star Wire                        | 6 months  | NIL  |
| 518 |  | Surya Pratap Singh  | Capitalvia Global Research Ltd   | 6 months  | 3    |
| 519 |  | Tushar Kumar Gupta  | SAE Project                      | 6 months  | NIL  |
| 520 |  | Ravi Dutt Sharma    | Star Wire                        | 6 months  | NIL  |
| 521 |  | Kartik              | Star Wire                        | 6 months  | NIL  |
| 522 |  | Aditya Pandit       | Escorts Ltd.                     | 1.5 month | NIL  |
| 523 |  | Amit Singh          | Drive well auto Industry         | 1.5 month | NIL  |
| 524 |  | Ankit Yadav         | Toyota                           | 1.5 month | NIL  |
| 525 |  | Ankur               | JBM                              | 1.5 month | NIL  |
| 526 |  | Chandras Kumar      | HYT Engineering Co. Pvt. Ltd     | 1.5 month | NIL  |
| 527 |  | Deepanshu Gaur      | Escorts Ltd.                     | 1.5 month | NIL  |
| 528 |  | Dheeraj Malik       | Escorts Ltd.                     | 1.5 month | NIL  |
| 529 |  | Divyam Mittal       | Escorts Ltd.                     | 1.5 month | NIL  |
| 530 |  | Gourav Arora        | Hitachi                          | 1.5 month | NIL  |



|     |  |                     |                                   |           |     |
|-----|--|---------------------|-----------------------------------|-----------|-----|
| 531 |  | Hardik Chaudhry     | Bhagwati Engineering Enterprises  | 1.5 month | NIL |
| 532 |  | Himanshu Gaur       | Escorts Ltd.                      | 1.5 month | NIL |
| 533 |  | Kapil Dagar         | Escorts Ltd.                      | 1.5 month | NIL |
| 534 |  | Karan Choudhary     | Project At College Premise        | 1.5 month | NIL |
| 535 |  | Kartik Atri         | Honda/Minda                       | 1.5 month | NIL |
| 536 |  | Lakshay Makar       | Sai Lpg Products                  | 1.5 month | NIL |
| 537 |  | Manan Aggarwal      | Associated Engineering Industries | 1.5 month | NIL |
| 538 |  | Mohd Tariq Saifi    | Escorts Ltd.                      | 1.5 month | NIL |
| 539 |  | Pradeep Yadav       | Escorts Ltd.                      | 1.5 month | NIL |
| 540 |  | Prashant Sharma     | Hyt Engineering Co. Pvt. Ltd      | 1.5 month | NIL |
| 541 |  | Prateek Mahapatra   | Maruti Suzuki                     | 1.5 month | NIL |
| 542 |  | Pushpender Dagar    | Maruti Suzuki                     | 1.5 month | NIL |
| 543 |  | Rahul Yadav         | Sai Lpg Products                  | 1.5 month | NIL |
| 544 |  | Sachisth Dutta      | Maruti Suzuki                     | 1.5 month | NIL |
| 545 |  | Sandeep             | Escort                            | 1.5 month | NIL |
| 546 |  | Sanjay Singh        | Maruti Suzuki                     | 1.5 month | NIL |
| 547 |  | Sarim Ealia Humayun | Maruti Suzuki                     | 1.5 month | NIL |
| 548 |  | Satyam Goel         | JRNEngineering Works              | 1.5 month | NIL |
| 549 |  | Shantnu Bali        | Anand Industries                  | 1.5 month | NIL |
| 550 |  | Shivam Kumar        | Project At College Premise        | 1.5 month | NIL |

|     |       |                        |   |           |     |
|-----|-------|------------------------|---|-----------|-----|
| 551 |       | Shivam Kumar Singh     | Minda / Maxop                               | 1.5 month | NIL |
| 552 |       | Sparsh Sharma          | Jay Ushin Ltd                               | 1.5 month | NIL |
| 553 |       | Syed Qurretulain Zaidi | Jay Ushin Ltd                               | 1.5 month | NIL |
| 554 |       | Tanish Saklani         | ESS ESS Ceratch                             | 1.5 month | NIL |
| 555 |       | Tushar Jindal          | Maruti Suzuki                               | 1.5 month | NIL |
| 556 |       | Udit Jain              | Tecumseh India Pvt. Limited                 | 1.5 month | NIL |
| 557 |       | Vaibhav Joshi          | Bhagwati Engineering Enterprises            | 1.5 month | NIL |
| 558 |       | Vinit Yadav            | Indian Railway                              | 1.5 month | NIL |
| 559 |       | Vishal Chauhan         | Hitachi                                     | 1.5 month | NIL |
| 560 |       | Vishal Kaushik         | Indian Railway                              | 1.5 month | NIL |
| 561 |       | Vishvjeet Pratap Singh | Maruti, Manesar                             | 1.5 month | NIL |
| 562 |       | Tushar Saini           | Sai Lpg Products                            | 1.5 month | NIL |
| 563 |       | Nishu                  | JCB India Limited/Andritz Hydro Pvt Limited | 1.5 month | NIL |
| 564 |       | Divyansh Ahuja         | Sanatan Autoplast Pvt. Ltd.                 | 1.5 month | NIL |
| 565 |       | Mukesh Kumar Das       | Project At College Premises                 | 1.5 month | NIL |
| 566 |       | Sarfaraz Alam          | SSP Private Limited                         | 1.5 month | NIL |
| 567 |       | Ritvik Manocha         | SSP Private Limited                         | 1.5 month | NIL |
| 568 | Maths | Divyansh               | In House Summer Training                    | 4 weeks   | NIL |
| 569 |       | Himanshi Panwar        | In House Summer Training                    | 4 weeks   | NIL |
| 570 |       | Ritik Kadian           | In House Summer                             | 4 weeks   | NIL |

|     |  |                      |                                      |         |     |
|-----|--|----------------------|--------------------------------------|---------|-----|
|     |  |                      | Training                             |         |     |
| 571 |  | Ritik Sharma         | In House Summer Training             | 4 weeks | NIL |
| 572 |  | Rohit Kumar Chhillar | In House Summer Training             | 4 weeks | NIL |
| 573 |  | Sakshi               | In House Summer Training             | 4 weeks | NIL |
| 574 |  | Sarvesh              | In House Summer Training             | 4 weeks | NIL |
| 575 |  | Shobhit Pandey       | In House Summer Training             | 4 weeks | NIL |
| 576 |  | Aakansha Singh       | Internshala( Data Science)           | 6 weeks | NIL |
| 577 |  | Akanksha Singh       | In House Summer Training             | 4 weeks | NIL |
| 578 |  | Anurag Vashishth     | In House Summer Training             | 4 weeks | NIL |
| 579 |  | Ashish Kumar         | In House Summer Training             | 4 weeks | NIL |
| 580 |  | Ashish Sharma        | In House Summer Training             | 4 weeks | NIL |
| 581 |  | Ashish Yadav         | In House Summer Training             | 4 weeks | NIL |
| 582 |  | Bhavya               | Pramerica Life(Intermarket Analysis) | 4 weeks | NIL |
| 583 |  | Gajender Yadav       | In House Summer Training             | 4 weeks | NIL |
| 584 |  | Harshita Gautam      | Unacademi(Data Science)              | 4 weeks | NIL |
| 585 |  | Himanshi Arora       | Coursera(Data Science)               | 6 weeks | NIL |
| 586 |  | Meenal Garg          | In House Summer Training             | 4 weeks | NIL |
| 587 |  | Nikita Sharma        | In House Summer Training             | 4 weeks | NIL |
| 588 |  | Nischal              | Internshala( Python Programming)     | 6 weeks | NIL |
| 589 |  | Priya Soni           | In House Summer Training             | 4 weeks | NIL |
| 590 |  | Raghu Rawal          | Unacademi(Data Science)              | 4 weeks | NIL |

|     |           |                       |  |          |     |
|-----|-----------|-----------------------|--|----------|-----|
| 591 |           | Rashmi                | Internshala( Data Science, Business Communication)   | 4 weeks  | NIL |
| 592 |           | Simran                | In House Summer Training                             | 4 weeks  | NIL |
| 593 |           | Yashasvi Jakhar       | In House Summer Training                             | 4 weeks  | NIL |
| 594 |           | Yogesh Beniwal        | In House Summer Training                             | 4 weeks  | NIL |
| 595 |           | Jayant Raj            | In House Summer Training                             | 4 weeks  | NIL |
| 596 |           | Akansha Malik         | Internshala( Python Programming)                     | 6 weeks  | NIL |
| 597 |           | Nisha                 | In House Summer Training                             | 4 weeks  | NIL |
| 598 |           | Prateek Khutela       | In House Summer Training                             | 4 weeks  | NIL |
| 599 |           | Harendra Kumar Jindal | In House Summer Training                             | 4 weeks  | NIL |
| 600 |           | Raj Kumar             | In House Summer Training                             | 4 weeks  | NIL |
| 601 |           | Ankita Yadav          | Project Related Work From lit Tirupati               | 6 weeks  | NIL |
| 602 |           | Riya Fagna            | Project Related Work From lit Tirupati               | 6 weeks  | NIL |
| 603 |           | Ridhhi Bhatnagar      | Project Related Work From lit Tirupati               | 6 weeks  | NIL |
| 607 | Education | Nisha                 | Manav Rachna International School Sector 46 Gurugram | 16 weeks | NIL |
| 608 |           | Swati                 | Manav Rachna International School Sector 46 Gurugram | 16 weeks | NIL |
| 609 |           | Kajal Khatana         | Manav Rachna International School Sector 46 Gurugram | 16 weeks | NIL |
| 610 |           | Anjali Singh          | Manav Rachna International School Sector 14          | 16 weeks | NIL |
| 611 |           | Annie Mondal          | Manav Rachna International School                    | 16 weeks | NIL |

|     |  |                    |   |          |     |
|-----|--|--------------------|---|----------|-----|
|     |  |                    | Sector 14                                   |          |     |
| 612 |  | Monika Sharma      | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 613 |  | Pooja Gupta        | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 614 |  | Priyanka Kumari    | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 615 |  | Priyashree Chaubey | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 616 |  | Reena Chaudhary    | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 617 |  | Riya Arora         | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 618 |  | Nidhi Bidhuri      | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 619 |  | Ridhi Guglani      | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 620 |  | Jitender           | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 621 |  | Aparajita Rathore  | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 622 |  | Pooja Kapoor       | Manav Rachna International School Sector 14 | 16 weeks | NIL |
| 623 |  | Riya Rana          | Grand Columbus School                       | 16 weeks | NIL |
| 624 |  | Shifali Bhardwaj   | Grand Columbus School                       | 16 weeks | NIL |
| 625 |  | Priyanka           | Grand Columbus School                       | 16 weeks | NIL |
| 626 |  | Shubham            | Grand Columbus School                       | 16 weeks | NIL |

|     |  |                    |                            |                   |          |     |
|-----|--|--------------------|----------------------------|-------------------|----------|-----|
| 627 |  | Rama Agnihotri     | Grand School               | Columbus          | 16 weeks | NIL |
| 628 |  | Anvi Gupta         | Grand School               | Columbus          | 16 weeks | NIL |
| 629 |  | Monika Singh       | Grand School               | Columbus          | 16 weeks | NIL |
| 630 |  | Deepanshi Gupta    | Grand School               | Columbus          | 16 weeks | NIL |
| 631 |  | Shikha Chaudhary   | Manav International School | Rachna Noida      | 16 weeks | NIL |
| 632 |  | Ruby Rani Jena     | Dav School                 |                   | 16 weeks | NIL |
| 633 |  | Vinay Kumari       | Dav School                 |                   | 16 weeks | NIL |
| 634 |  | Payal Solanki      | Dav School                 |                   | 16 weeks | NIL |
| 635 |  | Varsha Goswami     | Dav School                 |                   | 16 weeks | NIL |
| 636 |  | Jyotsna            | Dav School                 |                   | 16 weeks | NIL |
| 637 |  | Isha Bhardwaj      | Dav School                 |                   | 16 weeks | NIL |
| 638 |  | Pooja Chaurasya    | Dav School                 |                   | 16 weeks | NIL |
| 639 |  | Nandini Sharma     | Dav School                 |                   | 16 weeks | NIL |
| 640 |  | Moni Kumari        | Dav School                 |                   | 16 weeks | NIL |
| 641 |  | Varsha Venugopalan | Dav School                 |                   | 16 weeks | NIL |
| 642 |  | Bhavna Aggarwal    | Manav International School | Rachna Charmwood, | 16 weeks | NIL |
| 643 |  | Ekta Gaur          | Manav International School | Rachna Charmwood, | 16 weeks | NIL |
| 644 |  | Himanshu Kumar     | Manav International School | Rachna Charmwood, | 16 weeks | NIL |
| 645 |  | Jatin Kaushik      | Manav International School | Rachna            | 16 weeks | NIL |

|     |                   |  |          |     |
|-----|-------------------|--|----------|-----|
|     |                   | Charmwood,                                     |          |     |
| 646 | Neha Baliyan      | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 647 | Rashi Sharma      | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 648 | Shivani Sharma    | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 649 | Subhika Malhotra  | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 650 | Vandana           | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 651 | Shruti Bhardwaj   | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 652 | Kanchan Ambawatta | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 653 | Urvashi Aggarwal  | Manav Rachna International School Charmwood,   | 16 weeks | NIL |
| 654 | Akshita Shukla    | Homerton Grammar School                        | 16 weeks | NIL |
| 655 | Chavi Adlakha     | Homerton Grammar School                        | 16 weeks | NIL |
| 656 | Neha Rana         | Homerton Grammar School                        | 16 weeks | NIL |
| 657 | Parul Sharma      | Homerton Grammar School                        | 16 weeks | NIL |
| 658 | Priya Madhulika   | Homerton Grammar School                        | 16 weeks | NIL |
| 659 | Akash Chauhan     | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 660 | Mohan Prakash     | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 661 | Muddam            | Manav Rachna                                   | 16       | NIL |



|     |     |                  |  |          |     |
|-----|-----|------------------|--|----------|-----|
|     |     | Yochitha Reddy   | International School Sector 21-C,              | weeks    |     |
| 662 |     | Sukriti          | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 663 |     | Sarika Dabas     | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 664 |     | Ramandeep Kaur   | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 665 |     | Jagriti          | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 666 |     | Varsha Dixit     | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 667 |     | Shubhangi Tyagi  | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 668 |     | Mansi Sharma     | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 669 |     | Parul Yadav      | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 670 |     | Latika Arora     | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 671 |     | Akshara Sharma   | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 672 |     | Radhika Chhibber | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 673 |     | Deepika          | Manav Rachna International School Sector 21-C, | 16 weeks | NIL |
| 674 | PHY | Aakash Verma     | In house summer training                       | 4 weeks  | NIL |
| 675 |     | Bhoomika         | In house summer                                | 4 weeks  | NIL |

|     |      |                   |                          |         |     |
|-----|------|-------------------|--------------------------|---------|-----|
|     |      | Chandna           | training                 |         |     |
| 676 |      | Janhavi Sharma    | In house summer training | 4 weeks | NIL |
| 677 |      | Rahul Goswami     | In house summer training | 4 weeks | NIL |
| 678 |      | Reena Kaushik     | In house summer training | 4 weeks | NIL |
| 679 |      | Rohan Mishra      | In house summer training | 4 weeks | NIL |
| 680 |      | Rohit Kumar       | In house summer training | 4 weeks | NIL |
| 681 |      | Rohit Singh Rawat | In house summer training | 4 weeks | NIL |
| 682 |      | Himani Saraswat   | In house summer training | 4 weeks | NIL |
| 683 |      | Kalpna Rani       | In house summer training | 4 weeks | NIL |
| 684 |      | Preeti Sharma     | In house summer training | 4 weeks | NIL |
| 685 |      | Surekha Chaudhary | In house summer training | 4 weeks | NIL |
| 686 |      | Upasna Rawat      | In house summer training | 4 weeks | NIL |
| 687 |      | Suraj Kumar       | In house summer training | 4 weeks | NIL |
| 689 | CHEM | Akshika Nagar     | In house summer training | 4 weeks | NIL |
| 690 |      | Bhavya Bansal     | In house summer training | 4 weeks | NIL |
| 691 |      | Dev Gupta         | In house summer training | 4 weeks | NIL |
| 692 |      | Divya             | In house summer training | 4 weeks | NIL |

|     |  |                    |                          |         |     |
|-----|--|--------------------|--------------------------|---------|-----|
| 693 |  | Kirti Fagna        | In house summer training | 4 weeks | NIL |
| 694 |  | Man Mohan Singh    | In house summer training | 4 weeks | NIL |
| 695 |  | Navin Kumar Yadram | In house summer training | 4 weeks | NIL |
| 696 |  | Nikita             | In house summer training | 4 weeks | NIL |
| 697 |  | Nitin              | In house summer training | 4 weeks | NIL |
| 698 |  | Ritika Choudhary   | In house summer training | 4 weeks | NIL |
| 699 |  | Ritika Sharma      | In house summer training | 4 weeks | NIL |
| 700 |  | Ritu               | In house summer training | 4 weeks | NIL |
| 701 |  | Sahil Sharma       | In house summer training | 4 weeks | NIL |
| 702 |  | Sweta Rani         | In house summer training | 4 weeks | NIL |
| 703 |  | Yash Sharma        | In house summer training | 4 weeks | NIL |
| 704 |  | Ananya Julka       | In house summer training | 4 weeks | NIL |
| 705 |  | Anjali Chaudhary   | In house summer training | 4 weeks | NIL |
| 706 |  | Anshu              | In house summer training | 4 weeks | NIL |
| 707 |  | Anushka Sharma     | In house summer training | 4 weeks | NIL |
| 708 |  | Dasari Anirvesh    | In house summer training | 4 weeks | NIL |
| 709 |  | Deepu              | In house summer training | 4 weeks | NIL |

|     |  |                  |                          |          |     |
|-----|--|------------------|--------------------------|----------|-----|
|     |  |                  | training                 |          |     |
| 710 |  | Divya Arora      | In house summer training | 4 weeks  | NIL |
| 711 |  | Himanshu Kaushik | In house summer training | 4 weeks  | NIL |
| 712 |  | Kanika           | In house summer training | 4 weeks  | NIL |
| 713 |  | Kapil Garg       | In house summer training | 4 weeks  | NIL |
| 714 |  | Manish Baluni    | In house summer training | 4 weeks  | NIL |
| 715 |  | Mansi            | In house summer training | 4 weeks  | NIL |
| 716 |  | Mogili Madan     | In house summer training | 4 weeks  | NIL |
| 717 |  | Om Prakash Gupta | In house summer training | 4 weeks  | NIL |
| 718 |  | Rhythm Sapra     | In house summer training | 4 weeks  | NIL |
| 719 |  | Ruby Verma       | In house summer training | 4 weeks  | NIL |
| 720 |  | Sanjana          | In house summer training | 4 weeks  | NIL |
| 721 |  | Shilpi Mukherjee | In house summer training | 4 weeks  | NIL |
| 722 |  | Shreya           | In house summer training | 4 weeks  | NIL |
| 723 |  | Kajal Goyal      | In house summer training | 3 months | NIL |
| 724 |  | Shivangi         | In house summer training | 3 months | NIL |
| 725 |  | Anju             | In house summer training | 3 months | NIL |
| 726 |  | Preeti           | In house summer training | 3 months | NIL |

|     |  |                |                          |          |     |
|-----|--|----------------|--------------------------|----------|-----|
| 727 |  | Aashi          | In house summer training | 3 months | NIL |
| 728 |  | Namrata        | In house summer training | 3 months | NIL |
| 729 |  | Umang Gera     | In house summer training | 3 months | NIL |
| 730 |  | Aksit Bhatia   | In house summer training | 3 months | NIL |
| 731 |  | Riya Chugh     | In house summer training | 3 months | NIL |
| 732 |  | Rashmeet Kaur  | In house summer training | 3 months | NIL |
| 733 |  | Pooja Dagar    | In house summer training | 3 months | NIL |
| 734 |  | Damini         | In house summer training | 3 months | NIL |
| 735 |  | Neha Khatana   | In house summer training | 3 months | NIL |
| 736 |  | Neha Sharma    | In house summer training | 3 months | NIL |
| 737 |  | Arpita         | In house summer training | 3 months | NIL |
| 738 |  | Anjali         | In house summer training | 3 months | NIL |
| 739 |  | Yogita         | In house summer training | 3 months | NIL |
| 740 |  | Shivani Singh  | In house summer training | 3 months | NIL |
| 741 |  | Shiksha Tiwari | In house summer training | 3 months | NIL |
| 742 |  | Saloni Jangra  | In house summer training | 3 months | NIL |

## ANNEXURE 5.2

| Sr. no | Dept | Name             | Roll no       | Company name                            | Package |
|--------|------|------------------|---------------|---|---------|
| 1      | ECE  | Arika Singla     | 2K16ECUN01001 | Tianyini Worldtech India Pvt. Ltd.      | 3.6     |
| 2      | ECE  | Arika Singla     | 2K16ECUN01001 | NIIT TECHNOLOGIES                       | 3.5     |
| 3      | ECE  | Ayushi Maurya    | 2K16ECUN01003 | Tianyini Worldtech India Pvt. Ltd.      | 3.6     |
| 4      | ECE  | Madan Mohan Dhir | 2K16ECUN01006 | TCS                                     | 3.36    |
| 5      | ECE  | Mohit Yadav      | 2K16ECUN01010 | Infogain                                | 3       |
| 6      | ECE  | Mohit Yadav      | 2K16ECUN01010 | TCS                                     | 3.36    |
| 7      | ECE  | Rajan Gaur       | 2K16ECUN01011 | NIIT TECHNOLOGIES                       | 3.5     |
| 8      | ECE  | Raman Mishra     | 2K16ECUN01012 | NIIT TECHNOLOGIES                       | 3.5     |
| 9      | ECE  | Rohit Gupta      | 2K16ECUN01014 | NIIT TECHNOLOGIES                       | 3.5     |
| 10     | ECE  | Rohit Gupta      | 2K16ECUN01014 | ACS Solution                            | 4.80    |
| 11     | ECE  | Sanchita Dhar    | 2K16ECUN01015 | NIIT TECHNOLOGIES                       | 3.5     |
| 12     | ECE  | Vansh Tara       | 2K16ECUN01019 | Lido Learning                           | 10      |
| 13     | ECE  | Vijay Arora      | 2K16ECUN01020 | 3 Pillar Global                         | 4.15    |
| 14     | ECE  | Ayush Goyal      | 2K16ECUN01002 | Expert Lancing Research Services        | 3.5     |
| 15     | ECE  | Shreya Gupta     | 2K16ECUN01018 | Varite India Private Limited            | 3.5     |
| 16     | ECE  | Shivam Bhatia    | 2K16ECUN01017 | ACS Solution                            | 4.80    |
| 17     | ECE  | Shivam Bhatia    | 2K16ECUN01017 | Connect2 India                          | 4.20    |
| 18     | ECE  | Vishal Prasad    | 2K16ECUN01021 | ACS Solution                            | 4.80    |
| 19     | ECE  | Mayank Hans      | 2K16ECUN01009 | Mohan Energy Corporation Pvt Ltd, Noida | 4.00    |
| 20     | FMC  | Radhika Nigam    | 21703002N038  | Amazon, Bangalore                       | 3       |
| 21     | FMC  | Garima Sharma    | 21703002N064  | Mixture                                 | 1.9     |
| 22     | FMC  | Tulsi Devi       | 2K17MCUN0301  | DTDC                                    | 1.8     |

|    |     |                             |               |   |           |
|----|-----|-----------------------------|---------------|---|-----------|
|    |     | Sharma                      | 0             |   |           |
| 23 | FMC | Bhavya                      | 21703002N024  | Wipro HR Services                                   | 3.08      |
| 24 | CST | Aditya<br>Bhushan<br>Sharma | 2K16CSUN01003 | IBM, Jaro<br>Toppscholars                           | 4.5       |
| 25 | CST | Tridev Nath<br>Tripathi     | 2K16CSUN01042 | EXTRAMARKS  | 12        |
| 26 | CST | Aman<br>Diwakar             | 2K16CSUN01006 | Lido Learning                                       | 10        |
| 27 | CST | Shobhen<br>Tewatia          | 2K16CSUN01039 | Lido Learning                                       | 10        |
| 28 | CST | Ayush<br>Srivastava         | 2K16CSUN01057 | Lido Learning                                       | 10        |
| 29 | CST | Deepika<br>Ghotra           | 2K16CSUN01014 | Lido Learning,<br>Collabera, Damco<br>Solutions     | 10 / 3.5  |
| 30 | CST | Suraj<br>Makkar             | 2K16CSUN01179 | TCS, Lido Learning                                  | 3.36 / 10 |
| 31 | CST | Vasu Dev<br>Bansal          | 2K16CSUN01096 | Phable (Terrals<br>Technologies Pvt.<br>Ltd), WIPRO | 6 / 3.5   |
| 32 | CST | Saurabh<br>Sethi            | 2K16CSUN01038 | TCS, MyOperator                                     | 3.36      |
| 33 | CST | Palash<br>Dubey             | 2K16CSUN01029 | IBM   | 4.5       |
| 34 | CST | Ishu Goel                   | 2K16CSUN01018 | IBM   | 4.5       |
| 35 | CST | Ritesh<br>Nagpal            | 2K16CSUN01086 | IBM   | 4.5       |
| 36 | CST | Ashish<br>Verma             | 2K16CSUN01011 | IBM, TCS  | 3.36      |
| 37 | CST | Nikita<br>Sanghi            | 2K16CSUN01028 | IBM, TCS  | 3.36      |
| 38 | CST | Purna<br>Sharma             | 2K17CSUM01002 | Infogain, IBM                                       | 3.5 / 4.5 |
| 39 | CST | Mayank<br>Nagpal            | 2K16CSUN02013 | Infogain, IBM                                       | 3.5 / 4.5 |
| 40 | CST | Kaustubh<br>Dhasmana        | 2K16CSUN01021 | NIIT Technologies,<br>EX Squared<br>Solutions, IBM  | 4.5       |
| 41 | CST | Hitesh<br>Khanna            | 2K16CSUN01017 | TCS, IBM  | 4.5       |
| 42 | CST | Rupal<br>Gupta              | 2K16CSUN01137 | TCS, Quovantis<br>Technologies                      | 4.5       |
| 43 | CST | Vishrut<br>Sharma           | 2K16CSUN01046 | Cognizant   | 4         |



|    |     |                  |               |  |     |
|----|-----|------------------|---------------|--|-----|
| 44 | CST | Ashutosh Vaish   | 2K16CSUN01110 | Contata Solutions                                      | 4   |
| 45 | CST | Kartik Kumar     | 2K16CSUN01121 | Contata Solutions, TO THE NEW                          | 4   |
| 46 | CST | Sahil Sharma     | 2K16CSUN01036 | Guardian   | 4   |
| 47 | CST | Manish Khurana   | 2K16CSUN01074 | Guardian   | 4   |
| 48 | CST | Dhruv Yadav      | 2K16CSUN01113 | Infogain, Guardian                                     | 3.5 |
| 49 | CST | Kunal Bhardwaj   | 2K16CSUN01024 | BYJU'S, AglaSem Edutech Pvt. Ltd, Varite               | 3.6 |
| 50 | CST | Gajender Chauhan | 2K16CSUN01062 | Damco Solutions, Jinigram Consulting Services Pvt. Ltd | 3.5 |
| 51 | CST | Palak Arora      | 2K16CSUN02015 | NIIT Technologies, EX Squared Solutions                | 3.5 |
| 52 | CST | Shubham Yadav    | 2K16CSUN01175 | Varite   | 3.6 |
| 53 | CST | Sonalika Singh   | 2K16CSUN01090 | Varite   | 3.6 |
| 54 | CST | Sumit Kumar Jha  | 2K16CSUN01144 | Varite   | 3.6 |
| 55 | CST | Sakshi Arora     | 2K16CSUN01037 | Bristlecone  | 3.5 |
| 56 | CST | Srishti Setia    | 2K16CSUN01178 | Bristlecone  | 3.5 |
| 57 | CST | Akash Srivastava | 2K16CSUN01105 | Bristlecone  | 3.5 |
| 58 | CST | Tegveer Singh    | 2K16CSUN01180 | Bristlecone  | 3.5 |
| 59 | CST | Praveen Sharma   | 2K16CSUN01132 | Damco Solutions  | 3.5 |
| 60 | CST | Mohit Arora      | 2K16CSUN01075 | Damco Solutions  | 3.5 |
| 61 | CST | Karan Kaher      | 2K16CSUN01163 | Damco Solutions  | 3.5 |
| 62 | CST | Rupali Bhatnagar | 2K16CSUN01035 | Damco Solutions  | 3.5 |
| 63 | CST | Vikash Singh     | 2K16CSUN01044 | Damco Solutions  | 3.5 |
| 64 | CST | Yash Raghuvanshi | 2K16CSUN01150 | Damco Solutions  | 3.5 |
| 65 | CST | Paras            | 2K16CSUN01129 | Damco Solutions  | 3.5 |

|    |     |                 |               |                                     |      |
|----|-----|-----------------|---------------|-------------------------------------|------|
|    |     | Aggarwal        |               |                                     |      |
| 66 | CST | Chetan Singh    | 2K16CSUN01112 | Damco Solutions                     | 3.5  |
| 67 | CST | Piyush Dwivedi  | 2K16CSUN01166 | Damco Solutions                     | 3.5  |
| 68 | CST | Vishnu Sharma   | 2K16CSUN01182 | Damco Solutions                     | 3.5  |
| 69 | CST | Aditya Sharma   | 2K16CSUN01103 | Infogain                            | 3.5  |
| 70 | CST | Sonal Singhla   | 2K16CSUN01177 | Infogain                            | 3.5  |
| 71 | CST | Harsh Aggarwal  | 2K16CSUN01065 | Infogain                            | 3.5  |
| 72 | CST | Kanika Bhatia   | 2K16CSUN02009 | Infogain, TCS                       | 3.5  |
| 73 | CST | Aishwarya Khera | 2K16CSUN01005 | Intellect Partners, Damco Solutions | 3.5  |
| 74 | CST | Yadu Nandan     | 2K16CSUN02022 | NIIT Technologies                   | 3.5  |
| 75 | CST | Virender Kadian | 2K16CSUN01045 | NIIT Technologies                   | 3.5  |
| 76 | CST | Gaurav Joshi    | 2K16CSUN01063 | NIIT Technologies                   | 3.5  |
| 77 | CST | Shivam Kalia    | 2K16CSUN01141 | NIIT Technologies                   | 3.5  |
| 78 | CST | Sudhansu Das    | 2K16CSUN01143 | NIIT Technologies                   | 3.5  |
| 79 | CST | Chirag Walecha  | 2K16CSUN01060 | NIIT Technologies                   | 3.5  |
| 80 | CST | Arish Fatima    | 2K16CSUN01055 | NIIT Technologies                   | 3.5  |
| 81 | CST | Sanjil Jain     | 2K16CSUN01139 | NIIT Technologies                   | 3.5  |
| 82 | CST | Sumeet Chandel  | 2K16CSUN01092 | TCS                                 | 3.36 |
| 83 | CST | Yatin Sharma    | 2K16CSUN01183 | TCS                                 | 3.36 |
| 84 | CST | Pawan Gupta     | 2K16CSUN01130 | TCS                                 | 3.36 |
| 85 | CST | Abhishek Jain   | 2K16CSUN01102 | TCS                                 | 3.36 |
| 86 | CST | Jagmohan        | 2K16CSUN01119 | TCS                                 | 3.36 |
| 87 | CST | Abhiroop Chopra | 2K16CSUN02004 | TCS                                 | 3.36 |
| 88 | CST | Karan Garg      | 2K16CSUN01072 | TCS                                 | 3.36 |
| 89 | CST | Abhishek        | 2K16CSUN01002 | TCS                                 | 3.36 |

|     |     |                    |               |  |         |
|-----|-----|--------------------|---------------|--|---------|
|     |     | Sontakke           |               |  |         |
| 90  | CST | Bhavya Satija      | 2K16CSUN01012 | TCS  | 3.36    |
| 91  | CST | Ujjwal Gaur        | 2K16CSUN01043 | TCS  | 3.36    |
| 92  | CST | Krishna Chaturvedi | 2K16CSUN01023 | Crowe Horwath IT Services LLP                              | 3.35    |
| 93  | CST | Riya Sandhu        | 2K16CSUN01170 | Intellect Partners   | 3.25    |
| 94  | CST | Ruchi Bhatt        | 2K16CSUN01171 | Intellect Partners   | 3.25    |
| 95  | CST | Anshika Sachdeva   | 2K16CSUN01053 | TechBlue, Intellect Partners                               | 3.25    |
| 96  | CST | Anurag Tripathi    | 2K16CSUN01054 | Cavisson   | 3       |
| 97  | CST | Dhruv Kumar        | 2K16CSUN01158 | Cavisson   | 3       |
| 98  | CST | Varun Sharma       | 2K16CSUN01095 | Cavisson   | 3       |
| 99  | CST | Madhur Ahuja       | 2K16CSUN01025 | Cavisson   | 3       |
| 100 | CST | Nishant Dhingra    | 2K16CSUN01076 | Cavisson   | 3       |
| 78  | CST | Kanika Gupta       | 2K16CSUN01120 | Cavisson   | 3       |
| 79  | CST | Hitesh Bajaj       | 2K16CSUN01067 | WIPRO, Cavisson  | 3.5 / 3 |
| 80  | CST | Harsh Sharma       | 2K16CSUN02008 | Cavisson   | 3       |
| 81  | CST | Tushar Mittal      | 2K16CSUN01094 | Cavisson   | 3       |
| 82  | CST | Ankita Singh       | 2K16CSUN01107 | Cavisson   | 3       |
| 83  | CST | Aishwarya Nair     | 2K16CSUN01004 | Koyo Electronics   | 3       |
| 84  | CST | Jaisraj Bhatnagar  | 2K16CSUN01019 | Thinksys Software Pvt Ltd                                  | 3       |
| 85  | CST | Ayushi Aggarwal    | 2K16CSUN01111 | Binario Technologies                                       | 3       |
| 86  | CST | Pranjal Garg       | 2K16CSUN01131 | Binario Technologies, Zimozi Solutions                     | 3       |
| 87  | CST | Shubham Sharma     | 2K16CSUN01174 | Collabera  | 2.7     |
| 88  | CST | Raunak Kumar       | 2K16CSUN01168 | Sourcing Valley Recruitment and Advisory Services Pvt. Ltd | 2.4     |

|     |     |                     |               |  |      |
|-----|-----|---------------------|---------------|--|------|
| 89  | CST | Shailja Yadav       | 2K16CSUN01173 | Varite, AglaSem Edutech Pvt. Ltd                 | 3.6  |
| 90  | CST | Vaibhav             | 2K16CSUN01146 | Future Generali India Life Insurance Company Ltd | 2    |
| 91  | CST | Ishaan Bansal       | 2K16CSUN01118 | Future Generali India Life Insurance Company Ltd | 2    |
| 92  | CST | Mayank Garg         | 2K16CSUN01126 | Zimozi Solutions                                 | 1.44 |
| 93  | CST | Subodh Gupta        | 2K16CSUN01091 | Zimozi Solutions                                 | 1.44 |
| 94  | CST | Kandy Arora         | 2K16CSUN01020 | TO THE NEW                                       |      |
| 95  | CST | Sanyam `Popli       | 2K16CSUN01172 | SHIVALIC POWER CONTROL Pvt. Ltd.                 | 2.4  |
| 96  | CST | Ankit Talwar        | 2K16CSUN01155 | IAUGMENTOR                                       | 3.5  |
| 97  | CST | Manish Pokhriyal    | 2K16CSUN01125 | SAGE GROUP                                       |      |
| 98  | CST | Prashant            | 2K16CSUN01079 | ARTERIA  | 2    |
| 99  | CST | Ramandeep           | 2k16CSUN01034 | Byju's   | 10   |
| 100 |     | Sourabh Sharma      | 2K16CSUN01142 | Wunderman Thompson                               | 4.5  |
| 101 | CST | Minhajul Hossain    | 2K17CSUN01020 | CAPGEMINI  | 3.8  |
| 102 | CST | Naman Gupta         | 2K17CSUN01023 | ADP INDIA PVT. LTD ,CAPGEMINI                    | 5    |
| 103 | CST | Vaibhav Saini       | 2K17CSUN01148 | CAPGEMINI  | 3.8  |
| 104 | CST | Kishan Kumar Shukla | 2K17CSUN01165 | CAPGEMINI  | 3.8  |
| 105 | CST | Rohan Kumar         | 2K17CSUN01037 | CAPGEMINI  | 3.8  |
| 106 |     | Siddharth Gautam    | 2K17CSUN01170 | CAPGEMINI  | 3.8  |
| 107 | CST | Yogesh Dixit        | 2K17CSUN01158 | CAPGEMINI  | 3.8  |
| 108 | CST | Rajneesh Chaturvedi | 2K17CSUN01140 | CAPGEMINI  | 3.8  |
| 109 | CST | Vaibhav Kaushik     | 2K17CSUN01047 | CAPGEMINI  | 3.8  |
| 110 | CST | Diksha Babbar       | 2K17CSUN01062 | CAPGEMINI  | 3.8  |

|     |     |                     |               |                                  |         |
|-----|-----|---------------------|---------------|----------------------------------|---------|
| 111 | CST | Sachin Gupta        | 2K17CSUN01087 | CAPGEMINI                        | 3.8     |
| 112 | CST | Prachi Chaudhary    | 2K17CSUN01167 | CAPGEMINI                        | 3.8     |
| 113 | CST | Yogesh Kumar        | 2K17CSUN01154 | ADP INDIA PVT. LTD ,CAPGEMINI    | 5       |
| 114 | CST | Mukul Singh         | 2K17CSUN01132 | CAPGEMINI                        | 3.8     |
| 115 | CST | Nitanshi            | 2K17CSUN01135 | CAPGEMINI                        | 3.8     |
| 116 | CST | Parul Matta         | 2K17CSUN01137 | CAPGEMINI                        | 3.8     |
| 117 | CST | Harsha Sethi        | 2K17CSUN01123 | CAPGEMINI                        | 3.8     |
| 118 | CST | Ritvik Mukheja      | 2K17CSUN01084 | CAPGEMINI                        | 3.8     |
| 119 | CST | Anurag Bhardwaj     | 2K17CSUN01056 | CAPGEMINI                        | 3.8     |
| 120 | CST | Nilansh Khurana     | 2K17CSUN01027 | CAPGEMINI                        | 3.8     |
| 121 | CST | Palak Bansal        | 2K17CSUN01028 | CAPGEMINI                        | 3.8     |
| 122 | CST | R Kavya             | 2K17CSUN01031 | CAPGEMINI                        | 3.8     |
| 123 | CST | Rashi Saxena        | 2K17CSUN01032 | CAPGEMINI                        | 3.8     |
| 124 | CST | Deepti Tuteja       | 2K17CSUN01012 | CAPGEMINI                        | 3.8     |
| 125 | CST | Mayank Khattar      | 2K17CSUN01019 | CAPGEMINI                        | 3.8     |
| 126 | CST | Chitransh Bhatnagar | 2K17MEUN01008 | CAPGEMINI                        | 3.8     |
| 127 | CST | Austin Samuel       | 2K17CSUN01008 | CAPGEMINI                        | 3.8     |
| 128 | CST | Aayush Singh        | 2K17CSUN01001 | CAPGEMINI                        | 3.8     |
| 129 | CST | Rishabh Dhiman      | 2K17CSUN01035 | DAFFODIL / CAPGEMINI             | 4 / 3.8 |
| 130 | CST | Lizel Mehta         | 2K17CSUN01071 | DAFFODIL / MAVEN WAVE            | 4       |
| 131 | CST | Nitin Aggarwal      | 2K17CSUN01077 | ADP INDIA PVT. LTD               | 5       |
| 132 | CST | Abhishek Pandey     | 2K17CSUN01104 | JARO EDUCATION                   | 6.6     |
| 133 | CST | Anubhav Mukhija     | 2K17CSUN01006 | EX Squared Solutions, Maven Wave | 3.6, 4  |
| 134 | CST | Parth               | 2K17CSUN01029 | JARO EDUCATION                   | 6.6     |

|     |     |                       |               |                          |     |
|-----|-----|-----------------------|---------------|--------------------------|-----|
|     |     | Choudhary             |               |                          |     |
| 135 | CST | Stephen Denson        | 2K17CSUN01147 | MAVEN WAVE               | 4   |
| 136 | CST | Divyam                | 2K17CSUN01120 | EX Squared Solutions     | 3.6 |
| 137 | CST | Dipesh Yadav          | 2K17CSUN01160 | MAVEN WAVE               | 4   |
| 138 | CST | Aarti Sharma          | 2K17CSUN01168 | Maven Wave               | 4   |
| 139 | ME  | Shubham Mavi          | 2K16MEUN01040 | SONALIKA TRACTORS        | 5.5 |
| 140 | ME  | Somesh S              | 2K16MEUN01041 | INDIGO                   | 3   |
| 141 | ME  | Abhishek Bhardwaj     | 2K16MEUN01003 | EXPERT LANCING           | 3   |
| 142 | ME  | Mayank Sadhra         | 2K16MEUN01023 | POLYMEDICURE             | 2.4 |
| 143 | ME  | Krishan Mohan Vashist | 2K16MEUN01020 | EXPERT LANCING           | 3   |
| 144 | ME  | Suraj Sharma          | 2K16MEUN01044 | EXPERT LANCING           | 3   |
| 145 | ME  | Shubham Rohilla       | 2K17MEUL01005 | OSM PROJECTS PRIVATE LTD | 3   |
| 146 | ME  | Bhagat Singh          | 2K16MEUN01011 | EXPERT LANCING           | 3   |
| 147 | ME  | Abhinav Chawla        | 2K16MEUN01002 | POLYMEDICURE             | 2.4 |
| 148 | ME  | Ayush Chaudhary       | 2K16MEUN01010 | EXPERT LANCING           | 3   |
| 149 | ME  | Abdul Ahad            | 2K16MEUN01001 | POLYMEDICURE             | 3   |
| 150 | ME  | Sahil Verma           | 2K16MEUN01038 | EXPERT LANCING           | 3   |
| 151 | ME  | Subham Jha            | 2K16MEUN01042 | EXPERT LANCING           | 3   |
| 152 | ME  | Sumit Shaw            | 2K16MEUN01043 | INDIGO                   | 3   |
| 153 | ME  | Krishan Mohan Vashist | 2K16MEUN01020 | SONALIKA TRACTORS        | 5.5 |
| 154 | ME  | Mayank Sadhra         | 2K16MEUN01023 | SONALIKA TRACTORS        | 5.5 |
| 155 | ME  | Sagar Bisla           | 2K16MEUN01036 | OSWAL CASTING PVT LTD    | 3   |
| 156 | ME  | Sagar Jaglan          | 2K16MEUN01035 | OSWAL CASTING PVT LTD    | 3   |
| 157 | ME  | Vikram Sharma         | 2K16MEUN01046 | OSWAL CASTING PVT LTD    | 3   |

|     |                          |                  |               |  |      |
|-----|--------------------------|------------------|---------------|--|------|
| 158 | ME                       | Suraj Kumar      | 2K16MEUN01045 | OSWAL CASTING PVT LTD                                  | 3    |
| 159 | ME                       | Sahil Jaglan     | 2K16MEUN01037 | OSWAL CASTING PVT LTD                                  | 3    |
| 160 | ME                       | Abhishek Mishra  | 2K16MEUN01004 | OSWAL CASTING PVT LTD                                  | 3    |
| 161 | Maths                    | Bhavya Budhiraja | 2K18MAUN01006 | LIDO LEARNING  | 10   |
| 162 | Education and Humanities | Akshita Shukla   | 2K18EDUN01001 | MANAV RACHNA INTERNATIONAL SCHOOL CHARMWOOD, FARIDABAD | 3.8  |
| 163 | Education and Humanities | Akash Chauhan    | 2K18EDUN01003 | ST. COLUMBUS SCHOOL, DAYAL BAGH                        | 1.8  |
| 164 | Education and Humanities | Rama Agnihotri   | 2K18EDUN01066 | ST. COLUMBUS SCHOOL, DAYAL BAGH                        | 1.8  |
| 165 | Education and Humanities | Pooja Gupta      | 2K18EDUN01029 | SHRI DHRONACHARYA PUBLIC SCHOOL, FARIDABAD             | 1.75 |
| 166 | Education and Humanities | Radhika Chhibber | 2K18EDUN01032 | NEW GREEN FIELD SCHOOL, SAKET NEW DELHI.               | 3.5  |
| 167 | Education and Humanities | Neha Baliyan     | 2K18EDUN01012 | ST. COLUMBUS SCHOOL, DAYAL BAGH                        | 1.75 |
| 168 | Education and Humanities | Deepika          | 2K18EDUN01011 | SAINT RAMAN PUBLIC SCHOOL, DELHI                       | 1.8  |
| 169 | Education and Humanities | Aprajita Rathore | 2K18EDUN01059 | DYNASTY INTERNATIONAL SCHOOL, FARIDABAD                | 2.5  |
| 170 | Education and Humanities | Riya Arora       | 2K18EDUN01069 | NAV JYOTI SENIOR SECONDARY SCHOOL, BALLABHGARH         | 1.8  |
| 171 | Education and Humanities | Annie Mondal     | 2K18EDUN01005 | ST. PETER SCHOOL, SECTOR 66 FARIDABAD                  | 2.40 |
| 172 | Education and Humanities | Reena Choudhary  | 2K18EDUN01034 | KALKA PUBLIC SCHOOL, NEW DELHI                         | 2.5  |



|     |                          |                  |               |                                  |      |
|-----|--------------------------|------------------|---------------|----------------------------------|------|
| 173 | Education and Humanities | Jatin Kaushik    | 2K18EDUN01014 | FERNS AND PETALS                 | 2.52 |
|     | Education and Humanities | Shruti Bhardwaj  | 2K18EDUN01044 | FERNS AND PETALS                 | 3.12 |
| 174 | Education and Humanities | Subhika Malhotra | 2K18EDUN01040 | EASE ADMISSIONS JANAKPURI, DELHI | 1.6  |
| 175 | Education and Humanities | Ruby Rani Jena   | 2K18EDUN01046 | ST. COLUMBUS SCHOOL, DAYAL BAGH  | 1.8  |
| 176 | Chemistry                | Anjali           | 2K18CHPN01002 | JUBILANT CHEMISYS, DELHI         | 2.75 |



## **Internal Quality Assurance Cell**

### **Minutes of Meeting Nov 22, 2019**

In presence of Dr. Prinima, Dr. Mrinal, Dr. Sachita, Dr. Animesh, Mr. Ajit, Dr. Hardeo Thakur, Dr. Kiran Gupta, Dr. Charu Pathak, a meeting of IQAC Team was conducted.

Day and Date: Friday, Nov 22, 2019

Time: 11:40 am

Venue: HG12

Agenda :

1. compilation of AQAR (18-19)

#### ***Discussion:***

1. Dr. Sachita and Dr. Animesh gathered some data for the criteria assigned to them.
2. The doubts of other criteria to the members present were cleared.
3. Mr. Ajit would compile the pending data of criteria V.
4. The data along with the proofs of same and the website link would be attached as annexure.
5. The Annexure name would be same as the point number in the AQAR.
6. The NAAC manual should be referred for the details.



**MANAV RACHNA  
UNIVERSITY**

(FORMERLY MANAV RACHNA COLLEGE OF ENGINEERING  
NAAC ACCREDITED 'A' GRADE INSTITUTION)

Declared as State Private University under section 2f of the UGC act, 1956

## **Internal Quality Assurance Cell**

### **Minutes of Meeting Dec 23, 2019**

In presence of Prof.A.K.Gupta, Prof.D.K.Sharma, Dr.Charu Pathak, Dr.Sachita and Dr.Animesh, a meeting of IQAC Team was conducted.

Day and Date: Monday, Dec23, 2019

Time: 11:45 am

Agenda :

1. compilation of AQAR (18-19)

#### ***Discssion:***

1. *The data provided by Mr. Animesh was reviewed and a review was suggested for the same.*
2. *The data provided by Ms. Sachita was reviewed and few modifications were suggested. The data may be completed in co-ordination with Mr. Ajit.*

## **Internal Quality Assurance Cell**

### **Minutes of Meeting**

In presence of Prof.A.K.Gupta, Prof.D.K.Sharma, Dr.Charu Pathak, Dr. Mrinal Pandey, Dr. Prinima Gupta, Dr.Y.K.Sharma, Mr.Ajit Katiyar, Dr.Hardeo Thakur, Dr. Arpit Sand, a meeting of IQAC Team was conducted.

**Day and Date: Friday, Jan 3, 2020 Time: 11:45 am**

#### Agenda :

1. Compilation of AQAR (18-19)
2. Course file review (Jan- June 2020)

#### Discussion:

1. Regarding compilation of AQAR, the teams already assigned given criteria of PART B may kindly compile latest by 10th Jan, 2020. A review meeting shall be held on 11th Jan, 2020
2. Seven more members may be added to the team for the continuous data maintenance (for AQAR 19-20) of the allotted criteria. The number of team members for compilation may be divided as follows:  
PART A- 2  
PART B - (6 criteria \*2) = 12 members IQAC activities and data- 2  
Overall compilation - 2
3. A course file review of the courses to be taught in Jan- June, 2020 may be executed on Jan 10, and Jan 11, 2020. Prof.Gupta will be shortly sharing the formats and details.
4. Course files would include a write up on (Action taken /modifications) carried out on the basis of previous feedback of the course. (The implementation of same has to be verified after T1 and T2 by the HOD)
5. A departmental level review is encouraged for the subject content.
6. Course plan as already being followed with few additional matrices

/ mappings of COs andPOs (level 0, 1, 2, and 3) may be incorporated. (Prof .Gupta has will share the same).

7. The content list of course files as provided by Prof.Sangeeta Banga, Dean Academics maybe used (with any other required additions as per the course instructor/ coordinator)
8. The Course review teams as formulated in last review may kindly tie up with the heads ofthe departments for the schedule and report the same.
9. Its recommended that atleast two courses may be picked from each semester for everyprogram, for e.g... two courses each from B.Tech 2nd, 4th, 6th and 8th Sem.
10. Project and seminar plans should also be reviewed.



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## **Internal Quality Assurance Cell**

### **Minutes of Meeting**

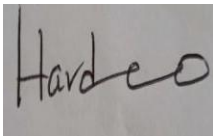
#### **Agenda: Audit for Criteria 1 Date: February 29, 2020**

AQAR, NAAC SAR (Departmental) 2019-20, Academic Audit (Criterion-1)

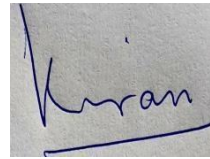
1. The Academic Audit of Criterion-1 of NAAC SAR Departmental was held on Feb.29, 2020 at 1 pm in Suk am Lab ,I-Block .
2. The IQAC in charge, Dr Charu Pathak along with its other team members Dr.D.K.Sharma, Dr.Hardeo Thakur, Dr Y.K.Sharma, Dr. Kiran Gupta, Dr. Deepa Arora and Dr. Ekta Rawat were present in the meeting.
3. The audit of Criteria 1 and 2 of the following Departments was conducted and the following observations were given:
4. Department of Mathematics was found to be filling up the information on various indicators and sub Indicators on the right lines. Except for a few lags with respect to the attachment of proofs of a few activities conducted, the document was approved by the teams.
5. Department of Chemistry: Indicator1.2.1 Front End: data needs to be furnished together in one slot(Columns 108-110and 236-244).Columns H,I,K,L,N and O there was no data; For Indicator 1.2.2 columns D, E, F, Land M were empty. In Column J, more clarity of data was required. For Ph.D. there was no data. Indicator 1.3.4: Back End : Documents were missing
6. Department of Management: Indicator1.2.1No data in columns H, I,J,K,L and M Indicator 1.3.2 Back End: No data found.
7. Department of Physics: Indicator 1.2.1: Result of Formula and feedback of stakeholders was missing. Indicator 1.2.2 and 1.3.4: Again result of formula was missing. In Indicators 1.3.2 and 1.3.3 no data was found.
8. Department of Law: Front End: Indicator 1.2.1, 1.3.2, 1.3.3 and 1.3.4 : Result of formula was missing.
9. Department of ECE: Front End: 1.2.1 : Result of formula was missing, Date of Academic approval missing ((J column), Back End: No folder for ECE supporting documents.

10. Department of CST: Date of Academic approval missing ((J column), Back End: No folder for CST supporting documents.
11. Department of ME:: Date of Academic approval missing ((J column), Back End: No folder for ME supporting documents.
12. Department of Education: Front End: Indicator 1.2.1, 1.3.2, 1.3.3 and 1.3.4 : Result of formula was missing.

The meeting ended with a happy note with the commitment to hold such meetings of members on regular basis to cater to the required quality in the document.

A photograph of a handwritten signature in blue ink on a light-colored surface. The signature reads "Hardeo".

Dr Hardeo Kr. Thakur

A photograph of a handwritten signature in blue ink on a light-colored surface. The signature reads "Kiran".

Dr kiran Gupta



**MANAV RACHNA UNIVERSITY**  
**(A UNIT OF UTHAN EDUCATIONAL TRUST)**  
**SECTOR - 43, DELHI SURAJKUND ROAD, FARIDABAD**  
**BALANCE SHEET AS ON 31ST MARCH 20**

|  | SCHEDULE | AMOUNT ( Rs.)         |
|--|----------|-----------------------|
| <b><u>SOURCES OF FUNDS :</u></b>                   |          |                       |
| DEVELOPMENT FUND                                   |          | 2,43,84,000           |
| SECURED LOANS                                      | A        | 25,22,71,057          |
| UNSECURED LOANS                                    |          | 20,79,46,096          |
| LONG TERM LIABILITIES                              | B        | 55,64,830             |
| <b>TOTAL</b>                                       |          | <b>49,01,65,983</b>   |
| <b><u>APPLICATION OF FUNDS :</u></b>               |          |                       |
| <b><u>FIXED ASSETS</u></b>                         |          |                       |
| GROSS BLOCK  | C        | 1,00,75,50,088        |
| LESS : DEPRECIATION                                |          | 54,88,12,107          |
| NET BLOCK  |          | 45,87,37,981          |
| CWIP   |          | 1,02,09,996           |
|  |          | <b>46,89,47,977</b>   |
| <b><u>CURRENT ASSETS</u></b>                       |          |                       |
| FIXED DEPOSIT WITH BANK                            | D        | 1,16,23,772           |
| STOCK OF CONSUMABLE ETC.                           |          | 22,65,583             |
| RECEIVABLES  | E        | 26,14,861             |
| CASH & BANK BALANCE                                |          | 5,03,72,015           |
| ADVANCES   | F        | 79,36,383             |
|  |          | 7,48,12,614           |
| <b><u>CURRENT LIABILITIES &amp; PROVISIONS</u></b> |          |                       |
| SUNDRY CREDITORS                                   |          | 5,20,49,655           |
| EXPENSES PAYABLE                                   | G        | 1,93,03,979           |
| OTHER CURRENT LIABILITIES                          | H        | 29,61,13,093          |
|  |          | 36,74,66,727          |
| <b>NET CURRENT ASSETS</b>                          |          | <b>(29,26,54,113)</b> |
| DEFERRED REVENUE EXPENDITURE                       |          | 7,19,07,900           |
| EXCESS OF EXPENDITURE OVER INCOME                  |          | 24,19,64,219          |
| <b>TOTAL</b>                                       |          | <b>49,01,65,983</b>   |

SIGNIFICANT ACCOUNTING POLICY AND SCHEDULE FORMING  
PART OF BALANCE SHEET  
AS PER OUR REPORT OF EVEN DATE ATTACHED IN FORM OF 10B

FOR AKHILESH CHANDRA GUPTA  
CHARTERED ACCOUNTANTS

AKHILESH CHANDRA GUPTA  
(PROPRIETOR)

MEMBERSHIP No. : 085901

PLACE : FARIDABAD

DATE : 24<sup>th</sup> Nov, 2020

For MANAV RACHNA UNIVERSITY

(Auth. Signatory)

(Auth. Signatory)

**MANAV RACHNA UNIVERSITY**  
**(A UNIT OF UTHAN EDUCATIONAL TRUST)**  
**SECTOR - 43, DELHI SURAJKUND ROAD, FARIDABAD**  
**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2020**

|  | SCHEDULE | AMOUNT ( Rs.)  |
|--|----------|----------------|
| <b>INCOME :</b>                                    |          |                |
| FEES FROM STUDENTS                                 |          | 36,04,91,296   |
| INTEREST INCOME                                    |          | 4,33,934       |
| TOTAL OF INCOME                                    |          | 36,09,25,230   |
| <b>EXPENSES :</b>                                  |          |                |
| PERSONNEL EXPENSES                                 | I        | 16,46,40,671   |
| STUDENT WELFARE & TRAINING EXPENSES                | J        | 3,42,75,084    |
| BOOKS & SUBSCRIPTION CHARGES                       |          | 28,26,038      |
| IT & COMMUNICATION                                 |          | 10,60,212      |
| RESEARCH & DEVELOPMENT EXPENSES                    |          | 15,49,054      |
| OPERATIONAL & ADMINISTRATIVE EXPENSES              | K        | 8,99,74,245    |
| FINANCIAL EXPENSES                                 | L        | 3,53,62,293    |
| TOTAL OF EXPENSES                                  |          | 32,96,87,597   |
| EXCESS OF INCOME OVER EXPENDITURE                  |          | 3,12,37,633    |
| DEPRECIATION                                       | C        | 4,99,35,441    |
| EXCESS OF EXPENDITURE OVER INCOME                  |          | (1,86,97,808)  |
| SURPLUS \ (DEFICIT) BROUGHT FORWARD FROM LAST YEAR |          | (22,32,66,411) |
| BALANCE CARRIED TO BALANCE SHEET                   |          | (24,19,64,219) |

SIGNIFICANT ACCOUNTING POLICY AND SCHEDULE FORMING  
PART OF INCOME AND EXPENDITURE ACCOUNT  
AS PER OUR REPORT OF EVEN DATE ATTACHED IN FORM OF 10B

FOR AKHILESH CHANDRA GUPTA  
CHARTERED ACCOUNTANTS

**A. C. GUPTA**  
Chartered Accountant  
Membership No. 85901


AKHILESH CHANDRA GUPTA  
(PROPRIETOR)

MEMBERSHIP No. : 085901

PLACE : FARIDABAD

DATE: 24<sup>th</sup> Nov, 2020

For MANAV RACHNA UNIVERSITY

  
(Auth. Signatory)

  
(Auth. Signatory)

**MANAV RACHNA UNIVERSITY**  
(A UNIT OF UTHAN EDUCATIONAL TRUST)  
**SCHEDULES FORMING PART OF BALANCE SHEET**

**AS ON**  
**31ST MARCH, 2020**

| <b>SECURED LOANS</b>      | <b>SCHEDULE-"A"</b> |
|---------------------------|---------------------|
|                           | <b>AMOUNT (Rs)</b>  |
| HDFC BANK LTD LOANS       | 18,93,25,758        |
| HDFC BANK OD A/C          | 5,86,59,676         |
| HP FINANCIAL SERVICES     | 41,65,296           |
| KOTAK MAHINDRA PRIME LTD. | 1,20,327            |
| <b>TOTAL</b>              | <b>25,22,71,057</b> |

| <b>LONG TERM LIABILITIES</b>                        | <b>SCHEDULE-"B"</b> |
|---|---------------------|
|   | <b>AMOUNT (Rs)</b>  |
| SECURITY FROM STAFF                                 | 13,49,830           |
| ALUMNI FUND   | 31,15,000           |
| INSTITUTION OF LATE SH.LAHOTI(FUND FOR PRIZE MEDAL) | 11,00,000           |
| <b>TOTAL</b>  | <b>55,64,830</b>    |

| <b>FIXED DEPOSIT</b>    | <b>SCHEDULE-"D"</b> |
|-------------------------|---------------------|
|                         | <b>AMOUNT (Rs)</b>  |
| FIXED DEPOSIT WITH BANK | 1,03,00,000         |
| INTEREST ACCURED ON FDR | 13,23,772           |
| <b>TOTAL</b>            | <b>1,16,23,772</b>  |

| <b>RECEIVABLES</b>             | <b>SCHEDULE-"E"</b> |
|--------------------------------|---------------------|
|                                | <b>AMOUNT (Rs)</b>  |
| FEES RECEIVABLES FROM STUDENTS | 26,05,763           |
| OTHER RECEIVABLE- NISD         | 9,098               |
| <b>TOTAL</b>                   | <b>26,14,861</b>    |

| <b>ADVANCES</b>                 | <b>SCHEDULE-"F"</b> |
|---------------------------------|---------------------|
|                                 | <b>AMOUNT (Rs)</b>  |
| ADVANCE TO SUPPLIER             | 36,44,679           |
| ADVANCE TO STAFF                | 1,67,671            |
| SECURITY DEPOSIT                | 12,00,000           |
| PREPAID EXPENSES                | 26,45,400           |
| TDS RECEIVABLE FROM I.T. DEPTT. | 2,00,258            |
| TDS RECEIVABLE FROM NBFC        | 78,375              |
| <b>TOTAL</b>                    | <b>79,36,383</b>    |

For MANAV RACHNA UNIVERSITY

  
(Auth. Signatory)

  
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**MANAV RACHNA UNIVERSITY**  
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**SCHEDULES FORMING PART OF BALANCE SHEET**

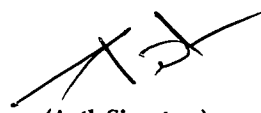
**AS ON**  
**31ST MARCH, 2020**


| <b>SCHEDULE-"G"</b>     |                    |
|-------------------------|--------------------|
| <b>EXPENSES PAYABLE</b> | <b>AMOUNT (Rs)</b> |
| TDS PAYABLE             | 26,40,839          |
| E.S.I. PAYABLE          | 6,533              |
| P.F. PAYABLE            | 62,600             |
| AUDIT FEE PAYABLE       | 2,25,000           |
| SALARY & WAGES PAYABLE  | 1,31,72,229        |
| OTHER EXPENSES PAYABLE  | 31,96,778          |
| <b>TOTAL</b>            | <b>1,93,03,979</b> |

| <b>SCHEDULE-"H"</b>              |                     |
|----------------------------------|---------------------|
| <b>OTHER CURRENT LIABILITIES</b> | <b>AMOUNT (Rs)</b>  |
| SECURITY FROM STUDENTS           | 70,55,230           |
| BANK ACCOUNTS                    | 7,76,22,243         |
| FEE RECEIVED IN ADVANCE          | 77,85,215           |
| BRANCH & DIVISION                | 20,36,50,405        |
| <b>TOTAL</b>                     | <b>29,61,13,093</b> |

For MANAV RACHNA UNIVERSITY

  
(Auth. Signatory)

  
(Auth. Signatory)

**MANAV RACHNA UNIVERSITY**  
(A UNIT OF UTHAN EDUCATIONAL TRUST)

**SCHEDULES FORMING PARTS OF INCOME & EXPENDITURE ACCOUNT**


**FOR YEAR ENDED**  
**31ST MARCH, 2020**

| <b>PERSONNEL EXPENSES</b>                     | <b>SCHEDULE-"I"</b> |
|---|---------------------|
|   | <b>AMOUNT (Rs)</b>  |
| SALARY TO FACULTY INCLUDING ALL ALLOWANCES    | 10,81,70,657        |
| SALARY TO NON TEACHING STAFF                  | 2,57,45,158         |
| CONTRACTUAL STAFF                             | 1,78,03,975         |
| VISITING FACULTY(INCLUDING KNOWLEDGE PARTNER) | 1,08,01,441         |
| EMPLOYER SHARE TO P.F.                        | 3,84,489            |
| EMPLOYER SHARE TO ESI                         | 67,503              |
| GRATUITY                                      | 9,86,674            |
| STAFF WELFARE EXPENSES                        | 6,80,774            |
| <b>TOTAL</b>                                  | <b>16,46,40,671</b> |

| <b>STUDENT WELFARE &amp; TRAINING EXPENSES</b> | <b>SCHEDULE-"J"</b> |
|--|---------------------|
|  | <b>AMOUNT (Rs)</b>  |
| STUDENT WELFARE EXPENSES                       | 58,20,012           |
| SPORTS EXPENSES                                | 9,72,065            |
| SCHOLARSHIP & DISCOUNTS                        | 2,23,99,991         |
| STUDENT TRAINING & LAB CONSUMABLES             | 50,83,016           |
| <b>TOTAL</b>                                   | <b>3,42,75,084</b>  |

For MANAV RACHNA UNIVERSITY

  
(Auth. Signatory)

  
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**MANAV RACHNA UNIVERSITY**  
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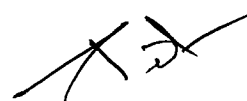
**SCHEDULES FORMING PARTS OF INCOME & EXPENDITURE ACCOUNT**

**FOR YEAR ENDED**  
**31ST MARCH, 2020**

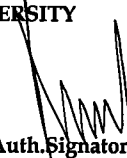
| <b>OPERATIONAL &amp; ADMINISTRATIVE EXPENSES</b> | <b>SCHEDULE-"K"</b><br><b>AMOUNT (Rs)</b> |
|--|---|
| ELECTRICITY EXPENSES                             | 1,76,49,851                               |
| REPAIR AND MAINTENANCE - BUILDING                | 35,86,565                                 |
| REPAIR AND MAINTENANCE - OTHER                   | 27,51,231                                 |
| MAINTENANCE - HEALTH & CLEANING                  | 26,34,505                                 |
| COMMUNITY OUTREACH EXPENSES                      | 1,89,109                                  |
| ACCREDITATION/INSPECTION/AFFILIATION CHARGES     | 27,15,254                                 |
| STUDENT EVALUATION & ASSESSMENT                  | 1,15,68,454                               |
| STUDENT SEMINARS & EVENTS                        | 1,22,92,694                               |
| FACULTY & STAFF DEVELOPMENT                      | 18,92,890                                 |
| CONVEYANCE AND TRAVELLING                        | 2,29,534                                  |
| PROFESSIONAL AND CONSULTANCY CHARGES             | 13,99,967                                 |
| PRINTING AND STATIONERY                          | 38,30,048                                 |
| RENT   | 15,73,712                                 |
| RATES & TAXES                                    | 5,07,470                                  |
| MESS EXPENSES                                    | 1,16,08,453                               |
| INSURANCE EXPENSES                               | 8,19,426                                  |
| STUDENT ADMISSION EXPENSES                       | 1,41,58,851                               |
| MEMBERSHIP & SUBSCRIPTION                        | 2,22,982                                  |
| AUDIT FEE  | 2,50,000                                  |
| OTHER ADMINISTRATIVE EXPENSES                    | 93,249                                    |
| <b>TOTAL</b>                                     | <b>8,99,74,245</b>                        |

| <b>FINANCIAL EXPENSES</b>          | <b>SCHEDULE-"L"</b><br><b>AMOUNT (Rs)</b> |
|------------------------------------|---|
| INTEREST ON SECURED LOAN           | 1,77,90,583                               |
| INTEREST ON UNSECURED LOAN         | 1,49,14,540                               |
| LOAN PREPAYMENT/PROCESSING CHARGES | 23,47,118                                 |
| BANK CHARGES                       | 3,10,052                                  |
| <b>TOTAL</b>                       | <b>3,53,62,293</b>                        |

For MANAV RACHNA UNIVERSITY



(Auth. Signatory)



(Auth. Signatory)

**MANAV RACHINA UNIVERSITY**  
(A UNIT OF UTHAN EDUCATIONAL TRUST)  
SECTOR - 43, DELHI SURAJKUND ROAD, FARIDABAD  
SCHEDULE OF FIXED ASSETS AS ON 31.03.2020

| DETAIL OF ASSETS             | DEP. RATE | GROSS BLOCK    |                      |                |               | DEPRECIATION BLOCK |              |               | NET BLOCK      |                      |                      |
|------------------------------|-----------|----------------|----------------------|----------------|---------------|--------------------|--------------|---------------|----------------|----------------------|----------------------|
|                              |           | GROSS          |                      | ADDITION       |               | AS ON 01.04.19     | FOR THE YEAR | TRANSFER SALE | AS ON 31.03.20 | WDV AS ON 31.03.2020 | WDV AS ON 31.03.2019 |
|                              |           | AS ON 01.04.19 | BEFORE & ON 01.10.19 | AFTER 01.10.19 | TRANSFER SALE |                    |              |               |                |                      |                      |
| LAND                         | 0%        | -              | -                    | -              | -             | 35,65,44,758       | 3,90,78,404  | -             | 39,56,23,162   | -                    | 35,50,66,019         |
| BUILDING                     | 10%       | 70,96,10,777   | 4,87,104             | 8,72,43,358    | 63,90,760     | 79,09,50,479       | -            | -             | 2,75,21,370    | 5,74,780             | 9,57,967             |
| EQUIPMENTS:                  |           |                |                      |                |               |                    |              |               |                |                      |                      |
| LAB EQUIPMENTS:              |           |                |                      |                |               |                    |              |               |                |                      |                      |
| Computer Lab                 | 40%       | 2,80,96,150    | -                    | -              | -             | 2,80,96,150        | 3,83,187     | -             | 2,75,21,370    | 5,74,780             | 9,57,967             |
| Electronic Lab               | 15%       | 77,22,999      | -                    | 8,26,921       | -             | 85,49,920          | 2,98,564     | -             | 64,44,594      | 21,05,326            | 15,76,969            |
| Mechanical Lab               | 15%       | 1,08,96,180    | -                    | -              | -             | 1,08,96,180        | 4,57,915     | -             | 83,01,326      | 25,94,854            | 30,52,769            |
| Physics Lab                  | 15%       | 18,66,662      | 14,008               | 4,61,055       | -             | 23,41,725          | 1,58,728     | -             | 12,11,738      | 11,29,967            | 8,13,652             |
| Chemistry Lab                | 15%       | 44,88,339      | 18,275               | -              | -             | 45,06,614          | 4,76,720     | -             | 18,05,199      | 27,01,415            | 31,59,860            |
| Research & Development Lab   | 15%       | 63,79,650      | 69,21,030            | -              | -             | 1,33,00,680        | 15,71,762    | -             | 43,94,026      | 89,06,654            | 35,57,386            |
| OFFICE & ELECTRIC EQUIPMENTS | 15%       | 5,63,30,831    | 2,56,400             | 11,87,224      | -             | 5,77,74,455        | 28,39,215    | -             | 4,10,91,958    | 1,66,82,497          | 1,80,78,088          |
| COMPUTERS                    | 40%       | 1,61,92,741    | 4,93,621             | 29,02,498      | -             | 1,95,88,860        | 10,98,728    | -             | 1,64,89,518    | 30,99,342            | 8,01,951             |
| SOFTWARE                     | 40%       | 36,99,698      | -                    | -              | -             | 36,99,698          | 1,98,172     | -             | 34,02,439      | 2,97,259             | 4,95,431             |
| VEHICLES:                    |           |                |                      |                |               |                    |              |               |                |                      |                      |
| Car                          | 15%       | 22,03,728      | -                    | -              | 14,77,177     | 7,26,551           | 85,640       | -             | 12,56,538      | 4,85,296             | 7,91,675             |
| Van                          | 15%       | 1,99,717       | -                    | -              | 1,99,717      | 1,99,717           | -            | -             | 1,99,717       | -                    | -                    |
| Scooter                      | 15%       | 48,828         | -                    | -              | 48,828        | -                  | -            | -             | 48,828         | -                    | -                    |
| Motor Cycle                  | 15%       | 61,185         | -                    | -              | 61,185        | -                  | -            | -             | 56,319         | -                    | 4,866                |
| Cycle                        | 15%       | 1,872          | -                    | -              | 1,872         | -                  | -            | -             | 1,872          | -                    | -                    |
| FURNITURE & FIXTURES         | 10%       | 5,01,93,814    | 26,18,922            | 10,13,915      | -             | 5,38,26,651        | 25,59,673    | -             | 3,02,82,640    | 2,35,44,011          | 2,24,70,847          |
| LIBRARY BOOKS                | 40%       | 1,28,54,466    | 45,973               | 3,92,286       | -             | 1,39,92,125        | 7,28,733     | -             | 1,20,02,882    | 12,89,243            | 15,80,317            |
| TOTAL (A)                    |           | 91,08,47,637   | 1,08,54,733          | 9,40,27,257    | 81,79,539     | 1,00,75,50,088     | 4,99,35,441  | 15,63,274     | 54,88,12,107   | 45,87,37,981         | 41,04,07,697         |
| CWIP (B)                     | 0%        | 57,32,489      | 3,53,22,220          | 5,14,14,015    | 8,22,58,728   | 1,02,09,996        | -            | -             | -              | 1,02,09,996          | 57,32,489            |
| TOTAL (A+B)                  |           | 91,65,80,126   | 4,61,76,953          | 14,54,41,272   | 90,02,12,267  | 1,01,77,60,084     | 4,99,35,441  | 15,63,274     | 54,88,12,107   | 46,89,47,977         | 41,61,40,186         |

NOTE: DEPRECIATION HAS BEEN PROVIDED ON W.D.V. METHOD AS PER RATE SPECIFIED IN IT ACT, 1961  
PREVIOUS YEARS FIGURES HAS BEEN RE-ARRANGED/RECLASSIFIED.

FOR AKHILESH CHANDRA GUPTA  
CHARTERED ACCOUNTANTS

**A. C. GUPTA**  
Chartered Accountant  
Membership No. 100000

AKHILESH CHANDRA GUPTA  
(PROPRIETOR)  
MEMBERSHIP No.: 085901  
PLACE: FARIDABAD  
DATE: 24<sup>th</sup> Nov, 2020

For MANAV RACHINA UNIVERSITY



(Auth. Signatory)

(Auth. Signatory)



## **EDITORIAL TEAM**

- |   |                    |
|---|--------------------|
| <b>1. Prof. Sangita Banga, Dean Academics</b>             | <b>Chairperson</b> |
| <b>2. Dr. Babita Parashar, Dean-Education</b>             | <b>Convenor</b>    |
| <b>3. Prof. shruti Vashisht, Dean Students Welfare</b>    | <b>Member</b>      |
| <b>4. Prof. Versha Vahini, Assoc. Dean &amp; Head-Law</b> | <b>Member</b>      |
| <b>5. Prof. Geeta Thakur, Professor &amp; Head-CAL</b>    | <b>Member</b>      |
| <b>6. Dr. Megha Mittal, Assoc. Professor</b>              | <b>Member</b>      |
| <b>7. Ms. Yogita Gupta, Asst. Professor</b>               | <b>Member</b>      |
| <b>8. Ms. Gaganjot Kaur, Asst. Professor</b>              | <b>Member</b>      |