

<i>Version 6 dated 26-09-</i> <b>3.1 Promotion of Research and Facilities</b>				
3.1.1 Teachers awarded National/International fellowship for advanced studies/ research during the year				
	Name of the teacher awarded the fellowship	Name of the Award	Date of Award	Awarding Agency
National				
International	<b>NIL –JULY-2018-JUN-2019</b>			
3.1.2 Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other fellows in the Institution enrolled during the year				
Name of Research fellowship		Duration of fellowship		Funding agency
<b>NIL –JULY-2018-JUN-2019</b>				

<b>.2 Resource Mobilization for Research</b>				
3.2.1 Research funds sanctioned and received from various agencies, industry and other organisations				
Nature of the Project	Duration	Name of the funding Agency	Total grant sanctioned	Amount received during the year
Major projects				
1. Electric Agriculture Utility Vehicle	2 Years	CL Educate	105444	
2.Mining of Significant Patterns in Dynamic Graph	2 Years	CL Educate	200000	
3.Ultrasonic assisted metal removal from water resources	2 Years	CL Educate	110000	
4.Ultrasonic based Autonomous Robot	2 Years	CL Educate	100000	
Minor Projects				
Interdisciplinary Projects				
Industry sponsored Projects				
Projects sponsored by the University				
Students Research Projects ( <i>other than compulsory by the University</i> )				
International Projects				
Any other(Specify)				
Total				
<b>3.3 Innovation Ecosystem</b>				
3.3.1 Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative				

practices during the year		
Title of Workshop/Seminar	Name of the Dept.	Date(s)
Workshop on Intellectual Property Rights Awareness	Attended by MRU Department of management and commerce and others	Oct 2019
Workshop on IPR for Students and Faculty Members'	conducted by AICTE - MHRD's Innovation Cell	January 10, 2019 from 10:30 AM to 3:30 PM (Venue: T-Block Auditorium).
Formulation of Students IPR club and session on "Introduction to IPR"	by Mr. Nitesh Karnwal	19th April 2019
A workshop on Indigenous Raman & Fluorescence Spectroscopy for analyzing the Bulk, Nano & polymer materials	I block Auditorium, By Dr. R. P. Joshi (RI Instruments & Innovation India)	9th August 2019 ,

### 3.3.2 Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of the Awardee	Awarding Agency	Date of Award	Category
AI bot to aid the depressed students.	Abhishek Sontakke (CST)	MHRD Innovation Cell (MIC), All India Council for Technical Education (AICTE) and Nanyang Technological University, Singapore (NTU Singapore)	2019	Student
Smart Blind Stick	Ashwani, Aarzoo Kapoor, Sahiba Kaur & Ria Mittal (CST)	Manav Rachna University	2019	Student
P-BAND Pollution Band	Mukul Singh, Parul Taneja, Ridhi Sethi, Deepak Rana, Abhishek Pandey (CST)	Greater Noida Industrial Development Authority in association with Sharda University	2019	Student
Health Monitoring System	Vivek Saini, Parul, Ashish (CST)	Manav Rachna Innovation and Incubation Center (MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and	2019	Student

		<b>Technoplanet</b>		
Bicycle Rental System	Ravi Prakash, Chandan Taneja, Sarathak Sharma <b>(CST)</b>	Manav Rachna Innovation and Incubation Center (MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet	2019	Student
Air Quality Node	Prince <b>(CST)</b>	Manav Rachna Innovation and Incubation Center (MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet	2019	Student
Automated Water Sprinkler System	Shourya Singh <b>(CST)</b>	Manav Rachna Innovation and Incubation Center (MRIIC) in association with Texas Instruments India University Program team, Department of Electronics and Communication Engineering, FET, MRIIRS and Technoplanet	2019	Student
Problem Statement MSME (Process automation in	Ishu Goel, Palash Dubey, Abhisheik Sontakke, Saurabh	MHRD Smart India Hackathon 2019, Lovely Professional University,	2019	Student

printing industry for smooth production and improvement of capacity)	Sethi, Aditya Bhushan Sharma, Arish Fatima <b>(CST)</b>	Punjab		
Vihaan 2.0, 24 hrs Hackathon	Parul Taneja, Deepak Rana and Mukul Singh <b>(CST)</b>	Delhi Technological University	2019	Student
PurAire (Thirty Hours Hackathon- OctaHacks 2.0)	Nilansh Khurana	Chitkara University, Punjab	2019	
Portable Eletcrocardiogram Machine (TechHacks I.0)	Vivek Saini (CST)	Chitkara University, Punjab	2019	Student

### 3.3.3 No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Centre	Name	Sponsored by
Name of the Start-up	Nature of Start-up	Date of commencement
Travel Gram	Mobile application based community built for travelers and explorers to connect, share and explore co-travelers	2019
Smart Water Sprinkler	Automatic water sprinkler to make watering and maintaining plants/ gardens easier for domestic and commercial places	2019
Ferrox Technologies	Innovative ideology that aims at revolutionizing commercial and agricultural EV marketplace with development in EAUUV [electric agricultural utility vehicle] and battery pack development for high voltage drivetrains	2018
Coating Vala Solutions	Developed an extremely affordable surface protector machine for coating of floors and important equipment to protect them from	2018

	dust and paints.	
Greenity	Creating a 'Smart Chair' is an innovative step towards generation of electricity from non-polluting sources rather than from conventional sources of energy	2018
Vagabond Brains	Working in digital marketing.	2018
ThapKrida	Working in developed games.	2018

### 3.4 Research Publications and Awards

#### 3.4.1 Ph. Ds awarded during the year

Name of the Department	No. of Ph. Ds Awarded
<b>NIL</b>	

#### 3.4.2 Research Publications in the Journals notified on UGC website during the year(July2018 –Sept-2019)

	Department	No. of Publication	Average Impact Factor, if any
National	<b>Chemistry</b>	17	
	13		
International	4		
	Department		
National	<b>CSE</b>	31	
	12		
International	19		
	Department		
National	<b>DMC</b>	01	
	NIL		
International	01		
	Department		
National	<b>DMS</b>	01	
	01		
International	NIL		
	Department		
	<b>ECE</b>	10	
National	4		
International	6		
	Department		
	<b>Education</b>	10	
National	5		
International	5		
	Department		

	<b>Law</b>	03	
National	NIL		
International	03		
	Department		
	<b>Management</b>	05	
National	01		
International	04		
	Department		
	<b>Maths</b>	09	
National	06		
International	03		
	Department		
	<b>Mechanical</b>	12	
National	03		
International	09		
	Department		
	<b>Physics</b>	21	
National	16		
International	05		

### 3.4.3 Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	No. of publication
PHYSICS	03
CHEMISTRY	06
MATHS	02
CSE	03
MECH.	02
LAW	05
EDU.	05
Management	01

### 3.4.4 Patents published/awarded during the year

Patent Details	Patent status <b>Published/Filed</b>	Patent Number	Date of Award

### 3.4.5 Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the paper	Name of the author	Title of the journal	Year of publication	Citation Index	Institutional affiliation as mentioned in	Number of citations excluding self

						the publication	citations

### 3.4.6 h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the paper	Name of the author	Title of the journal	Year of publication	h-index	Number of citations excluding self citations	Institutional affiliation as mentioned in the publication

### 3.4.7 Faculty participation in Seminars/Conferences and Symposia during the year :

No. of Faculty	International level	National level	State level	Local level
Attended Seminars/ Workshops				
Presented papers				
Resource Persons				

## 3.5 Consultancy

### 3.5.1 Revenue generated from Consultancy during the year

Name of the Consultant(s) department	Name of Consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)

### 3.5.2 Revenue generated from Corporate Training by the institution during the year

Name of the Consultant(s) & Department	Title of the Programme	Agency seeking training	Revenue generated (amount in rupees)	Number of trainees

## 3.6 Extension Activities

### 3.6.1 Number of extension and outreach programmes conducted in collaboration with industry, community and Non-Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the Activities	Organising unit/ agency/ collaborating agency	Number of teachers <b>coordinated</b> in such activities	Number of students participated in such activities

### 3.6.2 Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the Activity	Award/recognition	Awarding bodies	No. of Students benefited

### 3.6.3 Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/ agency/ collaborating agency	Name of the activity	Number of teachers <b>coordinated</b> in such activities	Number of students participated in such activities
<b>3.7 Collaborations</b>				
3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange during the year				
Nature of Activity	Participant	Source of financial support	Duration	
<b>NIL</b>				
3.7.2 Linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the year				
Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration <b>(From-To)</b>	participant
MOU signed	Altair Centre of Excellence	Design Tech and Altair Engineering India Pvt Ltd.	May 2019-Continuing	
3.7.3 MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year				
Organisation	Date of MoU signed	Purpose and Activities	Number of students/teachers participated MoUs	
Foundation for Glocal Science Initiatives (FGSI)	2019			
Atal Incubation Centre-BIMTECH	2019			
Vivek International	2019			
Sahai Research Labs	2019			
National Council for Cement and Building Materials (NCCBM)	2019			