SELF-ASSESSMENT REPORT (SAR)

UNDERGRADUATE ELECTRICAL ENGINEERING PROGRAM (TIER-II)

Submitted to

NATIONAL BOARD OF ACCREDITATION

NBCC PLACE,4th FLOOR EAST TOWER, BHISHAM PITAMAH MARG, PRAGATI VIHAR, NEW DELHI-110003

BY

DEPARTMENT OF ELECTRICAL ENGINEERING

RAJKIYA ENGINEERING COLLEGE AMBEDKAR NAGAR, UP INDIA

Akbarpur–Tanda Road, In Front of Hawai Patti,

KatariyaYakoobpur, Ambedkar Nagar 224122

(AICTE APPROVED GOVERNMENT ENGINEERING COLLEGE)
APJAKTU CODE 737

SAR Contents

PART A: Institute Information

1. **Name and Address of Institution:**
   Rajkiya Engineering College Ambedkar Nagar (Rec Ambedkar Nagar), Up India 224122

2. **Name and Address of the Affiliating University:**
   Dr. A.P.J. Abdul Kalam Technical University, Lucknow

3. **Year of establishment of Institution:**
   2010-2011

4. **Type of the Institution:**

University	
Deemed University	
Government Aided	
Autonomous	
Affiliated	✓

5. **Ownership Status:**

Central Government	
State Government	✓
Government Aided	
Self-financing	
Trust	
Society	
Section 25 Company	
Any Other (Please Specify)	

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of the Institution(s)	Year of Establishment	Programs of Study	Location
-	-	-	-

7. Details of all the programs being offered by the institution under consideration:

S. No.	Program Name	Year of Start	Intake	Increase in intake if any	Year of increase	AICTE Approval	Accreditation Status*
1.	B. Tech in Civil Engineering	2010-11	60	No	NA	Approved	Applying First Time
2.	B. Tech in Electrical Engineering	2010-11	60	No	NA	Approved	SAR Submitted
3	B. Tech in Information Technology	2010-11	60	No	NA	Approved	SAR Submitted

Table A.7

8. Programs to be considered for Accreditation vide this application:

S. No.	Program Name
1	B.Tech (Electrical Engineering)

Table A.8

9. Total number of employees in the Institution:

A. Regular* Employees (Faculty and Staff):

Items		2020-21		2019-20		2018-19	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	21	21	21	22	22	22
	F				2	2	2
Faculty in Mathematics Science & Humanities	M	8	8	8	9	9	9
	F	-	-	-	-	-	-
Non-teaching staff	M	-	-	-	-	-	-
	F	-	-	-	-	-	-

Table A.9a

B. Contractual Staff Employees (Faculty and Staff): (Not covered in Table A):

Items		2020-21		2019-20		2018-19	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	10	10	6	6	5	5
	F	3	3	3	3	4	4
Faculty in Mathematics Science & Humanities	M	1	1	2	2	1	1
	F	-	-	-	-	1	1
Non-teaching staff	M	82	82	66	76	66	66
	F	10	10	8	10	8	8

Table A.9b

10.Total number of Engineering Students:

Item	2020-21	2019-20	2018-19
Total no. of boys	654	645	626
Total no. of girls	169	176	137
Total no. of students	823	821	763

Table A.10

11. Vision of the Institution:

To attain the global level of excellence in scientific and technical education, fostering research, innovation, leadership qualities and entrepreneurial attitude, contributing to the advancement of the society and mankind.

12. Mission of the Institution:

- To enhance knowledge and skills of students in science, technology and human behaviour that will serve the nation.
- To create an ambience for new idea, research, innovation and entrepreneurial attitude, with a high level of ethics, communication and leadership qualities.
- To develop ability and passion to work wisely, creatively, and effectively in each member of college for the betterment of the mankind and all living beings.

Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of Institution:

Name	Prof (Dr.) Sandeep Tiwari
Designation	Director
Mobile No	+91-9891460727
Email id	director@recabn.ac.in

NBA coordinator, if designated:

Name	Prof (Dr.) Vishal Singh Chandel
Designation	Professor
Mobile No	+91-7007922632
Email id	vschandel@recabn.ac.in

NBA co-coordinator, if designated:

Name	Shri Amit Kumar Rai
Designation	Assistant Professor
Mobile No	+91-7503334676
Email id	amitkrrai@recabn.ac.in

CRITERION 1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60

1. VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES

1.1 State the Vision and Mission of the College and Department ***(5)***

Vision of the College

To attain the global level of excellence in scientific and technical education, fostering research, innovation, leadership qualities and entrepreneurial attitude, contributing to the advancement of the society and mankind.

Mission of the College

- To enhance knowledge and skills of students in science, technology and human behavior that will serve the nation.
- To create an ambience for new idea, research, innovation and entrepreneurial attitude, with a high level of ethics, communication and leadership qualities.
- To develop ability and passion to work wisely, creatively, and effectively in each member of college for the betterment of the mankind and all living beings.

Vision of Electrical Engineering Department

To impart knowledge in Electrical Engineering by upbringing globally competent engineers, innovators and entrepreneurs instilled with the human values and professional ethics.

Mission of Electrical Engineering Department

- To offer good quality education & research in Electrical Engineering.
- To provide the knowledge base and consultancy services to the rural and weaker section of the society for their upliftment and well-being.
- To bridge the gap between industry and academia by framing curricula and syllabi based on industrial and societal needs.

1.2 State the Program Educational Objectives (PEOs) ***(5)***

Program Educational Objectives (PEOs)

PEO 1:

To provide the students with solid fundamental knowledge in Mathematics, Physical Sciences, Electrical Sciences and Engineering.

PEO 2:

To provide the intensive training for solving teal time problems through engineering skills.

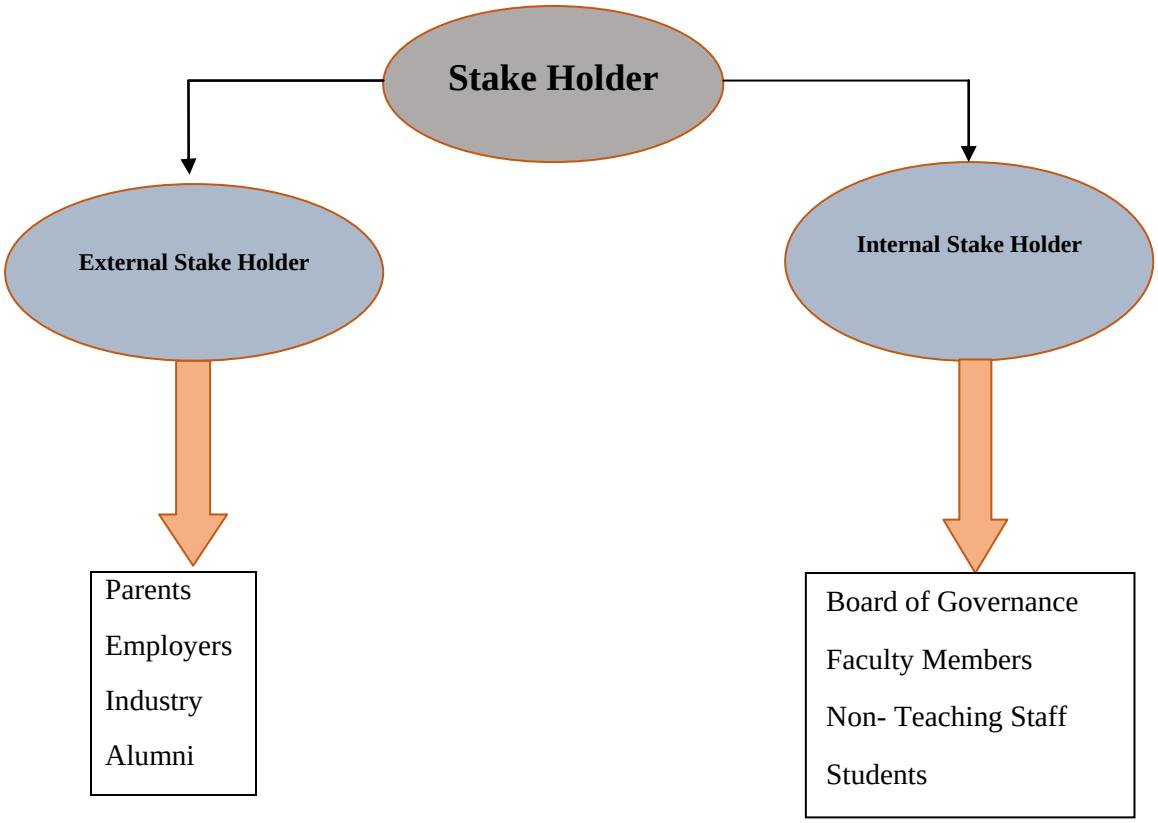
PEO 3:

To engage the students to learn and adopt new technologies to remain ahead in their profession and be leader in our technological vibrant society.

PEO 4:

To train the students to communicate effectively and work efficiently in team activities.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders ***(10)***



The Vision, Mission and PEOs are well published and disseminated as given below:

Table 1.3 a): List of stakeholder and their relevance

Stake holders and their relevance		
S. No.	**Name of Stakeholder**	**Relevance**
1.	Students	• Students play most prominent role in working of the program. • Student's feedback is considered to introduce innovative teaching and learning methodologies. • Student's input will help the program to introduce new open elective/elective Courses to meet the current trends.
2.	Faculty members	• Play a vital role in implementing the program. • Faculty involves in various committees to check the consistency of program. • Faculty provides inputs for assessment of students. • Faculty guides the students on innovative projects as per current needs.
3.	College Administration	• It is responsible to provide basic infrastructure, administrative and financial support for successful running of program. • Administration support to fulfil the aspirations of the students / Faculty/Department. • Administration periodically updates and upgrades the goals of the Institution.
4.	Parents	• Expect their wards in good professional career and higher studies. • They advise for the total improvement in the student quality through academic and extracurricular activities. • They make suggestions to improve the employability of the students.
5.	Employer	• Represents the major end users of our graduates. • Gives higher focus to the program on future data to create awareness with current industry needs. • Gives inputs to bridge the gap between program and industry, and to run specific courses considering global needs.
6.	Alumni	• Focus group because they are the measure of the long term success of our program. • Alumni feedback helps in designing various workshops and seminars to meet and to identify the gaps in the current programs as per the

		prevailing trends in engineering. • Recollect their experience during the program study and advise the department with necessary inputs considering students career.
7.	Industry	• Industry will always value an institution which produces technocrats with good technical skills and competencies. • It also values an institution whose students are having good moral and ethical values.

The Vision and Mission Statements are published

Particulars	Internal Stake Holders	External Stake Holders
Departmental Newsletter	Yes	Yes
College Website (www.recabn.ac.in)	Yes	Yes
Department Webpage (http://recabn.ac.in/?page_id=602)	Yes	Yes

The Vision and Mission Statements are disseminated

Particulars	Internal Stake Holders	External Stake Holders
Faculty Rooms	Yes	
Departmental Notice Boards	Yes	
Laboratories	Yes	
All the prominent places of Department	Yes	Yes
Departmental Seminar Hall	Yes	Yes

Apart from this, Vision, Mission and PEOs are disseminated to all the stakeholders of the programs through faculty meetings, student awareness workshops, student induction programs, and parent meetings, college brochure.

Above mentioned awareness methods are reviewed from time to time.

1.4 State the process for defining the Vision and Mission of the department, and PEOs of the program (25)

The Vision and Mission of the department is a reflection of the Vision and Mission of the college. Following factors were taken into consideration for defining the Vision & Mission of the department:

- Vision & Mission of the college.
- Core areas to be addressed by Department in foreseeable future.
- Commitment of the organization towards imparting quality education.
- Continuous improvement of the Institution & Department.

Based on the above-mentioned inputs the Vision & Mission of the department were initially formulated by consensus among faculties at the department level meetings. The same was floated open for review by Departmental Committee with input from students and college faculty and staff. An initial draft proposed in Department Advisory Board meeting was reviewed and approved with inputs from various stakeholders such as Alumni, TPO and Industry Experts. The approved Vision and Mission statements of the Department were submitted to Director through Dean-Academics & HOD as shown in Fig 1.4(a)

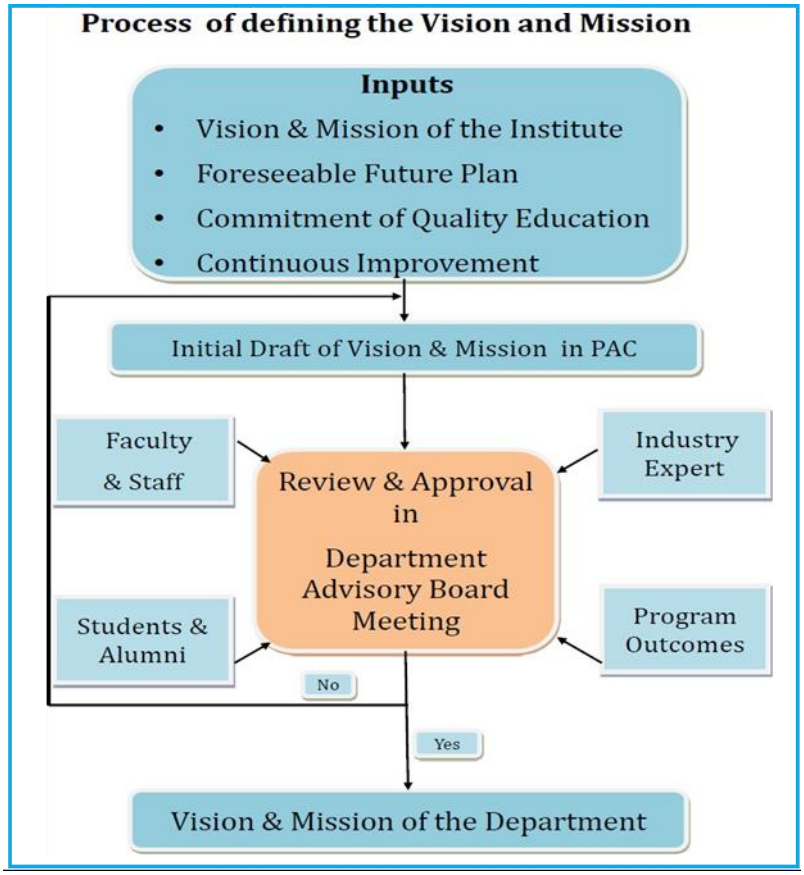


Fig. 1.4(a): Process of defining Mission & Vision of the Department

The process for defining Program Educational Objectives (PEOs) involves the core members such as: Students, Alumni, Industry Experts, Faculty Members and Employers. Efforts were also made in involving parents of students for their opinion regarding their expectations.

The various inputs considered for defining PEOs are mentioned below:

- Vision & Mission of Institute
- Vision & Mission of Department
- Feedback from Alumni, Students and Industrial Experts

Process of defining the Program Educational Objectives

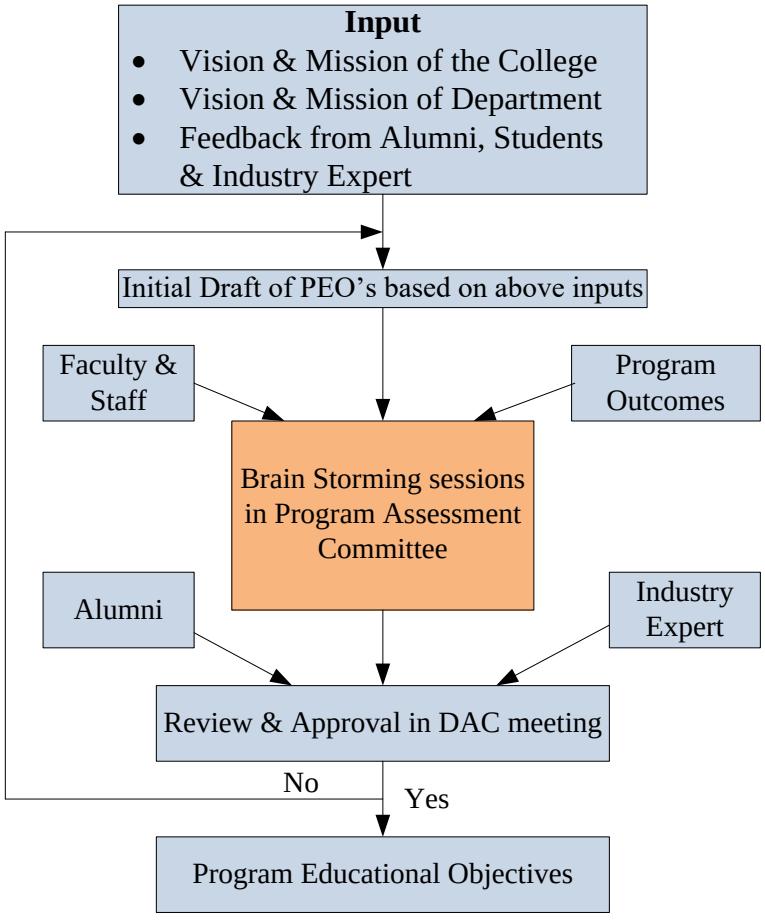


Fig 1.4(b): Process for defining the PEOs of the Department

Based on these inputs of stake holders PEOs for the Electrical Engineering Program were defined after various brainstorming sessions in Program Assessment Committee. The same were consulted and finally approved in Department Advisory Committee meeting. The approved Program Educational Objectives Statements of the department were submitted to Governing Council/Director and Dean, Academic for information as shown in Fig. 1.4(b).

1.5 Consistency of PEOs with Mission of the Department (15)

Note: M1, M2,…Mn are distinct elements of mission statements. Enter Correlation levels 1, 2 and 3 as defined below:

1. Slight (Low) 2.Moderate (Medium) 3. Substantial (High)

If there is no correlation, put "-"

Note: In this document wherever the term "Process" has been used its meaning is process formulation, notification and implementation.

Steps for generating consistency Matrix of PEOs with Mission of the Department are:

Step 1: Each PEO is mapped with distinct elements of mission statements (M1, M2 and M3) of the department with the following co-relation:

Co-relation Level 3 (High): when PEO would **LEAD** to mission element.

Co-relation Level 2 (Medium): When PEO would **SUPPORT** to attain the mission element.

Co-relation Level 1 (Low): When PEO would **HELP** to attain the mission element.

The co-relation matrix is shown in Table 1.5 (b).

Step 2: After generating co-relation level between Missions and PEOs, weighted average (R) is calculated for each mission element as shown in Table 1.5 (b).

Step 3: The values in each cell of PEOs-Mapping (R) obtained from step-2 are used to find the consistency between Missions and PEOs of the department as per the following range:

If R < = 0.40 then consistency is low (1)

If R > 0.40 and R <0.6 then consistency is medium (2)

If R >=0.6 then consistency is high (3)

The Consistency matrix of PEOs with Mission of Department is shown in Table 1.5(c).

Table 1.5(a) Mapping correlation between Mission of the department and PEOs

PEO's /Mission		To offer good quality education in Electrical Engineering.	To offer good quality research guidance in Electrical Engineering.	To provide the knowledge based and consultancy services to the rural and weaker section of the society for their upliftment and well-being.	To bridge the gap between industry and academia by framing curricula and syllabi based on industrial and societal needs.
PEO-1	To provide the students with solid fundamental knowledge in Mathematics, Physical Sciences	PEO would lead to Mission	PEO would lead to Mission	PEO would support to Mission	PEO would support to Mission
	To develop students with solid fundamental knowledge of Electrical Engineering.	PEO would lead to Mission	PEO would lead to Mission	PEO would support to Mission	PEO would support to Mission
PEO-2	To provide the intensive training to students through engineering skills.	PEO would lead to Mission	PEO would lead to Mission	PEO would support to Mission	PEO would help to Mission
	To provide intensive training for solving real time problems	PEO would lead to Mission	PEO would lead to Mission	PEO would support to Mission	PEO would help to Mission
PEO-3	To engage the students to learn and adopt new technologies.	PEO would support to Mission	PEO would lead to Mission	PEO would lead to Mission	PEO would support to Mission
	To prepare students to remain ahead in their profession and be leader in our technological vibrant society.	PEO would support to Mission	PEO would support to Mission	PEO would lead to Mission	PEO would support to Mission
PEO-4	To train the students to communicate effectively	PEO would help to Mission	PEO would support to Mission	PEO would help to Mission	PEO would help to Mission
	To train students to work efficiently in team activities.	PEO would help to Mission	PEO would help to Mission	PEO would help to Mission	PEO would help to Mission

Table 1.5 (b) Mapping correlation between Mission of the department and PEOs

		M1		M2	M3
PEO's /Mission		To offer good quality education in Electrical Engineering.	To offer good quality research guidance in Electrical Engineering.	To provide the knowledge based and consultancy services to the rural and weaker section of the society for their upliftment and well-being.	To bridge the gap between industry and academia by framing curricula and syllabi based on industrial and societal needs.
PEO-1	To provide the students with solid fundamental knowledge in Mathematics, Physical Sciences	**3**	**3**	**2**	**2**
	To develop students with solid fundamental knowledge of Electrical Engineering.	**3**	**3**	**2**	**2**
	PEO – Mapping(R)	**1.00**	**1.00**	**0.67**	**0.67**
PEO-2	To provide the intensive training to students through engineering skills.	**3**	**3**	**2**	**1**
	To provide intensive training for solving real time problems	**3**	**3**	**2**	**1**
	PEO – Mapping (R)	**1.00**	**1.00**	**0.67**	**0.33**
PEO-3	To engage the students to learn and adopt new technologies.	**2**	**3**	**3**	**2**
	To prepare students to remain ahead in their profession and be leader in our technological vibrant society.	**2**	**2**	**3**	**2**
	PEO – Mapping (R)	**0.67**	**0.83**	**1.00**	**0.67**
PEO-4	To train the students to communicate effectively	**1**	**2**	**1**	**1**
	To train students to work efficiently in team activities.	**1**	**1**	**1**	**1**
	PEO – Mapping (R)	**0.33**	**0.50**	**0.33**	**0.33**

Table 1.5(c): Consistency matrix of PEOs with Mission of Department

PEO Statements	M1	M2	M3
PEO1: To provide the students with solid fundamental knowledge in Mathematics, Physical Sciences, Electrical Sciences and Engineering.	3	3	3
PEO2: To provide the intensive training for solving real time problems through engineering skills.	3	3	1
PEO3: To engage the students to learn and adopt new technologies to remain ahead in their profession and be leader in our technological vibrant society.	3	3	3
PEO4: To train the students to communicate effectively and work efficiently in team activities.	2	1	1

2. PROGRAM CURRICULUM AND TEACHING-LEARNING PROCESSES (120)

2.1. Program Curriculum (20)

Process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any (10)

The overall process used to identify extent of compliance of the university curriculum for attaining the POs and PSOs is represented through flow chart.

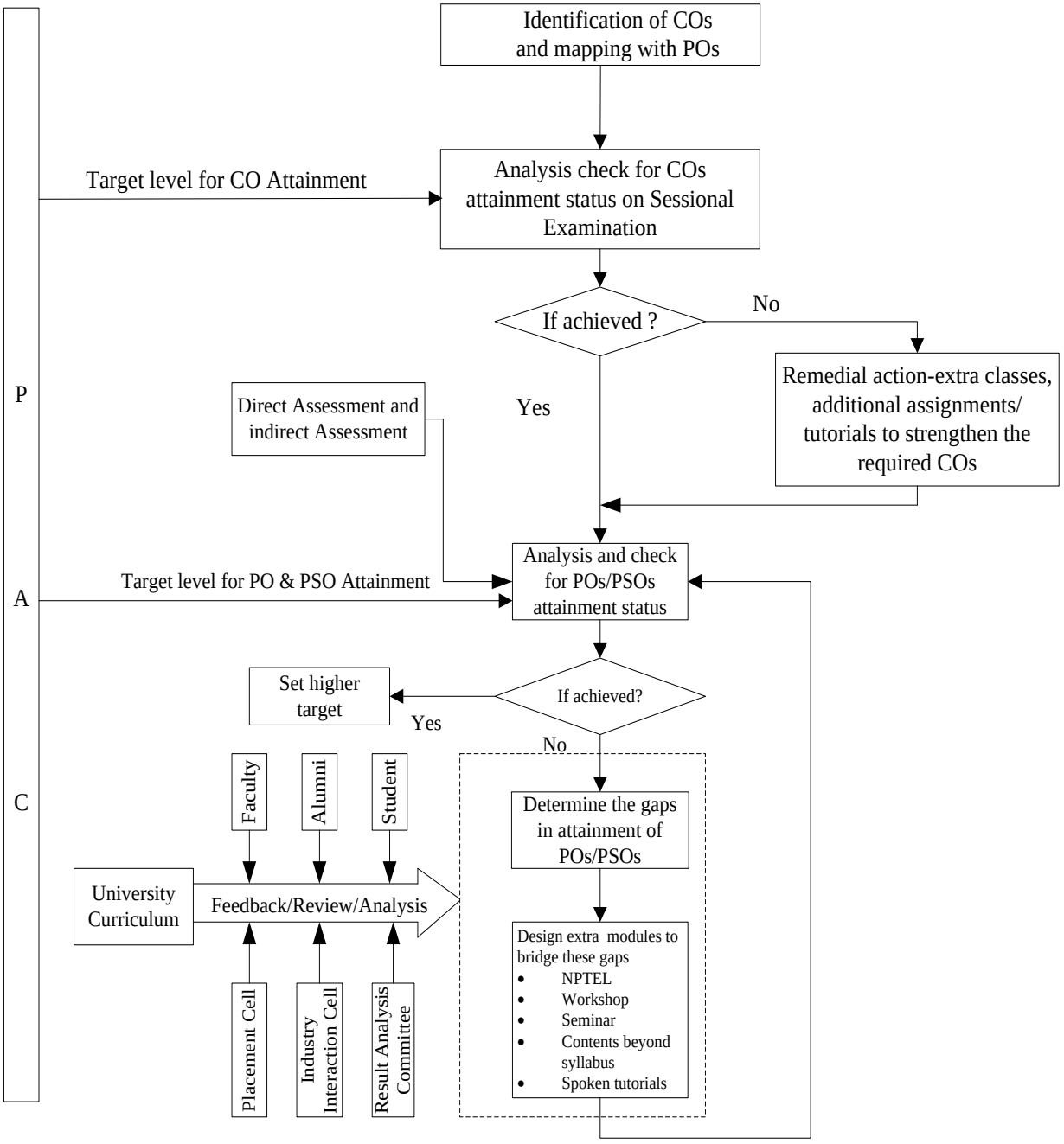


Fig. 2.1.1 Process for Attainment of POs & PSOs.

Steps Involved:

1. Course outcomes are identified/modified and mapped with program outcomes and Program Specific Outcomes by the team of expert faculties.
2. CO attainments are recorded and analyzed on the behalf of two sessional tests and external examination.
3. If target is not achieved then faculty member is advised to motivate the students and put more effort for attainment of COs through remedial classes and additional assignments.
4. Analysis of attainment of COs is done by the individual teaching faculty members and submitted to Program Assessment Committee (PAC) for analysis of PO and PSOs.
5. Faculty member along with head of the department identifies the gaps and issues related to attainment. Inputs from students, alumni, faculty members and industry interaction committee are also considered.
6. If the Attainment gaps found, then these gaps are discussed with the result analysis committee and teaching faculty and remedial action are taken accordingly.
7. The Curricular gaps are reduced by delivery of content beyond syllabus and by the required training through add on courses, guest lectures, workshops and seminars.

Delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

The curricular gaps are defined as per the following diagram.

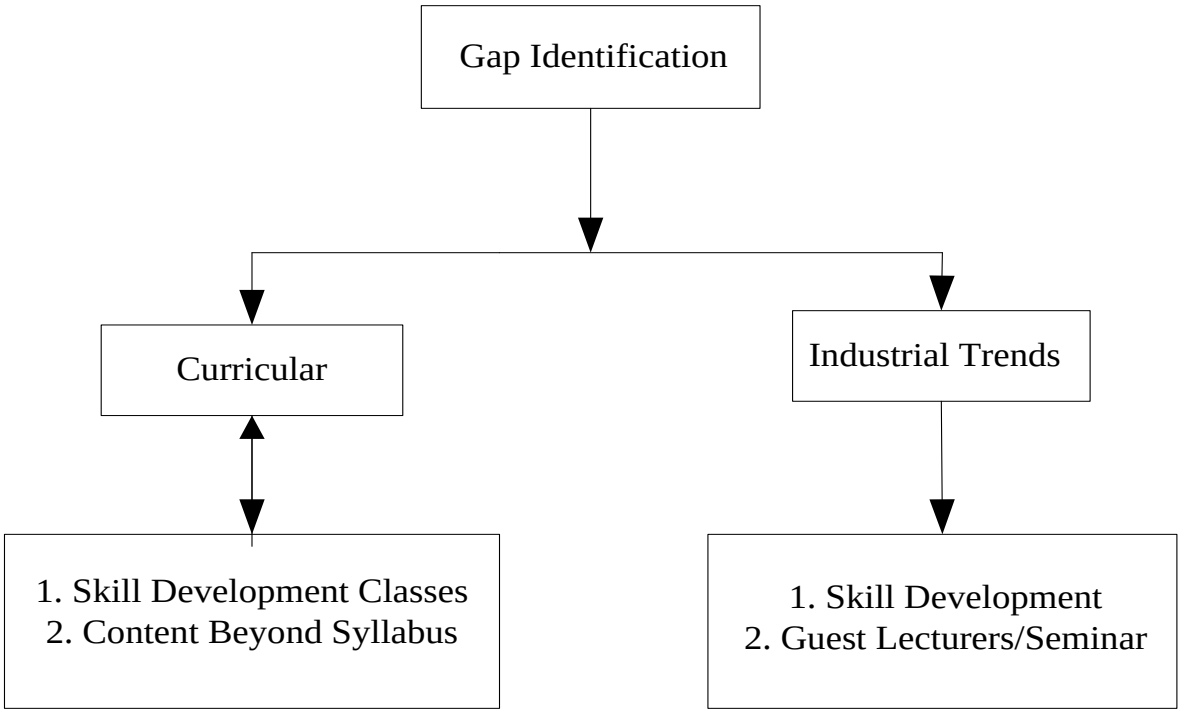


Fig. 2.1.2 Process for Gap Identification

A few content beyond syllabus (gap) topics are listed in the following list; rest are listed in course files of corresponding subject.

Session 2020-21

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-302	Mathematical analysis of bridge circuits, Power Measurement using instruments transformer, Concept and block diagram of CRT	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	KEE-303	State – Variable technique to the analysis of linear systems, difference equations	PO1, PO2, PO5, PO6, PSO1
3.	KEE-402	Details of Brushless DC Motor should be included in the syllabus	PO1, PO3, PO5, PSO2
4.	KEE-061	Grid connected Induction Generator, Transfer function of AC Servo-motor, Sub-synchronous motor	PO1, PO2, PO5, PO6, PSO1, PSO2
5.	KEE-503	Introduction to PMSM should be included in the syllabus; ZPF method related to Voltage regulation should be included in the syllabus	PO1, PO3, PO5, PSO2
6.	REE-701	Hysteresis motor, Stepper motor, Hybrid Electric vehicles, Grid connectivity with renewable energy	PO1, PO2, PO5, PO6, PSO1, PSO3
7.	REE-081	Effects of harmonics on Display devices	PO1, PO2, PO5, PO6, PSO1
8.	ROE-072	Phasor Estimation, Island detection Techniques	PO1, PO2, PO5, PO6, PSO1, PSO2

Session 2019-20

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-302	Mathematical analysis of bridge circuits, Power Measurement using instruments transformer, Concept and block diagram of CRT	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	KEE-402	Details of Brushless DC Motor should be included in the syllabus	PO1, PO3, PO5, PSO2
3.	REE-501	Introduction to PMSM should be included in the syllabus; ZPF method related to Voltage regulation should be included in the syllabus	PO1, PO3, PO5, PSO2
4.	REE-701	Hysteresis motor, Stepper motor, Hybrid Electric vehicles, Grid connectivity with renewable energy	PO1, PO3, PO5, PSO1, PSO2
5.	REE-081	Effects of harmonics on Display devices	PO1, PO3, PO5, PSO1
6.	REE-072	Phasor Estimation, Island detection Techniques	PO1, PO2, PO5, PO6, PSO1

Session 2018-19

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-302	Mathematical analysis of bridge circuits, Power Measurement using instruments transformer, Concept and block diagram of CRT	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	REE-402	Details of Brushless DC Motor should be included in the syllabus	PO1, PO3, PO5, PSO2
3.	NEE-701	Hysteresis motor, Stepper motor, Hybrid Electric vehicles,	PO1, PO2, PO5, PSO2

		Grid connectivity with renewable energy	
4.	NEE-042	Effects of harmonics on Display devices	PO1, PO2,PO3, PO5, PSO2
5.	NEE-031	Phasor Estimation, Island detection Techniques	PO1, PO2, PO5, PO6, PSO1

As prescribed by Dr. A.P.J. Abdul Kalam University, Lucknow (U. P.) the Course Curriculum of B. Tech. (Electrical Engineering) has been divided into 8 semesters (2020-21). Evaluation Schemes of university for 4-year degree program is mentioned in following tables. University has updated the curriculum from time to time. The following tables show the evaluation scheme of all subjects from IIIrd to VIIIth semester for session 2021-22.

Second year courses:

Table: 2.1 (a): III Semester courses

SEMESTER- III													
S. No.	**Subject Codes**	**Subject**	**Periods**			**Evaluation Scheme**				**End Semester**		**Total**	**Credit**
			L	**T**	**P**	**CT**	**TA**	**Total**	**P S**	**TE**	**PE**		
1.	KOE031-38/ KAS302	Engg. Science Course/Maths IV	3	1	0	30	20	50		100		150	4
2.	KAS301/ KVE301	Technical Communication/ Universal Human values	2 3	1 0	0 0	30	20	50		100		150	3
3.	KEE301	Electromagnetic Field Theory	3	1	0	30	20	50		100		150	4
4.	KEE302	Electrical Measurements & Instrumentation	3	1	0	30	20	50		100		150	4
5.	KEE303	Basic Signals & Systems	3	0	0	30	20	50		100		150	3
6.	KEE351	Analog Electronics Lab	0	0	2				25		25	50	1
7.	KEE352	Electrical Measurements and instrumentation Lab	0	0	2				25		25	50	1
8.	KEE353	Electrical Workshop	0	0	2				25		25	50	1
9.	KEE354	Mini Project or Internship Assessment	0	0	2			50				50	1
10.	KNC301/ KNC302	Computer System Security/Python Programming	2	0	0	15	10	25		50			0
11.		MOOCs (Essential for Hons. Degree)											
		Total										**950**	**22**

Table: 2.1 (b): IV Semester courses

SEMESTER- IV													
S. No.	**Subject Codes**	**Subject**	**Periods**			**Evaluation Scheme**				**End Semester**		**Total**	**Credit**
			L	**T**	**P**	**CT**	**TA**	**Total**	**P S**	**TE**	**PE**		
1.	KAS402/ KOE041-48	Maths IV/Engg. Science Course	3	1	0	30	20	50		100		150	4
2.	KVE401/ KAS401	Universal Human Values/Technical Communication	3 2	0 1	0 0	30	20	50		100		150	3
3.	KEE401	Digital Electronics	3	0	0	30	20	50		100		150	3
4.	KEE402	Electrical Machines-I	3	1	0	30	20	50		100		150	4
5.	KEE403	Networks Analysis &Synthesis	3	1	0	30	20	50		100		150	4
6.	KEE451	Circuit Simulation Lab	0	0	2				25		25	50	1
7.	KEE452	Electrical Machines - I Lab	0	0	2				25		25	50	1
8.	KEE453	Digital Electronics Lab	0	0	2				25		25	50	1
9.	KNC402/ KNC401	Python Programming/ Computer System Security	2	0	0	15	10	25		50			0
10.		MOOCs (Essential for Hons. Degree)											
		Total										**900**	**21**

Third year courses:

Table: 2.1 (c): V Semester courses

SEMESTER- V													
S. No.	**Subject Codes**	**Subject**	**Periods**			**Evaluation Scheme**				**End Semester**		**Total**	**Credit**
			L	**T**	**P**	**CT**	**TA**	**Total**	**P S**	**TE**	**PE**		
1.	KEE501	Power System - I	3	1	0	30	20	50		100		150	4
2.	KEE502	Control System	3	1	0	30	20	50		100		150	4
3.	KEE503	Electrical Machines-II	3	1	0	30	20	50		100		150	4
4.	KEE051-KEE054	Departmental Elective-I	3	0	0	30	20	50		100		150	3
5.	KEE055-KEE058	Departmental Elective-II	3	0	0	30	20	50		100		150	3
6.	KEE551	Power System-I Lab	0	0	2				25		25	50	1
7.	KEE552	Control System Lab	0	0	2				25		25	50	1
8.	KEE553	Electrical Machines - II Lab	0	0	2				25		25	50	1
9.	KEE554	Mini Project or Internship	0	0	2				50			50	1

		Assessment*											
10.	KNC501/ KNC502	Constitution of India, Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			
11.		MOOCs (Essential for Hons. Degree)											
		Total	**17**	**3**	**8**							**950**	**22**

*The Mini Project or internship (4 weeks) conducted during summer break after IV semester and will be assessed during V semester.

DEPARTMENT ELECTIVE - I	**DEPARTMENT ELECTIVE - II**
KEE051 Robotics	KEE055 Optimization Techniques
KEE052 Sensors and Transducers	KEE056 Neural Networks & Fuzzy System
KEE053 Industrial Automation and Control	KEE057 Digital Signal Processing
KEE054 Electrical Standards and Engineering Practices	KEE058 Analog & Digital Communication

Table: 2.1 (d): VI Semester courses

SEMESTER- VI													
S. No.	**Subject Codes**	**Subject**	**Periods**			**Evaluation Scheme**				**End Semester**		**Total**	**Credit**
			L	**T**	**P**	**CT**	**TA**	**Total**	**P S**	**TE**	**PE**		
1.	KEE601	Power System-II	3	1	0	30	20	50		100		150	4
2.	KEE602	Microprocessor and Microcontroller	3	1	0	30	20	50		100		150	4
3.	KEE603	Power Electronics	3	1	0	30	20	50		100		150	4
4.	KEE06*	Departmental Elective- III	3	0	0	30	20	50		100		150	3
5.	KOE06*	Open Elective-I	3	0	0	30	20	50		100		150	3
6.	KEE651	Power System-II Lab	0	0	2				25		25	50	1
7.	KEE652	Microprocessor and Microcontroller Lab	0	0	2				25		25	50	1
8.	KEE653	Power Electronics Lab	0	0	2				25		25	50	1
9.	KNC601/ KNC602	Constitution of India, Law and Engineering / Indian Tradition, Culture and Society	2	0	0	15	10	25		50			
10.		MOOCs (Essential for Hons. Degree)											
		Total	**17**	**3**	**6**							**900**	**21**

DEPARTMENT ELECTIVE - III	**OPEN ELECTIVE-I**
KEE 061 Special Electrical Machines	KOE 060 Idea To Business Model
KEE 062 Electrical Machine Design	KOE 061 Real Time Systems
KEE 063 Digital Control System	KOE 062 Embedded System
KEE 064 Electrical and Hybrid Vehicles	KOE 063 Introduction To Mems
	KOE 064 Object Oriented Programming
	KOE 065 Computer Based Numerical Techniques
	KOE 066 GIS & Remote Sensing
	KOE 067 Basics Of Data Base Management System
	KOE 068 Software Project Management

	KOE 069 Understanding The Human Being Comprehensively- Human Aspirations And Its Fulfillment

Fourth year courses:

Table: 2.1 (e): VII Semester courses

SEMESTER-VII													
S. No.	**Subject Codes**	**Subject**	**Periods**			**Evaluation Scheme**				**End Semester**		**Total**	**Credit**
			L	**T**	**P**	**CT**	**TA**	**Total**	**P S**	**TE**	**PE**		
1.	KHU701 /KHU702	HSMC -1 #/ HSMC-2 #	3	0	0	30	20	50		100		150	4
2.	KEE07X	Departmental Elective- IV	3	0	0	30	20	50		100		150	4
3.	KEE07X	Departmental Elective-V	3	0	0	30	20	50		100		150	4
4.	KOE07X	Open Elective-II	3	0	0	30	20	50		100		150	3
5.	KEE751	Industrial Automation & PLC Lab	0	0	2	30	20	50		100		150	3
6.	KEE752	Mini Project or Internship Assessment*	0	0	2				25		25	50	1
7.	KEE753	Project I	0	0	8				25		25	50	1
8.		MOOCs (Essential for Hons. Degree)											
		Total	**12**	**0**	**12**							**850**	**20**
*The Mini Project or internship (4 - 6 weeks) conducted during summer break after VI semester and will be assesses during VII semester.													
Department Elective - IV KEE070: Advanced Micro processors & Micro Controllers KEE071: Energy Conservation and Auditing KEE072: HVDC & AC Transmission KEE073: High Voltage Engineering KEE074: Power Quality and FACTS						**Department Elective - V** KEE075: Electric drives KEE076: Power System dynamics and Control KEE077: Power System Protection KEE078: Deregulated Power System KEE079: Utilization of Electrical Energy & Electric Traction							

Table: 2.1 (f): VIII Semester courses

SEMESTER-VIII													
S. No.	**Subject Codes**	**Subject**	**Periods**			**Evaluation Scheme**				**End Semester**		**Total**	**Credit**
			L	**T**	**P**	**CT**	**TA**	**Total**	**P S**	**TE**	**PE**		
1.	KHU801/ KHU802	HSMC2#/HSMC-1#	3	0	0	30	20	50		100		150	3
2.	KOE08X	Open Elective-III	3	0	0	30	20	50		100		150	3
3.	KOE08X	Open Elective-IV	3	0	0	30	20	50		100		150	3
4.	KEE851	Project II	0	0	18			100		300		400	9
5.		MOOCs (Essential for Hons. Degree)											
		Total	**9**	**0**	**18**					**600**		**850**	**18**

Science Based Open Electives:

1.	KOE031/041	Engineering Mechanics
2.	KOE032/042	Material Science
3.	KOE033/043	Energy Science & Engineering
4.	KOE034/044	Sensor & Instrumentation
5.	KOE035/045	Basics Data Structure & Algorithms
6.	KOE036/046	Introduction to Soft Computing
7.	KOE036/046	Introduction to Soft Computing
8.	KOE037/047	Analog Electronics Circuits
9.	KOE038/048	Electronics Engineering
10.	RAS501	Managerial Economics
11.	RAS502/602	Sociology
12.	RUC501/601	Cyber Security
13.	RAS601	Industrial Management
14.	ROE071	Modelling and Simulation of Dynamic Systems
15.	ROE072	Introduction to Smart Grid
16.	ROE073	Cloud computing
17.	ROE074	Understanding the human being Comprehensively Human Aspiration audits Fulfillment
18.	ROE081	Digital and Social Media Marketing
19.	ROE082	Entrepreneurship Development
20.	ROE083	Machine Learning
21.	ROE084	Micro and Smart Systems
22.	ROE085	Operations Research
23.	ROE086	Renewable Energy Resources
24.	ROE087	*Human Values in Madhyasth Darshan
25.	ROE088	*Values, Relationship & Ethical Human Conduct-For a Happy & Harmonious Society

Open Elective-II:

1.	KOE071	Filter Design

2.	KOE072	Bioeconomics
3.	KOE073	Machine Learning
4.	KOE074	Renewable Energy Resources
5.	KOE075	Operations Research
6.	KOE076	Value Relationship & Ethical Human Conduct- For A Happy & Harmonious Society
7.	KOE077	Design Thinking
8.	KOE078	Soil And Water Conservation Engineering
9.	KOE079	Introduction To Women's And Gender Studies

Open Elective-III:

1. KOE-081 Cloud Computing
2. KOE-082 Bio Medical Signal Processing
3. KOE-083 Entrepreneurship Development
4. KOE-084 Introduction To Smart Grid
5. KOE-085 Quality Management
6. KOE-086 Industrial Optimization Techniques
7. KOE-087 Human Values In Madhyasth Darshan

Open Elective-IV:

1. KOE-091 Automation and Robotics
2. KOE-092 Computerized Process Control
3. KOE-093 Database Management System And Data Mining and Warehousing
4. KOE-094 Digital and Social Media Marketing
5. KOE-095 Modeling of Field-Effect Nano Devices
6. KOE-096 Modelling and Simulation Of Dynamic Systems
7. KOE-097 Human Values In Buddha and Jain Darshan
8. KOE-098 Human Values In Sankhay Yoga and Vedanta Darsan

2.1.1 State the process used to identify extent of compliance of the university curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I. Also mention the identified curricular gaps, if any (10)

The courses and syllabi are defined by the affiliating university i.e. Dr. A. P.J. Abdul Kalam Technical University, Lucknow. Individual subject teacher is responsible for the formation of course outcomes of teaching subject. For mapping with POs/PSOs, the correlation levels are defined as 1 (slight/low), 2 (Moderate/Medium), and 3 (Substantial/High). The affiliating university revises the curriculum from time to time as required. Accordingly, the course outcomes and its mapping are reviewed.

The program has well defined POs and PSOs as given below:

Program Outcomes (POs) of Electrical Engineering Department

POs	Engineering Graduates will be able to:
PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.
PO2	**Problem analysis:** Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions:** Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems:** Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in

	societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive examinations and other aspects.

Program Specific Outcomes (PSOs) of Electrical Engineering Department

PSO1	An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career. (Professional Skill)
PSO2	An ability to specify, design and implement the concepts of electric drive system, solid state power electronics converters, electrical instrumentation, control and automation, recent advances in Science & Technology and apply the gained skills for future prospects. (Professional Skill)
PSO3	To pursue higher education or be placed in industries/PSUs/Central or State Departments after qualifying competitive examination at National and global level. (Competitive Skill)

The compliance of the university curriculum for attaining the Program Outcomes and Program Specific Outcomes are measured and evaluated using following components:

- The performance of students in external university examinations.
- Internal assessment, which includes sessional marks, attendance, and teacher assessments.
- Student's success rate during campus recruitments, National level examinations like GATE,

CAT, certifications (NPTEL, MOOCS).

- Indirect assessment methods including surveys from stakeholders, engineering events, student's participation and achievements.
- Feedback from students, faculty, and recruiters.

Based on the evaluation and observations of above mentioned components, following curricular gaps are identified:

Table 2.1.1a: Identified Curriculum gaps for session 2020-21

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-302	Mathematical analysis of bridge circuits, Power Measurement using instruments transformer, Concept and block diagram of CRT	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	KEE-303	State – Variable technique to the analysis of linear systems, difference equations	PO1, PO2, PO5, PO6, PSO1,PSO2
3.	KEE-402	Details of Brushless DC Motor should be included in the syllabus	PO1, PO3, PO5, PSO2
4.	KEE-061	Grid connected Induction Generator, Transfer function of AC Servo-motor, Sub-synchronous motor	PO1, PO2, PO5, PO6, PSO1,PSO3
5.	KEE-503	Introduction to PMSM should be included in the syllabus; ZPF method related to Voltage regulation should be included in the syllabus	PO1, PO3, PO5, PSO1,PSO2
6.	REE-701	Hysteresis motor, Stepper motor, Hybrid Electric vehicles, Grid connectivity with renewable energy	PO1, PO2, PO5, PO6, PSO1,PSO2
7.	REE-081	Effects of harmonics on Display devices	PO1, PO2, PO5, PO6, PSO1,PSO3
8.	ROE-072	Phasor Estimation, Island detection Techniques	PO1, PO2, PO5, PO6, PSO1

Table 2.1.1b: Identified Curriculum gaps for session 2019-20

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-302	Mathematical analysis of bridge circuits, Power Measurement using instruments transformer, Concept and block diagram of CRT	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	KEE-402	Details of Brushless DC Motor should be included in the syllabus	PO1, PO3, PO5, PSO2
3.	REE-501	Introduction to PMSM should be included in the syllabus; ZPF method related to Voltage regulation should be included in the syllabus	PO1, PO3, PO5, PSO2
4.	REE-701	Hysteresis motor, Stepper motor, Hybrid Electric vehicles, Grid connectivity with renewable energy	PO1, PO2, PO5, PO6, PSO1,PSO2
5.	REE-081	Effects of harmonics on Display devices	PO1, PO2, PO5, PO6, PSO1,PSO3
6.	REE-072	Phasor Estimation, Island detection Techniques	PO1, PO2, PO5, PO6, PSO1

Table 2.1.1c: Identified Curriculum gaps for session 2018-19

S. No.	Subject Code	Gap identified	Relevance with POs/PSOs
1.	KEE-302	Mathematical analysis of bridge circuits, Power Measurement using instruments transformer, Concept and block diagram of CRT	PO1, PO3, PO4, PO5, PO6, PO11, PO12, PSO1, PSO3
2.	REE-402	Details of Brushless DC Motor should be included in the syllabus	PO1, PO3, PO5, PSO2
3.	NEE-701	Hysteresis motor, Stepper motor, Hybrid Electric vehicles, Grid connectivity with renewable energy	PO1, PO2, PO5, PO6, PSO1,PSO2
4.	NEE-042	Effects of harmonics on Display devices	PO1, PO3, PO5,PSO1, PSO2
5.	NEE-031	Phasor Estimation, Island detection Techniques	PO1, PO2, PO5, PO6, PSO1

Table 2.1.1d: Identified Industrial gaps

S. No.	Identified Industrial gaps
1.	**Presentation and Communication skills**
2.	**Additional Programming Skills (**MATLAB, Python, Scilab etc.)
3.	**Industry specific skills:** (PLC, SCADA etc.)
4.	**Competitive Skills** : Aptitude & Reasoning, Group discussions and Mock Interviews, technical subjects like C,OOPS, Data structure
5.	**Confidence building & Career Based Counselling**
6.	**Project Development & report writing** (real time/research based projects)

2.1.2. State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)

Table B.2.1.2a: Invited/Expert lecture/workshop in Session 2020-21

S. No.	Gap	Action taken	Date	Resource Person With designation	Relevance to POs, & PSOs
1.	Impact of Ambient temperature on PV cell performance characteristics	Expert Lecture (Online Mode)	19/06/2021	Mr. Saurabh Rajput, MITS, Gwalior	PO1, PO2, PO3, PO4, PO12,PSO 2
2.	Internet of Things: Introduction, Architecture and its Application	Expert Lecture (Online Mode)	25/06/2021	Dr. Ahmad Faiz Minai, Integral University, Lucknow	PO1, PO2, PO3, PO4, PO12,PSO3

Table B.2.1.2b: Invited/Expert lecture/workshop in Session 2019-20

S. No.	Gap	Action taken	Date	Resource Person With designation	Relevance to POs, & PSOs
1.	Research and Funding Opportunity offered by Ministry of Electronics and Information Technology	Invited Talk	16/07/2019	Mr. Om Krishna Singh, Scientist-C, MEITY, New Delhi	PO2, PO3, PO4, PO6
2.	Developing Critical Thinking using Learning Management System and ICT Tools	One week national workshop	05/08/2019-09/08/2019	REC Ambedkar Nagar through TEQIP-III	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1, PSO2
3.	Emerging Trends in Power System Operation and Planning	Expert Lecture	17/08/2019	Prof. R. Balasubramanian, IIT Delhi	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1, PSO2
4.	Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar, Wind & Fuel Cell	One week short term course	27/08/2019-31/08/2019	REC Ambedkar Nagar through TEQIP-III	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1, PSO2
5.	Environmental Management for Eco-friendly Infrastructure Development	One week workshop	One week (September 02-06, 2019)	REC Ambedkar Nagar through TEQIP-III	PO1, PO2, PO3, PO4, PO5, PO7 PSO1, PSO2, PSO3
6.	Robotics Workshop cum Championship (ROBOFIESTA)	One week workshop	One week (September 02-06, 2019)	REC Ambedkar Nagar through TEQIP-III	PO1, PO2, PO3, PO4, PO5, PO6, PSO1, PSO2, PSO3
7.	Power System Stability	Invited Talk	07/09/2019	Prof. M K Verma, IIT (BHU), Varanasi	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1, PSO2
8.	Application of Variable Frequency Transformer in Wind Energy Conversion System	Invited Talk	07/09/2019	Dr. Farhad Ilahi Bakhsh, NIT, Srinagar (J & K)	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1, PSO2
9.	Power Supply & EMI/EMC aspects of Military Aircraft	Invited Talk	03/10/2019	Er. Sube Singh Gurjar, RCMA (Korwa), Amethi	PO1, PO2, PO3, PO4, PO5, PO11, PO12, PSO1
10.	Recent Advances in Science and Technology (RAST-2020)	International Seminar	2 days (February 16-17 ,2020)	REC, Ambedkar Nagar through TEQIP-III	PO1,PO11, PSO1,PSO2, PSO3,

Table B.2.1.2c: Invited/Expert lecture/workshop in Session 2018-19

S. No.	Gap	Action taken	Date	Resource Person With designation	Relevance to POs, & PSOs
1.	Industrial Automation-Challenges & Opportunities	Expert Lecture	01/12/2018	Er. Vineet Saxena, Suncor Energy, Canada	PO1, PO2, PO3, PO4, PO5, PSO3
2.	Application of Particle Swarm Optimization and Genetic Algorithm in Electrical Engineering	Invited Talk	30/03/2019	Prof. R.K. Mishra, IIT (BHU), Varanasi	PO1, PO2, PO3, PO4, PO5, PO11, PSO3
3.	High Frequency compact DC-DC Converter	Invited Talk	15/04/2019	Dr Sandeep Anand, IIT Kanpur	PO1, PO2, PO3, PO4, PO5, PO11, PSO3
4.	Start-Up Cell "Parikalpna"	Invited Talk	02/05/2019	Gen. P K Singh, Retired Indian Army	PO1, PO2, PO3, PO4, PO5, PO11, PSO3
5.	IEEEAwareness-Volunteers and Leadership	Invited Talk	26 November 2018	Dr. Aseem Chandel, REC Mainpuri (UP)	PO1, PO2, PO3, PO4, PSO1, PSO2, PSO3

2.2. Teaching - Learning Processes (100)

2.2.1 Describe Processes followed to improve quality of Teaching & Learning (25)

The university prepares academic calendar for both semester at the beginning of each academic session. Rajkiya Engineering College, Ambedkar Nagar further prepares its academic calendar in-line to the university calendar for timely compliance of academic activities. The academic calendar displays all the academic activities scheduled for an academic session along with the examination schedule of the university. Dean Academics & Head of Department review the syllabus coverage of each course and academic activities during the semester from time to time during semester. Detailed teaching-learning process through flow chart explained in the Figure-2.2.1.

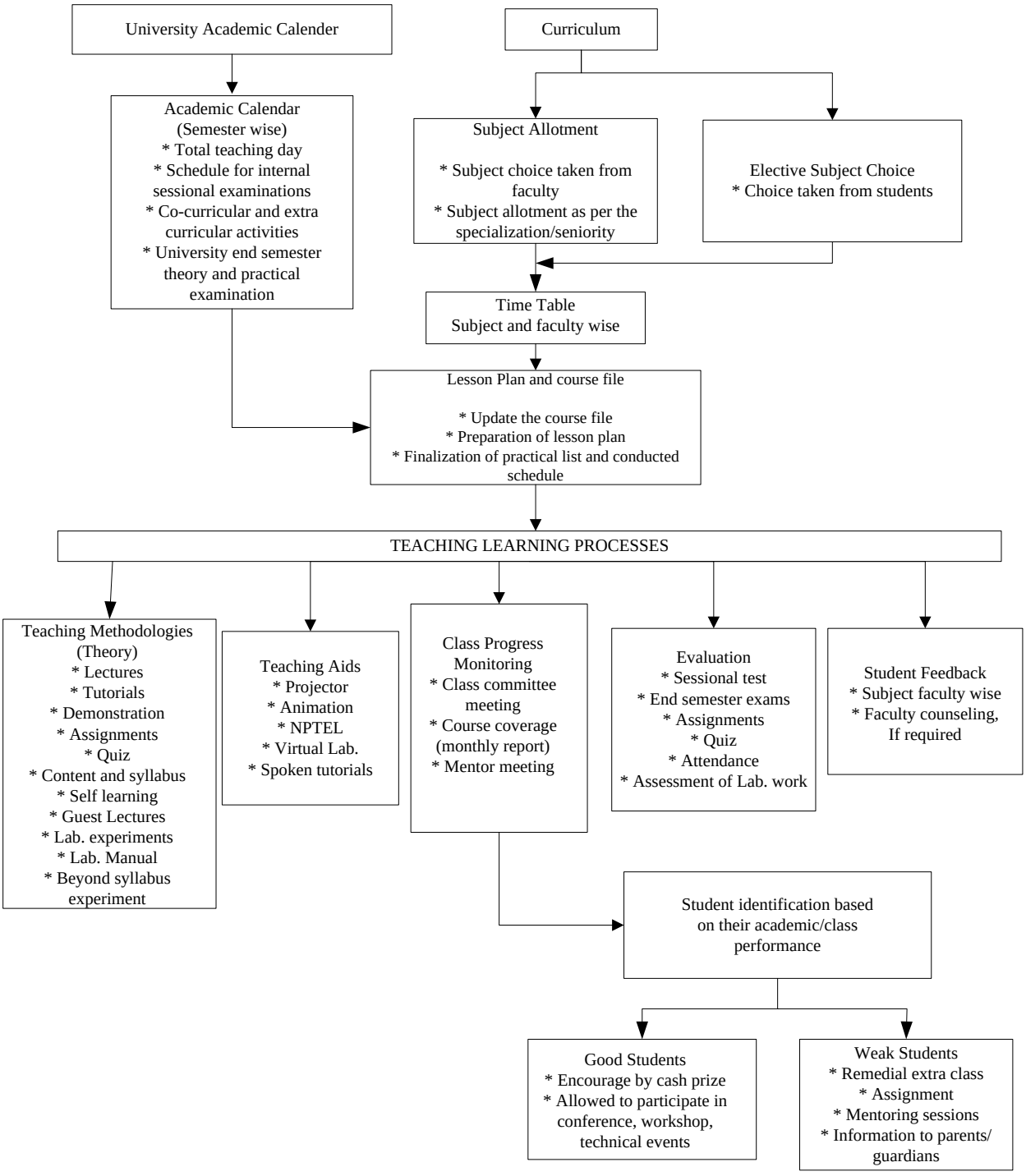


Fig. 2.2.1 Process for teaching learning

Pedagogical Initiatives

- Effective content delivery method classroom teaching as per time table.
- Tutorials classes as per program curriculum.
- Hands on practice during lab work.

- Class test, presentations, viva-voce and quizzes.
- Weekly assignments (individual/group).
- Remedial classes, extra classes.
- Career based counseling and value addition programs.
- Industry-Academia Interaction.
- Project work and weekly assessment.
- Entrepreneurship through incubation cell support.
- Engineering Events.
- Extra library hours, Book bank facility for students.

The department is currently using following methods for academic monitoring and effective teaching learning process

1. ***Academic counseling and Monitoring:*** Weekly attendance monitoring report, timely submission and checking of assignments, student counseling report, course coverage status report, extra/remedial classes, lab viva-voce, additional tests, tutorial sheets, weekly project assessment report.

2. ***Student Feedback system:*** Academic feedback of students is done during each semester where the complete details of the current academic performance of each students are shared with parents.

3. ***Academic surveys***: Graduate exit surveys, alumni survey, feedback from parents, Course end survey, and feedback of faculty by students.

4. ***Academic audits****:* Regular audits of course files, lab records, assignments, results, engineering events etc.

Mentorship Details

1499/EED/REC/21 Dated: 23/09/2021

All the students of B.Tech EE are hereby informed that the following mentor list will be followed for 2021-22 session. Students have to meet their mentor every week on Saturdays or as when required.

B.TECH 2ND YEAR (EED)

	List of Mentor -Mentee for Session 2021-22			
S. No.		**Roll No.**	**Student/Mentee Name**	**Faculty/Mentor Name**

1	List of Mentor -Mentee for Session 2021-22 (2nd year Students)	2007370200001	Abhishek Kumar Singh	Mr. Sonu Kumar (7376935446)
2		2007370200002	Abhishek Kumar	
3		2007370200003	Abhishek Kumar	
4		2007370200004	Abhishek Kumar Kaul	
5		2007370200005	Abhishek Shukla	
6		2007370200006	Adesh Sonkar	
7		2007370200007	Aditya Gupta	
8		2007370200008	Aditya Kumar	
9		2007370200009	Aditya Raj Singh	
10		2007370200010	Ajit Kumar	
11		2007370200011	Aman Chaudhary	
12		2007370200012	Aman Gupta	
13		2007370200014	Anuj Lata	
14		2007370200015	Anupam Kumar Anurag	
15		2007370200016	Anurag Verma	
16		2007370200017	Ashish Kumar	
17		2007370200018	Ashutosh Dubey	
18		2007370200019	Avanish Kumar Verma	
19		2007370200020	Ayush Kumar Gupta	
20		2007370200021	Chetna Varman	
21		2007370200022	Devesh Pratap Singh	
22		2007370200023	Dheeraj Tiwari	
23		2007370200024	Gaurav Pandey	
24		2007370200025	Gyanendra Gautam	
25		2007370200026	Harshjeet Singh	
26		2007370200027	Hemraj Meena	
27		2007370200028	Jay Prakash	
28		2007370200029	Jyoti Singh	
29		2007370200030	Karan Kumar	
30		2007370200031	Kritika	
1	List of Mentor - Mentee for Session 2021-22 (2nd year Students)	2007370200032	Mohd Bilal Khan	Dr. M.Aslam Husain (Contact No.- 9451663915)
2		2007370200033	Nazneen Parveen	
3		2007370200034	Neha Kashyap	
4		2007370200035	Pradyum Kumar Mathur	
5		2007370200036	Pragya Yadav	

6		2007370200037	Preeti Dubey	
7		2007370200038	Prince Gautam	
8		2007370200039	Raj Singh	
9		2007370200040	Ranjeet Kumar	
10		2007370200041	Rinki Yadav	
11		2007370200042	Rohit Kumar	
12		2007370200043	Saba	
13		2007370200044	Saquib	
14		2007370200045	Satish Kumar	
15		2007370200046	Saurabh Kannaujia	
16		2007370200047	Saurabh Kumar	
17		2007370200048	Shailesh Kumar Kushwaha	
18		2007370200049	Shashikant Rao	
19		2007370200050	Shristi Chaudhary	
20		2007370200051	Siddharth Raj Gupta	
21		2007370200052	Sonali Kanaujiya	
22		2007370200053	Swapnil Rai	
23		2007370200054	Swastik Lakhan	
24		2007370200055	Tanu Yadav	
25		2007370200056	Uddeshy Shaky	
26		2007370200057	Ujjwal Pratap Singh	
27		2007370200058	Vandana Yadav	
28		2007370200059	Vinay Pandey	
29		2007370200060	Vishal Kumar	
30		2007370200061	Vivek Kumar	
1	List of Mentor -Mentee for Session 2021-22 (2nd year + 4th year Students)	2007370200062	Zeeshan Iqbal	Mr. Vikas Patel (Contact No.- 9454110223)
2		1873720001	Aadarsha Kumar	
3		1873720003	Abhishek Singh	
4		1873720004	Aditya Madhav	
5		1873720005	Akash Deep	
6		1873720006	Akash Rawat	
7		1873720007	Anita Yadav	
8		1873720008	Anjali	
9		1873720009	Anjali Gautam	
10		1873720010	Ankesh Kumar	

11		1873720011	Ankit Kumar	
12		1873720012	Ankit Kumar Gautam	
13		1873720013	Ankit Upadhyay	
14		1873720014	Ankur Kumar Yadav	
15		1873720015	Anurag Singh	
16		1873720016	Anurag Singh	
17		1873720017	Arshit Kumar	
18		1873720018	Ashutosh	
19		1873720019	Ashwani Kumar	
20		1873720020	Avinash Kumar	
21		1873720021	Awantika	
22		1873720022	Ayush Pal	
23		1873720023	Deepak Kumar	
24		1873720024	Deveshwar Nisad	
25		1873720025	Divyanshu Verma	
26		1873720026	Dravid Singh	
27		1873720027	Girijesh Kumar Gond	
28		1873720028	Jayendra Pratap	
29		1873720029	Lokesh Kumar	
30		1873720030	Manas Kumar	
1	List of Mentor -Mentee for Session 2021-22 (4th year Students)	1873720031	Mausam Chaudhary	Dr.Sanjay Agrawal (Contact No.-7309236277)
2		1873720032	Mayank Nayak	
3		1873720033	Pallavi Tripathi	
4		1873720034	Pawan Kumar	
5		1873720035	Pragati Jayant	
6		1873720036	Pratibha	
7		1873720037	Pratik Kumar Gautam	
8		1873720038	Prince	
9		1873720039	Raj Singh	
10		1873720040	Rajnesh Kumar	
11		1873720041	Ravi Kumar Meena	
12		1873720042	Ritesh Kumar	
13		1873720043	Rohit Gautam	
14		1873720044	Sachin Kumar	
15		1873720046	Sarvesh	

16		1873720047	Saurabh Kumar	
17		1873720048	Saurabh Singh	
18		1873720049	Sawan Kanaujiya	
19		1873720050	Shashank Varshney	
20		1873720051	Shashi Prabha	
21		1873720052	Shashikant Pal	
22		1873720053	Shivendera Kumar Nayak	
23		1873720054	Shweta Sagar	
24		1873720055	Subodh Kumar Singh	
25		1873720056	Suraj Kumar	
26		1873720057	Suraj Prasad	
27		1873720058	Tanishq Choudhary	
28		1873720059	Utkarsh Verma	
29		1873720060	Uttkarsh Pratap Singh	
30		1873720061	Vimalesh Kumar	
1	List of Mentor -Mentee for Session 2021-22 (3rd year + 4th Students)	1873720062	Vinay Kumar Rao	Dr. Yudhishthir Pandey (Contact No.- 9717952676)
2		1873720063	Vishal Sonker	
3		1907370209001	Abhishek Gauttam	
4		1907370209002	Chandraketoo Chauhan	
5		1907370209003	Martand Kumar Yadav	
6		1907370209004	Priya Anand	
7		1907370209005	Shubham Kumar	
8		1907370209006	Shyam Bhawan Gautam	
9		1873713006	Akash Kumar Dwivedi	
10		1873713049	Shubham Singh	
11		1907370130001	Aarti Shakya	
12		1907370130002	Aayush Kumar Vishodiya	
13		1907370130003	Abhinay Yadav	
14		1907370130004	Abhishek Singh	
15		1907370130005	Adarsh Kumar	
16		1907370130006	Adit Srivastava	
17		1907370130007	Aditi Chaudhary	
18		1907370130008	Aditya Singh	
19		1907370130009	Ajay Kushwaha	

20		1907370130010	Akanksha	
21		1907370130011	Ali Rizvi	
22		1907370130012	Alok Kumar Verma	
23		1907370130013	Aman Chhabra	
24		1907370130014	Amit Kumar	
25		1907370130015	Amit Tiwari	
26		1907370130016	Anchal	
27		1907370130017	Anshul Verma	
28		1907370130018	Anupam Kumar Shukla	
29		1907370130019	Anurag Jaiswal	
30		1907370130021	Arvind Yadav	
1	List of Mentor -Mentee for Session 2021-22 (3rd year Students)	1907370130022	Astha Vats	Dr. Arif Iqbal (Contact no.-7567978865)
2		1907370130023	Atul Paswan	
3		1907370130024	Avinash	
4		1907370130025	Ayush Varma	
5		1907370130026	Chandra Bhusan Yadav	
6		1907370130027	Dimpy Yadav	
7		1907370130028	Gaurav Kumar Kanaujia	
8		1907370130029	Jitendra Kumar	
9		1907370130030	Kajal Gautam	
10		1907370130031	Manas Singhal	
11		1907370130033	Mohd Adil Azad	
12		1907370130034	Mohd Shadab	
13		1907370130035	Navneet Kumar	
14		1907370130036	Neha Maurya	
15		1907370130037	Neha Verma	
16		1907370130038	Noor Mohammad	
17		1907370130039	Pallavi Pandey	
18		1907370130040	Pankaj Kumar	
19		1907370130041	Pragya Singh	
20		1907370130042	Praphul Kumar Maurya	
21		1907370130043	Prashant Kumar	
22		1907370130044	Prashant Kumar	
23		1907370130045	Prashant Singh	
24		1907370130046	Praveen Kumar Saini	

25		1907370130047	Prince Maurya	
26		1907370130048	Priya Singh	
27		1907370130049	Rahul Saroj	
28		1907370130050	Randheer Yadav	
29		1907370130051	Satyendra Singh	
30		1907370130052	Saurabh Kumar	
1	List of Mentor -Mentee for Session 2021-22 (3rd year Students)	1907370130053	Savan Kumar Gautam	Dr. S. P Singh (Contact No.-9451051969)
2		1907370130054	Shalu Dwivedi	
3		1907370130055	Shardendra Kumar	
4		1907370130056	Shashikant Kumar Yadav	
5		1907370130057	Shivali Agarwal	
6		1907370130058	Stuti Pandey	
7		1907370130059	Sudhanshu Srivastava	
8		1907370130060	Suraj Gautam	
9		1907370130061	Sushama Kumari	
10		1907370130062	Suyash Sharma	
11		1907370130063	Utkarsh Tiwari	
12		1907370130064	Vikas Yadav	
13		1907370130065	Vineet Kumar	
14		1907370130066	Yogendra Kumar	
15		1907370200047	Sahil Verma	
16		2007370139001	Akash Kumar	
17		2007370139002	Akhilesh Kumar Parjapati	
18		2007370139003	Alok	
19		2007370139004	Gaurav Kanojia	
20		2007370139005	Komal Sahu	
21		2007370139006	Naman Singhal	

All the students of B.Tech EE are hereby informed that the following mentor list will be followed for 2020-21 session. Students have to meet their mentor every week on Saturdays or as when required.

S. No.	Roll. No.	Student Name	Mentor (s)
1	1907370200002	Abhishek Pratap Singh	Dr. S. P Singh (Contact No.-9451051969)
2	1907370200003	Adarsh Ojha	
3	1907370200004	Adarsh Sen	
4	1907370200005	Akash Kumar Rao	

5	1907370200006	Akhilesh Pal	
6	1907370200007	Alok Kumar	
7	1907370200008	Alok Raj Dwivedi	
8	1907370200009	Amit Kumar Gautam	
9	1907370200010	Anil Kumar Yadav	
10	1907370200011	Anjali Agrahari	
11	1907370200012	Anurag Shukla	
12	1907370200013	Ashish Kannaujia	
13	1907370200014	Ashutosh Gupta	
14	1907370200001	Aashutosh Singh	
15	1907370200015	Ashutosh Yadav	
16	1907370200016	Chandan Kumar Yadav	
17	1907370200017	Deepanshu Yadav	
18	1907370200018	Ekta Singh	
19	1907370200019	Gauri Shankar	
20	1907370200020	Goud Akash Ramanuj	
21	1907370200021	Hemant Kumar	Dr. M.Aslam Husain (Contact No.-9451663915)
22	1907370200022	Himanshu Tiwari	
23	1907370200023	Karan Kumar	
24	1907370200024	Kashib Khan	
25	1907370200025	Mamata	
26	1907370200026	Mansi Gupta	
27	1907370200027	Mohammad Murshid Alam	
28	1907370200028	Mubarak Ali	
29	1907370200029	Muralidhar Maurya	
30	1907370200030	Neetu Patel	
31	1907370200031	Nikhil Kumar Singh	
32	1907370200032	Prabhakar Gautam	
33	1907370200033	Prabhat Kumar	
34	1907370200034	Pradeep Kumar	
35	1907370200035	Prajesham Pandey	
36	1907370200036	Praveen Gautam	
37	1907370200037	Priya	
38	1907370200038	Pushkar Kumar	
39	1907370200039	Rahul Pratap	
40	1907370200040	Rajneesh Kumar	
41	1907370200041	Rakhi Kumari	Ms. Shikha Choudhary
42	1907370200042	Raman Sahu	
43	1907370200043	Rishikesh Mourya	

44	1907370200044	Ritu Pandey	
45	1907370200045	Rohit Kumar	
46	1907370200046	Rumi Devi	
47	1907370200048	Saket Kumar	
48	1907370200049	Saksham Raj	
49	1907370200050	Sakshi Chaurasia	
50	1907370200051	Sarvesh Kumar Gond	
51	1907370200052	Satya Prakash Yadav	
52	1907370200053	Shaad Imam Rizvi	
53	1907370200054	Shivam	
54	1907370200055	Shivangi Singh	
55	1907370200056	Siddharth Verma	
56	1907370200057	Sunil Kumar Chaudhary	Mr. Ravindra Kumar
57	1907370200058	Sushmit Dubey	
58	1907370200059	Swapnil Pathak	
59	1907370200060	Vandana Maurya	
60	1907370200061	Vikas Chaudhari	
61	1907370200062	Vikas Kumar	
62	1907370200063	Vishal Verma	
63	1907370130032	Mantasha Khan	
64	1873720045	Sadhana Gautam (Ex-Student)	

B.TECH 3RD YEAR (EED)

S. No.	Reg. No.	Student Name	Mentor (s)
1	18737201	Aadarsha Kumar	Dr. Arif Iqbal (Contact no.-7567978865)
2	18737203	Abhishek Singh	
3	18737204	Aditya Madhav	
4	18737205	Akash Deep	
5	18737206	Akash Rawat	
6	18737207	Anita Yadav	
7	18737208	Anjali	
8	18737209	Anjali Gautam	
9	18737210	Ankesh Kumar	
10	18737211	Ankit Kumar	
11	18737212	Ankit Kumar Gautam	
12	18737213	Ankit Upadhyay	
13	18737214	Ankur Kumar Yadav	
14	18737215	Anurag Singh	

15	18737216	Anurag Singh/32510368(Up See)	
16	18737217	Arshit Kumar	
17	18737218	Ashutosh	
18	18737219	Ashwani Kumar	
19	18737220	Avinsash Kumar	
20	18737221	Awantika	
21	18737222	Ayush Pal	Dr. Yudhishthir Pandey (Contact No.- 9717952676)
22	18737223	Deepak Kumar	
23	18737224	Deveshwar Nishad	
24	18737225	Divyanshu Verma	
25	18737226	Dravid Singh	
26	18737227	Girijesh Kumar Gond	
27	18737228	Jayendra Pratap	
28	18737229	Lokesh Kumar	
29	18737230	Manas Kumar	
30	18737231	Mausam Chaudhary	
31	18737232	Mayank Nayak	
32	18737233	Pallavi Tripathi	
33	18737234	Pawan Kumar	
34	18737235	Pragati Jayant	
35	18737236	Pratibha	
36	18737237	Pratik Kumar Gautam	
37	18737238	Prince	
38	18737239	Raj Singh	
39	18737240	Rajensh Kumar	
40	18737241	Raki Kumar Meena	
41	18737242	Ritesh Kumar	Dr.Sanjay Agrawal (Contact No.-7309236277)
42	18737243	Rohit Gautam	
43	18737244	Sachin Kumar	
44	18737246	Sarvesh	
45	18737247	Saurabh Kumar	
46	18737248	Saurabh Singh	
47	18737249	Sawan Kanaujiya	
48	18737250	Shashank Varshney	
49	18737251	Shashi Prabha	
50	18737252	Shashikant Pal	
51	18737253	Shivendera Kumar Nayak	
52	18737254	Subodh Kumar Singh	
53	18737255	Suraj Kumar	
54	18737256	Suraj Prasad	
55	18737257	Sweta Sagar	
56	18737258	Tanishq Choudhary	
57	18737259	Utkarsh Verma	
58	18737260	Uttkarsh Pratap Singh	

59	18737261	Vimalesh Kumar	
60	18737262	Vinay Kumar Rao	
61	18737263	Vishal Sonker	Mr. Vikas Patel (Contact No.- 9454110223)
62	197379201	Abhishek Kumar Gautam	
63	197379202	Chandraketoo Chauhan	
64	197379203	Martand Kumar Yadav	
65	197379204	Priya Anand	
66	197379205	Shubham Kumar	
67	197379206	Shyam Bhawan Gautam	

B.TECH 4TH YEAR (EED)

S. No.	Reg. No.	Name	Mentor (s)
1	17737201	Abhinav Bajpai	Mr. Vikas Patel (Contact No.- 9454110223)
2	17737202	Aditya Kumar	
3	17737203	Aditya Raj	
4	17737204	Akash	
5	17737205	Akash Kvshwaha	
6	17737206	Akash Rav	
7	17737207	Amar Km. Gond	
8	17737208	Amit Gond	
9	17737209	Amit Km. Majhi	
10	17737210	Amit Km. Vishwakarma	
11	17737211	Anand Kumar Patel	
12	17737212	Anita Gond	
13	17737213	Ankit Kumar	
14	17737214	Ankur Bauda	Dr. Puneet Joshi
15	17737215	Anurag Kumar	
16	17737216	Arjun Kumar	
17	17737217	Arpita Chaudhary	
18	17737218	Ashish Km. Pandey	
19	17737219	Awanish Km. Yadav	
20	17737220	Bipin Yadav	
21	17737221	Chandra Parkash Anand	
22	17737223	Devanshu Singh	
23	17737224	Gaurav Vishesh	
24	17737225	Harshita Chaudhary	
25	17737226	Kavita	
26	17737227	Madhusudan	
27	17737228	Mithlesh Kumar	
28	17737229	Mohammad Faisal Khan	

29	17737230	Mohit Kumar	
30	17737231	Pankaj Km. Mahaur	
31	17737232	Prakhar Singh	
32	17737233	Priyanshi Bharti	
33	17737234	Raj Vaibhav	
34	17737235	Rajarshi Km. Gaurav	Mr. Lokesh Kumar Yadav
35	17737236	Rajarshi Singh	
36	17737237	Rajverdhan Verma	
37	17737238	Reshi Pal	
38	17737239	Rohit Singh	
39	17737240	Samant Srivastava	
40	17737241	Saurabh Kumar	
41	17737242	Shailendra Singh	
42	17737243	Shalini Keshri	
43	17737244	Shreya Chaudhary	
44	17737245	Shubham Singh Chauhan	
45	17737246	Simpi Gupta	
46	17737248	Suneeta Ranjan	
47	17737249	Surya Prakash Dinkar	
48	17737250	Swatantra Km. Azaad	
49	17737251	Tarun Goel	
50	17737252	Utkarsh Pratap	
51	17737253	Vartika Dubey	
52	17737254	Vidhu Manwal	
53	17737255	Vikas Chaudhary	
54	17737256	Vikas Kumar	Mr. Sonu Kumar (7376935446)
55	17737257	Vinod Km. Verma	
56	17737258	Vishal	
57	17737259	Vishwambar Singh	
58	17737260	Vikas Tiwari	
59	17737261	Vivek Kumar	
60	17737262	Yogesh Kumar	
61	17737263	Shivam Patel	
62	187379201	Aansu Kumari	
63	187379202	Chandan Kumar	
64	187379203	Harishankar Sah	
65	187379204	Kamlesh Kumar Gupta	
66	187379205	Km. Sweta Bhardwaj	
67	187379206	Manisha Bharti	
68	187379207	Parikshit Saroj	
69	187379208	Rahul Kumar	
70	187379209	Rahul Kumar	

71	187379210	Renu Singh	
72	187379211	Shubham Kumar Dwivedi	
73	187379212	Sudheer Kumar Maury	

Ref. No. 621/EED/REC/19 **Dated: 05/08/2019**

All the students of B.Tech EE are hereby informed that the following mentor list will be followed for 2018-19 session. Students have to meet their mentor every week on Saturdays or as when reuired.

B.TECH 2ND YEAR (EED)

S. No.	Reg. No.	Student Name	Mentor (s)
1	18737201	Aadarsha Kumar	Dr. Arif Iqbal (Contact no.-7567978865)
2	18737203	Abhishek Singh	
3	18737204	Aditya Madhav	
4	18737205	Akash Deep	
5	18737206	Akash Rawat	
6	18737207	Anita Yadav	
7	18737208	Anjali	
8	18737209	Anjali Gautam	
9	18737210	Ankesh Kumar	
10	18737211	Ankit Kumar	
11	18737212	Ankit Kumar Gautam	
12	18737213	Ankit Upadhyay	
13	18737214	Ankur Kumar Yadav	
14	18737215	Anurag Singh	
15	18737216	Anurag Singh	
16	18737217	Arshit Kumar	
17	18737218	Ashutosh	
18	18737219	Ashwani Kumar	
19	18737220	Avinsash Kumar	
20	18737221	Awantika	
21	18737222	Ayush Pal	Dr. Yudhishthir Pandey (Contact No.-9717952676)
22	18737223	Deepak Kumar	
23	18737224	Deveshwar Nishad	
24	18737225	Divyanshu Verma	
25	18737226	Dravid Singh	
26	18737227	Girijesh Kumar Gond	
27	18737228	Jayendra Pratap	
28	18737229	Lokesh Kumar	
29	18737230	Manas Kumar	
30	18737231	Mausam Chaudhary	
31	18737232	Mayank Nayak	
32	18737233	Pallavi Tripathi	
33	18737234	Pawan Kumar	
34	18737235	Pragati Jayant	

35	18737236	Pratibha	
36	18737237	Pratik Kumar Gautam	
37	18737238	Prince	
38	18737239	Raj Singh	
39	18737240	Rajensh Kumar	
40	18737241	Raki Kumar Meena	
41	18737242	Ritesh Kumar	Dr.Sanjay Agrawal (Contact No.-7309236277)
42	18737243	Rohit Gautam	
43	18737244	Sachin Kumar	
44	18737246	Sarvesh	
45	18737247	Saurabh Kumar	
46	18737248	Saurabh Singh	
47	18737249	Sawan Kanaujiya	
48	18737250	Shashank Varshney	
49	18737251	Shashi Prabha	
50	18737252	Shashikant Pal	
51	18737253	Shivendera Kumar Nayak	
52	18737254	Subodh Kumar Singh	
53	18737255	Suraj Kumar	
54	18737256	Suraj Prasad	
55	18737257	Sweta Sagar	
56	18737258	Tanishq Choudhary	
57	18737259	Utkarsh Verma	
58	18737260	Uttkarsh Pratap Singh	
59	18737261	Vimalesh Kumar	
60	18737262	Vinay Kumar Rao	
61	18737263	Vishal Sonker	Mr. Vikas Patel (Contact No.-9454110223)
62	197379201	Abhishek Kumar Gautam	
63	197379202	Chandraketoo Chauhan	
64	197379203	Martand Kumar Yadav	
65	197379204	Priya Anand	
66	197379205	Shubham Kumar	
67	197379206	Shyam Bhawan Gautam	

B.TECH 3rdYEAR (EED)

S. No.	Reg. No.	Name	Mentor (s)
1	17737201	Abhinav Bajpai	Mr. Vikas Patel (Contact No.-9454110223)
2	17737202	Aditya Kumar	
3	17737203	Aditya Raj	
4	17737204	Akash	
5	17737205	Akash Kvshwaha	
6	17737206	Akash Rav	
7	17737207	Amar Km. Gond	
8	17737208	Amit Gond	
9	17737209	Amit Km. Majhi	

10	17737210	Amit Km. Vishwakarma	
11	17737211	Anand Kumar Patel	
12	17737212	Anita Gond	
13	17737213	Ankit Kumar	
14	17737214	Ankur Bauda	Dr. Puneet Joshi
15	17737215	Anurag Kumar	
16	17737216	Arjun Kumar	
17	17737217	Arpita Chaudhary	
18	17737218	Ashish Km. Pandey	
19	17737219	Awanish Km. Yadav	
20	17737220	Bipin Yadav	
21	17737221	Chandra Parkash Anand	
22	17737223	Devanshu Singh	
23	17737224	Gaurav Vishesh	
24	17737225	Harshita Chaudhary	
25	17737226	Kavita	
26	17737227	Madhusudan	
27	17737228	Mithlesh Kumar	
28	17737229	Mohammad Faisal Khan	
29	17737230	Mohit Kumar	
30	17737231	Pankaj Km. Mahaur	
31	17737232	Prakhar Singh	
32	17737233	Priyanshi Bharti	
33	17737234	Raj Vaibhav	
34	17737235	Rajarshi Km. Gaurav	Mr. Lokesh Kumar Yadav
35	17737236	Rajarshi Singh	
36	17737237	Rajverdhan Verma	
37	17737238	Reshi Pal	
38	17737239	Rohit Singh	
39	17737240	Samant Srivastava	
40	17737241	Saurabh Kumar	
41	17737242	Shailendra Singh	
42	17737243	Shalini Keshri	
43	17737244	Shreya Chaudhary	
44	17737245	Shubham Singh Chauhan	
45	17737246	Simpi Gupta	
46	17737248	Suneeta Ranjan	
47	17737249	Surya Prakash Dinkar	
48	17737250	Swatantra Km. Azaad	
49	17737251	Tarun Goel	
50	17737252	Utkarsh Pratap	
51	17737253	Vartika Dubey	

52	17737254	Vidhu Manwal	
53	17737255	Vikas Chaudhary	
54	17737256	Vikas Kumar	Mr. Sonu Kumar (7376935446)
55	17737257	Vinod Km. Verma	
56	17737258	Vishal	
57	17737259	Vishwambar Singh	
58	17737260	Vikas Tiwari	
59	17737261	Vivek Kumar	
60	17737262	Yogesh Kumar	
61	17737263	Shivam Patel	
62	187379201	Aansu Kumari	
63	187379202	Chandan Kumar	
64	187379203	Harishankar Sah	
65	187379204	Kamlesh Kumar Gupta	
66	187379205	Km. Sweta Bhardwaj	
67	187379206	Manisha Bharti	
68	187379207	Parikshit Saroj	
69	187379208	Rahul Kumar	
70	187379209	Rahul Kumar	
71	187379210	Renu Singh	
72	187379211	Shubham Kumar Dwivedi	
73	187379212	Sudheer Kumar Maury	

B.TECH 4thYEAR (EED)

S. No.	Roll. No.	Student Name	Mentor (s)
1	1673720001	Aakash Gangwar	Dr. S. P. Singh
2	1673720002	Abhijeet Singh	
3	1673720003	Abhinav Kandu	
4	1673720004	Abhishek Kumar	
5	1673720005	Abhishek Kumar	
6	1673720006	Abhishek Kumar Priyada	
7	1673720007	Abhishek Kumar Singh	
8	1673720008	Abhishek Pandey	
9	1673720009	Adarsh Kumar	
10	1673720010	Adity Ratan	
11	1673720011	Alok Kumar	
12	1673720012	Alok Paswan	
13	1673720013	Aman Singh	
14	1673720014	Amandeep Singh	
15	1673720015	Aryan Singh	

16	1673720016	Asheesh Rajbhar	
17	1673720017	Ashish Kumar Saroj	
18	1673720018	Ashish Narayan	
19	1673720019	Ashwin Kumar Yadav	
20	1673720020	Deepak Kumar Kannaujiy	
21	1673720021	Dinesh Kumar	Dr. M. Aslam Husain (Contact No.-9451663915)
22	1673720022	Himanshu Sagar	
23	1673720023	Kapil Kumar	
24	1673720024	Km Renu	
25	1673720025	Krishan Pal Singh	
26	1673720026	Kumari Anjali Singh	
27	1673720027	Kumari Savita	
28	1673720028	Lalit Gond	
29	1673720029	Maneesh Kumar Gupta	
30	1673720030	Manish Kumar Bharati	
31	1673720031	Manoj Kumar	
32	1673720033	Mukul Dev	
33	1673720034	Neeraj Kumar	
34	1673720035	Pankaj Gangwar	
35	1673720036	Pawan Kumar Bharati	
36	1673720037	Prashant Kumar Bandhu	
37	1673720038	Priti Maurya	
38	1673720039	Pushpendra Singh	
39	1673720040	Ravi Shankar Gautam	
40	1673720041	Ritik Rajput	
41	1673720043	Robin Singh	Mr. Abdul Hafeez
42	1673720044	Sanoj Kumar	
43	1673720045	Sarthak Gupta	
44	1673720046	Satish Kumar	
45	1673720047	Saurabh Kumar	
46	1673720048	Shalini Patel	
47	1673720049	Shivam Gautam	
48	1673720050	Shivangi Verma	
49	1673720051	Shivraj Vishwakarma	
50	1673720052	Simran Yadav	
51	1673720053	Somya	
52	1673720054	Sunil Yadav	
53	1673720055	Sweta Kumari	
54	1673720056	Vijay Kumar	

55	1673720058	Vinit Kumar	
56	1573720035	Preeti Gautam	Mr. Ravindra Kumar
57	1773720901	Ankit Kumar Maurya	
58	1773720902	Deeksha Singh	
59	1773720903	Deepak Kumar	
60	1773720904	Dheeraj Dhirendra Singh Yadav	
61	1773720905	Govind	
62	1773720906	Harendra Pratap Aditya	
63	1773720907	Ishwar Chand	
64	1773720908	Km. Kajal Prasad	
65	1773720909	Km. Pushpalata	
66	1773720910	Mithlesh Kumar	
67	1773720911	Vivek Bharti	
68	1773720912	Yashwant Kumar	
69	1673700004	Akash Deep Arya	

2.2.2. Quality of internal semester question papers, assignments and evaluation (20)

The university (Dr. A P J Abdul Kalam Technical University, Lucknow) prepares question papers for end semester examination. Rajkiya Engineering College, Ambedkar Nagar prepares question papers, assignments for internal assessments including sessional examinations (two examinations in a semester), and internal viva-voce for laboratories.

A. Initiatives:

Following initiatives have been devised at department level to prepare quality assignments for all internal assessments

- Program Assessment Committee (PAC) is constituted at the beginning of academic session to take care of the quality of assignments and question papers. The committee includes, class coordinators and Head of Department.

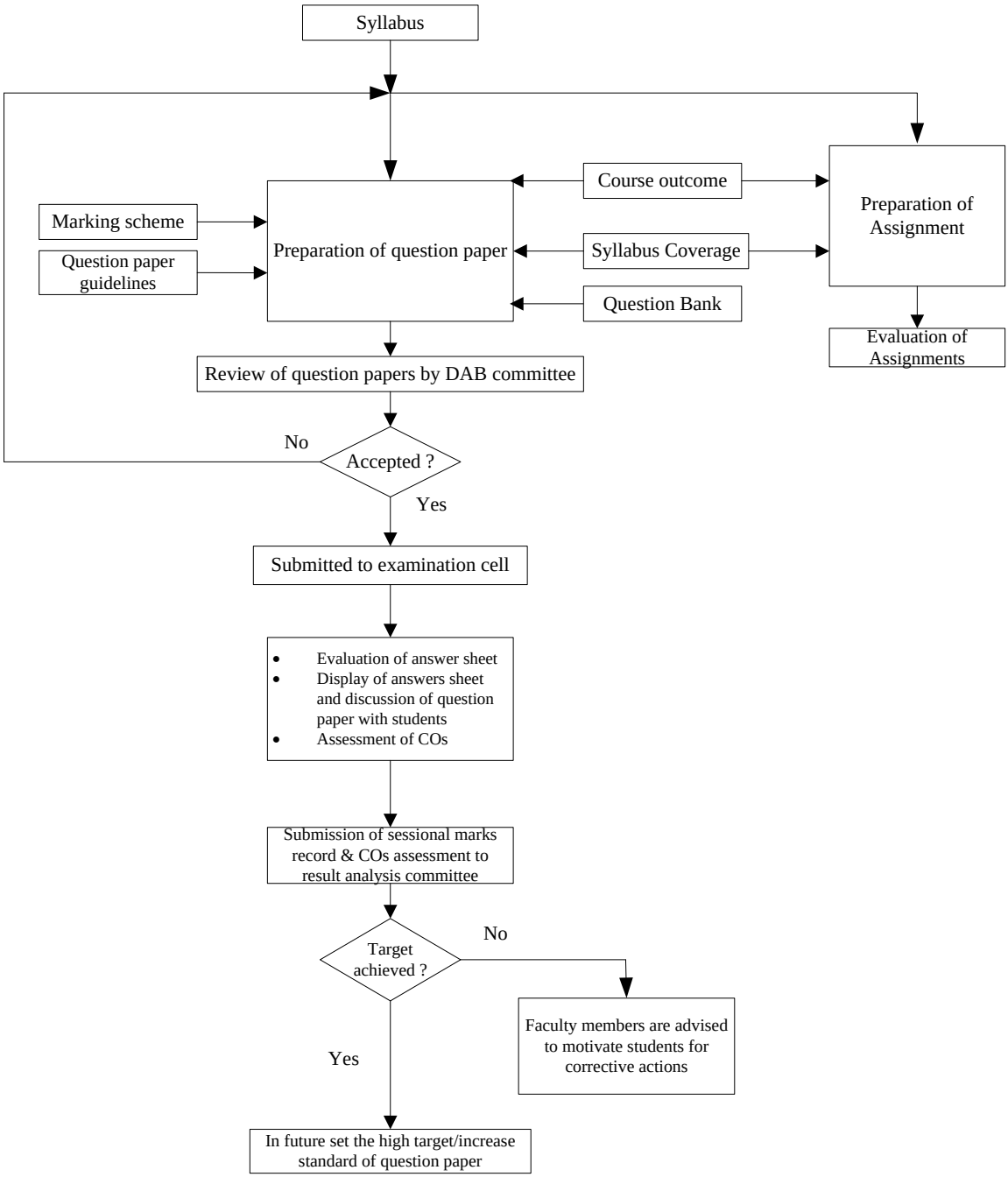


Fig. 2.2.2 Evaluation Process

- Discussions on few sample assignments/ question papers types are done to help the faculty members to understand what kind of assignments should be given.
- Assignments are prepared and evaluated at the beginning of the semester.
- Weekly assignments disseminated among students for each subject.
- Assignments provided are from the contents taught during that week/units of syllabus covered.

- The assignments/question papers are prepared by the individual subject teacher.
- Faculty members are encouraged to include case studies (if possible) and standard questions that are important from end semester examination viewpoint.
- Students are encouraged to use standard contents /references on internet and follow standard books while writing their assignments.
- Subject assignments also include few questions on 'contents beyond the syllabus'.

B. Implementation Details

Student assignments:

- Students must do the assignments on a separate copy/file for each subject.
- Assignments are checked /graded by the faculty on a regular basis.
- The solutions to given assignments are discussed in tutorial classes/other problem solving classes.

Question papers (Sectional/Class tests):

- Faculty teaching in class prepares question papers of their subjects.
- Question papers are prepared with consultation from standard books, old university question papers and case studies (if any).
- The standard and quality of questions is strictly maintained.
- Questions papers are prepared strictly as per the format of the university.
- Evaluated answer sheets are shown to each student in the classes.

Laboratory Assignments:

- A list of experiments has been prepared by university with reference to syllabus.
- Additional experiments beyond the syllabus are conducted by faculty member.
- Concepts learnt during theory classes are practically implemented during lab hours.

C. Evaluation & Analysis

Student assignments

- Sample copies of checked assignments are analyzed by the committee/HoD.
- Student class coordinators provide useful inputs to class coordinators/HoD on the entire process of assignment.
- Assignments are also evaluated by PAC during the evaluation of course files on regular basis.

- The checked assignment accounts for 10 marks allocation to students which are one of the components of his internal assessment for each subject as per the affiliating university norms.
- Students not submitting their assignments are further counseled and if required his/her feedback may be shared to his/her parents. Doing assignments is a compulsory academic activity.

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Question papers (Sessional/Class tests):

- A comparative evaluation of student's performance is carried out after each test.
- Students are required to check their answer sheets after evaluations.

Laboratory Assignments

- Each lab experiment is well documented as per a common format including heads like objectives, introduction, algorithms/model, implementation, applications, analysis, conclusion.
- Monthly performance of students in labs is done through viva-voce.

2.2.3. Quality of Student Projects (25)

Project identification & allotment

1. A list of projects have been compiled with a list of 15 projects from each faculty members of the department. This list gets revised in the beginning of new academic session.
2. In addition, Project suggestions are invited from the good academic performing students.
3. The list of possible projects are kept in the agenda of discussion with project committee involving project coordinators to discuss its relevance from implementation & availability of resources viewpoint.
4. A project coordinator to monitor the progress of the projects of that class.
5. Once the projects are finalized, student's groups are formed with similar interests. Maximum of 2-3 students are allowed in a group.
6. The projects with title are assigned to various student groups.
7. Students then consult with their assigned project guides to understand the overall idea.
8. Project allocation for final year gets completed in beginning of 7^{th} semester.
9. Students are asked to submit and present a project synopsis after 10-15 days.

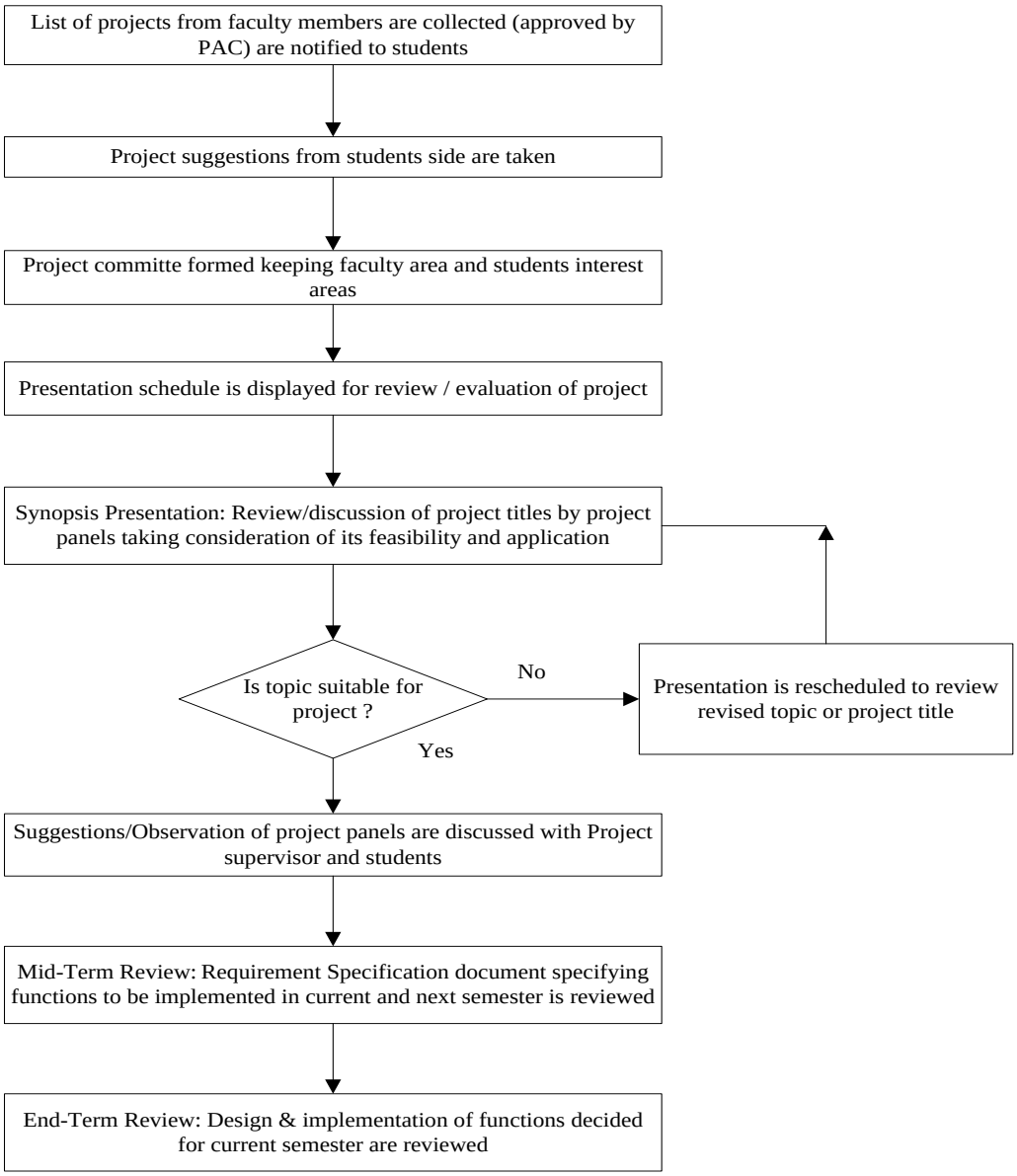


Fig. 2.2.3 Project Evaluation Process

Continuous Monitoring & evaluation

1. Student members are required to meet their faculty supervisors on weekly basis as per time table inline with program curriculum.
2. Evaluation of project progress is done as per rubrics on regular basis.
3. At least 2-3 progress presentations are scheduled during the semester.
4. Students are also encouraged to take useful inputs/help from their seniors/industry personals s per need basis.
5. The cumulative performance of students in these presentations is properly documented and forms the basis for award of final marks.

6. Students are encouraged to publish their work in International conference and peer review journals.
7. It is ensured that student completes all the phases of the project development by his own. So as to learn to apply the concepts and gain enough confidence for real projects.

Awards & recognition

- Best projects are recognized on the basis of overall marks scored through various presentations scheduled by department time to time.
- Students with hardware projects are funded by REC, Ambedkar Nagar.
- Department caters the need of software (Licensed version). It is available for students to do his work.

Quality of student projects is analyzed on the following parameters.

- Award of marks is based on quality of work done.
- Ability of the students to demonstrate the overall idea & objectives.
- Ability of the students to demonstrate innovation, unique features and use of project in real world.
- Student's ability to write and present the work effectively during the project presentations.
- The ability to use design methodologies to prepare a model/design of the overall project.
- Ability to apply the concepts of software engineering and project management concepts for designing, implementation, documentation etc.
- Ability to document the project as per the given instructions. His/her ability to write and represent the contents.

List of sample projects developed by Final Year Students (2020-21, 2019-20, 2018-19 sessions)

Table 2.4 (a): Selected Projects in session 2020-21

Group No.	Name	Guide	Project Topic	POs addressed	PSOs addressed	Justification Parameters	Rating (Out of 5)
1.	Ankit Kumar Rajarshi Km. Gaurav Shailendra Singh	Dr. S.P.Singh	Automatic Street Light Dimmer Circuit	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4
2.	Raj Vaibhav Vikas Chaudhary Vikas Kumar	Dr. Mohammed Aslam Husain	Detection and monitoring of unwanted cattle in farm using drone	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology,	4

						Application of Concepts	
3.	Utkarsh Pratap Mohit Kumar	Mr. Vikas Patel/ Dr. Amit Kumar Pandey	Microcontroller Based Lamp Life extended by ZVS	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
4.	Chandan Kumar Sudheer Kumar Maurya Kamlesh Kumar Gupta	Dr. Sanjay Agrawal	Intelligent Traffic light control using Image processing	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	3
5.	Shubham Singh Chauhan Amit Km. Vishwakarma Yogesh Kumar	Dr. Puneet Joshi	Metaheuristic based approach for selective harmonic elimination in multi level inverters	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4
6.	M Faisal Khan Ashish Km. Pandey Vishal	Dr. Yudhisthir Pandey	Soil monitoring and control using sensors	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	5
7.	Sumit Kumar Singh Shreya Chaudhary Vidhu Manwal	Mr. Lokesh Kumar Yadav	Eco- friendly electric vehicle by using renewable sources	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	3
8.	Vishwambar Singh Reshi Pal Simpi Gupta	Dr. Arif Iqbal	Smart car	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4
9.	Arpita Chaudhary Vartika Dubey Harshita Chaudhary	Mr. Sonu Kumar	Home Automation System	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4

Table 2.4 (b): Selected Projects in session 2019-20.

Group No.	Name	Guide	Project Topic	POs addressed	PSOs addressed	Justification Parameters	Rating (Out of 5)
1.	Abhishek Pandey Lalit Gond Ashwin Kumar Yadav	Dr. S.P.Singh & Mr.Ravindra Kumar	Smart Garden with IoT Plant Monitoring System	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of	4

						Concepts	
2.	Adity Ratan Neeraj Kumar Aryan Singh	Mr. Lokesh K Yadav	Comparative Performance Analysis of DC motor with FUZZY PID & PSO-PID	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
3.	Abhishek Kumar Aman Singh Sarthak Gupta	Dr. Yudhishthir Pandey	Power Quality Improvements In Power system interfaced with renewable energy Sources	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
4.	Km Renu Maneesh Kumar Gupta Ritik Rajput	Dr.Sanjay Agrawal	Designing of Laboratory Based Demand Side management In the Smart Grid Prospective	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	4
5.	Ashish Kumar Saroj Shivraj Vishwakarma Akash Deep Arya	Dr. Mohammed Aslam Husain	Maximum Power point Tracking (MPPT) for solar PV system	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	3

Table 2.4 (c): Selected Projects in session 2018-19.

Group No.	Name	Guide	Project Topic	POs addressed	PSOs addressed	Justification Parameters	Rating (Out of 5)
1.	Kavita Singh Dheeraj Mishra Shivam Maurya	Dr. Yudhishthir Pandey & Ravindra Kumar	Voltage Control of Power System Using FACTS devices	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of Concepts	4
2.	Mr. Anand K Gupta Mr. Utkarsh Kanth Mr. Abhishek	Dr. A K Mishra & Dr. Mohammed Aslam Husain	Efficient Monitoring of Fuel Cell with Methanol as reformer	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
3.	Janmejai Tiwari Pankaj Kumar Saroj Pawan Kumar	Dr. S. P. Singh & Ms. Shashi Pandey	Solar power charge controller	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
4.	Mr. Khushuram Mr. Sandeep Kumar Mr. Shivam Rajput	Mr. Lokesh Kumar Yadav	Closed Loop Control Of Brushless D.C. Motor	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Usefulness in real world, Use of Latest Technology, Application of Concepts	3
5.	Shatrughan Km.Antima Pandey Shamsul laqa	Dr. Mohammed Aslam Husain	Economic feasibility analysis of Solar PV generation for academic building of REC	1,2,3,4,5,6, 8,9,10,11,12	1,2,3	Innovative idea, Usefulness in real world, Use of Latest Technology, Application of	4

			Ambedkarnagar			Concepts	

Note: Projects above are rated using the following scheme:

Rating	**Remarks**
5	Excellent
4	Very Good
3	Good
2	Average
1	Poor

Few students also develop additional projects pertaining to college requirements, collaborative project from some industry as a part of the in-house development cell in guidance of faculty members.

2.2.4. Initiatives related to Industry Interaction (15)

A strong academia-industry interaction is the backbone of the department as well as the College. Higher education is not only synonym with the world class facilities, faculty and students but also with the involvement of industry in academia. Whatever we do and facilitate our students with, it remains incomplete without the involvement of the industry where the knowledge is implemented.

The College has created an **Industry interaction cell,** which work towards opening the various avenues where we can collaborate with the industry. These include:

- To create an 'Industry Lecture Series' by setting up a pool of distinguished guest lectures from industry experts.
- To set up relevant Centre of Excellence (CoE) in REC Ambedkar Nagar with industry /corporate players.
- Organize 'Short-term Training' opportunities (4-8 weeks) for faculty members and students.
- Attract 'Industry Projects' to the college for execution by students/departments.
- To arrange for industry sponsored conferences.
- Make latest tools/technologies available from leading companies to provide knowledge update for faculty members.
- Help to setup Faculty Development Programs (FDP), workshops and seminars delivered by industry experts. They could range from 01 to 30 days.
- Enable faculty to modify the curriculum that suits evolving industry needs and promote industry participation in curriculum planning and development.
- Facilitate research and development projects.

The Department quality assurance with industry interaction is ensured by multipronged approach outlined below:

- Regular meetings with prominent industry experts as its members ensure industry focused and application oriented curricula, besides their periodic review.
- Regular lectures of industrial experts as per the needs of the students.
- After end of VI semester, industrial training is mandatory for all the students. The industrial training assessed through presentation and viva-voce examination and marks are awarded.
- Inputs offered by industry experts are adequately accommodated in the value added programs run by the department.
- Industrial experts are invited for expert lectures.

Details of Expert Lectures

Table 2.5 (a): Organized Expert Lectures

S. No.	Name & Affiliation of Resource Person	Title of Expert talk	Date	Remarks (in Conference /Seminar/Workshop/ Expert Lecture Series/Invited talk	Relevance with POs/PSOs
1.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Humanities course for engineering & technology-A case study of AICET model Curriculum	16/01/2020	Invited Talk	PO3,PO6, PO7, PO8, PO9, PO11, PO12
2.	Mr. Suraj Pandey and Mr. Mustakeem Ahmad SOFCON Trainer, Lucknow	PLC/SCADA	25/02/2019	Invited Talk	PSO3, PO1, PO2, PO3, PO4, PO5, PO11
3.	Er. Krishna Mohan Pandey and Mr. Chandra Mohan Pandey SOFCON Trainer, Lucknow	MATLAB	26/02/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5,
4.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Application of Particle Swarm Optimization	30/03/2019	Invited Talk	PSO3, PO1, PO2, PO3, PO4, PO5, PO11
5.	Mr. Om Krishna Singh, Scientist-C, MEITY, New Delhi	Research and Innovative Funding opportunities	16/07/2019	Invited Talk	PO2, PO3, PO4, PO6
6.	Dr. Faiz Ahmad Minai, Integral University, Lucknow	Renewable Energy	29/08/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5, PO11, PO12

7.	Er. Sube Singh Gurjar RCMA(Korwa), Amethi	Power supply and EMI/EMC Aspect in military Aircraft	03/10/2019	Invited Talk	PSO1, PSO2, PSO3, PO1, PO2, PO3, PO4, PO5, PO11, PO12
8.	Dr. Pushpendra Singh, REC Banda	Speed Control of Three Phase Induction Motor	15/11/2019	Invited Talk	PSO1, PSO2, PSO3 PO1, PO11
9.	Mr. Abhijeet Singh, REC Banda	Basics of EM Waves	14/11/2019	Invited Talk	PSO1, PSO2, PSO3 PO1, PO11
10.	Er. Sube Singh Gurjar, RCMA(HAL, Korwa), Amethi	Evolution of flight data Recorder & Certification for military application	08/05/2018	Invited Talk	PSO1, PSO2, PSO3 PO1, PO2, PO4, PO5, PO9
11.	Prof. S K Chaturvedi, IIT Kharagpur	Reliability Engineering and its Applications	21/04/2018	Invited Talk	PSO1, PSO2, PSO3 PO1, PO2, PO4, PO5, PO9, PO11

Workshop/Training/Short term course Details

Table 2.5 (b): Organized Workshop/Training/FDP/STC

S. No.	Name of program	Organizer	Duration with Date
1.	International Seminar on "Recent Advances in Science and technology" (ISRAST-2020)	RECAmbedkar Nagar through TEQIP-III	2 days (February 16-17 ,2020)
2.	International Conference (REC-CON-19)	REC Ambedkar Nagar through TEQIP-III	2 days(November 28-29 ,2019)
3.	One week workshop on "Environmental Management for Eco-Friendly Infrastructure Development"	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
4.	One week workshop on "Robotics Workshop cum Championship" (ROBOFIESTA)	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
5.	One Week short term Course On "Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar ,Wind & Fuel cell"	REC Ambedkar Nagar through TEQIP-III	One week (August 27-31, 2019)
6.	"Developing Critical thinking using Learning Management System (LMS) and ICT tools"	REC Ambedkar Nagar through TEQIP-III	One week (August05-09, 2019)
7.	Four Week Summer Internship on	REC Ambedkar Nagar	Four week (17 June-15 July

	"MATLAB and its Application in Electrical Engineering	through TEQIP-III	2019)
8.	Four Week Summer Internship on "Open Source software-SCILAB, e-SIM"	Self-Sponsored	Four week (10 June-10 July 2019)
9.	Faculty Development Program On "Essentials of Teaching-Learning process and research Methology"	REC Ambedkar Nagar through TEQIP	One week (February 04-08, 2019)
10.	National Workshop on "Nurturing Start-up/Entrepreneurial Skills in Budding Engineers"	REC Ambedkar Nagar through TEQIP	One week (February 15-19, 2019)
11.	One Week short term Course On "Real time Simulation of FACTS and HVDC through ICT"	In collaboration with NITTTR Chandigarh	One week (January 20-February02, 2019)
12.	One week National workshop on "MATLAB & its application in Engineering"	Entuple Technologies Pvt Ltd, Bengaluru, Karnataka	One week (January 20-February02, 2019)
13.	Week short term Course On "Artificial Intelligence & optimization through ICT"	In collaboration with NITTTR Chandigarh	One week (January 21-25, 2019)
14.	One Week short term Course On "Recent Advances in Electrical engineering"	REC Ambedkar Nagar through TEQIP	One week (April 10-14, 2018)
15.	Ansys Maxwell	Entuple Technologies Pvt Ltd, Bengaluru, Karnataka	1 day (February 02, 2018)
16.	Workshop on "Outcome Based Education (OBE)"	REC Ambedkar Nagar through TEQIP	2 days (September 09-10, 2018)
17.	ICT course on "Scilab Programming"	In collaboration with NITTTR Chandigarh	One week (May 14-18, 2018)
18.	Short Term training program On Laboratory and Workshop Management "	In collaboration with NITTTR Kolkata	One week (April 09-13, 2018)

2.2.5 Initiatives related to industry internship/summer training (15)

Initiatives and implementation:

- Students are counseled by faculty members on the need of suggestion on summer training programs. As per university syllabus, there is a course namely industrial training & viva-voce in VII semester.
- Students are encouraged to provide the list of programs or type of industry they wish to opt for.
- Based on the inputs by students, few industries are identified by the department and Training and Placement Office (TPO) of the institute. A proper communication is carried out with the

concerned industry. A request letter is sent to the industry. Students are allowed to work as interns in the industry for a maximum duration of 2 months (as per the university norms).

- Many students prefer to do some industry specific training from organizations nearby their home. Such students are advised on the kind of training programs they should prefer.
- All the students are required to complete one project that should be the application of the contents covered during his/her training.
- Few students wish to do industrial training within the campus. For such students, special summer training programs in collaborations with some industry is organized.
- In campus, training programs is designed and monitored at department level. Students are given real time projects as a part of the training. Each such student presents their implemented projects in beginning of VII semester.
- All the students are required to present their projects reports in spiral with certificate from the concerned industry. This is a requirement as per the program curriculum.

Students are awarded marks on the following parameters.

- Usefulness or utility of the project
- His individual design and implementation efforts
- His ability to apply the learnt concepts
- His efforts in presentation and documentation

Impact analysis

- Students gain the basic skills for the development of real world projects.
- The training programs have helped students in development of good projects in their final year.
- Most of the student undergone training has been placed through campus recruitments.
- This helps the student to understand and apply the various development phases in projects.

Details of Summer Industrial Training

Table 2.6 (a): Industry interactions/training for minimum 1-month duration in session 2020-21

S. No.	Reg. No.	Students	Training Place
1	1873720901	Aansu Kumari	ONGC, Dehradun
2	1773720001	Abhinav Bajpai	Internshala (Online)
3	1773720002	Aditya Kumar	Internshala (Online)
4	1773720003	Aditya Raj	Internshala (Online)
5	1773720004	Akash	Internshala (Online)
6	1773720005	Akash Kushwaha	Internshala (Online)

7	1773720007	Amar Kumar Gond	Internshala (Online)
8	1773720008	Amit Gond	Internshala (Online)
9	1773720009	Amit Kumar Majhi	Internshala (Online)
10	1773720010	Amit Kumar Vishwakarma	Internshala (Online)
11	1773720011	Anand Kumar Patel	Internshala (Online)
12	1773720013	Ankit Kumar	Internshala (Online)
13	1773720014	Ankur Baudh	Internshala (Online)
14	1773720015	Anurag Kumar	Internshala (Online)
15	1773713016	Archana Yadav	Internshala (Online)
16	1773720017	Arpita Chaudhary	Internshala (Online)
17	1773720018	Ashish Kumar Pandey	Internshala (Online)
18	1773720019	Awanish Kumar Yadav	Ducat India – Noida,
19	1773720020	Bipin Yadav	Internshala (Online)
20	1873720902	Chandan Kumar	Internshala (Online)
21	1773720021	Chandra Prakash Anand	Ducat India – Noida,
22	1773720021	Chandra Prakash Anand	Ducat India – Noida,
23	1773720022	Devanshu Singh	Internshala (Online)
24	1773720023	Gaurav Vishesh	Internshala (Online)
25	1873720903	Hari Shankar Sah	Internshala (Online)
26	1773720024	Harshita Chaudhary	Internshala (Online)
27	1873720904	Kamlesh Kumar Gupta	Internshala (Online)
28	1773720025	Kavita	Internshala (Online)
29	1873720905	Km. Sweta Bhardwaj	Internshala (Online)
30	1773720026	Madhusudan	Internshala (Online)
31	1873720906	Manisha Bharti	Internshala (Online)
32	1773720027	Mithlesh Kumar	Internshala (Online)
33	1773720028	Mohammad Faisal Khan	Internshala (Online)
34	1773720029	Mohit Kumar	Internshala (Online)
35	1773720030	Pankaj Kumar Mahaur	ICT Academy, IIT Kanpur
36	1873720907	Parikshit Saroj	Internshala (Online)
37	1773720031	Prakhar Singh	Internshala (Online)
38	1873720908	Rahul Kumar	Internshala (Online)
39	1873720909	Rahul Kumar	Internshala (Online)
40	1873720909	Rahul Kummar	Internshala (Online)
41	1773720033	Raj Vaibhav	Internshala (Online)
42	1773720034	Rajarshi Kumar Gaurav	Internshala (Online)
43	1773720035	Rajarshi Singh	Internshala (Online)
44	1773720036	Rajverdhan Verma	Internshala (Online)
45	1873720910	Renu Singh	Internshala (Online)
46	1773720037	Rishi Pal	Internshala (Online)
47	1673720042	Robin Kumar	Internshala (Online)
48	1773720038	Rohit Singh	Internshala (Online)
49	1773720039	Samant Srivastava	Internshala (Online)
50	1773720040	Saurabh Kumar	Internshala (Online)

51	1773720041	Shailendra Singh	Internshala (Online)
52	1773720042	Shalini Keshri	NIELIT, Lucknow
53	1773720043	Shreya Chaudhary	Internshala (Online)
54	1873720911	Shubham Kumar Dwivedi	Internshala (Online)
55	1773720044	Shubham Singh Chauhan	Internshala (Online)
56	1773720044	Shubham Singh Chauhan	Internshala (Online)
57	1773720045	Simpi Gupta	Internshala (Online)
58	1873720912	Sudheer Kumar Maury	Internshala (Online)
59	1773720046	Sumit Kumar Singh	Internshala (Online)
60	1773720046	Sumit Kumar Singh	Internshala (Online)
61	1773720046	Sumit Kumar Singh	Internshala (Online)
62	1773720048	Surya Prakash Dinkar	Internshala (Online)
63	1773720049	Swatantra Kumar Azaad	Internshala (Online)
64	1773720050	Tarun Goel	Internshala (Online)
65	1773720051	Utkarsh Pratap	Internshala (Online)
66	1773720052	Vartika Dubey	Internshala (Online)
67	1773720053	Vidhu Manwal	Internshala (Online)
68	1773720054	Vikas Chaudhary	Internshala (Online)
69	1773720055	Vikas Kumar	Internshala (Online)
70	1773720056	Vikas Tiwari	Internshala (Online)
71	1773720057	Vinod Kumar Verma	Reliance communications Ltd., Lucknow
72	1773720058	Vishal	Internshala (Online)
73	1773720059	Vishwambar Singh	Internshala (Online)
74	1773720060	Vivek Kumar	NIELIT, Lucknow
75	1773720061	Yogesh Kumar	Internshala (Online)

Table 2.6 (b): Industry interactions/training for minimum 1-month duration in session 2019-20

S. No.	Reg. No.	Student Name	Training Place
1.	1673720001	Aakash Gangwar	NTPC, Tanda (UP)
2.	1673720002	Abhijeet Singh	Railway Electrification Dept. CORE, (Allahabad)
3.	1673720003	Abhinav Kandu	NTPC, Tanda (UP)
4.	1673720004	Abhishek Kumar	NTPC, Tanda (UP)
5.	1673720005	Abhishek Kumar	NTPC, Tanda (UP)
6.	1673720006	Abhishek Kumar Priyada	Central Engineering Workshop at BPCL, Mumbai
7.	1673720007	Abhishek Kumar Singh	Uttar Pradesh Power Corporation Limited, Ambedkar Nagar (UP)
8.	1673720008	Abhishek Pandey	Diesel Traction Training Centre N.E.R, Gonda (UP)
9.	1673720009	Adarsh Kumar	MATLAB and its Application in Engineering Internship at REC

			Ambedkar Nagar
10.	1673720010	Adity Ratan	UPPCL, Ambedkar Nagar (UP)
11.	1673720011	Alok Kumar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
12.	1673720012	Alok Paswan	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
13.	1673720013	Aman Singh	NTPC, Tanda (UP)
14.	1673720014	Amandeep Singh	NTPC, Tanda (UP)
15.	1673720015	Aryan Singh	NTPC, Tanda (UP)
16.	1673720016	Asheesh Rajbhar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
17.	1673720017	Ashish Kumar Saroj	UPPCL, Ambedkar Nagar (UP)
18.	1673720018	Ashish Narayan	Parichha Thermal Power Station, Jhansi (UP)
19.	1673720019	Ashwin Kumar Yadav	Diesel Shed, Gonda (UP)
20.	1673720020	Deepak Kumar Kannaujiy	UPPCL, Ambedkar Nagar (UP)
21.	1673720021	Dinesh Kumar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
22.	1673720022	Himanshu Sagar	NTPC, Dadri (UP)
23.	1673720023	Kapil Kumar	UPPCL, Ambedkar Nagar (UP)
24.	1673720024	Km Renu	NTPC, Tanda (UP)
25.	1673720025	Krishan Pal Singh	NTPC, Tanda (UP)
26.	1673720026	Kumari Anjali Singh	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
27.	1673720027	Kumari Savita	NTPC, Tanda (UP)
28.	1673720028	Lalit Gond	Diesel Traction Training Centre N.E.R Gonda (UP)
29.	1673720029	Maneesh Kumar Gupta	NTPC, Tanda (UP)
30.	1673720030	Manish Kumar Bharati	Diesel Locomotive Works, Varanasi
31.	1673720031	Manoj Kumar	NTPC, Tanda (UP)
32.	1673720033	Mukul Dev	BHEL, Jhansi (UP)
33.	1673720034	Neeraj Kumar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
34.	1673720035	Pankaj Gangwar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
35.	1673720036	Pawan Kumar Bharati	NTPC, Tanda (UP)
36.	1673720037	Prashant Kumar Bandhu	NTPC, Tanda (UP)
37.	1673720038	Priti Maurya	MATLAB and its Application in

			Engineering Internship at REC Ambedkar Nagar
38.	1673720039	Pushpendra Singh	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
39.	1673720040	Ravi Shankar Gautam	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
40.	1673720041	Ritik Rajput	NTPC, Tanda (UP)
41.	1673720043	Robin Singh	North Central Railways (Agra)
42.	1673720044	Sanoj Kumar	NTPC, Tanda (UP)
43.	1673720045	Sarthak Gupta	NTPC, Tanda (UP)
44.	1673720046	Satish Kumar	NTPC, Tanda (UP)
45.	1673720047	Saurabh Kumar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
46.	1673720048	Shalini Patel	NTPC, Tanda (UP)
47.	1673720049	Shivam Gautam	Substation Allahabad
48.	1673720050	Shivangi Verma	NTPC, Tanda (UP)
49.	1673720051	Shivraj Vishwakarma	NTPC, Tanda (UP)
50.	1673720052	Simran Yadav	NTPC, Tanda (UP)
51.	1673720053	Somya	Substation Gomtinagar, Lucknow
52.	1673720054	Sunil Yadav	NTPC, Tanda (UP)
53.	1673720055	Sweta Kumari	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
54.	1673720056	Vijay Kumar	NTPC, Tanda (UP)
55.	1673720058	Vinit Kumar	MATLAB and its Application in Engineering Internship at REC Ambedkar Nagar
56.	1573720035	Preeti Gautam	Sub-station Division, Panki, Kanpur
57.	1773720901	Ankit Kumar Maurya	Substation Kasara, Mau
58.	1773720902	Deeksha Singh	Substation, Varanasi
59.	1773720903	Deepak Kumar	NTPC, Tanda (UP)
60.	1773720904	Dheeraj Dhirendra Singh Yadav	Substation, Naini Complex (Prayagraj)
61.	1773720905	Govind	Substation, Akbarpur (UP)
62.	1773720906	Harendra Pratap Aditya	Substation Gidahi, Basti (UP)
63.	1773720907	Ishwar Chand	Substation, Akbarpur (UP)
64.	1773720908	Km Kajal Prasad	Cetpa Infotech Pvt. Ltd., Noida
65.	1773720909	Km Pusaplata	Substation Andhaun, Ghazipur
66.	1773720910	Mithlesh Kumar	Substation Hafizpur, Azamgarh
67.	1773720911	Vivek Bharti	Obra Thermal Power Plant, Sonbhadra
68.	1673700004	Akash Deep Arya	NTPC, Tanda (UP)

Table 2.6 (c): Industry interactions/training for minimum 1-month duration in session 2018-19

S. No.	Reg. No.	Student Name	Training Place
1.	1573720016	Janmejai Tiwari	UPPCL, Jaunpur
2.	1573720037	Rajat Singh	RDSO, Lucknow
3.	1573720020	Kisan Kumar Jaiswal	NTPC, Tanda (UP)
4.	1573720011	Ankit Kumar Singh	REC, Ambedkar Nagar
5.	1673720909	Rinkle Singh	220kV Electrical Transmission Sub Division, Sikandrara, Hathras
6.	1673720903	Deepak Kumar Kannaujiya	NTPC, Tanda (UP)
7.	1573720024	Manjeet Vishwakarma	NTPC, Tanda (UP)
8.	1673720910	Shamsullaqa	NTPC, Tanda (UP)
9.	1573720002	Abhishek Rai	MNIT, Jaipur
10.	1573720048	Utkarsh Kanth	MNIT, Jaipur
11.	1573720009	Anand Kumar Gupta	MNIT, Jaipur
12.	1573720019	Khushiram	NTPC, Tanda (UP)
13.	1573720033	Pawan Kumar	NTPC, Tanda (UP)
14.	167379211	Shatrughn	NTPC, Tanda (UP)
15.	1573720044	Shilpa Singh	Gandhi park substation div -1 33/11kv, Ghaziabad (UP)
16.	1573720010	Anjali	Madhyanchal Vidyut Vitran Nigam Limited
17.	1673720904	Dheeraj Mishra	UPPTCL Pilipokhar hatras road Agra
18.	1573720027	Mohit Kumar	MNIT, Jaipur
19.	1573720001	Abhinav Kumar Arya	UPPCL,Bhelupur Upkendra
20.	1573720037	Rajat Singh	RDSO, Lucknow
21.	1573720003	Ajeet Kumar Sonkar	REC, Ambedkar Nagar
22.	1573720013	Awinash Kumar	REC, Ambedkar Nagar
23.	1573720021	Kishan Kumar	UPPCL, Bhelupur upkendra, Varanasi
24.	1573720039	Rishikant Barman	Summer internship, IIT BHU, Varanasi
25.	1573720029	Nagesh Kumar	MNIT, Jaipur (Rajasthan)
26.	1573720023	Madhu Shukla	NTPC, Tanda (UP)
27.	1573720031	Pankaj Kumar Saroj	UPPCL-Substation, Jaunpur (UP)
28.	1573720028	Mukteswar Lal	REC, Ambedkar Nagar
29.	1573720036	Rahul Kumar	132 KV Substation, Ambedkar Nagar
30.	1673720905	Gulam Ali Asgar	Mechanical workshop, North Eastern

			Railway, Gorakhpur
31.	1573720025	Manoj Kumar Verma	DLW, Varanasi (UP)
32.	1573720049	Sadhana Priyadarshi	UPPCL, Azamgarh
33.	1573720017	Kavita Singh	BHEL Anpara , Sonbhadra
34.	1573720030	Neeraj Baranwal	Power grid substation, Rae Bareli (UP)
35.	1573720026	Mohammad Aaub Khan	REC, Ambedkar Nagar
36.	1573720046	Shivam Maurya	NTPC, Tanda (UP)
37.	1573720005	Akash Yadav	REC Ambedkar Nagar
38.	1573720008	Amit Kumar Patel	NTPC, Tanda (UP)

Outcome/ Impact on Students: Industrial exposure with practical/working knowledge.

Table 2.7: MOUs of College with different Industries

S. No.	Industry Name	MOU Date
1.	Pride Engineers, Lucknow	19th February, 2019
2.	Everest Industries, Prayagraj	04th November, 2019
3.	ACME Digitek Solutions Pvt. Ltd., Lucknow	21st January, 2019
4.	Accurate Industrial Controls Pvt. Ltd., Pune	01st September, 2019
5.	Goyal Computers, Lucknow	19th February, 2019
6.	Mohd. Sarwar & Sons, Tanda, Ambedkar Nagar	25th January, 2019
7.	Haji M. Sarwar & Sons, Tanda, Ambedkar Nagar	25th January, 2019
8.	OORJAgram India Pvt. Ltd, Greater Noida	02nd August, 2021

We are in process to establish few high end labs in collaboration with industrial organizations of repute.

CRITERION 3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120

3. COURSE OUTCOMES AND PROGRAM OUTCOMES (120)

3.1. Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)

3.1.1 Course Outcomes (COs) (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked)- (05)

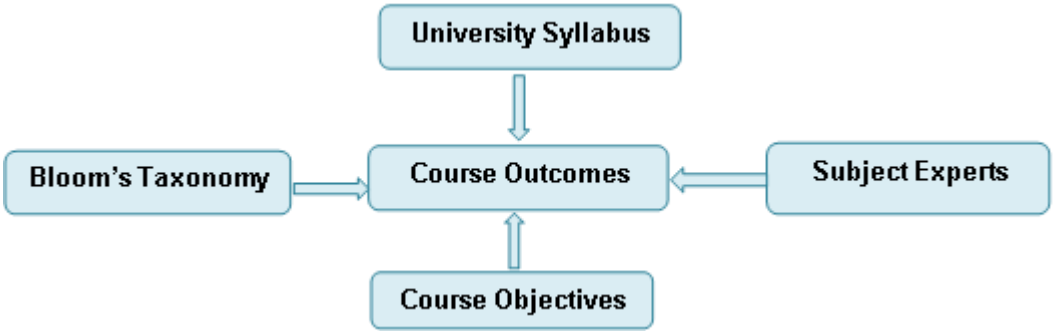


Fig. 3.1.1 Course Outcome Definition Process

Department of Electric al Engineering follows the courses as per the evaluation scheme and syllabus of the university. Each course has four to six course outcomes provided by university or designed by subject faculties under the consultation with Program Assessment Committee. CO's are aligned with PO and PSO's. The CO's of six courses, one from each semester, excluding 1st year are given below:

Session: 2020-21

Course Name: Electrical Measurements & Instrumentation
Semester: 3

Course Outcomes (COs):

KEE302.1	Evaluate errors in measurement as well as identify and use different types of instruments for the measurement of voltage, current, power and energy.
KEE302.2	Display the knowledge of measurement of electrical quantities resistance, inductance and capacitance with the help of bridges.

KEE302.3	Demonstrate the working of instrument transformers as well as calculate the errors in current and potential transformers
KEE302.4	Manifest the working of electronic instruments like voltmeter, multi-meter, frequency meter and CRO.
KEE302.5	Display the knowledge of transducers, their classifications and their applications for the measurement of physical quantities like motion, force, pressure, temperature, flow and liquid level.

Course Name: Electrical Machine-I
Semester: 4

Course Outcomes (COs):

KEE402.1	Analyze the various principle & concept involved in Electromechanical Energy conversion.
KEE402.2	Demonstrate the constructional details of DC machines as well as transformers, and principle of operation of brushless DC motor, Stepper and DC Servo motors.
KEE402.3	Evaluate the performance and characteristics of DC Machine as motor as well as generator.
KEE402.4	Evaluate the performance of transformers, individually and in parallel operation.
KEE402.5	Demonstrate and perform various connections of three phase transformers.

Course Name: Electrical Machines -II
Semester: 5

Course Outcomes (COs):

KEE503.1	Demonstrate the constructional details and principle of operation of three phase Induction and Synchronous Machine
KEE503.2	Analyze the performance of the three phase Induction and Synchronous Machine using the phasor diagrams and equivalent circuits.
KEE503.3	Select appropriate three phase AC machine for any application and appraise its significance.
KEE503.4	Start and observe the various characteristics of three phase Induction and Synchronous Machine.

KEE503.5	Explain the principle of operation and performance of Single-Phase Induction & Universal Motor.

Course Name: Special Electrical Machines
Semester: 6

Course Outcomes (COs):

REE061.1	Describe the working principle, constructional features of different types of electrical machines including the fractional kilowatt machines.
REE061.2	Analyze torque-speed characteristics of different electrical machines and interpret their performance and identify the suitable machine for an operation.
REE061.3	Study different types of control techniques for a machine and identify the best control strategy based upon different constraints.
REE061.4	Illustrate the use of steeper, BLDCs, SRM, and other special machines in the area of the various industrial and domestic as well as commercial applications of various fractional kilowatt machines.

Course Name: Electrical Drives
Semester: 7

Course Outcomes (COs):

REE701.1	Understand the basic concept of electric drive
REE701.2	Understand the dynamics of electric drive
REE701.3	Solve and analyze the operation of starting, braking and their dynamics
REE701.4	Application of power electronic controlled converters to DC and AC Drives
REE701.5	Analyze and design of power electronic controlled converters to special electric drives

Introduction to Power Quality & FACTS (REE-081)
Semester: 8

Course Outcomes (COs):

REE081.1	Understand the terms and definitions of power quality disturbances, and their causes, detrimental effects and solutions.
REE081.2	Determined the causes and behavior of voltage sag and their solutions at end user level
REE081.3	Determined the sources of Electrical Transients over voltages and switching transients and devices for over voltage protection
REE081.4	Understand and apply the terms and definitions of FACTs Controllers and use of them for power quality Improvement
REE081.5	Determined and analyze the various causes of harmonics, effects of harmonics and its Mitigation techniques

Session: 2019-20

Course Name: Electrical Measurements & Instrumentation
Semester: 3

Course Outcomes (COs):

KEE302.1	Evaluate errors in measurement as well as identify and use different types of instruments for the measurement of voltage, current, power and energy.
KEE302.2	Display the knowledge of measurement of electrical quantities resistance, inductance and capacitance with the help of bridges.
KEE302.3	Demonstrate the working of instrument transformers as well as calculate the errors in current and potential transformers
KEE302.4	Manifest the working of electronic instruments like voltmeter, multi-meter, frequency meter and CRO.
KEE302.5	Display the knowledge of transducers, their classifications and their applications for the measurement of physical quantities like motion, force, pressure, temperature, flow and liquid level.

Course Name: Electrical machine -I
Semester: 4

Course Outcomes (COs):

KEE402.1	Analyze the various principles & concepts involved in Electromechanical Energy Conversion.
KEE402.2	Demonstrate the constructional details of DC machines as well as transformers, and principle of operation of brushless DC motor, Stepper and DC Servo motors.
KEE402.3	Evaluate the performance and characteristics of DC Machine as motor and as well as generator.
KEE402.4	Evaluate the performance of transformers, individually and in parallel operation.
KEE402.5	Demonstrate and perform various connections of three phase transformers.

Course Name: Electrical machine -II
Semester: 5

Course Outcomes (COs):

REE501.1	Identify different types of machine on the basis of constructional details and demonstrate the principle of operation of AC machines.
REE501.2	Analyze the performance of the Asynchronous and Synchronous Machines using the phasor diagrams and equivalent circuits.
REE501.3	Compute the voltage regulation and efficiency by performing tests on machines.
REE501.4	Identify the suitable AC machine for different applications and asses its significance.
REE501.5	Demonstrate the principle of operation and performance of special machines used in real time applications.

Course Name: Power System Analysis
Semester: 6

Course Outcomes (COs):

REE603.1	Ability to understand working, characteristics & applications of Special Electrical Machines (Universal Motor, AC series motor, Hysteresis Motors).
REE603.2	Ability to solve theoretical & numerical problems related with three phase AC Machines (Generator & Motor).
REE603.3	Analysis of some stepper as well Printed Circuit Board motors.
REE603.4	Ability to understand construction, principle of operation, control and performance of permanent magnet brushless D.C. motors.
REE603.5	Ability to solve theoretical & numerical problems related with single and two-phase AC Machines

Course Name: Electric Drives
Semester: 7

Course Outcomes (COs):

REE701.1	Understand the basic concept of electric drive
REE701.2	Understand the dynamics of electric drive
REE701.3	Solve and analyze the operation of starting and braking
REE701.4	Application of power electronic controlled converters to DC and AC Drives
REE701.5	Analyze and design of power electronic controlled converters to special electric drives

Course Name: Renewable Energy Resources
Semester: 8

Course Outcomes (COs):

ROE086.1	Differentiate and compare different renewable and non-renewable energy resources and also able to showcase his knowledge related to solar photovoltaic applications.
ROE086.2	Demonstrate his knowledge in the area of solar thermal energy including its applications viz solar thermal power plants, solar heating, solar cooling and also able to evaluate the performance of solar flat plate collectors.
ROE086.3	Explain the concept of Geo-thermal energy, Magneto-Hydrodynamics. Fuel Cells, their performance and limitations.
ROE086.4	Demonstrate his knowledge in the area of thermo-electric, thermionic energy conversion and wind energy.
ROE086.5	Elaborate the concept of biomass, ocean thermal energy conversion, wave energy, tidal energy and their principle of operation, performance and limitations.

Session: 2018-19

Course Name: Electrical Measurements & Instrumentations
Semester: 3

Course Outcomes (COs):

REE302.1	Explain the measurement system and analyse the measurement errors
REE302.2	Demonstrate the operation of different AC and DC bridges and its applications
REE302.3	Describe the operation and the applications of instrument transformers
REE302.4	Interpret the operation of electronics measurements devices particularly, digital counter, frequency meter, voltmeter, multimeter and storage oscilloscope etc.
REE302.5	Select the transducers for measurement and identify data acquisition systems.

Course Name: Electrical machine -I
Semester: 4

Course Outcomes (COs):

REE402.1	Analyze the various principles & concepts involved in Electromechanical Energy Conversion.
REE402.2	Demonstrate the constructional details of DC machines as well as transformers, and principle of operation of brushless DC motor, Stepper and DC Servo motors.
REE402.3	Evaluate the performance and characteristics of DC Machine as motor and as well as generator.
REE402.4	Evaluate the performance of transformers, individually and in parallel operation.
REE402.5	Demonstrate and perform various connections of three phase transformers.

Course Name: Electrical machine -II
Semester: 5

Course Outcomes (COs):

REE501.1	Identify different types of machine on the basis of constructional details and demonstrate the principle of operation of AC machines.
REE501.2	Analyze the performance of the Asynchronous and Synchronous Machines using the phasor diagrams and equivalent circuits.
REE501.3	Compute the voltage regulation and efficiency by performing tests on machines.
REE501.4	Identify the suitable AC machine for different applications and asses its significance.
REE501.5	Demonstrate the principle of operation and performance of special machines used in real time applications.

Course Name: Power Electronics
Semester: 6

Course Outcomes (COs):

REE601.1	Demonstrate the characteristics as well as the operation of BJT, MOSFET, IGBT, SCR, TRIAC and GTO and identify their use in the power switching applications.
REE601.2	Comprehend the non-isolated DC-DC converter and apply their use in different Power Electronics applications.
REE601.3	Analyse the phase-controlled rectifiers and evaluate their performance parameters
REE601.4	Apprehend the working of single-phase ac voltage controllers, cyclo-converters and their various applications
REE601.5	Explain the single-phase and three-phase inverter differential between CSI and VSI and apply PWM for harmonic reduction.

Course Name: Electric Drives
Semester: 7

Course Outcomes (COs):

NEE701.1	Understand the basic concept of electric drive
NEE701.2	Understand the dynamics of electric drive
NEE701.3	Solve and analyze the operation of starting and braking
NEE701.4	Application of power electronic controlled converters to DC and AC Drives
NEE701.5	Analyze and design of power electronic controlled converters to special electric drives

Power Quality (NEE-042)
Semester: 8

Course Outcomes (COs):

REE081.1	Understand the terms and definitions of power quality disturbances, and their causes, detrimental effects and solutions.
REE081.2	Determined the causes and behavior of voltage sag and their solutions at end user level
REE081.3	Determined the sources of Electrical Transients over voltages and switching transients and devices for over voltage protection
REE081.4	Understand and apply the terms and definitions of FACTs Controllers and use of them for power quality Improvement
REE081.5	Determined and analyze the various causes of harmonics, effects of harmonics and its Mitigation techniques

3.1.2 CO-PO-PSO matrices of courses selected in 3.1.1 (05)

Session: 2020-21

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE302.1	3	2	1	1					1		1	2	2	3	2
KEE302.2	3	2	1	1					1			2	2	3	2
KEE302.3	3	2	2	1					1	1	1	2	3	3	2
KEE302.4	3	1	1	1					1	1	1	2	2	3	2
KEE302.5	3	2	1	1					1	1	1	2	2	3	2
KEE302	3	1.8	1.2	1					1	1	1	2	2.2	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE402.1	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.2	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.3	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.4	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.5	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE503.1	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
KEE503.2	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
KEE503.3	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
KEE503.4	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
KEE503.5	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
KEE503	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE601.1	3	2	1	1					1		1	2	2	3	2
KEE601.2	3	3	1	1					1		1	2	2	3	2
KEE601.3	3	2	2	1					1		1	2	2	3	2
KEE601.4	3	2	1	1		1			1		1	2	2	3	2
KEE601	3	2.25	1.25	1		1			1		1	2	2	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE701.1	3	3	3	2	1		1		1		1	2	2	3	2
KEE701.2	3	3	3	2	1		1		1		1	2	2	3	2
KEE701.3	3	3	3	2	3	2	1	1	1		1	3	2	3	3
KEE701.4	3	3	2	2	1	2	1	1	1	1	2	2	2	3	2
KEE701.5	3	3	3	2	1	3	2	1	1		2	3	2	3	3
KEE701	3	3	2.8	2	1.4	1.4	1.2	0.6	1	1	1.4	2.4	2	3	2.4

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE081.1	3	3	3	2	1		1		1		1	2	3	2	2
KEE081.2	3	3	3	2	1		1		1		1	2	3	2	2
KEE081.3	3	2	3	2	3	2	1	1	1		1	3	3	3	3
KEE081.4	3	3	2	2	1	2	1	1	1		2	2	3	3	2
KEE081.5	3	3	3	2	1	3	2	1	1		2	3	3	3	3
KEE081	3	2.8	2.8	2	1.4	1.4	1.2	0.6	1		1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

Session: 2019-20

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE302.1	3	1	1	1	1	1		3	1	2	1	2	3	3	3
KEE302.2	3	2	2	2		1		1	1	1	1	2	1	3	3
KEE302.3	3	2	3	2			1	2	2	2	2	3	3	2	3
KEE302.4	3		2	3	1	2		3	1	1	1	3	1	3	3
KEE302.5	3	2	2	3	1	1	2	2	2	2	2	2	2	2	3
KEE302	3	1.75	2	2.2	1	1.25	1.5	2.2	1.4	1.6	1.4	2.4	2	2.6	3

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE402.1	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.2	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.3	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.4	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402.5	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2
KEE402	3	3	3	2	3	2	1	1	2	2	2	3	3	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE501.1	3	1	2	1		2							2	3	1
KEE501.2	3	3	1	1	1	1					2		2	3	1
KEE501.3	3	3		3	2	1							2	3	1
KEE501.4	3	1	1	3	1	2	1		1	1		1	2	3	1
KEE501.5	3	2	1	2	1	2	1	1	1		2	2	2	3	2
KEE501	3	3	1.25	2	1.25	1.6	1	1	1	1	2	1.5	2	3	1.2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE603.1	2	1		2	3							2	3		
REE603.2	3	3		1	2		2					2	3		
REE603.3	3	2		2	2		3					2	3		
REE603.4	3	3		2	2		3					2	3		
REE603.5	3	3		1	3		2					2	3		
REE603	2.8	2.4		1.6	2.4		2.5					2.0	3.0		

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE701.1	3	3	3	2	1		1	-	1		1	2	3	2	2
REE701.2	3	3	3	2	1		1	-	1		1	2	3	2	2
REE701.3	3	2	3	2	3	2	1	1	1		1	3	3	3	3
REE701.4	3	3	2	2	1	2	1	1	1		2	2	3	3	2
REE701.5	3	3	3	2	1	3	2	1	1		2	3	3	3	3
REE701	3	2.8	2.8	2	1.4	2.3	1.2	1	1		1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
ROE086.1	3	3	3	2	1		1		1		1	2	3	2	2
ROE086.2	3	3	3	2	1		1		1		1	2	3	2	2
ROE086.3	3	2	3	2	3	2	1	1	1		1	3	3	3	3
ROE086.4	3	3	2	2	1	2	1	1	1		2	2	3	3	2
ROE086.5	3	3	3	2	1	3	2	1	1		2	3	3	3	3
ROE086	3	2.8	2.8	2	1.4	2.3	1.2	1	1		1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

Session: 2018-19

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE302.1	3	2	1	1					1		1	2	2	3	2
KEE302.2	3	2	1	1					1		1	2	**2**	3	2
KEE302.3	3	2	2	1					1		1	2	3	3	2
KEE302.4	3	1	1	1					1	1	1	2	2	3	2
KEE302.5	3	2	1	1					1	1	1	2	2	3	2
KEE302	3	1.8	1.2	1					1	1	1	2	2.2	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE402.1	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.2	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.3	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.4	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402.5	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2
KEE402	3	3	3	3	1	1	1	2	2	3	3	3	3	3	2

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE501.1	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
REE501.2	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
REE501.3	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
REE501.4	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
REE501.5	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2
REE501	3	3	3	3	1	2	1	2	2	2	2	3	3	3	2

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE601.1	2	1	3	2									1	3	
REE601.2	1	2	3	3				1				1	1	3	
REE601.3	1	1	3	2	1			1		1		1	1	3	
REE601.4	1	1	3	3	1		1		1			2	1	3	
REE601.5	1	2	2	3		3	2		1		1	2	1	3	
REE601	1.6	1.4	2.8	2.6	1	3	1.5	1	1	1	1	1.5	1	3	

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
REE701.1	3	3	3	2	1		1		1		1	2	3	2	2
REE701.2	3	3	3	2	1		1		1		1	2	3	2	2
REE701.3	3	2	3	2	3	2	1	1	1		1	3	3	3	3
REE701.4	3	3	2	2	1	2	1	1	1		2	2	3	3	2
REE701.5	3	3	3	2	1	3	2	1	1		2	3	3	3	3
REE 701	3	2.8	2.8	2	1.4	2.3	1.2	1	1		1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KEE081.1	3	3	3	2	1		1		1		1	2	3	2	2
KEE081.2	3	3	3	2	1		1		1		1	2	3	2	2
KEE081.3	3	2	3	2	3	2	1	1	1		1	3	3	3	3
KEE081.4	3	3	2	2	1	2	1	1	1		2	2	3	3	2
KEE081.5	3	3	3	2	1	3	2	1	1		2	3	3	3	3
KEE081	3	2.8	2.8	2	1.4	1.4	1.2	0.6	1		1.4	2.4	3	2.6	2.4

1-Low; 2- Medium; 3- High

3.1.3 Program level Course-PO matrix of all courses including first year courses (10)

Table 3.1 (a): Mapping (average scores) of courses with POs

Session: 2020-21

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
KAS101	2.75	2.25	2.25	1.50	2.25	2.00	1.00					
KAS103	1.60	1.60	2.00	2.80								
KEE101	3.00	2.60	2.60	2.00	1.00		1.20		1.00	1.00		1.00
KCS101	3.00	2.60	2.60	2.20	1.33	2.20	2.00	2.20	2.00	2.00	2.00	2.60
KMC101	1.60	2.00	2.00	1.80	1.00						1.60	1.00
KAS202	3.00	3.00	3.00	3.00	2.25	1.00	1.75	1.00	0.00	1.00	1.00	1.75
KAS203	2.40	2.20	3.00	1.80								
KEC201	3.00	2.60	2.60	2.00	1.00		1.20		1.00	1.00		1.00
KMC201	1.50	1.83	1.25	1.50	1.25	1.00	2.00	1.00	1.50	1.00	1.00	1.00
KMC202	2.00	2.40	2.40	1.60	1.00	0.60					2.20	2.40
KOE038	3.00	3.00	2.75	2.00	1.50	1.50			1.25	2.00	1.00	2.25
KAS301	2.60	3.00	3.00	2.20	2.20	0.80	0.80	0.80	0.20	2.00	2.00	2.00
KEE301	3.00	2.60	2.60	2.00	1.00		1.20		1.00	1.00		1.00
KEE302	3.00	1.80	1.20	1.00					1.00	1.00	1.00	2.00
KEE303	3.00	3.00	2.00	2.00	1.00	1.00			1.00	1.00	1.00	1.00
KAS402	2.29	2.12	1.95	1.92			2.16					
KVA401	3.00	2.60	2.60	2.00	1.00		1.20		1.00	1.00		1.00
KEE401	3.00	3.00	2.60	2.40	2.00	0.67	0.00	0.00	0.00	0.00	1.00	2.00

KEE402	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00
KEE403	3.00	2.00	1.00	1.00	1.00							3.00
KEE501	1.60	2.20		2.25	2.00		2.00	1.00	1.00		1.80	3.00
KEE502	3.00	3.00	3.00	3.00	2.00		1.00			1.00		1.00
KEE503	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00
KEE052	3.00	2.00	2.00	1.40	1.00				1.00	1.00	1.00	1.00
KEE058	3.00	2.00	2.00	1.40	1.00				1.00	1.00	1.00	1.00
KNC501	2.00					1.50	2.50	2.83	2.00	1.00	1.00	2.17
KEE601	2.80	2.80	1.00	2.60	2.00	1.00	1.00			1.00		1.00
KEE602	3.00	1.20	2.00	1.40	1.00				1.00	1.00	1.00	1.00
KEE603	3.00	2.60	2.80	2.00	1.40	2.33	1.20	1.00	1.00		1.40	2.40
KEE061	3.00	2.25	1.25	1.00		1.00			1.00		1.00	2.00
KOE060				1.00		2.00	1.00	2.00	3.00	1.00	3.00	2.00
KNC602	2.00					1.50	2.50	2.83	2.00	1.00	1.00	2.17
REE071	1.60	1.60	1.60	2.00	1.50	1.20	0.00					
REE072	3.00	3.00	1.20	2.00	1.00				1.00		1.00	2.00
REE078	3.00	3.00	3.00	3.00	1.00				1.00		1.00	1.00
REE701	3.00	3.00	2.80	2.00	1.40	2.33	1.20	1.00	1.00	1.00	1.40	2.40
REE702	1.50	3.00	2.40	2.00	2.50							1.20
ROE086	3.00	3.00	2.33	2.00	1.00	1.00	2.00	1.00	2.33	2.67		
REE081	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00		1.40	2.40
REE085	3.00	3.00	2.00	2.00	1.00	1.00			1.00	1.00	1.00	1.00

Mapping (average scores) of courses with PSOs

Courses	PSO1	PSO2	PSO3
KOE038	3.00	2.50	2.25
KAS301	0.40	0.40	2.00
KEE301	3.00	3.00	2.40
KEE302	2.20	3.00	2.00
KEE303	3.00	3.00	2.00
KVA401	3.00	3.00	2.40
KEE401	1.00	3.00	9.00
KEE402	3.00	3.00	2.00
KEE403	2.00	1.00	2.00
KEE501	3.00		
KEE502	1.00	1.80	3.00
KEE503	3.00	3.00	2.00
KEE052	3.00	3.00	2.40
KEE058	3.00	3.00	2.40
KNC501	1.00	1.17	
KEE601	2.00		
KEE602	3.00	3.00	2.40

KEE603	3.00	2.60	2.40
KEE061	2.00	3.00	2.00
KOE060	1.00	1.00	1.00
KNC602	1.00	1.17	
REE071	1.60	1.80	
REE072	3.00	3.00	1.00
REE078	3.00	3.00	2.00
REE701	2.00	3.00	2.40
REE702	2.00	1.00	1.00
ROE086	3.00		
REE081	2.00	3.00	2.40
REE085	3.00	3.00	2.00

Table 3.1 (b): Mapping (average scores) of courses with POs

Session: 2019-20

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
KAS101	2.75	2.25	2.25	1.50	2.25	2.00	1.00					
KEE101	3.00	2.60	2.60	2.00	1.00		1.20		1.00	1.00		1.00
KAS103	2.80	2.20	2.00	2.60	2.25							
KAS202	3.00	3.00	3.00	3.00	2.25	1.00	1.75	1.00	0.00	1.00	1.00	1.75
KAS203	2.80	2.20	2.00	2.00								
KCS201	3.00	2.60	2.60	2.20	1.33	2.20	2.00	2.20	2.00	2.00	2.00	2.60
KAS204	3.00	3.00	3.00	2.20	2.20	0.80	0.00	0.00	0.00		1.00	2.00
KOE038	3.00	3.00	2.75	2.00	1.50	1.50			1.25	2.00	1.00	2.25
KAS301	3.00	3.00	3.00	2.20	2.20	0.80	0.80	0.80	0.20	2.00	2.00	2.00
KEE301	3.00	2.00	2.40	2.20	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.40
KEE302	3.00	1.80	1.20	1.00					1.00	1.00	1.00	2.00
KEE303	3.00	3.00	2.00	2.00	1.00	1.00			1.00	1.00	1.00	1.00
KVE401						1.00	1.00	3.00	2.00	1.60	1.00	1.80
KAS402	2.09	1.97	1.69	1.87			2.06					
KEE401	3.00	3.00	2.60	2.40	2.00	0.67	0.00	0.00	0.00	0.00	1.00	2.00
KEE402	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00
KEE403	3.00	2.00	1.00	1.00	1.00							3.00
RAS501	2.00					1.20	2.40	2.60	2.00	1.00	1.00	2.20
RAS502	1.00	1.00	1.00	1.00	1.00	2.00	1.25	3.00	3.00	2.40	2.40	3.00
REE501	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00
REE502	1.20	2.60	-	2.20	2.00						1.80	3.00
REE503	2.60	1.80	2.20	3.00	2.40							1.80
REE051	3.00	3.00	2.00	2.00	1.00					1.00		1.00
RAS601	2.00					1.20	2.00	2.60	2.20	1.00	1.25	2.00
RUC601				1.00		1.00	1.00					

REE601	1.20	1.40	2.80	2.60	1.00	3.00	1.50	1.00	1.00	1.00	1.00	1.50
REE602	2.60	2.00	2.20	1.60	2.20	2.20	1.40			1.00	1.00	2.00
REE603	2.80	2.80	1.00	2.60	2.00	1.00	1.00			1.00		1.00
REE064	3.00	2.80	1.20	1.00					1.00		1.00	2.00
ROE071	2.80	2.80	2.20	2.40	2.20	1.00			1.00	1.00	1.00	1.00
REE072	3.00	3.00	1.20	2.00	1.00				1.00		1.00	2.00
REE078	3.00	3.00	3.00	3.00	1.00				1.00		1.00	1.00
REE701	3.00	3.00	2.80	2.00	1.40	2.33	1.20	1.00	1.00	1.00	1.40	2.40
REE702	1.50	3.00	2.40	2.00	2.50							1.20
ROE086	2.80	2.80	2.20	2.40	2.20	1.00			1.00	1.00	1.00	1.00
REE801	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00	#DIV/0!	1.40	2.40
REE805	2.80	2.80	2.20	2.40	2.20	1.00			1.00	1.00	1.00	1.00

Mapping (average scores) of courses with PSOs

Courses	PSO 1	PSO 2	PSO 3
KOE038	3.00	2.50	2.25
KAS301	0.40	0.40	2.00
KEE301	3.00	1.00	0.00
KEE302	2.20	3.00	2.00
KEE303	3.00	3.00	2.00
KVE401	1.00	1.00	1.00
KEE401	1.00	3.00	9.00
KEE402	3.00	3.00	2.00
KEE403	2.00	1.00	2.00
RAS501	1.00	1.20	1.00
RAS502	1.20	1.20	1.00
REE501	3.00	3.00	2.00
REE502	3.00		
REE503	2.00	2.60	
REE051	2.00	1.80	2.00
RAS601	1.00	1.20	1.00
RUC601	2.00	2.00	
REE601	1.00	3.00	
REE602	3.00	2.00	1.00
REE603	2.00		
REE064	2.00	3.00	2.00
ROE071	1.60	1.60	1.00
REE072	3.00	3.00	1.00
REE078	3.00	3.00	2.00
REE701	2.00	3.00	2.40
REE702	2.00	1.00	1.00

ROE086	1.60	1.60	1.00
REE801	2.00	3.00	2.40
REE805	1.60	1.60	1.00

Table 3.1 (c): Mapping (average scores) of courses with POs

Session 2018-19

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
KAS101	2.75	2.25	2.25	1.50	2.25	2.00	1.00					
KAS103	2.80	2.40	2.20	2.00	2.60							
KAS202	3.00	3.00	3.00	3.00	2.25	1.00	1.75	1.00	0.00	1.00	1.00	1.75
KAS203	2.80	2.40	2.20	2.00								
KCS201	3.00	2.60	2.60	2.00	1.00		1.20		1.00	1.00		1.00
ROE043	2.50	1.00	1.00	1.25	1.00	2.00	1.00		1.50			1.00
RAS302	1.20	1.00	1.00	2.00	1.40	2.60	3.00	2.20			1.00	2.00
REC309	3.00	3.00	3.00	2.20	2.20						2.00	2.00
REE301	2.60	2.60	2.60	2.80	2.60	1.00	1.00		1.00		1.00	1.00
REE302	3.00	1.80	1.20	1.00					1.00	1.00	1.00	2.00
REE303	3.00	2.80	1.80	1.80	1.60						0.80	3.00
RAS401	2.40	2.00	2.20	1.60	2.20	2.20	1.40				1.00	1.00
RVE401						1.00	1.00	3.00	2.00	1.60	1.00	1.80
REC402	3.00	2.00	2.40	2.20	1.00							1.40
REE401	2.60	1.80	2.20	3.00								2.00
REE402	3.00	3.00	3.00	3.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	3.00
REE405	2.80	2.00	1.00	1.00	1.00							3.00
RAS501	2.00					1.20	2.40	2.60	2.00	1.00	1.00	2.20
RAS502	2.80	2.80	2.20	2.40	2.20	1.00			1.00	1.00	1.00	1.00
REE501	2.60	1.80	2.20	3.00								2.00
REE502	1.20	2.60	-	2.20	2.00						1.80	3.00
REE503	3.00	3.00	3.00	3.00	2.00		1.00			1.00		1.00
REE052	3.00	2.00	2.00	1.40	1.00				1.00	1.00	1.00	1.00
RAS601	2.00					1.20	2.00	2.60	2.20	1.00	1.25	2.00
RUC601	2.67	1.67	1.50	1.00	3.00	1.67	1.00					
REE601	2.80	2.80	1.00	2.60	2.00	1.00	1.00			1.00		1.00
REE602	2.60	2.00	2.20	1.60	2.20	2.20	1.40			1.00	1.00	2.00
REE603	2.80	2.80	1.00	2.60	2.00	1.00	1.00			1.00		1.00
REE062	3.00	2.00	2.00	2.80	2.00	1.00			1.00	1.00	1.00	1.00
NOE073	3.00	3.00	1.00	1.00	1.00				1.00		1.00	1.00
NEE031	2.73	2.36	1.45	1.63	0.90	0.91					0.91	1.82
NEE701	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00		1.40	2.40
NEE702	2.60	2.00	2.00	1.75	1.60	1.25	1.40		1.00		1.00	1.60
NEC702 A	3.00	2.00	2.00	1.40	1.00				1.00	1.00	1.00	1.00

NOE081	2.80	2.80	2.20	2.40	2.20	1.00			1.00	1.00	1.00	1.00
NEE042	3.00	2.80	2.80	2.00	1.40	2.33	1.20	1.00	1.00	1.00	1.40	2.40
NEE801	2.60	2.60	2.60	2.80	2.60	1.00	1.00		1.00		1.00	1.00
NEE802	3.00	3.00	1.00	1.00	1.00				1.00		1.00	1.00

Mapping (average scores) of courses with PSOs

Courses	PSO 1	PSO 2	PSO 3
ROE043			
RAS302	0.50	0.50	2.00
REC309	0.40	0.40	2.00
REE301	1.40	1.40	2.00
REE302	2.00	3.00	2.00
REE303	1.00	0.80	2.40
RVE401	1.00	1.00	1.00
REC402	3.00	1.00	0.00
REE401	3.00	2.60	2.20
REE402	3.00	3.00	2.00
REE405	2.00	1.00	2.00
RAS501	1.00	1.20	1.00
RAS502	1.60	1.60	1.00
REE501	3.00	2.60	2.20
REE502	3.00		
REE503	1.00	1.80	3.00
REE052	3.00	3.00	2.40
RAS601	1.00	1.20	1.00
RUC601	2.20	2.40	
REE601	2.00	3.00	2.00
REE602	3.00	2.00	1.00
REE603	2.00		
REE062	1.00	1.00	1.00
NOE073	1.00	1.00	1.00
NEE031	2.73	1.64	0.91
NEE701	2.00	3.00	2.40
NEE702	2.00	2.00	1.00
NEC702A	3.00	3.00	2.40
NOE081	1.60	1.60	1.00
NEE042	3.00	2.60	2.40
NEE801	1.40	1.40	1.00
NEE802	1.00	1.00	1.00

3.2. Attainment of Course Outcomes (50)

3.2.1 Describe the assessment processes used to gather the data upon which the

evaluation of Course Outcome is based **(10)**

In the Outcome Based Education (OBE), assessment is done through one or more than one processes, carried out by the department, that identify, collect, and prepare data to evaluate the achievement of course outcomes (COs).

CO Assessment Process
The assessment processes and tools are used for showing
o Relevance of process and tools with theory subject. o For each subject four to six COs are designed and a remapped with Program Outcomes and Program Specific Outcomes. o Each question in sessional test is mapped with the COs. o Relevance of process and tools with practical. o For each subject five COs are designed and are mapped with Program Outcomes and Program Specific Outcomes. o Each experiment in lab is mapped with the COs.

Evaluation of Course Outcomes is based on two major components i.e. Internal Assessment & External Assessment.

- *External assessment*- Performance of student is recorded in university theory exams, laboratory exams and project evaluation.

- *Internal assessment*- Performance of student is recorded through internal assessment tests (class tests), class assignments and tutorials, laboratory assignments, seminars and project progress review and evaluation.

Details of academic components for internal assessment for attainment of course outcomes

Table 3.2: Internal Assessment processes for Course Outcome

Assessment Type	**Assessment Process**	**Description**
Internal Assessment	Sessional/class Tests & its analysis	It accounts for 60% of the total internal marks awarded to students.
	Unit- wise Assignments & its evaluations	Five assignments per subject are allocated during a semester. Each assignment is of 2 marks and a total of maximum 10 marks are included in the final internal evaluation, thus accounting for 20% of the total evaluation.
	Tutorial & quizzes	Important questions are covered in tutorial sessions & Tutorial sheets are prepared for each course as a part of course file. Short answer questions are given to students in quizzes. This helps us to understand the problem solving ability of students.

	Participation in various engineering events & student contests	General Proficiency (GP) marks are allocated for participation. Participation details are documented & marks criteria is decided by Dean student welfare through consultation.
	Class presentations	GP marks are allocated. Class presentations are done for each course.
	Project presentations	Students are required to give at least 2-3 presentations for final year project in front of faculty members & project supervisors. Major criteria for evaluation include completion of work, meeting with supervisor, originality of work, individual efforts etc. The evaluations are documented & final marks are based on the cumulative results. Final year project accounts for 200 marks in external & 100 marks in internal evaluation.
	Industrial training viva-voce & mini project	Students are required to present their mini-project developed during Industrial training in VIIth semester. They also submit a project report for the mini project.
	Lab Assignments & Viva Voce	Lab assignments are given during each lab session. Viva-Voce of is conducted twice a semester. Viva voce is based on parameters like completion of file, viva, attendance, experiment execution.

Assessment Process

We have defined the following criteria for defining the Attainment level of Course Outcomes Attainment of course outcome is defined at three levels. Target is taken as 60 % marks

I. Attainment **Level 1**: If less than 40% students scoring ≥ Target marks

II. Attainment **Level 2**: If 40-60% students scoring ≥ Target marks

III. Attainment **Level 3**: If greater than or equal to 60% students scoring ≥ Target marks

Internal Assessment
Attainment No: Less than 40% students scoring less than target marks. **Attainment Yes**: Greater than or equal to 60% students scoring equal to or greater than target marks.

External Assessment (End Semester Exams)
Attainment No: Less than 40% students scoring less than 60% as class average marks. **Attainment Yes**: Greater than or equal to 60% students scoring 60% as class average marks.

Total attainment for Course outcome is based on External & Internal Assessment as per the following rule:

Total Attainment: **30% of Internal Assessment + 70% of External Assessment**

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (40)

Table 3.2.2 (a): Attainment of Course Outcomes for 2020-21

Courses	CO 1	CO 2	CO 3	CO 4	CO 5
KOE038	2.75	2.75	2.75	2.75	2.75
KAS301	1.00	1.32	1.32	1.32	0.84
KEE301	2.81	2.81	2.82	2.74	2.82
KEE302	2.58	2.57	2.38	2.38	2.49
KEE303	2.74	2.74	2.77	2.70	2.77
KAS402	2.98	2.90	2.90	2.72	2.92
KVA401	2.97	2.97	2.97	2.97	2.97
KEE401	2.80	3.00	3.00	3.00	3.00
KEE402	3.00	2.91	2.31	2.99	2.99
KEE403	2.81	2.81	2.82	2.74	2.82
KEE501	2.86	2.79	2.75	2.76	2.64
KEE502	2.81	2.81	2.82	2.74	2.82
KEE503	3.00	2.97	2.36	2.87	2.85
KEE052	2.81	2.81	2.82	2.74	2.82
KEE058	2.81	2.81	2.82	2.74	2.82
KNC501	2.84	2.72	2.92	2.92	2.84
KEE601	2.81	2.81	2.82	2.74	2.82
KEE602	2.81	2.81	2.82	2.74	2.82
KEE603	2.80	2.80	2.81	2.74	2.83
KEE061	2.75	2.84	2.75	2.75	
KOE060	2.81	2.81	2.82		
KNC602	2.84	2.72	2.92	2.92	2.84
REE071	2.99	3.00	2.99	3.00	2.99
REE072	2.97	2.70	2.96	2.97	2.95
REE078	2.81	2.81	2.82	2.74	2.82
REE701	2.94	2.82	2.94	2.94	2.94
REE702	2.81	2.81	2.82	2.74	2.82
ROE086	2.98	2.98	2.98	2.97	2.97
REE081	2.99	2.93	3.00	2.99	2.99
REE085	2.81	2.81	2.82	2.74	2.82

Table 3.2.2 (b): Attainment of Course Outcomes for 2019-20

Courses	CO 1	CO 2	CO 3	CO 4	CO 5
KOE038	2.62	2.62	2.62	2.62	2.62
KAS301	1.62	1.62	1.62	1.62	1.14
KEE301	1.16	1.32	1.32	1.32	0.84

KEE302	2.25	2.21	2.17	2.23	2.70
KEE303	2.73	2.73	2.75	2.69	2.75
KVE401	2.73	2.73	2.75	2.69	2.75
KAS402	2.09	2.41	2.93	2.87	2.97
KEE401	1.72	1.88	1.88	1.88	1.40
KEE402	2.96	2.96	2.96	2.96	2.71
KEE403	2.80	2.80	2.82	2.74	2.81
RAS501	3.00	2.80	3.00	3.00	3.00
RAS502	2.81	2.81	2.82	2.74	2.82
REE501	2.73	2.79	2.78	2.60	2.82
REE502	2.66	2.82	2.76	2.84	2.81
REE503	2.7	2.78	2.85	2.78	2.87
REE051	2.81	2.81	2.82	2.74	2.82
RAS601	3.00	2.64	2.52	3.00	3.00
RUC601	2.97	2.97	2.97	2.96	2.97
REE601	2.98	2.95	3.00	3.00	3.00
REE602	2.89	2.99	2.95	3.00	3.00
REE603	2.81	2.81	2.82	2.74	2.82
REE064	2.45	2.54	2.94	2.84	2.94
ROE071	2.81	2.81	2.82	2.74	2.82
REE072	2.56	2.29	2.13	2.4	1.82
REE078	2.81	2.81	2.82	2.74	2.82
REE701	2.9	2.15	2.68	2.58	2.61
REE702	2.81	2.81	2.82	2.74	2.82
ROE086	2.81	2.81	2.82	2.74	2.82
REE081	2.99	2.55	2.99	2.99	2.65
REE085	2.8	2.8	2.83	2.72	2.81

Table 3.2.2 (c): Attainment of Course Outcomes for 2018-19

Courses	CO 1	CO 2	CO 3	CO 4	CO 5
ROE043	2.44	2.46	2.43	2.29	2.56
RAS302	1.40	1.40	1.88	1.88	1.88
REC309	0.84	0.84	1.32	1.32	1.32
REE301	2.91	291	2.93	2.91	2.93
REE302	2.73	2.29	2.68	2.63	2.58
REE303	0.30	2.78	2.62	2.58	2.54
RAS401	1.84	1.24	1.71	1.52	1.52
RVE401	2.76	2.76	2.81	2.76	2.81
REC402	0.30	0.30	0.90	0.90	0.90
REE401	2.87	2.85	2.87	2.84	2.87
REE402	2.82	2.53	2.72	2.70	2.61
REE405	2.42	2.38	2.91	2.27	2.39

RAS501	3.00	2.80	2.84	3.00	3.00
RAS502	2.76	2.76	2.81	2.76	2.81
REE501	2.73	2.86	2.82	2.87	2.80
REE502	2.84	2.94	2.92	2.93	2.93
REE503	2.81	2.81	2.82	2.74	2.82
REE052	2.76	2.76	2.81	2.76	2.81
RAS601	3.00	2.80	3.00	3.00	3.00
RUC601	2.87	2.87	2.90	2.85	2.90
REE601	2.59	2.59	2.67	2.55	2.67
REE602	2.67	2.81	2.59	2.71	2.69
REE603	2.81	2.81	2.82	2.74	2.82
REE062	2.76	2.76	2.79	2.74	2.79
NOE073	2.81	2.81	2.82	2.79	2.82
NEE031	2.70	2.72	2.75	2.73	2.73
NEE701	2.96	2.90	2.96	2.93	2.65
NEE702	2.89	2.89	2.89	2.89	2.87
NEC702A	2.75	2.75	2.76	2.75	2.76
NOE081	3.00	3.00	3.00	3.00	3.00
NEE042	2.97	2.93	2.94	2.96	2.86
NEE801	2.92	2.92	2.97	2.92	2.97
NEE802	2.93	2.93	2.95	2.93	2.95

3.3. Attainment of Program Outcomes and Program Specific Outcomes (50)

3.3.1 Describe assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)

Assessment tools are broadly classified into two categories i.e. **Direct Assessment & Indirect Assessment.** Total attainment for PO & PSO is calculated by considering **80% of direct assessment & 20% of indirect assessment.** Assessment tools are used as per given below:

Direct Assessment Methods		
S. No.	**Direct Assessment Tool**	**Method Description**
1	External End Semester Examination	Marks obtained in external end semester examination are the basis for external assessment to record the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs). Attainment level is calculated based on the attainment criteria decided at the departmental level. A Semester Examination is more focused on attainment of COs, POs and PSOs.
2	Sessional/class Tests	In each semester, internal sessional/class tests are conducted and students' performance is used to evaluate attainments.

3	Class presentations	Student presentations on the allotted topic are evaluated for each course.
4	Project presentations	Students are required to give at least 2-3 presentations for final year project in front of faculty members & project supervisors. Major criteria for evaluation include completion of work, meeting with supervisor, originality of work, individual efforts etc. The evaluations are documented & final marks are based on the cumulative results.
5	Industrial training viva-voce & mini project	Students are required to present their mini-project developed during Industrial training in VIIth semester. They also submit a project report for the mini project.
6	Lab Assignments & Viva Voce	Lab assignments are given during each lab session. Viva-Voce of is conducted twice a semester. Viva voce is based on parameters like completion of file, viva, attendance, experiment execution.

Indirect Assessment Methods		
S. No.	**Indirect Assessment Tool**	**Method Description**
1	Exit Survey	Collect feedback and suggestions about program satisfaction with respect to program outcomes, college extracurricular activities and facilities from the final year students.
2	Alumni Feedback	Collect feedback and suggestions about program satisfaction with respect to program outcomes, college extracurricular activities and facilities from the Alumni students.
3	Parent Feedback	Collect feedback and suggestions about program satisfaction with respect to program outcomes, college extracurricular activities and facilities from parents.
4	Employer Feedback	Collect feedback and information about the graduate's skills, capabilities and opportunities.

3.3.2. Provide results of evaluation of each PO & PSO (40)

Table 3.3.2 (a): PO & PSO attainment (2020-21)

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
KOE038	2.75	2.75	2.52	1.83	1.38				1.15	1.83		2.06	2.75	2.29	2.06
KAS301	0.73	0.70	0.70	0.68	0.68	0.70	0.90	0.90	0.30	0.70	0.70	0.70	0.60	0.90	0.70
KEE301	2.80	2.42	2.43	1.87	0.93		1.12		0.93	0.94		0.93	2.80	2.80	2.24
KEE302	2.51	1.51	1.00	0.84					0.84	0.82	0.83	1.68	1.83	2.51	1.68
KEE303	2.75	2.75	1.83	1.83	0.92	0.92			0.92	0.92	0.92	0.92	2.75	2.75	1.83

KAS402	2.36	2.16	1.97	1.97	0.00	0.00	2.21	0.00	0.00	0.00	0.00	0.00			
KVA401	2.97	2.58	2.58	1.98	0.99		1.19		0.99	0.99		0.99	2.97	2.97	2.38
KEE401	2.96	2.96	2.97	2.98	2.96	3.00	0.00	0.00	0.00	0.00	2.96	2.96	2.90	3.00	2.99
KEE402	2.84	2.84	2.84	2.84	0.95	0.95	0.95	1.89	1.89	1.89	1.89	2.84	2.84	2.84	1.89
KEE403	2.80	1.87	0.93	0.93	0.93					0.00		2.80	1.87	0.93	1.87
KEE501	1.48	2.01		2.05	1.83		1.89	0.95	0.95		1.65	2.76	2.76		
KEE502	2.80	2.80	2.80	2.80	1.87		0.93			0.93		0.93	0.93	1.68	2.80
KEE503	2.81	2.81	2.81	2.81	0.94	0.94	0.94	1.87	1.87	1.87	1.87	2.81	2.81	2.81	1.87
KEE052	2.80	1.87	1.87	1.30	0.93				0.93	0.93		0.93	2.80	2.80	2.24
KEE058	2.80	1.87	1.87	1.30	0.93				0.93	0.93	0.94	0.93	2.80	2.80	2.24
KNC501	1.97					1.48	2.46	2.79	1.97	0.98	0.98	2.13	0.98	1.15	
KEE601	2.61	2.61	0.93	2.43	1.87	0.93	0.93			0.93		0.93	1.87		
KEE602	2.80	1.12	1.87	1.30	0.93				0.94	0.94	0.94	0.93	2.80	2.80	2.24
KEE603	2.80	2.43	2.62	1.87	1.31	2.18	1.12	0.93	0.93		1.30	2.24	2.80	2.43	2.24
KEE061	2.77	2.08	1.15	0.92		0.92			0.92		0.92	1.85	1.85	2.77	1.85
KOE060				0.94		1.87	0.94	1.87	2.81	0.94	2.81	1.87	0.94	0.94	0.94
KNC602	1.97					1.48	2.46	2.79	1.97	0.98	0.98	2.13	0.98	1.15	
REE071	1.60	1.60	1.59	1.99									1.60	1.80	
REE072	2.92	2.92	1.17	1.95					0.97		0.97	1.95	2.92	2.92	0.97
REE078	2.80	2.80	2.80	2.80	0.93				0.93		0.93	0.93	2.80	2.80	1.87
REE701	2.91	2.91	2.72	1.94	1.36	2.29	1.17	0.98	0.97	0.98	1.36	2.34	1.94	2.91	2.34
REE702	1.13	2.80	2.24	1.86	2.33							1.12	1.87	0.93	0.93
ROE086	2.97	2.98	2.31	1.98					2.31	2.48			2.97		
REE081	2.98	2.78	2.78	1.99	1.39	2.33	1.19	1.00	0.99		1.39	2.38	1.99	2.98	2.38
REE085	2.80	2.80	1.87	1.87	0.93	0.93			0.93	0.93	0.93	0.93	2.80	2.80	1.87
Direct Attainme-nt	2.52	2.36	2.04	1.85	1.24	1.39	1.28	1.33	1.13	1.00	1.26	1.64	2.22	2.29	1.93
Indirect Attainme-nt	2.68	2.75	2.76	2.56	2.48	2.48	2.48	2.20	2.52	2.48	2.41	2.71	2.83	2.76	2.71
Overall Attainm-ent	2.57	2.48	2.26	2.06	1.61	1.72	1.64	1.59	1.55	1.44	1.61	1.96	2.40	2.43	2.16

Table 3.3.2 (b): PO & PSO attainment (2019-20)

Courses	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**	**PSO 1**	**PSO 2**	**PSO 3**
KOE038	2.62	2.62	2.40	1.74	1.31				1.09	1.74		1.96	2.62	2.18	1.96
KAS301	2.20	2.20	2.20	2.00	2.00	1.50	3.00	3.00	2.00	2.20	2.20	2.20	2.50	3.00	2.20
KEE301	0.74	0.68	0.75	0.74	0.74							0.79	0.74	0.74	
KEE302	2.42	1.45	0.97	0.81					0.81	0.88	0.85	1.61	1.78	2.42	1.61
KEE303	2.73	2.73	1.82	1.82	0.91	0.91			0.91	0.91	0.91	0.91	2.73	2.73	1.82
KVE401						0.91	0.91	2.73	1.82	1.46	0.91	1.64	0.91	0.91	0.92
KAS402	2.40	2.20	2.00	2.00	0.00	0.00	2.25	0.00	0.00	0.00	0.00	0.00			
KEE401	1.44	1.44	1.43	1.43	1.44	1.60					1.44	1.44	1.50	1.40	1.59

KEE402	2.85	2.85	2.85	2.85	0.95	0.95	0.95	1.90	1.90	1.90	1.90	2.85	2.85	2.85	1.90
KEE403	2.80	1.87	0.93	0.93	0.93							2.80	1.87	0.93	1.87
RAS501	2.00					1.20	2.40	2.60	2.00	1.00	1.00	2.20	1.00	1.20	1.00
RAS502	0.93	0.93	0.93	0.94	0.94	1.87	1.17	2.80	2.80	2.24	2.24	2.80	1.12	1.12	0.94
REE501	2.74	2.74	2.74	2.74	0.91	0.91	0.91	1.83	1.83	1.83	1.83	2.74	2.74	2.74	1.83
REE502	1.11	2.41		2.04	1.12						1.68	2.78	2.78		
REE503	2.42	1.67	2.06	2.80								1.68		2.42	
REE051	2.80	2.80	1.87	1.87	0.93					0.93		0.93	1.87	1.68	1.87
RAS601	2.00					1.20	2.00	2.60	2.20	1.00	1.25	2.00	1.00	1.20	1.00
RUC601	2.64	1.65	1.48	0.99	2.97	1.65	0.99						2.18	2.37	
REE601	1.19	1.39	2.78	2.59					1.00	1.00	1.00	1.50	0.99	2.98	
REE602	2.57	1.98	2.18	1.58	1.39	2.18	1.39			0.99	0.99	2.00	2.97	1.98	0.99
REE603	2.61	2.61	0.93	2.43	1.87	0.93	0.93			0.93		0.93	1.87		
REE064	2.74	2.55	1.11	0.91					0.91		0.93	1.83	1.83	2.74	1.83
ROE071	2.61	2.61	2.05	2.24	2.05	0.94			0.93	0.94	0.62	0.94	1.49	1.49	0.94
REE072	2.24	2.24	0.89	1.50	0.75				0.75	0.00	0.75	1.50	2.24	2.24	0.75
REE078	2.80	2.80	2.80	2.80	0.93				0.93		0.93	0.93	2.80	2.80	1.87
REE701	2.59	2.59	2.41	1.72	1.22	2.04	1.04	0.87	0.86	0.86	1.21	2.08	1.72	2.59	2.08
REE702	1.13	2.80	2.24	1.86	2.33							1.12	1.87	0.93	0.93
ROE086	2.61	2.61	2.05	2.24	2.05	0.94			0.93	0.94	0.93	0.94	1.49	1.49	0.94
REE081	2.83	2.64	2.64	1.89	1.34	2.21	1.12	0.96	0.94		1.32	2.27	1.89	2.83	2.27
REE085	2.61	2.61	2.05	2.24	2.05	0.94			0.93	0.94	0.93	0.70	1.49	1.49	0.94
Direct Attainm-ent	2.25	2.17	1.84	1.81	1.37	1.29	1.47	1.93	1.28	1.14	1.17	1.69	1.86	1.98	1.48
Indirect Attainm-ent	2.94	2.85	2.85	2.82	2.61	2.55	2.57	2.51	2.71	2.55	2.51	2.83	2.75	2.80	2.73
Overall Attainme-nt	2.38	2.30	2.04	2.01	1.62	1.54	1.69	2.05	1.56	1.41	1.44	1.91	2.03	2.13	1.72

Table 3.3.2 (c): PO & PSO attainment (2018-19)

Courses	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PO 9**	**PO 10**	**PO 11**	**PO 12**	**PSO 1**	**PSO 2**	**PSO 3**
ROE033	2.14	1.00	0.84	1.16	0.33	0.36	0.18	0.00	0.36	0.00	0.00	0.36			
RAS302	1.30	1.36	1.36	1.36	1.34	1.37	1.36	1.38			1.36	1.36	1.30	1.60	1.36
REC309	2.40	2.40	2.40	2.45	2.45						2.40	2.40	1.50	3.00	2.40
REE301	2.53	2.53	2.53	2.73	2.53	0.97	0.97		0.97		0.97	0.97	1.36	1.36	0.97
REE302	2.58	1.54	1.04	0.86					0.86	0.87	0.86	1.72	1.75	2.58	1.72
REE303	2.16	1.99	1.42	1.41	1.25						0.70	2.16	0.72	0.70	1.78
RAS401	1.27	1.03	1.13	0.82	1.16	1.15					0.51	0.36			
RVE401						0.93	0.93	2.78	1.85	1.48	0.93	1.67	0.93	0.93	0.94

REC402	2.40	2.10	2.50	2.45	2.40							2.57	2.40	2.40	
REE401	2.48	1.72	2.10	2.86								1.92	2.87	2.48	2.10
REE402	2.67	2.67	2.67	2.67	0.89	0.89	0.89	1.78	1.78	1.78	1.78	2.67	2.67	2.67	1.78
REE405	2.32	1.65	0.83	0.83								2.48	1.65	0.83	1.65
RAS501	2.00					1.20	2.40	2.60	2.00	1.00	1.00	2.20	1.00	1.20	1.00
RAS502	2.59	2.59	2.04	2.22	2.04	0.94			0.93	0.94	0.93	0.93	1.48	1.48	0.92
REE501	2.44	1.69	2.07											2.45	2.07
REE502	1.17	2.52		2.14	1.17						1.75	2.91	2.91		
REE503	2.80	2.80	2.80	2.80	1.87		0.93			0.93		0.93	0.93	1.68	2.80
REE052	2.78	1.85	1.85	1.30	0.93				0.93	0.94	0.92	0.93	2.78	2.78	2.22
RAS601	2.00					1.20	2.00	2.60	2.20	1.00	1.25	2.00	1.00	1.20	1.00
RUC601	2.56	1.60	1.43	0.96	2.87	1.59	0.96						2.10	1.15	
REE601	2.44	2.44	0.87	2.27	1.74	0.87	0.87			0.87		0.87	1.74	2.61	1.74
REE602	2.34	1.80	1.98	1.44	1.24	1.98	1.27			0.88	0.89	1.80	2.69	1.76	0.90
REE603	2.61	2.61	0.93	2.43	1.87	0.93	0.93			0.93		0.93	1.87		
REE062	2.77	1.84	1.84	2.58	1.84	0.92			0.92	0.92	0.92	0.92	0.92	0.92	0.92
NOE073	2.81	2.81	0.94	0.94	0.94				0.94		0.94	0.94	0.94	0.94	0.94
NEE031	2.73	2.36	1.45	1.63	0.90	0.91					0.91	1.82	2.73	1.64	0.91
NEE701	2.88	2.68	2.68	1.92	1.35	2.19	1.14	0.95	0.96		1.33	2.29	1.92	2.88	2.29
NEE702	2.50	1.15	1.54	1.34					0.77		0.58	1.54	1.92	1.92	0.96
NEC702 A	2.75	1.84	1.84	1.29	0.92				0.92	0.92	0.92	0.92	2.75	2.75	2.20
NOE081	2.80	2.80	2.20	2.40	2.20	1.00			1.00	1.00	1.00	1.00	1.60	1.60	1.00
NEE042	2.93	2.74	2.74	1.96	1.37	2.26	1.17	0.97	0.98	0.98	1.37	2.34	2.93	2.54	2.34
NEE801	2.55	2.55	2.55	2.75	2.55	0.98	0.98		0.98		0.98	0.98	1.37	1.37	0.98
NEE802	2.94	2.94	0.98	0.98	0.98				0.98		0.98	0.98	0.98	0.98	0.98
Direct Attainm-ent	2.44	2.16	1.81	1.85	1.62	1.24	1.20	1.87	1.18	1.03	1.09	1.59	1.79	1.81	1.52
Indirect Attainm-ent	2.55	2.75	2.82	2.63	2.62	2.72	2.77	2.47	2.62	2.82	2.82	2.72	2.72	2.75	2.92
Overall Attainm-ent	2.46	2.28	2.01	2.01	1.82	1.53	1.51	1.99	1.46	1.39	1.44	1.81	1.98	2.00	1.80

Indirect attainment values corresponding to each PO & PSO are calculated using Graduate Exit Survey by using the following format:

Rajkiya Engineering College, Ambedkar Nagar

Exit Survey Format of Program Outcomes (POs) and Program Specific Outcomes (PSOs) for B.Tech. Electrical Engineering (Session: 2020-21)

PO/PSO No.	POs/PSOs Description	Exit survey question	Rating				
			1	2	3	4	5
PO1	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering	To what level you are able to apply the engineering concept to solve the					

	problems of Electrical Engineering.	complex problems?					
PO2	Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	To what extent you are able to analyse and formulate the problems related to Electrical engineering?					
PO3	Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	To what level you are able design the system related to Electrical engineering problems?					
PO4	Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	To what level you are able analyse and interpret the data?					
PO 5	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	To what level you are able use state of art tools for Electrical engineering activities?					
PO6	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	To what level you are able analyse societal health legal cultural issues related to Electrical engineering practices?					
PO7	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	To what level you are able understand environmental context and need or sustainable development?					
PO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	To what level you are able understand ethical principles and responsibilities?					
PO9	Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	To what extent you are able understand the functions effectively as an individuals and leader of diverse team?					
PO10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	To what level you are able communicate the complex engineering problems?					
PO11	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	To what level you are able demonstrate knowledge and the project management principles?					
PO12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.	To what extent you are able analyse the lifelong learning technique related Electrical engineering?					
PSO 1	An ability to specify, design and analyze the systems	To what extent able you					

	that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.	are able to understand the fundamentals of electric power system?					
PSO 2	An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.	To what level you are able to develop, analyse and control the electric drive system?					
PSO 3	An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.	To what level the imparted education of Electrical engineering is beneficial for various competitive examination at National and global level?					

1-Lowest and 5- Highest

Name _____ Roll no_____ Class_____

Sample Attainment Evaluation of COs, POs and PSO

Course Code: KEE302 (Session: 2020-21)

			For CO1 Calculation																				
		Marks mm	1	1	1	1	2	2	2	2	4	16					100						
		co	1	1	1	1	1	1	1	1	1												
			CT-1								Assignment/ Quiz	Total Marks of attempted questions	MAX. Marks	%co	Target >60% (Y/N)	Score	ESE	% ESE	Target>= 60% (Y/N)	Score	30%internal+70% ESE	Score	Target
S. NO.	ROLL NO.	NAME OF THE STUDENT	Q1	Q2	Q3	Q6	Q7	Q8	Q9	Q12	All												
1	1907370200001	AASHUTOSH SINGH	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	70	70.00	Y	3	78	3	Y
2	1907370200002	ABHISHEK PRATAP SINGH	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	80	80.00	Y	3	85	3	Y
3	1907370200003	ADARSH OJHA	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	60	60.00	Y	3	71	3	Y
4	1907370200004	ADARSH SEN	1	1	1	1	2	2	2	0	3	13	16	81.25	Y	3	45	45.00	N	2	56	2	N
5	1907370200005	AKASH KUMAR RAO	1	1	1	1	2	2	0	2	3.2	13.2	16	82.5	Y	3	12	12.00	N	1	33	1	N
6	1907370200006	AKHILESH PAL	1	1	1	1	2	0	2	2	3.4	13.4	16	83.75	Y	3	36	36.00	N	1	50	2	N
7	1907370200007	ALOK KUMAR	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	24	24.00	N	1	46	2	N
8	1907370200008	ALOK RAJ DWIVEDI	1	1	0	1	2	2	2	2	3.2	14.2	16	88.75	Y	3	40	40.00	N	2	55	2	N
9	1907370200009	AMIT KUMAR GAUTAM	1	0	0	1	2	0	2	2	3.4	11.4	16	71.25	Y	3	50	50.00	N	2	56	2	N
10	1907370200010	ANIL KUMAR YADAV	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	70	70.00	Y	3	77	3	Y
11	1907370200011	ANJALI AGRAHARI	1	1	1	0	2	2	2	2	3.4	14.4	16	90	Y	3	45	45.00	N	2	59	2	N
12	1907370200012	ANURAG SHUKLA	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	40	40.00	N	2	57	2	N
13	1907370200013	ASHISH KANNAUJIA	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	60	60.00	Y	3	71	3	Y
14	1907370200014	ASHUTOSH GUPTA	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	47	47.00	N	2	61	3	Y
15	1907370200015	ASHUTOSH YADAV	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	60	60.00	Y	3	71	3	Y
16	1907370200016	CHANDAN KUMAR YADAV	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	38	38.00	N	1	56	2	N
17	1907370200017	DEEPANSHU YADAV	1	1	1	0	2	2	0	2	3.6	12.6	16	78.75	Y	3	15	15.00	N	1	34	1	N
18	1907370200018	EKTA SINGH	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	60	60.00	Y	3	71	3	Y
19	1907370200019	GAURI SHANKAR	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	60	60.00	Y	3	71	3	Y
20	1907370200020	GOUD AKASH RAMANUJ	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	70	70.00	Y	3	78	3	Y
21	1907370200021	HEMANT KUMAR	1	1	1	1	2	0	2	2	3.6	13.6	16	85	Y	3	60	60.00	Y	3	68	3	Y
22	1907370200022	HIMANSHU TIWARI	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	36	36.00	N	1	54	2	N
23	1907370200023	KARAN KUMAR	1	1	1	1	2	2	0	2	3.6	13.6	16	85	Y	3	40	40.00	N	2	54	2	N
24	1907370200024	KASHIB KHAN	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	38	38.00	N	1	55	2	N
25	1907370200025	MAMATA	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	50	50.00	N	2	64	3	Y
26	1907370200026	MANSI GUPTA	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	45	45.00	N	2	60	2	N
27	1907370200027	MOHAMMAD MURSHID ALAM	1	1	1	0	2	2	0	2	3.2	12.2	16	76.25	Y	3	70	70.00	Y	3	72	3	Y
28	1907370200028	MUBARAK ALI	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	50	50.00	N	2	64	3	Y
29	1907370200029	MURALIDHAR MAURYA	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	36	36.00	N	1	54	2	N
30	1907370200030	NEETU PATEL	1	0	1	1	2	2	2	2	3.2	14.2	16	88.75	Y	3	60	60.00	Y	3	69	3	Y
31	1907370200031	NIKHIL KUMAR SINGH	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	60	60.00	Y	3	71	3	Y
32	1907370200032	PRABHAKAR GAUTAM	1	0	1	1	2	2	2	2	3.4	14.4	16	90	Y	3	70	70.00	Y	3	76	3	Y
33	1907370200033	PRABHAT KUMAR	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	80	80.00	Y	3	85	3	Y
34	1907370200034	PRADEEP KUMAR	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	70	70.00	Y	3	78	3	Y
35	1907370200035	PRAJESHAM PANDEY	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	70	70.00	Y	3	78	3	Y
36	1907370200036	PRAVEEN GAUTAM	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	40	40.00	N	2	56	2	N
37	1907370200037	PRIYA	1	1	1	1	2	0	2	2	3.2	13.2	16	82.5	Y	3	70	70.00	Y	3	74	3	Y
38	1907370200038	PUSHKAR KUMAR	1	1	0	1	2	2	2	2	3.6	14.6	16	91.25	Y	3	45	45.00	N	2	59	2	N
39	1907370200039	RAHUL PRATAP	1	1	0	1	2	2	2	2	3.4	14.4	16	90	Y	3	70	70.00	Y	3	76	3	Y
40	1907370200040	RAJNEESH KUMAR	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	40	40.00	N	2	57	2	N
41	1907370200041	RAKHI KUMARI	1	1	0	1	2	2	0	2	3.2	12.2	16	76.25	Y	3	36	36.00	N	1	48	2	N
42	1907370200042	RAMAN SAHU	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	80	80.00	Y	3	85	3	Y
43	1907370200043	RISHIKESH MOURYA	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	45	45.00	N	2	60	3	Y
44	1907370200044	RITU PANDEY	1	1	1	1	2	0	2	2	3.2	13.2	16	82.5	Y	3	80	80.00	Y	3	81	3	Y
45	1907370200045	ROHIT KUMAR	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	70	70.00	Y	3	78	3	Y
46	1907370200046	RUMI DEVI	1	1	1	1	2	0	2	2	3.4	13.4	16	83.75	Y	3	80	80.00	Y	3	81	3	Y
47	1907370200048	SAKET KUMAR	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	60	60.00	Y	3	71	3	Y
48	1907370200049	SAKSHAM RAJ	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	37	37.00	N	1	55	2	N
49	1907370200050	SAKSHI CHAURASIA	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	90	90.00	Y	3	92	3	Y
50	1907370200051	SARVESH KUMAR GOND	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	70	70.00	Y	3	78	3	Y
51	1907370200052	SATYA PRAKASH YADAV	1	1	1	1	2	2	2	2	3.4	15.4	16	96.25	Y	3	60	60.00	Y	3	71	3	Y
52	1907370200053	SHAAD IMAM RIZVI	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	90	90.00	Y	3	92	3	Y
53	1907370200054	SHIVAM	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	80	80.00	Y	3	85	3	Y
54	1907370200055	SHIVANGI SINGH	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	70	70.00	Y	3	78	3	Y
55	1907370200056	SIDDHARTH VERMA	1	1	1	1	2	2	2	2	3.6	15.6	16	97.5	Y	3	60	60.00	Y	3	71	3	Y
56	1907370200057	SUNIL KUMAR CHAUDHARY	1	0	1	0	2	0	0	2	3.6	9.6	16	60	Y	3	18	18.00	N	1	31	1	N
57	1907370200058	SUSHMIT DUBEY	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	80	80.00	Y	3	84	3	Y
58	1907370200059	SWAPNIL PATHAK	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	70	70.00	Y	3	77	3	Y
59	1907370200060	VANDANA MAURYA	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	45	45.00	N	2	60	2	N
60	1907370200061	VIKAS CHAUDHARI	1	1	1	1	2	0	2	2	3.6	13.6	16	85	Y	3	40	40.00	N	2	54	2	N
61	1907370200062	VIKAS KUMAR	1	1	1	1	2	2	2	2	3.2	15.2	16	95	Y	3	90	90.00	Y	3	92	3	Y
62	1907370200063	VISHAL VERMA	1	1	0	1	2	2	2	2	3.6	14.6	16	91.25	Y	3	80	80.00	Y	3	83	3	Y
63	1907370130032	MANTASHA KHAN	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	80	80.00	Y	3	84	3	Y
64	1873720045	SADHANA GAUTAM	1	0	1	1	2	2	2	2	3.2	14.2	16	88.75	Y	3	60	60.00	Y	3	69	3	Y
65	207379201	AKASH DEEP BALWANT	1	1	1	1	2	2	2	2	3	15	16	93.75	Y	3	36	36.00	N	1	53	2	N
66	207379202	ANIL KUMAR	1	1	0	1	0	2	2	0	3.2	10.2	16	63.75	Y	3	17	17.00	N	1	31	1	N
67	207379203	DIVYANSH MISHRA	1	1	1	1	2	0	2	2	3.4	13.4	16	83.75	Y	3	40	40.00	N	2	53	2	N
68	207379205	RANJEET KUMAR	1	1	1	1	2	0	2	0	3.6	11.6	16	72.5	Y	3	37	37.00	N	1	48	2	N
69	207379206	UMESH KUMAR MAURYA	1	1	1	1	0	2	2	2	3.2	13.2	16	82.5	Y	3	40	40.00	N	2	53	2	N
																					Avg. Grade	**2.54**	
																					Student with 3	41	59.42
																					Student with 2	24	34.78
																					Student with 1	4	5.80
																					Total Student	69	

			For CO2 Calculation																						
		marks mm	1	1	2	2	2	2	2	2	2	2	4	22						100					
		CO	2	2	2	2	2	2	2	2	2	2													
			CT-1										Assignment/ Quiz	Total Marks of attempted questions	MAX. Marks	%co	score	Target >60% (Y/N)	ESE	% ESE	Target>=60% (Y/N)	Score	30%internal+70% ESE	Score	Target
S. NO.	ROLL NO.	NAME OF THE STUDENT	Q4	Q5	Q10	Q11	Q13	Q14	Q15	Q16	Q17	Q18	All												
1	1907370200001	AASHUTOSH SINGH	1	1	2	2	2	0	2	2	2	0	3.2	17.2	22	78.18	3	Y	70	70.00	Y	3	72	3	Y
2	1907370200002	ABHISHEK PRATAP SINGH	1	1	2	2	0	2	2	2	2	0	3.2	17.2	22	78.18	3	Y	80	80.00	Y	3	79	3	Y
3	1907370200003	ADARSH OJHA	1	1	2	2	0	2	2	2	2	0	3.6	17.6	22	80.00	3	Y	60	60.00	Y	3	66	3	Y
4	1907370200004	ADARSH SEN	1	1	2	2	2	0	2	2	2	2	3	19	22	86.36	3	Y	45	45.00	N	2	57	2	N
5	1907370200005	AKASH KUMAR RAO	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	12	12.00	N	1	37	1	N
6	1907370200006	AKHILESH PAL	1	1	2	2	2	2	2	2	2	2	3.4	21.4	22	97.27	3	Y	36	36.00	N	1	54	2	N
7	1907370200007	ALOK KUMAR	1	1	2	0	2	2	2	2	2	0	3.6	17.6	22	80.00	3	Y	24	24.00	N	1	41	2	N
8	1907370200008	ALOK RAJ DWIVEDI	1	1	2	2	2	0	2	2	2	0	3.2	17.2	22	78.18	3	Y	40	40.00	N	2	51	2	N
9	1907370200009	AMIT KUMAR GAUTAM	1	1	2	2	2	0	0	2	2	0	3.4	15.4	22	70.00	3	Y	50	50.00	N	2	56	2	N
10	1907370200010	ANIL KUMAR YADAV	1	1	2	2	2	2	2	2	2	0	3	19	22	86.36	3	Y	70	70.00	Y	3	75	3	Y
11	1907370200011	ANJALI AGRAHARI	1	1	2	2	2	0	2	2	0	2	3.4	17.4	22	79.09	3	Y	45	45.00	N	2	55	2	N
12	1907370200012	ANURAG SHUKLA	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	40	40.00	N	2	57	2	N
13	1907370200013	ASHISH KANNAUJIA	1	1	2	2	2	0	0	2	2	0	3.4	15.4	22	70.00	3	Y	60	60.00	Y	3	63	3	Y
14	1907370200014	ASHUTOSH GUPTA	1	1	2	2	2	2	2	2	0	2	3	19	22	86.36	3	Y	47	47.00	N	2	59	2	N
15	1907370200015	ASHUTOSH YADAV	0	1	2	2	2	2	2	2	2	0	3.4	18.4	22	83.64	3	Y	60	60.00	Y	3	67	3	Y
16	1907370200016	CHANDAN KUMAR YADAV	1	1	0	2	0	0	0	2	2	0	3.6	11.6	22	52.73	3	N	38	38.00	N	1	42	2	N
17	1907370200017	DEEPANSHU YADAV	1	1	2	2	2	0	0	2	2	0	3.6	15.6	22	70.91	3	Y	15	15.00	N	1	32	1	N
18	1907370200018	EKTA SINGH	1	1	2	0	2	2	2	2	2	2	3.2	19.2	22	87.27	3	Y	60	60.00	Y	3	68	3	Y
19	1907370200019	GAURI SHANKAR	1	1	2	2	2	2	2	2	2	0	3.2	19.2	22	87.27	3	Y	60	60.00	Y	3	68	3	Y
20	1907370200020	GOUD AKASH RAMANUJ	1	1	2	2	2	2	2	2	0	2	3.6	19.6	22	89.09	3	Y	70	70.00	Y	3	76	3	Y
21	1907370200021	HEMANT KUMAR	1	1	2	2	2	2	2	2	2	2	3.6	21.6	22	98.18	3	Y	60	60.00	Y	3	71	3	Y
22	1907370200022	HIMANSHU TIWARI	1	1	2	2	2	0	2	2	2	2	3.6	19.6	22	89.09	3	Y	36	36.00	N	1	52	2	N
23	1907370200023	KARAN KUMAR	1	1	2	2	2	0	0	2	2	0	3.6	15.6	22	70.91	3	Y	40	40.00	N	2	49	2	N
24	1907370200024	KASHIB KHAN	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	38	38.00	N	1	56	2	N
25	1907370200025	MAMATA	1	1	2	2	2	2	2	0	2	0	3.2	17.2	22	78.18	3	Y	50	50.00	N	2	58	2	N
26	1907370200026	MANSI GUPTA	1	1	2	2	2	2	2	2	2	2	3	21	22	95.45	3	Y	45	45.00	N	2	60	3	Y
27	1907370200027	MOHAMMAD MURSHID ALA	1	1	2	2	0	0	2	2	2	2	3.2	17.2	22	78.18	3	Y	70	70.00	Y	3	72	3	Y
28	1907370200028	MUBARAK ALI	1	1	2	2	2	2	2	2	0	0	3.6	17.6	22	80.00	3	Y	50	50.00	N	2	59	2	N
29	1907370200029	MURALIDHAR MAURYA	1	1	2	2	2	2	0	2	2	0	3.4	17.4	22	79.09	3	Y	36	36.00	N	1	49	2	N
30	1907370200030	NEETU PATEL	1	1	2	2	2	2	0	2	2	0	3.2	17.2	22	78.18	3	Y	60	60.00	Y	3	65	3	Y
31	1907370200031	NIKHIL KUMAR SINGH	1	1	2	2	2	2	2	2	2	0	3.2	19.2	22	87.27	3	Y	60	60.00	Y	3	68	3	Y
32	1907370200032	PRABHAKAR GAUTAM	1	1	2	2	2	2	2	2	0	0	3.4	17.4	22	79.09	3	Y	70	70.00	Y	3	73	3	Y
33	1907370200033	PRABHAT KUMAR	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	80	80.00	Y	3	85	3	Y
34	1907370200034	PRADEEP KUMAR	1	1	2	2	2	2	2	2	2	0	3.6	19.6	22	89.09	3	Y	70	70.00	Y	3	76	3	Y
35	1907370200035	PRAJESHAM PANDEY	1	1	2	2	2	2	2	2	2	0	3.4	19.4	22	88.18	3	Y	70	70.00	Y	3	75	3	Y
36	1907370200036	PRAVEEN GAUTAM	1	1	2	2	2	0	0	2	2	2	3	17	22	77.27	3	Y	40	40.00	N	2	51	2	N
37	1907370200037	PRIYA	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	70	70.00	Y	3	78	3	Y
38	1907370200038	PUSHKAR KUMAR	1	1	0	2	2	2	0	0	0	0	3.6	11.6	22	52.73	3	N	45	45.00	N	2	47	2	N
39	1907370200039	RAHUL PRATAP	1	1	2	0	2	0	0	2	2	2	3.4	15.4	22	70.00	3	Y	70	70.00	Y	3	70	3	Y
40	1907370200040	RAJNEESH KUMAR	1	1	2	2	0	0	2	2	2	0	3.6	15.6	22	70.91	3	Y	40	40.00	N	2	49	2	N
41	1907370200041	RAKHI KUMARI	1	0	2	2	2	2	2	2	2	0	3.2	18.2	22	82.73	3	Y	36	36.00	N	1	50	2	N
42	1907370200042	RAMAN SAHU	1	1	2	2	2	2	0	2	2	2	3.4	19.4	22	88.18	3	Y	80	80.00	Y	3	82	3	Y
43	1907370200043	RISHIKESH MOURYA	1	1	2	2	2	2	2	2	2	0	3.2	19.2	22	87.27	3	Y	45	45.00	N	2	58	2	N
44	1907370200044	RITU PANDEY	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	80	80.00	Y	3	85	3	Y
45	1907370200045	ROHIT KUMAR	1	1	2	2	2	2	2	2	2	0	3.4	19.4	22	88.18	3	Y	70	70.00	Y	3	75	3	Y
46	1907370200046	RUMI DEVI	1	1	2	2	2	2	2	2	2	2	3.4	21.4	22	97.27	3	Y	80	80.00	Y	3	85	3	Y
47	1907370200048	SAKET KUMAR	1	1	2	2	2	0	2	2	2	2	3.6	19.6	22	89.09	3	Y	60	60.00	Y	3	69	3	Y
48	1907370200049	SAKSHAM RAJ	1	1	2	2	2	0	2	2	0	2	3.6	17.6	22	80.00	3	Y	37	37.00	N	1	50	2	N
49	1907370200050	SAKSHI CHAURASIA	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	90	90.00	Y	3	92	3	Y
50	1907370200051	SARVESH KUMAR GOND	1	1	2	2	2	2	2	2	2	0	3.4	19.4	22	88.18	3	Y	70	70.00	Y	3	75	3	Y
51	1907370200052	SATYA PRAKASH YADAV	1	1	2	2	2	2	2	2	2	2	3.4	21.4	22	97.27	3	Y	60	60.00	Y	3	71	3	Y
52	1907370200053	SHAAD IMAM RIZVI	1	1	2	2	2	2	2	2	2	2	3.6	21.6	22	98.18	3	Y	90	90.00	Y	3	92	3	Y
53	1907370200054	SHIVAM	1	1	2	2	2	2	2	2	0	0	3.6	17.6	22	80.00	3	Y	80	80.00	Y	3	80	3	Y
54	1907370200055	SHIVANGI SINGH	1	1	2	2	2	2	2	2	2	0	3.2	19.2	22	87.27	3	Y	70	70.00	Y	3	75	3	Y
55	1907370200056	SIDDHARTH VERMA	1	1	2	2	2	0	0	2	0	2	3.6	15.6	22	70.91	3	Y	60	60.00	Y	3	63	3	Y
56	1907370200057	SUNIL KUMAR CHAUDHARY	1	0	0	0	0	0	0	0	0	2	3.6	6.6	22	30.00	1	N	18	18.00	N	1	22	1	N
57	1907370200058	SUSHMIT DUBEY	1	1	2	2	2	2	2	2	2	2	3	21	22	95.45	3	Y	80	80.00	Y	3	85	3	Y
58	1907370200059	SWAPNIL PATHAK	1	1	2	2	2	0	2	2	2	0	3	17	22	77.27	3	Y	70	70.00	Y	3	72	3	Y
59	1907370200060	VANDANA MAURYA	1	1	2	2	2	2	2	2	2	2	3	21	22	95.45	3	Y	45	45.00	N	2	60	3	Y
60	1907370200061	VIKAS CHAUDHARI	1	1	2	2	2	2	2	2	0	0	3.6	17.6	22	80.00	3	Y	40	40.00	N	2	52	2	N
61	1907370200062	VIKAS KUMAR	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	90	90.00	Y	3	92	3	Y
62	1907370200063	VISHAL VERMA	1	1	2	2	2	2	2	2	2	0	3.6	19.6	22	89.09	3	Y	80	80.00	Y	3	83	3	Y
63	1907370130032	MANTASHA KHAN	1	1	2	2	2	0	2	2	0	2	3	17	22	77.27	3	Y	80	80.00	Y	3	79	3	Y
64	1873720045	SADHANA GAUTAM	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	60	60.00	Y	3	71	3	Y
65	207379201	AKASH DEEP BALWANT	1	1	2	2	2	2	2	2	2	2	3	21	22	95.45	3	Y	36	36.00	N	1	54	2	N
66	207379202	ANIL KUMAR	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	17	17.00	N	1	41	2	N
67	207379203	DIVYANSH MISHRA	1	1	2	2	0	2	2	2	2	2	3.4	19.4	22	88.18	3	Y	40	40.00	N	2	54	2	N
68	207379205	RANJEET KUMAR	1	1	2	2	2	2	2	0	2	0	3.6	17.6	22	80.00	3	Y	37	37.00	N	1	50	2	N
69	207379206	UMESH KUMAR MAURYA	1	1	2	2	2	2	2	2	2	2	3.2	21.2	22	96.36	3	Y	40	40.00	N	2	57	2	N
																							Avg. Grade	**2.52**	

Student with 3	39	56.52
Student with 2	27	39.13
Student with 1	3	4.35
Total Student	69	

			For CO3 Calculation																				
		marks mm	1	1	2	2	2	2	2	4	16						100						
		CO	3	3	3	3	3	3	3	1													
			CT-2							Assignment/ Quiz	Total Marks of attempted questions	MAX. Marks	%co	score	Target >60% (Y/N)	ESE	% ESE	Target>= 60% (Y/N)	Score	30%internal+70 %ESE	Score	Target
S. NO.	ROLL NO.	NAME OF THE STUDENT	Q1	Q2	Q7	Q8	Q9	Q12	Q13	All													
1	1907370200001	AASHUTOSH SINGH	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	70	70.00	Y	3	70	3	Y
2	1907370200002	ABHISHEK PRATAP SINGH	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	80	80.00	Y	3	79	3	Y
3	1907370200003	ADARSH OJHA	1	0	0	2	2	2	0	3.6	10.6	16	66.25	3	Y	60	60.00	Y	3	62	3	Y
4	1907370200004	ADARSH SEN	0	0	0	2	2	2	2	3	11	16	68.75	3	Y	45	45.00	N	2	52	2	N
5	1907370200005	AKASH KUMAR RAO	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	12	12.00	N	1	29	1	N
6	1907370200006	AKHILESH PAL	0	0	2	2	2	2	0	3.4	11.4	16	71.25	3	Y	36	36.00	N	1	47	2	N
7	1907370200007	ALOK KUMAR	1	0	0	0	2	2	0	3.6	8.6	16	53.75	3	Y	24	24.00	N	1	33	1	N
8	1907370200008	ALOK RAJ DWIVEDI	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	40	40.00	N	2	51	2	N
9	1907370200009	AMIT KUMAR GAUTAM	0	0	2	2	2	2	2	3.4	13.4	16	83.75	3	Y	50	50.00	N	2	60	3	Y
10	1907370200010	ANIL KUMAR YADAV	0	0	2	2	2	2	0	3	11	16	68.75	3	Y	70	70.00	Y	3	70	3	Y
11	1907370200011	ANJALI AGRAHARI	0	0	0	2	2	2	2	3.4	11.4	16	71.25	3	Y	45	45.00	N	2	53	2	N
12	1907370200012	ANURAG SHUKLA	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	40	40.00	N	2	51	2	N
13	1907370200013	ASHISH KANNAUJIA	0	0	2	2	2	2	0	3.4	11.4	16	71.25	3	Y	60	60.00	Y	3	63	3	Y
14	1907370200014	ASHUTOSH GUPTA	1	0	0	2	2	2	2	3	12	16	75.00	3	Y	47	47.00	N	2	55	2	N
15	1907370200015	ASHUTOSH YADAV	1	0	0	0	0	2	2	3.4	8.4	16	52.50	3	Y	60	60.00	Y	3	58	2	N
16	1907370200016	CHANDAN KUMAR YADAV	0	0	0	2	2	2	2	3.6	11.6	16	72.50	3	Y	38	38.00	N	1	48	2	N
17	1907370200017	DEEPANSHU YADAV	0	0	0	2	0	2	2	3.6	9.6	16	60.00	3	Y	15	15.00	N	1	29	1	N
18	1907370200018	EKTA SINGH	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	60	60.00	Y	3	65	3	Y
19	1907370200019	GAURI SHANKAR	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	60	60.00	Y	3	63	3	Y
20	1907370200020	GOUD AKASH RAMANUJ	1	0	0	2	2	2	2	3.6	12.6	16	78.75	3	Y	70	70.00	Y	3	73	3	Y
21	1907370200021	HEMANT KUMAR	0	0	2	2	2	2	0	3.6	11.6	16	72.50	3	Y	60	60.00	Y	3	64	3	Y
22	1907370200022	HIMANSHU TIWARI	1	0	0	2	2	2	2	3.6	12.6	16	78.75	3	Y	36	36.00	N	1	49	2	N
23	1907370200023	KARAN KUMAR	0	0	0	2	2	2	0	3.6	9.6	16	60.00	3	Y	40	40.00	N	2	46	2	N
24	1907370200024	KASHIB KHAN	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	38	38.00	N	1	49	2	N
25	1907370200025	MAMATA	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	50	50.00	N	2	58	2	N
26	1907370200026	MANSI GUPTA	1	0	0	2	2	2	2	3	12	16	75.00	3	Y	45	45.00	N	2	54	2	N
27	1907370200027	MOHAMMAD MURSHID ALA	1	0	2	2	2	2	2	3.2	14.2	16	88.75	3	Y	70	70.00	Y	3	76	3	Y
28	1907370200028	MUBARAK ALI	1	0	0	2	2	2	0	3.6	10.6	16	66.25	3	Y	50	50.00	N	2	55	2	N
29	1907370200029	MURALIDHAR MAURYA	1	0	0	2	2	2	0	3.4	10.4	16	65.00	3	Y	36	36.00	N	1	45	2	N
30	1907370200030	NEETU PATEL	1	1	2	2	2	2	2	3.2	15.2	16	95.00	3	Y	60	60.00	Y	3	71	3	Y
31	1907370200031	NIKHIL KUMAR SINGH	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	60	60.00	Y	3	63	3	Y
32	1907370200032	PRABHAKAR GAUTAM	1	0	0	2	2	2	0	3.4	10.4	16	65.00	3	Y	70	70.00	Y	3	69	3	Y
33	1907370200033	PRABHAT KUMAR	0	0	0	2	2	2	0	3.2	9.2	16	57.50	3	Y	80	80.00	Y	3	73	3	Y
34	1907370200034	PRADEEP KUMAR	1	0	2	2	2	2	2	3.6	14.6	16	91.25	3	Y	70	70.00	Y	3	76	3	Y
35	1907370200035	PRAJESHAM PANDEY	1	0	2	2	2	2	2	3.4	14.4	16	90.00	3	Y	70	70.00	Y	3	76	3	Y
36	1907370200036	PRAVEEN GAUTAM	0	0	0	2	2	2	2	3	11	16	68.75	3	Y	40	40.00	N	2	49	2	N
37	1907370200037	PRIYA	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	70	70.00	Y	3	70	3	Y
38	1907370200038	PUSHKAR KUMAR	0	0	0	2	2	2	2	3.6	11.6	16	72.50	3	Y	45	45.00	N	2	53	2	N
39	1907370200039	RAHUL PRATAP	0	0	2	2	2	2	0	3.4	11.4	16	71.25	3	Y	70	70.00	Y	3	70	3	Y
40	1907370200040	RAJNEESH KUMAR	0	0	0	2	2	2	0	3.6	9.6	16	60.00	3	Y	40	40.00	N	2	46	2	N
41	1907370200041	RAKHI KUMARI	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	36	36.00	N	1	46	2	N
42	1907370200042	RAMAN SAHU	0	0	2	2	2	2	0	3.4	11.4	16	71.25	3	Y	80	80.00	Y	3	77	3	Y
43	1907370200043	RISHIKESH MOURYA	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	45	45.00	N	2	53	2	N
44	1907370200044	RITU PANDEY	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	80	80.00	Y	3	77	3	Y
45	1907370200045	ROHIT KUMAR	0	0	0	2	2	2	0	3.4	9.4	16	58.75	3	Y	70	70.00	Y	3	67	3	Y
46	1907370200046	RUMI DEVI	0	0	0	2	2	2	2	3.4	11.4	16	71.25	3	Y	80	80.00	Y	3	77	3	Y
47	1907370200048	SAKET KUMAR	0	0	0	2	2	2	2	3.6	11.6	16	72.50	3	Y	60	60.00	Y	3	64	3	Y
48	1907370200049	SAKSHAM RAJ	A	0	0	2	2	2	2	3.6	11.6	16	72.50	3	Y	37	37.00	N	1	48	2	N
49	1907370200050	SAKSHI CHAURASIA	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	90	90.00	Y	3	86	3	Y
50	1907370200051	SARVESH KUMAR GOND	1	0	0	2	2	2	2	3.4	12.4	16	77.50	3	Y	70	70.00	Y	3	72	3	Y
51	1907370200052	SATYA PRAKASH YADAV	1	0	2	2	2	2	2	3.4	14.4	16	90.00	3	Y	60	60.00	Y	3	69	3	Y
52	1907370200053	SHAAD IMAM RIZVI	1	0	0	2	2	2	2	3.6	12.6	16	78.75	3	Y	90	90.00	Y	3	87	3	Y
53	1907370200054	SHIVAM	1	0	0	2	2	2	0	3.6	10.6	16	66.25	3	Y	80	80.00	Y	3	76	3	Y
54	1907370200055	SHIVANGI SINGH	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	70	70.00	Y	3	70	3	Y
55	1907370200056	SIDDHARTH VERMA	0	0	0	2	2	2	2	3.6	11.6	16	72.50	3	Y	60	60.00	Y	3	64	3	Y
56	1907370200057	SUNIL KUMAR CHAUDHARY	1	0	2	2	2	2	2	3.6	14.6	16	91.25	3	Y	18	18.00	N	1	40	1	N
57	1907370200058	SUSHMIT DUBEY	1	0	0	2	2	2	2	3	12	16	75.00	3	Y	80	80.00	Y	3	79	3	Y
58	1907370200059	SWAPNIL PATHAK	0	0	0	2	2	2	2	3	11	16	68.75	3	Y	70	70.00	Y	3	70	3	Y
59	1907370200060	VANDANA MAURYA	0	0	0	2	2	2	2	3	11	16	68.75	3	Y	45	45.00	N	2	52	2	N
60	1907370200061	VIKAS CHAUDHARI	0	0	0	0	2	2	0	3.6	7.6	16	47.50	2	N	40	40.00	N	2	42	2	N
61	1907370200062	VIKAS KUMAR	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	90	90.00	Y	3	86	3	Y
62	1907370200063	VISHAL VERMA	0	0	0	0	0	0	2	3.6	5.6	16	35.00	1	N	80	80.00	Y	3	67	3	Y
63	1907370130032	MANTASHA KHAN	0	0	0	2	2	2	2	3	11	16	68.75	3	Y	80	80.00	Y	3	77	3	Y
64	1873720045	SADHANA GAUTAM	0	0	0	2	2	2	2	3.2	11.2	16	70.00	3	Y	60	60.00	Y	3	63	3	Y
65	207379201	AKASH DEEP BALWANT	1	0	0	2	2	2	2	3	12	16	75.00	3	Y	36	36.00	N	1	48	2	N
66	207379202	ANIL KUMAR	1	0	0	2	2	2	2	3.2	12.2	16	76.25	3	Y	17	17.00	N	1	35	1	N
67	207379203	DIVYANSH MISHRA	1	0	2	2	2	2	2	3.4	14.4	16	90.00	3	Y	40	40.00	N	2	55	2	N
68	207379205	RANJEET KUMAR	1	0	0	2	2	2	2	3.6	12.6	16	78.75	3	Y	37	37.00	N	1	50	2	N
69	207379206	UMESH KUMAR MAURYA	1	0	2	2	2	2	2	3.2	14.2	16	88.75	3	Y	40	40.00	N	2	55	2	N
																				Avg. Grade	**2.31**		

Student with 3	37	48.05
Student with 2	27	35.06
Student with 1	13	16.88
Total Student	77	

For CO4 Calculation

		marks mm	1	1	2	2	2	2	4	14						100						
		CO	4	4	4	4	4	4	4													
	Roll Number	**Name**	**CT-2**						**Assignment/ Quiz**	**Total Marks of attempted questions**	**MAX. Marks**	**%co**	**score**	**Target >60% (Y/N)**	**ESE**	**% ESE**	**Target>= 60% (Y/N)**	**Score**	**30%internal+70 %ESE**	**Score**	**Target**
S. NO.	**ROLL NO.**	**NAME OF THE STUDENT**	**Q3**	**Q4**	**Q10**	**Q14**	**Q15**	**Q16**	**All**												
1	1907370200001	AASHUTOSH SINGH	0	0	2	0	2	2	3.2	9.2	14	65.71	3	Y	70	70.00	Y	3	69	3	Y
2	1907370200002	ABHISHEK PRATAP SINGH	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	80	80.00	Y	3	80	3	Y
3	1907370200003	ADARSH OJHA	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	60	60.00	Y	3	67	3	Y
4	1907370200004	ADARSH SEN	0	0	2	2	2	2	3	11	14	78.57	3	Y	45	45.00	N	2	55	2	N
5	1907370200005	AKASH KUMAR RAO	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	12	12.00	N	1	32	1	N
6	1907370200006	AKHILESH PAL	0	0	2	0	2	2	3.4	9.4	14	67.14	3	Y	36	36.00	N	1	45	2	N
7	1907370200007	ALOK KUMAR	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	24	24.00	N	1	42	2	N
8	1907370200008	ALOK RAJ DWIVEDI	0	0	2	2	2	0	3.2	9.2	14	65.71	3	Y	40	40.00	N	2	48	2	N
9	1907370200009	AMIT KUMAR GAUTAM	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	50	50.00	N	2	59	2	N
10	1907370200010	ANIL KUMAR YADAV	0	0	2	0	2	2	3	9	14	64.29	3	Y	70	70.00	Y	3	68	3	Y
11	1907370200011	ANJALI AGRAHARI	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	45	45.00	N	2	56	2	N
12	1907370200012	ANURAG SHUKLA	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	40	40.00	N	2	52	2	N
13	1907370200013	ASHISH KANNAUJIA	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	60	60.00	Y	3	66	3	Y
14	1907370200014	ASHUTOSH GUPTA	0	0	2	2	2	2	3	11	14	78.57	3	Y	47	47.00	N	2	56	2	N
15	1907370200015	ASHUTOSH YADAV	0	1	2	0	0	2	3.4	8.4	14	60.00	3	Y	60	60.00	Y	3	60	3	Y
16	1907370200016	CHANDAN KUMAR YADAV	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	38	38.00	N	1	51	2	N
17	1907370200017	DEEPANSHU YADAV	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	15	15.00	N	1	35	1	N
18	1907370200018	EKTA SINGH	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	60	60.00	Y	3	66	3	Y
19	1907370200019	GAURI SHANKAR	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	60	60.00	Y	3	66	3	Y
20	1907370200020	GOUD AKASH RAMANUJ	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	70	70.00	Y	3	74	3	Y
21	1907370200021	HEMANT KUMAR	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	60	60.00	Y	3	67	3	Y
22	1907370200022	HIMANSHU TIWARI	0	0	2	2	2	0	3.6	9.6	14	68.57	3	Y	36	36.00	N	1	46	2	N
23	1907370200023	KARAN KUMAR	0	0	2	0	2	2	3.6	9.6	14	68.57	3	Y	40	40.00	N	2	49	2	N
24	1907370200024	KASHIB KHAN	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	38	38.00	N	1	51	2	N
25	1907370200025	MAMATA	0	1	2	2	2	2	3.2	12.2	14	87.14	3	Y	50	50.00	N	2	61	3	Y
26	1907370200026	MANSI GUPTA	0	0	2	2	2	2	3	11	14	78.57	3	Y	45	45.00	N	2	55	2	N
27	1907370200027	MOHAMMAD MURSHID ALAM	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	70	70.00	Y	3	73	3	Y
28	1907370200028	MUBARAK ALI	0	1	2	2	2	0	3.6	10.6	14	75.71	3	Y	50	50.00	N	2	58	2	N
29	1907370200029	MURALIDHAR MAURYA	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	36	36.00	N	1	50	2	N
30	1907370200030	NEETU PATEL	1	0	2	2	2	2	3.2	12.2	14	87.14	3	Y	60	60.00	Y	3	68	3	Y
31	1907370200031	NIKHIL KUMAR SINGH	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	60	60.00	Y	3	66	3	Y
32	1907370200032	PRABHAKAR GAUTAM	0	0	2	0	2	2	3.4	9.4	14	67.14	3	Y	70	70.00	Y	3	69	3	Y
33	1907370200033	PRABHAT KUMAR	0	0	2	0	2	2	3.2	9.2	14	65.71	3	Y	80	80.00	Y	3	76	3	Y
34	1907370200034	PRADEEP KUMAR	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	70	70.00	Y	3	74	3	Y
35	1907370200035	PRAJESHAM PANDEY	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	70	70.00	Y	3	73	3	Y
36	1907370200036	PRAVEEN GAUTAM	0	0	2	2	2	2	3	11	14	78.57	3	Y	40	40.00	N	2	52	2	N
37	1907370200037	PRIYA	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	70	70.00	Y	3	73	3	Y
38	1907370200038	PUSHKAR KUMAR	0	0	2	0	0	0	3.6	5.6	14	40.00	2	N	45	45.00	N	2	44	2	N
39	1907370200039	RAHUL PRATAP	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	70	70.00	Y	3	73	3	Y
40	1907370200040	RAJNEESH KUMAR	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	40	40.00	N	2	53	2	N
41	1907370200041	RAKHI KUMARI	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	36	36.00	N	1	49	2	N
42	1907370200042	RAMAN SAHU	0	0	2	0	2	2	3.4	9.4	14	67.14	3	Y	80	80.00	Y	3	76	3	Y
43	1907370200043	RISHIKESH MOURYA	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	45	45.00	N	2	56	2	N
44	1907370200044	RITU PANDEY	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	80	80.00	Y	3	80	3	Y
45	1907370200045	ROHIT KUMAR	0	0	2	0	2	2	3.4	9.4	14	67.14	3	Y	70	70.00	Y	3	69	3	Y
46	1907370200046	RUMI DEVI	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	80	80.00	Y	3	80	3	Y
47	1907370200048	SAKET KUMAR	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	60	60.00	Y	3	67	3	Y
48	1907370200049	SAKSHAM RAJ	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	37	37.00	N	1	51	2	N
49	1907370200050	SAKSHI CHAURASIA	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	90	90.00	Y	3	87	3	Y
50	1907370200051	SARVESH KUMAR GOND	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	70	70.00	Y	3	73	3	Y
51	1907370200052	SATYA PRAKASH YADAV	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	60	60.00	Y	3	66	3	Y
52	1907370200053	SHAAD IMAM RIZVI	0	0	2	2	2	0	3.6	9.6	14	68.57	3	Y	90	90.00	Y	3	84	3	Y
53	1907370200054	SHIVAM	0	0	2	0	2	2	3.6	9.6	14	68.57	3	Y	80	80.00	Y	3	77	3	Y
54	1907370200055	SHIVANGI SINGH	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	70	70.00	Y	3	73	3	Y
55	1907370200056	SIDDHARTH VERMA	1	0	2	0	2	0	3.6	8.6	14	61.43	3	Y	60	60.00	Y	3	60	3	Y
56	1907370200057	SUNIL KUMAR CHAUDHARY	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	18	18.00	N	1	37	1	N
57	1907370200058	SUSHMIT DUBEY	0	0	2	2	2	0	3	9	14	64.29	3	Y	80	80.00	Y	3	75	3	Y
58	1907370200059	SWAPNIL PATHAK	0	0	2	2	2	2	3	11	14	78.57	3	Y	70	70.00	Y	3	73	3	Y
59	1907370200060	VANDANA MAURYA	0	0	2	2	2	2	3	11	14	78.57	3	Y	45	45.00	N	2	55	2	N
60	1907370200061	VIKAS CHAUDHARI	0	0	2	0	2	2	3.6	9.6	14	68.57	3	Y	40	40.00	N	2	49	2	N
61	1907370200062	VIKAS KUMAR	0	0	2	2	2	0	3.2	9.2	14	65.71	3	Y	90	90.00	Y	3	83	3	Y
62	1907370200063	VISHAL VERMA	0	0	2	2	2	0	3.6	9.6	14	68.57	3	Y	80	80.00	Y	3	77	3	Y
63	1907370130032	MANTASHA KHAN	0	0	2	2	2	2	3	11	14	78.57	3	Y	80	80.00	Y	3	80	3	Y
64	1873720045	SADHANA GAUTAM	0	0	2	2	2	2	3.2	11.2	14	80.00	3	Y	60	60.00	Y	3	66	3	Y
65	207379201	AKASH DEEP BALWANT	0	1	2	2	2	2	3	12	14	85.71	3	Y	36	36.00	N	1	51	2	N
66	207379202	ANIL KUMAR	1	0	2	2	2	2	3.2	12.2	14	87.14	3	Y	17	17.00	N	1	38	1	N
67	207379203	DIVYANSH MISHRA	0	0	2	2	2	2	3.4	11.4	14	81.43	3	Y	40	40.00	N	2	52	2	N
68	207379205	RANJEET KUMAR	0	0	2	2	2	2	3.6	11.6	14	82.86	3	Y	37	37.00	N	1	51	2	N
69	207379206	UMESH KUMAR MAURYA	1	1	2	2	2	2	3.2	13.2	14	94.29	3	Y	40	40.00	N	2	56	2	N
																			Avg. Grade	2.49	

Student with 3	38	55.07
Student with 2	27	39.13
Student with 1	4	5.80
Total Student	69	

For CO5 Calculation

		marks mm	1	1	2	2	2	4	12						100					
		CO	5	5	5	5	5	5												

			CT-2					Assignment/Quiz	Total Marks of attempted questions	MAX. Marks	%co	score	Target >60% (Y/N)	ESE	% ESE	Target>= 60% (Y/N)	Score	30%internal+70 %ESE	Score	Target
S. NO.	**ROLL NO.**	**NAME OF THE STUDENT**	**Q5**	**Q6**	**Q11**	**Q17**	**Q18**	**All**												
1	1907370200001	AASHUTOSH SINGH	0	1	2	0	0	3.2	6.2	12	51.67	2	Y	70	70.00	Y	3	65	3	Y
2	1907370200002	ABHISHEK PRATAP SINGH	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	80	80.00	Y	3	77	3	Y
3	1907370200003	ADARSH OJHA	0	1	2	0	0	3.6	6.6	12	55.00	2	Y	60	60.00	Y	3	59	2	N
4	1907370200004	ADARSH SEN	0	1	2	0	2	3	8	12	66.67	3	Y	45	45.00	N	2	52	2	N
5	1907370200005	AKASH KUMAR RAO	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	12	12.00	N	1	29	1	N
6	1907370200006	AKHILESH PAL	0	1	2	0	0	3.4	6.4	12	53.33	2	Y	36	36.00	N	1	41	2	N
7	1907370200007	ALOK KUMAR	0	1	2	2	0	3.6	8.6	12	71.67	3	Y	24	24.00	N	1	38	1	N
8	1907370200008	ALOK RAJ DWIVEDI	0	1	2	2	2	3.2	10.2	12	85.00	3	Y	40	40.00	N	2	54	2	N
9	1907370200009	AMIT KUMAR GAUTAM	0	1	2	2	0	3.4	8.4	12	70.00	3	Y	50	50.00	N	2	56	2	N
10	1907370200010	ANIL KUMAR YADAV	0	1	2	0	2	3	8	12	66.67	3	Y	70	70.00	Y	3	69	3	Y
11	1907370200011	ANJALI AGRAHARI	0	1	2	0	2	3.4	8.4	12	70.00	3	Y	45	45.00	N	2	53	2	N
12	1907370200012	ANURAG SHUKLA	0	1	2	2	0	3.2	8.2	12	68.33	3	Y	40	40.00	N	2	49	2	N
13	1907370200013	ASHISH KANNAUJIA	0	1	2	0	2	3.4	8.4	12	70.00	3	Y	60	60.00	Y	3	63	3	Y
14	1907370200014	ASHUTOSH GUPTA	0	1	2	0	2	3	8	12	66.67	3	Y	47	47.00	N	2	53	2	N
15	1907370200015	ASHUTOSH YADAV	1	1	2	0	0	3.4	7.4	12	61.67	3	Y	60	60.00	Y	3	61	3	Y
16	1907370200016	CHANDAN KUMAR YADAV	0	1	2	2	0	3.6	8.6	12	71.67	3	Y	38	38.00	N	1	48	2	N
17	1907370200017	DEEPANSHU YADAV	0	1	0	0	0	3.6	4.6	12	38.33	1	N	15	15.00	N	1	22	1	N
18	1907370200018	EKTA SINGH	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	60	60.00	Y	3	63	3	Y
19	1907370200019	GAURI SHANKAR	0	1	2	2	0	3.2	8.2	12	68.33	3	Y	60	60.00	Y	3	63	3	Y
20	1907370200020	GOUD AKASH RAMANUJ	0	1	2	2	2	3.6	10.6	12	88.33	3	Y	70	70.00	Y	3	76	3	Y
21	1907370200021	HEMANT KUMAR	0	1	2	2	2	3.6	10.6	12	88.33	3	Y	60	60.00	Y	3	69	3	Y
22	1907370200022	HIMANSHU TIWARI	1	1	2	2	2	3.6	11.6	12	96.67	3	Y	36	36.00	N	1	54	2	N
23	1907370200023	KARAN KUMAR	0	1	2	0	0	3.6	6.6	12	55.00	2	Y	40	40.00	N	2	45	2	N
24	1907370200024	KASHIB KHAN	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	38	38.00	N	1	47	2	N
25	1907370200025	MAMATA	0	1	2	0	0	3.2	6.2	12	51.67	2	Y	50	50.00	N	2	51	2	N
26	1907370200026	MANSI GUPTA	0	1	2	2	2	3	10	12	83.33	3	Y	45	45.00	N	2	57	2	N
27	1907370200027	MOHAMMAD MURSHID ALAM	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	70	70.00	Y	3	70	3	Y
28	1907370200028	MUBARAK ALI	1	0	0	0	0	3.6	4.6	12	38.33	1	N	50	50.00	N	2	47	2	N
29	1907370200029	MURALIDHAR MAURYA	0	1	2	0	2	3.4	8.4	12	70.00	3	Y	36	36.00	N	1	46	2	N
30	1907370200030	NEETU PATEL	1	1	2	2	2	3.2	11.2	12	93.33	3	Y	60	60.00	Y	3	70	3	Y
31	1907370200031	NIKHIL KUMAR SINGH	0	1	2	2	0	3.2	8.2	12	68.33	3	Y	60	60.00	Y	3	63	3	Y
32	1907370200032	PRABHAKAR GAUTAM	0	1	0	0	0	3.4	4.4	12	36.67	1	N	70	70.00	Y	3	60	3	Y
33	1907370200033	PRABHAT KUMAR	0	1	2	2	0	3.2	8.2	12	68.33	3	Y	80	80.00	Y	3	77	3	Y
34	1907370200034	PRADEEP KUMAR	0	1	2	0	2	3.6	8.6	12	71.67	3	Y	70	70.00	Y	3	71	3	Y
35	1907370200035	PRAJESHAM PANDEY	0	1	2	2	0	3.4	8.4	12	70.00	3	Y	70	70.00	Y	3	70	3	Y
36	1907370200036	PRAVEEN GAUTAM	0	1	2	0	2	3	8	12	66.67	3	Y	40	40.00	N	2	48	2	N
37	1907370200037	PRIYA	0	1	2	2	0	3.2	8.2	12	68.33	3	Y	70	70.00	Y	3	70	3	Y
38	1907370200038	PUSHKAR KUMAR	0	1	2	0	0	3.6	6.6	12	55.00	2	Y	45	45.00	N	2	48	2	N
39	1907370200039	RAHUL PRATAP	0	1	2	0	0	3.4	6.4	12	53.33	2	Y	70	70.00	Y	3	65	3	Y
40	1907370200040	RAJNEESH KUMAR	0	1	2	0	0	3.6	6.6	12	55.00	2	Y	40	40.00	N	2	45	2	N
41	1907370200041	RAKHI KUMARI	1	1	2	0	2	3.2	9.2	12	76.67	3	Y	36	36.00	N	1	48	2	N
42	1907370200042	RAMAN SAHU	0	1	2	2	0	3.4	8.4	12	70.00	3	Y	80	80.00	Y	3	77	3	Y
43	1907370200043	RISHIKESH MOURYA	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	45	45.00	N	2	52	2	N
44	1907370200044	RITU PANDEY	0	1	2	2	0	3.2	8.2	12	68.33	3	Y	80	80.00	Y	3	77	3	Y
45	1907370200045	ROHIT KUMAR	0	1	2	2	2	3.4	10.4	12	86.67	3	Y	70	70.00	Y	3	75	3	Y
46	1907370200046	RUMI DEVI	0	1	2	2	0	3.4	8.4	12	70.00	3	Y	80	80.00	Y	3	77	3	Y
47	1907370200048	SAKET KUMAR	0	1	2	0	2	3.6	8.6	12	71.67	3	Y	60	60.00	Y	3	64	3	Y
48	1907370200049	SAKSHAM RAJ	0	1	2	0		3.6	6.6	12	55.00	2	Y	37	37.00	N	1	42	2	N
49	1907370200050	SAKSHI CHAURASIA	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	90	90.00	Y	3	84	3	Y
50	1907370200051	SARVESH KUMAR GOND	0	1	2	2	0	3.4	8.4	12	70.00	3	Y	70	70.00	Y	3	70	3	Y
51	1907370200052	SATYA PRAKASH YADAV	1	1	2	0	2	3.4	9.4	12	78.33	3	Y	60	60.00	Y	3	66	3	Y
52	1907370200053	SHAAD IMAM RIZVI	0	1	2	2	2	3.6	10.6	12	88.33	3	Y	90	90.00	Y	3	90	3	Y
53	1907370200054	SHIVAM	0	1	2	2	0	3.6	8.6	12	71.67	3	Y	80	80.00	Y	3	78	3	Y
54	1907370200055	SHIVANGI SINGH	0	1	2	0	2	3.2	8.2	12	68.33	3	Y	70	70.00	Y	3	70	3	Y
55	1907370200056	SIDDHARTH VERMA	1	1	2	2	0	3.6	9.6	12	80.00	3	Y	60	60.00	Y	3	66	3	Y
56	1907370200057	SUNIL KUMAR CHAUDHARY	0	1	2	0	2	3.6	8.6	12	71.67	3	Y	18	18.00	N	1	34	1	N
57	1907370200058	SUSHMIT DUBEY	0	1	2	2	2	3	10	12	83.33	3	Y	80	80.00	Y	3	81	3	Y
58	1907370200059	SWAPNIL PATHAK	0	1	2	0	0	3	6	12	50.00	2	Y	70	70.00	Y	3	64	3	Y
59	1907370200060	VANDANA MAURYA	0	1	2	0	2	3	8	12	66.67	3	Y	45	45.00	N	2	52	2	N
60	1907370200061	VIKAS CHAUDHARI	0	1	2	0	0	3.6	6.6	12	55.00	2	Y	40	40.00	N	2	45	2	N
61	1907370200062	VIKAS KUMAR	0	1	2	2	2	3.2	10.2	12	85.00	3	Y	90	90.00	Y	3	89	3	Y
62	1907370200063	VISHAL VERMA	0	1	0	0	0	3.6	4.6	12	38.33	1	N	80	80.00	Y	3	68	3	Y
63	1907370130032	MANTASHA KHAN	0	1	2	2	0	3	8	12	66.67	3	Y	80	80.00	Y	3	76	3	Y
64	1873720045	SADHANA GAUTAM	0	1	2	0	0	3.2	6.2	12	51.67	2	Y	60	60.00	Y	3	58	2	N
65	207379201	AKASH DEEP BALWANT	1	1	2	2	2	3	11	12	91.67	3	Y	36	36.00	N	1	53	2	N
66	207379202	ANIL KUMAR	0	1	2	2	2	3.2	10.2	12	85.00	3	Y	17	17.00	N	1	37	1	N
67	207379203	DIVYANSH MISHRA	0	1	2	2	2	3.4	10.4	12	86.67	3	Y	40	40.00	N	2	54	2	N
68	207379205	RANJEET KUMAR	0	1	2	2	0	3.6	8.6	12	71.67	3	Y	37	37.00	N	1	47	2	N
69	207379206	UMESH KUMAR MAURYA	0	1	2	2	2	3.2	10.2	12	85.00	3	Y	40	40.00	N	2	54	2	N
																		Avg. Grade	**2.43**	

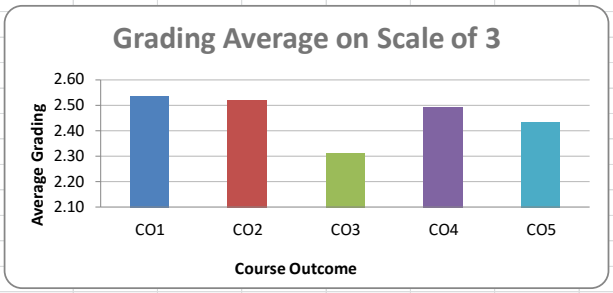
Student with 3	35	50.72
Student with 2	29	42.03
Student with 1	5	7.25
Total Student	69	

CO Feedback

			CO1		CO2		CO3		CO4		CO5	
			MM	**Target>=60%**	**MM**	**Target>=60%**	**MM**	**Target>=60%**	**MM**	**Target>=60%**	**MM**	**Target>=60%**
S. NO.	**ROLL NO.**	**NAME OF THE STUDENT**	**5**									
1	1907370200001	AASHUTOSH SINGH	5	Y	5	Y	5	Y	5	Y	5	Y
2	1907370200002	ABHISHEK PRATAP SINGH	4	Y	5	Y	5	Y	5	Y	5	Y
3	1907370200003	ADARSH OJHA	5	Y	5	Y	3	Y	5	Y	5	Y
4	1907370200004	ADARSH SEN	3	Y	3	Y	5	Y	5	Y	5	Y
5	1907370200005	AKASH KUMAR RAO	5	Y	5	Y	5	Y	5	Y	5	Y
6	1907370200006	AKHILESH PAL	4	Y	5	Y	5	Y	3	Y	4	Y
7	1907370200007	ALOK KUMAR	4	Y	5	Y	5	Y	5	Y	5	Y
8	1907370200008	ALOK RAJ DWIVEDI	3	Y	5	Y	3	Y	5	Y	5	Y
9	1907370200009	AMIT KUMAR GAUTAM	5	Y	5	Y	5	Y	5	Y	5	Y
10	1907370200010	ANIL KUMAR YADAV	3	Y	4	Y	5	Y	5	Y	5	Y
11	1907370200011	ANJALI AGRAHARI	5	Y	5	Y	5	Y	4	Y	5	Y
12	1907370200012	ANURAG SHUKLA	3	Y	5	Y	5	Y	5	Y	5	Y
13	1907370200013	ASHISH KANNAUJIA	5	Y	5	Y	3	Y	5	Y	5	Y
14	1907370200014	ASHUTOSH GUPTA	4	Y	5	Y	5	Y	5	Y	3	Y
15	1907370200015	ASHUTOSH YADAV	5	Y	4	Y	5	Y	5	Y	5	Y
16	1907370200016	CHANDAN KUMAR YADAV	5	Y	5	Y	5	Y	5	Y	5	Y
17	1907370200017	DEEPANSHU YADAV	3	Y	5	Y	5	Y	4	Y	5	Y
18	1907370200018	EKTA SINGH	5	Y	5	Y	3	Y	5	Y	5	Y
19	1907370200019	GAURI SHANKAR	5	Y	3	Y	5	Y	5	Y	5	Y
20	1907370200020	GOUD AKASH RAMANUJ	4	Y	5	Y	5	Y	5	Y	3	Y
21	1907370200021	HEMANT KUMAR	5	Y	5	Y	5	Y	5	Y	5	Y
22	1907370200022	HIMANSHU TIWARI	5	Y	5	Y	5	Y	3	Y	5	Y
23	1907370200023	KARAN KUMAR	4	Y	5	Y	5	Y	5	Y	5	Y
24	1907370200024	KASHIB KHAN	5	Y	4	Y	4	Y	5	Y	5	Y
25	1907370200025	MAMATA	5	Y	5	Y	5	Y	5	Y	4	Y
26	1907370200026	MANSI GUPTA	5	Y	4	Y	5	Y	5	Y	5	Y
27	1907370200027	MOHAMMAD MURSHID ALA	3	Y	4	Y	5	Y	5	Y	5	Y
28	1907370200028	MUBARAK ALI	5	Y	5	Y	5	Y	3	Y	5	Y
29	1907370200029	MURALIDHAR MAURYA	5	Y	5	Y	5	Y	5	Y	5	Y
30	1907370200030	NEETU PATEL	3	Y	5	Y	5	Y	5	Y	5	Y
31	1907370200031	NIKHIL KUMAR SINGH	5	Y	3	Y	5	Y	5	Y	4	Y
32	1907370200032	PRABHAKAR GAUTAM	4	Y	3	Y	5	Y	5	Y	5	Y
33	1907370200033	PRABHAT KUMAR	5	Y	5	Y	4	Y	5	Y	5	Y
34	1907370200034	PRADEEP KUMAR	3	Y	5	Y	5	Y	3	Y	5	Y
35	1907370200035	PRAJESHAM PANDEY	5	Y	5	Y	5	Y	5	Y	5	Y
36	1907370200036	PRAVEEN GAUTAM	4	Y	5	Y	5	Y	5	Y	5	Y
37	1907370200037	PRIYA	5	Y	5	Y	5	Y	5	Y	5	Y
38	1907370200038	PUSHKAR KUMAR	5	Y	4	Y	5	Y	3	Y	3	Y
39	1907370200039	RAHUL PRATAP	3	Y	5	Y	5	Y	5	Y	5	Y
40	1907370200040	RAJNEESH KUMAR	5	Y	5	Y	5	Y	5	Y	5	Y
41	1907370200041	RAKHI KUMARI	5	Y	5	Y	5	Y	5	Y	5	Y
42	1907370200042	RAMAN SAHU	4	Y	4	Y	4	Y	5	Y	5	Y
43	1907370200043	RISHIKESH MOURYA	5	Y	5	Y	5	Y	5	Y	5	Y
44	1907370200044	RITU PANDEY	5	Y	4	Y	5	Y	3	Y	3	Y
45	1907370200045	ROHIT KUMAR	4	Y	3	Y	5	Y	5	Y	5	Y
46	1907370200046	RUMI DEVI	5	Y	5	Y	5	Y	5	Y	5	Y
47	1907370200048	SAKET KUMAR	5	Y	4	Y	5	Y	3	Y	5	Y
48	1907370200049	SAKSHAM RAJ	3	Y	5	Y	5	Y	5	Y	5	Y
49	1907370200050	SAKSHI CHAURASIA	5	Y	5	Y	5	Y	5	Y	5	Y
50	1907370200051	SARVESH KUMAR GOND	5	Y	5	Y	5	Y	3	Y	5	Y
51	1907370200052	SATYA PRAKASH YADAV	4	Y	5	Y	3	Y	5	Y	5	Y
52	1907370200053	SHAAD IMAM RIZVI	5	Y	5	Y	5	Y	5	Y	5	Y
53	1907370200054	SHIVAM	5	Y	3	Y	5	Y	4	Y	5	Y
54	1907370200055	SHIVANGI SINGH	5	Y	5	Y	5	Y	5	Y	3	Y
55	1907370200056	SIDDHARTH VERMA	5	Y	5	Y	5	Y	5	Y	5	Y
56	1907370200057	SUNIL KUMAR CHAUDHARY	4	Y	5	Y	5	Y	4	Y	3	Y
57	1907370200058	SUSHMIT DUBEY	5	Y	5	Y	5	Y	5	Y	5	Y
58	1907370200059	SWAPNIL PATHAK	5	Y	4	Y	5	Y	5	Y	5	Y
59	1907370200060	VANDANA MAURYA	5	Y	5	Y	3	Y	5	Y	5	Y
60	1907370200061	VIKAS CHAUDHARI	3	Y	5	Y	5	Y	5	Y	5	Y
61	1907370200062	VIKAS KUMAR	5	Y	5	Y	5	Y	5	Y	5	Y
62	1907370200063	VISHAL VERMA	4	Y	3	Y	5	Y	5	Y	5	Y
63	1907370130032	MANTASHA KHAN	5	Y	5	Y	5	Y	5	Y	5	Y
64	1873720045	SADHANA GAUTAM	4	Y	5	Y	5	Y	5	Y	5	Y
65	207379201	AKASH DEEP BALWANT	5	Y	5	Y	3	Y	5	Y	5	Y
66	207379202	ANIL KUMAR	5	Y	5	Y	5	Y	5	Y	5	Y
67	207379203	DIVYANSH MISHRA	5	Y	3	Y	5	Y	4	Y	4	Y
68	207379205	RANJEET KUMAR	3	Y	5	Y	5	Y	5	Y	5	Y
69	207379206	UMESH KUMAR MAURYA	5	Y	5	Y	5	Y	5	Y	5	Y
		Total Student		69								
		Y attainded		69		69		69		69		69
		% of student with Y		100		100		100		100		100
		On 1,2,3 scale (attainment)		3		3		3		3		3

Direct CO Attainment

Course Outcomes	AVG on Scale of 3	Distribution in %		
		3	2	1
CO1	2.54	59.42	34.78	5.80
CO2	2.52	56.52	39.13	4.35
CO3	2.31	48.05	35.06	16.88
CO4	2.49	55.07	39.13	5.80
CO5	2.43	50.72	42.03	7.25



No. of Students Scoring>=60%

Course Outcomes	% of students Achived CO	CO Result
CO1	59.42	N
CO2	56.52	N
CO3	48.05	N
CO4	55.07	N
CO5	50.72	N

Overall attainment of COs, POs and PSOs

Course		Attainment on scale of 3,2,1	Indirect	Overall
KEE302	CO1	2.54	3	2.58
	CO2	2.52	3	2.57
	CO3	2.31	3	2.38
	CO4	2.49	3	2.54
	CO5	2.43	3	2.49

	PO Attainment												PSO Attainment		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO 1	2.58	1.72	0.86	0.86					0.86		0.86	1.72	1.72	2.58	1.72
CO 2	2.57	1.71	0.86	0.86					0.86			1.71	1.71	2.57	1.71
CO 3	2.38	1.59	1.59	0.79					0.79	0.79	0.79	1.59	2.38	2.38	1.59
CO 4	2.54	0.85	0.85	0.85					0.85	0.85	0.85	1.70	1.70	2.54	1.70
CO 5	2.49	1.66	0.83	0.83					0.83	0.83	0.83	1.66	1.66	2.49	1.66
Course	2.51	1.51	1.00	0.84	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.84	0.82	0.83	1.68	1.83	2.51	1.68

	Program Outcome Mapping														
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO 1	3	2	1	1					1		1	2	2	3	2
CO 2	3	2	1	1					1			2	2	3	2
CO 3	3	2	2	1					1	1	1	2	3	3	2
CO 4	3	1	1	1					1	1	1	2	2	3	2
CO5	3	2	1	1					1	1	1	2	2	3	2
Course	3	1.8	1.2	1	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1	1	1	2	2.2	3	2

CRITERION 4	STUDENTS' PERFORMANCE	150

4. STUDENTS' PERFORMANCE (150)

Table 4.1: Student Information

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
Sanctioned intake of the program (*N*) (first year)	60	60	60
Total number of students admitted in first year *minus* number of students migrated to other programs/institutions plus no. of students migrated to this program (*N*1)	62	64	61
Number of students admitted in 2nd year in the same batch via lateral entry (*N*2)	5	6	6
Separate division students, if applicable (N3)	-	-	-
Total number of students admitted in the Program (*N*1 + *N*2 + N3)	**67**	**70**	**67**

Table 4.2(a): Student Performance (without backlogs)

Year of Entry	*N*1 + *N*2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
CAY (2020-21)	67 (62+5+0)	37			
CAYm1 (19-20)	70 (64+6+0)	60	60		
CAYm2(18-19)	67(61+06+0)	55	54	46	
CAYm3(17-18)	73 (61+12+0)	42	40	39	39
CAYm4 LYG (16-17)	71 (59+12+0)	39	38	34	34
CAYm5 LYGm1(15-16)	60(48+12+0)	27	33	33	33
CAYm6(LYGm2)(14-15)	58(49+9+0)	30	34	32	32

Table 4.2(b): Student Performance (Graduated)

Year of Entry	*N*1 + *N*2 + N3 (As defined above)	Number of students who have successfully graduated (Student with Backlog in stipulated period of study)			
		I Year	II Year	III Year	IV Year
CAY (2020-21)	67 (62+5+0)	**60**			
CAYm1 (19-20)	70 (64+6+0)	63	70		
CAYm2(18-19)	67(61+06+0)	63	69	67	
CAYm3(17-18)	73 (61+12+0)	60	74	74	61
CAYm4 LYG (16-17)	71 (59+12+0)	58	69	68	67
CAYm5	60(48+12+0)	47	57	60	56

LYGm1(15-16)					
CAYm6(LYGm2)(14-15)	58(49+9+0)	49	58	58	58

4.1. Enrolment Ratio

(20)

Year of Entry	Enrolment Ratio= N1/N
CAY	62/60=1.0333
CAY m1	64/60=1.0667
CAYm2	61/60=1.0167
Mean Enrolment Ratio = 1.038	

Table 4.3: Enrolment Ratio percentage

Item	Enrolment Ratio= N1/N	**Marks**
>=90% students enrolled at the First Year Level on average basis during the period of assessment	**1.038**	**20**
>=80% students enrolled at the First Year Level on average basis during the period of assessment	.	
>=70% students enrolled at the First Year Level on average basis during the period of assessment		
>=60% students enrolled at the First Year Level on average basis during the period of assessment		
Otherwise	.	

4.2. Success Rate in the stipulated period of the program **(40)**

4.2.1. Success rate without backlogs in any semester/year of study **(25)**

Table 4.4: Success Rate (without backlogs)

Item	Latest Year of Graduation, LYG(CAY*m4*) (2017-21)	Latest Year of Graduation, LYG(CAY*m5*) (2016-20)	Latest Year of Graduation LYG(CAY*m6*) (2015-19)	Latest Year of Graduation, LYG(CAY*m7*) (2014-18)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	73(61+12)	71 (59+12)	60 (48+12)	58 (49+9)
Number of students who have graduated without backlogs in the stipulated period	39	34	33	32
Success Index (SI)	0.534	0.479	0.55	0.552
Average SI	0.529			

Success rate without backlogs in any year of study = 25 * Average SI
=25 * 0.529
=13.217

4.2.2. Success rate in stipulated period (15)

Table 4.5: Success Rate in stipulated period

Item	Latest Year of Graduation, LYG(CAY*m4*) (2017-21)	Latest Year of Graduation, LYG(CAY*m5*) (2016-20)	Latest Year of Graduation LYG(CAY*m6*) (2015-19)	Latest Year of Graduation, LYG(CAY*m7*) (2014-18)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable	73(61+12)	71 (59+12)	60 (48+12)	58 (49+9)
Number of students who have graduated with and without backlogs in the stipulated period	61	67	56	58
Success Index (SI)	0.836	0.944	0.933	1.00
Average SI		0.928		

Success rate with and without backlogs in any year of study = 15 * Average SI
=15 * 0.928
=13.92

4.3. Academic Performance in Third year (15)

Table 4.6: Academic Performance in third year

Academic Performance	CAY*m1*	CAY*m2*	CAY*m3*
Mean of CGPA or Mean Percentage of all successful students(X)	77.90	72.34	70.4
Total no. of successful students (Y)	74	70	59
Total no. of students appeared in the examination (Z)	74	70	59
API = x* (Y/Z)	7.79	7.23	7.04
Average API = (AP1 + AP2 + AP3+AP4)/4	7.35		

Academic Performance =1.5 * Average API (Academic Performance Index)
= 1.5 * 7.35
= 11.325

4.4. Academic performance in Second year (15)

Table 4.7: Academic Performance in second year

Academic Performance	CAYm1	CAYm2	CAY*m*3
Mean of CGPA or Mean Percentage of all successful students(X)	69.30	70.627	72.2
Total no. of successful students (Y)	69	74	71
Total no. of students appeared in the examination (Z)	69	74	71
API = X* (Y/Z)	7.61	7.062	7.22
Average API = (AP1 + AP2 + AP3+AP4)/4	7.29		

Academic Performance Level = 1.5 * Average API (Academic Performance Index)
= 1.5 * 7.29
= 10.875

4.5. Placement, Higher Studies and Entrepreneurship (40)

Table 4.8: Placement & higher study details

Item	CAYm1 (2020-21)	CAYm2 (2019-20)	CAY*m3* (2018-19)	CAY*m4* (2017-18)
Total No. of Final Year Students (N)	73	66	60	58
No. of students placed in companies or Government Sector (x)	02	04	23	-
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	02	02	-	-
No. of students turned entrepreneur in engineering/technology (z)	-	-	-	-
x + y + z =	04	06	23	0
Placement Index: (x + y + z)/N	0.055	0.091	0.383	0
Average placement= (P1 + P2 + P3)/3		0.176		

Assessment Points = 40 × average placement
=7.05

Professional Activities (20)

4.6.1 Professional societies/chapters and organizing engineering events (5)

Table 4.9 A: Professional Societies/Chapters details

S. No.	Societies/Chapters	Membership ID	Membership date
1.	IEEE (USA)-Student Branch	STB11386	05 November, 2018
2.	IEEE (USA)-PES Student Branch Chapter	SBC11386	30 March, 2019
3.	IEEE (USA)-WIE Student Branch	SBA11386	23 March, 2019

	Affinity Group		
4.	IE (India)	IM000634-5	27 June, 2019

Table 4.9 B: Organizing Engineering Events Workshop/Training/Short term course details

S. No.	Name of program	Organizer	Duration with Date
1.	One Week FDP on *Power System Optimization and Control (PSOC)*	REC Ambedkar Nagar through TEQIP-III of AKTU	5 days (December 14-18, 2020)
2.	International Seminar on "*Recent Advances in Science and technology(ISRAST-2020)*	REC Ambedkar Nagar through TEQIP-III	2 days (February 16-17, 2020)
3.	International Conference *(REC-CON-19)*	REC Ambedkar Nagar through TEQIP-III	2 days (November 28-29 ,2019)
4.	One week workshop on *"Environmental Management for Eco-Friendly Infrastructure Development"*	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
5.	One week workshop on *"Robotics Workshop cum Championship (ROBOFIESTA)*	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
6.	One Week short term Course On *"Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar ,Wind & Fuel cell"*	REC Ambedkar Nagar through TEQIP-III	One week (August 27-31, 2019)
7.	One week short term course *"Developing Critical thinking using Learning Management System (LMS) and ICT tools"*	REC Ambedkar Nagar through TEQIP-III	One week (August05-09, 2019)
8.	Four Week Summer Internship on *"MATLAB and its Application in Electrical Engineering"*	REC Ambedkar Nagar through TEQIP-III	Four week (17 June-15 July 2019)
9.	Four Week Summer Internship on *"Open Source software-SCILAB,e-SIM*"	Self-Sponsored	Four week (10 June-10 July 2019)
10.	Faculty Development Program On *"Essentials of Teaching-Learning process and research Methodology"*	REC, Ambedkar Nagar through TEQIP-III	One week (February 04-08, 2019)
11.	National Workshop on *"Nurturing Start-*	REC, Ambedkar Nagar through	One week (February 15-19, 2019)

	up/Entrepreneurial Skills in Budding Engineers"	TEQIP-III	
12.	One Week short term Course On *"Real time Simulation of FACTS and HVDC through ICT"*	In collaboration with NITTTR Chandigarh	One week (January 20-February02, 2019)
13.	One week National workshop on *"MATLAB & its application in Engineering"*	Entruple Technologies Pvt. Ltd	One week (January 20-February02, 2019)
14.	Week short term Course On *"Artificial Intelligence & optimization through ICT"*	In collaboration with NITTTR Chandigarh	One week (January 21-25, 2019)
15.	One Week short term Course On *"Recent Advances in Electrical engineering"*	REC, Ambedkar Nagar through TEQIP-III	One week (April 10-14, 2018)
16.	One day Faculty Training Program on *Ansys Maxwell*	Entruple Technologies Pvt. Ltd	1 day (February 02, 2018)
17.	Workshop on *"Outcome Based Education (OBE)"*	REC Ambedkar Nagar through TEQIP-III	2 days (September 09-10, 2018)
18.	ICT course on *"SCILAB Programming"*	In collaboration with NITTTR Chandigarh	One week (May 14-18, 2018)
19.	Short Term training program On *"Laboratory and Workshop Management"*	In collaboration with NITTTR Kolkata	One week (April 09-13, 2018)

4.6.2 Publication of Technical Magazines, Newsletters, etc. (5)

(The Department shall list the publications mentioned earlier along with the names of the editors, publishers, etc.)

Electrical Engineering section is published in Newsletter published at college website with following issues:

- News Letter (September, 2019)
- News Letter (August, 2019)
- News Letter (July, 2019)
- News Letter (May & June, 2019)
- News Letter (April 2019)
- News Letter (March 2019)
- News Letter (February 2019)
- News Letter (January 2019)
- News Letter (December 2018)
- News Letter (November 2018)
- News Letter (July to October 2018)

4.6.3 (a) Participation in Inter-Institute events by students of the program of study (10)

Table 4.10: Participation in Inter-Institute Events

S.No.	College Event	Organizer	Event Date	Remarks, if any
1.	AKTU Technical, Literary and Management Fest	REC Ambedkar Nagar at Zonal level	8-9, 14 Nov, 2019	Technical activities: Bridge Kirti, Coding contest, Frugal engineering, Robo race, Robo war, Technical poster, Working model.
2.	AVIGHNA 2018	REC, Ambedkar Nagar	04-07 April, 2018	-
3.	TVARAN 18 (Inter-college Sports Festival)	KNIT, Sultanpur	22-24 Feb. 2018	Participation: Boys: 36, Girls: 56
4.	ASMITA 18 (Inter-college Sports Festival)	IIIT, Allahabad, KNIT, Sultanpur, BHU, Varanasi	9-11 Feb. 2018	Participation: Boys: 20
5.	AVIGHNA 16	REC, Ambedkar Nagar	12-15 April 2018	-

4.6.3 (b) Participation in International/National Conference

S.No.	Conference Name	Paper Title	Student Name	Event Date
1	ICECCT 3rd IEEE International Conference, organized by SVS College of Engineering,	An Efficient Technique to reduced total harmonic distortion in cascaded H-Bridge Multilevel Inverter	Shivam Maurya,	February 20-22, 2019
2	ICECCT 3rd IEEE International Conference, organized by SVS College of Engineering,	An Efficient Technique to reduced total harmonic distortion in cascaded H-Bridge Multilevel Inverter	Kavita Singh,	February 20-22, 2019
3	ICECCT 3rd IEEE International Conference, organized by SVS College of Engineering,	An Efficient Technique to reduced total harmonic distortion in cascaded H-Bridge Multilevel Inverter	Dheeraj Mishra	February 20-22, 2019
4	IEEE International Conference on Power Electronics, Control and Automation	An Efficient algorithm for voltage enhancement in power system	Gaurav Gautam,	November 16-17, 2019

	(ICPECA 2019)			
5	IEEE International Conference on Power Electronics, Control and Automation (ICPECA 2019)	An Efficient algorithm for voltage enhancement in power system	Kishan Kumar,	November 16-17, 2019
6	IEEE International Conference on Power Electronics, Control and Automation (ICPECA 2019)	An Efficient algorithm for voltage enhancement in power system	Shivam Kumar	November 16-17, 2019
7	2019 IEEE International Conference on Electrical, Computer, and Communication Technology	Performance Study of Proton Exchange Fuel Cells for Different Atmospheric Condition	Utkarsh Kanth	February 2019
8	2019 IEEE International Conference on Electrical, Computer, and Communication Technology	Performance Study of Proton Exchange Fuel Cells for Different Atmospheric Condition	Anand Gupta	February 2019
9	2019 IEEE International Conference on Electrical, Computer, and Communication Technology	Performance Study of Proton Exchange Fuel Cells for Different Atmospheric Condition	Abhishek Rai	February 2019
10	2019 IEEE International Conference on Electrical, Computer, and Communication Technology	Economic Feasibility Analysis of Solar PV Generation at REC Ambedkar Nagar	Shamsullaqa	February 2019
11	2019 IEEE International Conference on Electrical, Computer, and Communication Technology	Economic Feasibility Analysis of Solar PV Generation at REC Ambedkar Nagar	Shatrughan	February 2019
12	2019 IEEE	Economic Feasibility	Antima Pandey	February 2019

	International Conference on Electrical, Computer, and Communication Technology	Analysis of Solar PV Generation at REC Ambedkar Nagar		
13	RECCON-2019	Planning and Analysis of Distribution Generating according to reliability	Himanshu Sagar	(November 28-29 ,2019)
14	RECCON-2019	Planning and Analysis of Distribution Generating according to reliability	Abhishek Kumar Singh	(November 28-29 ,2019)
15	RECCON-2019	Planning and Analysis of Distribution Generating according to reliability	Abhishek Kumar Priyadarshi	(November 28-29 ,2019)
16	RECCON-2019	Intellectual Property Rights Basics & Application Procedure	Amandeep Singh	(November 28-29 ,2019)

4.6.3. (c) (b) Participation in International/National Journal

S.No.	Journal Name	Paper Title	Student Name	International/National Journal
1	Solid State Technology	Smart Garden with IoT based Plant Monitoring System	Ashwin Kumar Yadav	International Journal
2	Solid State Technology	Analysis of Distribution Network Protection Issues in the Presence of Disperse Generation	Himanshu Sagar	International Journal

4.6.3. (d) Certification Through Moocs/NPTEL Course

SR NO	NAME	MOOCS COURSES	SESSION
1	Archana Yadav	Principle Of Signals and Systems	2018-19
2	Rohit Singh	Programming Data Structures & Algirithams Using Python	2018-19
3	Rohit Singh	Principle Of Signals and Systems	2018-19

4	Rajverdhan Verma	Principle Of Signals and Systems	2018-19
5	Sumit Kumar Singh	Principle Of Signals and Systems	2018-19
6	Mithlesh Kumar	Fundamentals Of Electrical Engineering	2018-19
7	Gaurav Vishesh	Principle Of Signals and Systems	2018-19
8	Divyanshu Verma	Problem Solving Through Programming In C	2018-19
9	Girijesh Kumar	Problem Solving Through Programming In C	2018-19
10	Rajarshi Singh	Principle Of Signals and Systems	2018-19
11	Deepak Kumar	Problem Solving Through Programming In C	2018-19
12	Shashank Varshney	Problem Solving Through Programming In C	2018-19
13	Deveshwar Nishad	Problem Solving Through Programming In C	2018-19
14	Awanish Kumar Yadav	Principle Of Signals and Systems	2018-19
15	Pallavi Tripathi	Problem Solving Through Programming In C	2018-19
16	Maneesh Kumar Gopta	Fundamentals of Power Electronics	2018-19
17	Kirshan Pal Singh	Fundamentals of Power Electronics	2018-19
18	Ravi Shanker Gautam	Fundamentals of Power Electronics	2018-19
19	Kumari Renu	Fundamentals of Power Electronics	2018-19
20	Shalini Patel	Fundamentals of Power Electronics	2018-19
21	Kumari Anjali Singh	Fundamentals of Power Electronics	2018-19
22	Sweta Kumari	Fundamentals of Power Electronics	2018-19
23	Deepak Kumar Kannaujiya	Electrical Vehicle Part-1	2018-19
24	Abhishek Panday	Electrical Vehicle Part-1	2018-19
25	Aman Singh	Advanced IOT Application	2018-19
26	Shivraj Vishwakarma	Fundamentals of Power Electronics	2018-19
27	Shivraj Vishwakarma	Power System Engineering	2018-19
28	Akash Deep Arya	Electrical Machines-2	2018-19
29	Akash Deep Arya	Analog Circuits	2018-19
30	Ashish Kumar Saroj	Fundamentals of Power Electronics	2018-19
31	Pankaj Gangwar	Electrical Machines-2	2018-19
32	Simran Yadav	Fundamentals of Power Electronics	2018-19
33	Preeti Gautam	Fundamentals of Power Electronics	2018-19
34	Sarthak Gupta	Control Engineering	2018-19
35	Alok Kumar	Control Engineering	2018-19
36	Aakash Gangwar	Fundamentals of Power Electronics	2018-19
37	Ashwin Kumar	Electric Vehicles -Part 1	2018-19
38	Manish Kumar Bharati	Fundamentals of Power Electronics	2018-19
39	Anand Kumar Gupta	Power System Analysis	2018-19
40	Utkarsh Kanth	Semiconductor Device &Circuits	2018-19
41	Abhishek Rai	Control Engineering	2018-19
42	Kashib Khan	Developing Soft Skills and Personality	2019-20
43	Pawan Kumar	Enhancing Soft Skills and Personality	2019-20
44	Pawan Kumar	Patent Low for Engineers and Scientists	2019-20
45	Deveshwar Nishad	Enhancing Soft Skills and Personality	2019-20
46	Divyanshu Verma	Enhancing Soft Skills and Personality	2019-20
47	Divyanshu Verma	Developing Soft Skills and Personality	2019-20
48	Shashi Prabha	Enhancing Soft Skills and Personality	2019-20

49	Anita Yadav	Developing Soft Skills and Personality	2019-20
50	Anita Yadav	Emotional Intelligence	2019-20
51	Pratibha	Developing Soft Skills and Personality	2019-20
52	Pratibha	Enhancing Soft Skills and Personality	2019-20
53	Shivendera Kumar Nayak	Enhancing Soft Skills and Personality	2019-20
54	Akash Rawat	Enhancing Soft Skills and Personality	2019-20
55	Shashank Varshney	Enhancing Soft Skills and Personality	2019-20
56	Suraj Prasad	Enhancing Soft Skills and Personality	2019-20
57	Ankesh Kumar	Developing Soft Skills and Personality	2019-20
58	Vartika Dubey	Control Engineering	2019-20
59	Suraj Kumar	Enhancing Soft Skills and Personality	2019-20
60	Sarvesh	Enhancing Soft Skills and Personality	2019-20
61	Girijesh Kumar	Enhancing Soft Skills and Personality	2019-20
62	Avinash Kumar	Enhancing Soft Skills and Personality	2019-20
63	Dravid Singh	Developing Soft Skills and Personality	2019-20
64	Dravid Singh	Emotional Intelligence	2019-20
65	Ayush Pal	Emotional Intelligence	2019-20
66	Ayush Pal	Developing Soft Skills and Personality	2019-20
67	Vishal Sonker	Developing Soft Skills and Personality	2019-20
68	Vishal Sonker	Emotional Intelligence	2019-20
69	Deepak Kumar	Developing Soft Skills and Personality	2019-20
70	Deepak Kumar	Patent Low for Engineers and Scientists	2019-20
71	Deepak Kumar	Enhancing Soft Skills and Personality	2019-20
72	Raj Singh	Developing Soft Skills and Personality	2019-20
73	Harshita Chaudhari	Control Engineering	2019-20
74	Shashi Prabha	Developing Soft Skills and Personality	2019-20
75	Akash	Developing Soft Skills and Personality	2019-20
76	Kumari Anjali Singh	Introduction to Smart Grid	2019-20
77	Vinod Kumar Verma	Basic Electric Circuits	2019-20
78	Vikas Chaudhary	Control Systems	2019-20
79	Ashish Kumar Pandey	Control Engineering	2019-20
80	Rajarshi Singh	Basic Electric Circuits	2019-20
81	Ashish Kumar Pandey	Basic Electric Circuits	2019-20
82	Rohit Singh	Basic Electric Circuits	2019-20
83	Gauri Shankar	Developing Soft Skills and Personality	2020-21
84	Adarsh Sen	Developing Soft Skills and Personality	2020-21
85	Anurag Shukla	Developing Soft Skills and Personality	2020-21
86	Hemant Kumar	Developing Soft Skills and Personality	2020-21
87	Sushmit Dubey	Developing Soft Skills and Personality	2020-21
88	Rishikesh Mourya	Developing Soft Skills and Personality	2020-21
89	Mantasha Khan	Developing Soft Skills and Personality	2020-21
90	Nikhil Kumar Singh	Developing Soft Skills and Personality	2020-21
91	Divyanshu Verma	Patent Low for Engineers and Scientists	2020-21
92	Deveshwar Nishad	Patent Low for Engineers and Scientists	2020-21
93	Divyanshu Verma	Patent Low for Engineers and Scientists	2020-21
94	Shashi Prabha	Introduction to Industry4 4.0and Industrial Internet of Things	2020-21

95	Anita Yadav	Introduction to Industry4 4.0and Industrial Internet of Things	2020-21
96	Shashank Varshney	Introduction to Industry4 4.0and Industrial Internet of Things	2020-21
97	Suraj Prasad	Introduction to Industry4 4.0and Industrial Internet of Things	2020-21
98	Sarvesh	Introduction to Industry4 4.0and Industrial Internet of Things	2020-21
99	Girijesh Kumar	Developing Soft Skills and Personality	2020-21
100	Avinash Kumar	Developing Soft Skills and Personality	2020-21
101	Deepak Kumar	Introduction to Industry4 4.0and Industrial Internet of Things	2020-21

CRITERION 5	FACULTY INFORMATION AND CONTRIBUTIONS	200

5. FACULTY INFORMATION AND CONTRIBUTIONS (200)

Faculty details for the session 2020-21

Table 5.a Faculty Details (2020-21)

Name of the Faculty Member	Qualification			Association with the institution	Designation	Date on which Designated as Professor/Associate Professor/ Assistant	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving(in case Currently Associated is ("No"))	Name of Association (Regular/Contract)
	Degree (Highest degree)	University	Year of Attaining highest Qualification							Research	PhD Guidance	Faculty Receiving PhD during the Assesment Years		
Dr. S. P. Singh	Ph. D. (EE)	Ph.D. (MNNIT, Allahabad)	Ph.D.(2014)	30-12-2017	Associate Professor	30-12-2017	30-12-2017	Electrical Engineering	Power Quality Improvement, Renewable Energy Sources	8	4		Y	Regular
Dr. Arif Iqbal	Ph. D. (EE)	Ph.D. (I.I.T. Roorkee)	PhD(2015)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Multiphase AC machines, Power Electronics, Renewable energy	4			Y	Regular
Dr. Mohammed Aslam Husain	Ph. D. (EE)	Ph.D. (A.M.U. Aligarh)	PhD(2017)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Maximum Power Point Trackers (MPPTs) for PV systems	3	1		Y	Regular
Dr. Sanjay Agarwal	Ph. D. (EE)	Ph.D. (M.N.N.I.T Allahabad)	PhD(2017)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power System Protection, Power Quality,	0	1		Y	Regular
Dr. Puneet Joshi	Ph. D. (EE)	G.B. Pant University of Agriculture & Technology	Ph. D. (2018)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Artificial Intelligence Power Electronics, Renewable	9			Y	Regular
Mr. Lokesh Kumar Yadav	M.Tech. (Control System)	M.Tech. (NIT Patna)	2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power System Stability, optimization technique				Y	Regular
Dr. Yudhisthir Pandey	Ph.D	Ph.D (Jamia Millia Islamia, New Delhi)	M. Tech (2011), B.E (2002),	11-12-2017	Lecturer, Sr. Lecturer, Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Electrical Power System Deregulated Environment	2			Y	Regular
Mr. Sonu Kumar	M. tech (Electrical Engineering)	M.Tech (NIT Hamirpur, HP)	M.Tech -2013	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Electrical Machine, Power system, Power Electronics	0			Y	Regular
Mr. Vikas Patel	M. tech (Electrical Engineering	M. Tech. (MMMUT Gorakhpur)	M.Tech - 2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Renewable Energy, Power Electronic	1			Y	Regular

	)													
Mr. Ravindra Kumar	M. tech (Electrical Engineering) M.Sc.	M.Tech - (KNIT Sultanpur)	M.Tech -2011	31-08-2020	Assistant Professor (Contractual Basis)	31-08-2020	31-08-2020	Electrical Engineering	Power Electronics & Drives.	3			N 31/07/2021	Contract
Mr. Jaswant Singh	M.Tech (Power Electronics & Drives)	M.Tech. (AKTU, Lucknow)	M.Tech (2011)	31-08-2020	Assistant Professor (Contractual Basis)	31-08-2020	31-08-2020	Electrical Engineering	Power Electronics and Electric Drives	2			N 30/06/2021	Contract
Ms. Shikha Choudhary	M.Tech (Instrument ation Engineering)	M.Tech (S.G.G.S.I.E& T, Nanded)	M.Tech (2014)	31-08-2020	Assistant Professor(Contractual	31-08-2020	31-08-2020	Electrical Engineering	Bio-Medical Instrumentation, Bio-Signal Processing	2			N 31/07/2021	Contract

Faculty from other Departments (session 2020-21)

Name of the Faculty Member	Qualification			Association with the institution	Designation	Date on which Designated as Professor/Associate Professor/ Assistant Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving(in case Currently Associated is ("No")	Name of Association (Regular/Contract)
	Degree (Highest degree)	University	Year of Attaining highest Qualification							Research Publications	PhD Guidance	Faculty Receiving PhD during the Assesment Years		
Prof. V. S. Chandel	Ph. D.	Lucknow University	2006 (Ph.D)	15-06-2017	Professor	15-06-2017	15-06-2017	APSH	Electronics	65	02		Y	Regular
Dr. Prabhudatt Dwivedi	Ph.D.	MNNIT, Prayagraj	2011	11/12/2017	Assistant Professor	11/12/2017	11/12/2017	APSH	Marketing Management	10	-		Y	Regular
Dr. Sushant Chaturvedi	Ph.D.	University of Prayagraj	Ph.D (2012)	18-12-2017	Assistant Professor	18-12-2017	18-12-2017	APSH	English	10			Y	Regular
Dr. Amit Pandey	Ph.D.	NIT Prayagraj	2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	APSH	VLSI Design	20	1		Y	Regular
Dr. Ashok Kumar Upadhyay	Ph. D.	Purvanchal University, Jaunpur	Ph.D (2004)	31-08-2020	Assistant Professor(Contractual)	31-08-2020	31-08-2020	APSH	Mathematics	-			Y	Contract
Mr. Hemant Kumar Baranwal	M. Tech. (CSE)	Dr. APJ AKTU, Lucknow	M.Tech 2016	31-08-2020	Assistant Professor(Contractual)	31-08-2020	31-08-2020	ITD	Computer Science	1			N 31/07/2021	Contract
Ms. Kumkum Dubey	M. Tech. (IT)	MMMUT, Gorakhpur	M.Tech 2017	31-08-2020	Assistant Professor(Contractual)	31-08-2020	31-08-2020	ITD	Computer Science	19			N 31/07/2021	Contract
Mr. Vikas Srivastava	M.Sc.	RML University, Faizabad	M.Sc. 2014	22-08-2019	Ph.D. Student	22-08-2019	22-08-2019	APSH	Statistics				Y	Contract

Faculty details for the session 2019-20

Table 5.b Faculty Details (2019-20)

Name of the Faculty Member	Qualification			Association with the institution	Designation	Date on which Designated as	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving(in case Currently Associated is ("No")	Name of Association (Regular/Contract)
	Degree (Highest degree)	University	Year of Attaining highest Qualification							Research Publications	PhD Guidance	Faculty Receiving PhD during the Assesment Years		
Dr. S. P. Singh	Ph. D. (EE)	Ph.D. (MNNIT, Allahabad)	Ph.D.(2014)	30-12-2017	Associate Professor	30-12-2017	30-12-2017	Electrical Engineering	Power Quality Improvement, Renewable Energy Sources	8	4		Y	Regular
Dr. Arif Iqbal	Ph. D. (EE)	Ph.D. (I.I.T. Roorkee)	PhD(2015)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	machines, Power Electronics, Renewable	1			Y	Regular
Dr. Mohammed Aslam Husain	Ph. D. (EE)	Ph.D. (A.M.U. Aligarh)	PhD(2017)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Renewable energy sources, Power electronics, Elctric vehicle	12	1		Y	Regular
Dr. Sanjay Agarwal	Ph. D. (EE)	Ph.D. (M.N.N.I.T Allahabad)	PhD(2017)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power System Protection, Power Quality,	0	1		Y	Regular
Dr. Puneet Joshi	Ph. D. (EE)	G.B. Pant University of Agriculture & Technology	Ph. D. (2018)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	intenigence Power Electronics, Renewable energy, Power	5			Y	Regular
Mr. Lokesh Kumar Yadav	M.Tech. (Control System)	M.Tech. (NIT Patna)	2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power System Stability, optimization technique	2			Y	Regular
Dr. Yudhisthir Pandey	Ph.D	Ph.D (Jamia Millia Islamia, New Delhi)	B.E (2002), M. Tech (2011)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Electrical Power System Deregulated Environment	4			Y	Regular
Mr. Sonu Kumar	M. tech (Electrical Engineering)	M.Tech (NIT Hamirpur, HP)	M.Tech -2013	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Electrical Machine, Power system, Power Electronics	0			Y	Regular
Mr. Vikas Patel	M. tech (Electrical Engineering)	M. Tech. (MMMUT Gorakhpur)	M.Tech -2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Renewable Energy, Power Electronics, Electrical Drives, Electrical Machines	0			Y	Regular
Mr. Ravindra Kumar	M. tech (Electrical Engineering) M.Sc.	M.Tech -(KNIT Sultanpur)	M.Tech -2011	13-08-2019	Assistant Professor (Contractual Basis)	13-08-2019	13-08-2019	Electrical Engineering	Power Electronics & Drives.	3			N 30/06/2020	Contract

Mr. Abdul Hafeez	M.Tech (Instrumentation and Control)	M.Tech. (AMU, Aligarh)	M.Tech (2013)	13-08-2019	Assistant Professor (Contractual Basis)	13-08-2019	13-08-2019	Electrical Engineering	Instrumentation and Control	2			N 30/06/2020	Contract
Mr. Sunil Kumar Jain	M.Tech (Power Electronics)	M.Tech (MNNIT Allahabad)	M.Tech (2011)	30-08-2019	Assistant Professor(Contractual Basis)	30-08-2019	30-08-2019	Electrical Engineering	Power Electronics	2			N 30/06/2020	Contract

Faculty from other Departments (2019-20)

Name of the Faculty Member	Qualification			Association with the institution	Designation	Date on which Designated as Professor/Associate Professor/ Assistant Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving(in case Currently Assoiated is ("No")	Name of Association (Regular/Contract)
	Degree (Highest degree)	University	Year of Attaining highest Qualification							Research Publications	PhD Guidance	Receiving PhD during the		
Dr. D. P. Mishra	Ph.D.	Dr. R.M.L Avadh University Ajodhya	2011	01-06-2012	Assistant Professor	01-06-2012	01-06-2012	APSH	Chemistry	14	1		Y	Regular
Dr. Prabhudatt Dwivedi	Ph.D.	MNNIT, Prayagraj	2011	11/11/2017	Assistant Professor	11/11/2017	11/11/2017	APSH	Marketing Management	10	-		Y	Regular
Mr. Vivekanand Singh	M.Tech.	M.Tech (IIT Delhi)	M.Tech. 2012	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	APSH	Production Engineering	-			Y	Regular
Dr. Amit Kumar Pandey	Ph.D.	MNNIT, Prayagraj	2014 (Ph.D)	11/12/2017	Assistant Professor	11/12/2017	11/12/2017	APSH	VLSI Design	20			Y	Regular
Dr. Sushant Chaturvedi	Ph.D.	University of Prayagraj	Ph.D (2012)	18-12-2017	Assistant Professor	18-12-2017	18-12-2017	APSH	English	10			Y	Regular
Dr. Amit Kumar Singh	Ph.D.	IIT, BHU, Varanasi	Ph.D.(2014)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	APSH	Mathematics	12	2		Y	Regular
Dr. Ashok Kumar Upadhyay	Ph.D.	Purvanchal University, Jaunpur	Ph.D (2004)	13-08-2019	Assistant Professor	13-08-2019	13-08-2019	APSH	Mathematics	-			Y 30/06/2020	Contract
Ms. Kumkum Dubey	M. Tech. (IT)	MMMUT, Gorakhpur	2017	13-08-2019	Assistant Professor(Contractual)	13-08-2019	13-08-2019	ITD	Computer Science				N 30/06/2020	Contract

Faculty details for the session 2018-19

Table 5.c Faculty Details (2018-19)

Name of the Faculty Member	Qualification			Association with the institution	Designation	Date of Joining as Assistant Professor/Associate Professor/ Assistant Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving(in case Currently Associated is ("No")	Name of Association (Regular/Contract)
	Degree (Highest degree)	University	Year of Attaining highest Qualification							Research Publications	PhD Guidance	Faculty Receiving PhD during the Assesment Years		
Dr. S. P. Singh	Ph. D. (EE)	Ph.D. (MNNIT, Allahabad)	Ph.D.(2014)	30-12-2017	Associate Professor	30-12-2017	30-12-2017	Electrical Engineering	Power Quality Improvement, Renewable Energy Sources	8	4		Y	Regular
Dr. Arif Iqbal	Ph. D. (EE)	Ph.D. (I.I.T. Roorkee)	PhD(2015)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	machines, Power Electronics, Renewable	4			Y	Regular
Dr. Mohammed Aslam Husain	Ph. D. (EE)	Ph.D. (A.M.U. Aligarh)	PhD(2017)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Renewable energy sources, Power electronics, Elctric vehicle	3			Y	Regular
Dr. Sanjay Agarwal	Ph. D. (EE)	Ph.D. (M.N.N.I.T Allahabad)	PhD(2017)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power System Protection, Power Quality,	0	01		Y	Regular
Dr. Puneet Joshi	Ph. D. (EE)	G.B. Pant University of Agriculture & Technology	Ph. D. (2018)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power Electronics, Renewable	9			Y	Regular
Mr. Lokesh Kumar Yadav	M.Tech. (Control System)	M.Tech. (NIT Patna)	2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Power System Stability, optimization techniques				Y	Regular
Dr. Yudhisthir Pandey	Ph.D	Ph.D (Jamia Millia Islamia, New Delhi)	B.E (2002), M. Tech (2011)	11-12-2017	Lecturer, Sr. Lecturer, Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Electrical Power System Deregulated Environment	2			Y	Regular
Mr. Sonu Kumar	M. tech (Electrical Engineering)	M.Tech (NIT Hamirpur, HP)	M.Tech -2013	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Electrical Machine, Power system, Power Electronics	0			Y	Regular
Mr. Vikas Patel	M. tech (Electrical Engineering)	M. Tech. (MMMUT Gorakhpur)	M.Tech -2014	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	Electrical Engineering	Energy, Power Electronics, Electrical Drives, Electrical	1			Y	Regular
Mr. Ravindra Kumar	M. tech (Electrical Engineering) M.Sc.	M.Tech -(KNIT Sultanpur)	M.Tech -2011	11-09-2018	Assistant Professor (Contractual Basis)	11-09-2018	11-09-2018	Electrical Engineering	Power Electronics & Drives.	1			N 20/06/2019	Contract
Ms. Shashi Pandey	M.Tech (Control & Instrumentation)	M.Tech. (MMMUT, Gorakhpur)	M.Tech (2017)	18-07-2018	Assistant Professor (Contractual Basis)	18-07-2018	18-07-2018	Electrical Engineering	restructuring, Deregulation, Price Forecasting Techforecasting				N 21/06/2019	Contract
Ms. Shikha Choudhary	M.Tech (Instrumentation Engineering)	M.Tech (S.G.G.S.I.E&T, Nanded)	M.Tech (2014)	21-07-2018	Assistant Professor(Contractual Basis)	21-07-2018	21-07-2018	Electrical Engineering	Bio-Medical Instrumentation, Bio-Signal Processing	2			N 19/06/2019	Contract

Faculty from other Departments (2018-19)

Name of the Faculty Member	Qualification			Association with the institution	Designation	Date on which Designated as Professor/Associate Professor/ Assistant Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N) Date of Leaving(in case Currently Assoiated is ("No")	Name of Association (Regular/Contract)
	Degree (Highest degree)	University	Year of Attaining highest Qualification							Research Publications	PhD Guidance	Faculty Receiving PhD during the Assesment Years		
Dr. D. P. Mishra	Ph.D.	Dr. R.M.L Avadh University Ajodhya	2011	01-06-2012	Assistant Professor	01-06-2012	01-06-2012	APSH	Chemistry	13			Y	Regular
Dr. Prabhudatt Dwivedi	Ph.D.	MNNIT, Prayagraj	2011	11/11/2017	Assistant Professor	11/11/2017	11/11/2017	APSH	Marketing Management	10			Y	Regular
Mr. Vivekanand Singh	M.Tech.	M.Tech (IIT Delhi)	M.Tech. 2012	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	APSH	Production Engineering	-			Y	Regular
Dr. Amit Kumar Pandey	Ph.D.	MNNIT, Prayagraj	2014 (Ph.D)	11/12/2017	Assistant Professor	11/12/2017	11/12/2017	APSH	VLSI Design	19			Y	Regular
Dr. Sushant Chaturvedi	Ph.D.	University of Prayagraj	Ph.D (2012)	18-12-2017	Assistant Professor	18-12-2017	18-12-2017	APSH	English	9			Y	Regular
Dr. Amit Kumar Singh	Ph.D.	IIT, BHU, Varanasi	Ph.D.(2014)	11-12-2017	Assistant Professor	11-12-2017	11-12-2017	APSH	Mathematics	11			Y	Regular
Dr. Ashok Kumar Upadhyay	Ph.D.	Purvanchal University, Jaunpur	Ph.D (2004)	18-07-2018	Assistant Professor	18-07-2018	18-07-2018	APSH	Mathematics	-			Y 29/06/2019	Contract

5.1. Student-Faculty Ratio (SFR) (20)

No. of UG Programs in the Department (n): 01
No. of PG Programs in the Department (m): 00
Actual No. of Students in UG 2nd Year = u1=69 (2020-21), 71(2019-20), 74(2018-19)
Actual No. of Students in UG 3rd Year = u2=69 (2020-21), 74 (2019-20), 70(2018-19)

Actual No. of Students in UG 4th Year =u3 =74 (2020-21),70 (2019-20), 58(2018-19)

No. of Students = Sanctioned Intake + Actual Lateral entry students
S=Number of Students in the Department = UG1 + UG2 +.. +UGn
F = Total Number of Faculty Members in the Department (excluding first year faculty) Student Teacher Ratio (STR) = S / F

Table 5.1.1a: Student Faculty Ratio

Year	CAY(2020-21)	CAYm1(2019-20)	CAYm2(2018-19)
u1.1(2nd Year)	60+5	60+6	60+12
u1.2(3rd Year)	60+6	60+12	60+12
u1.3(4th Year)	60+12	60+12	60+12
Total No. of Students in the Department **(S)**	**203**	**210**	**216**
No. of Faculty in the Department **(F)**	**12**	**12**	**12**
Student Faculty Ration (SFR)	**SFR1=S1/F1=16.92**	**SFR2=S2/F2=17.50**	**SFR3= S3/F3=18.00**
Average SFR	**SFR=(SFR1+SFR2+SFR3)/3=17.47**		

Table 5.1.1b: Student Faculty Ratio

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY (2020-21)	9	3
CAYm1(2019-20)	9	3
CAYm2(2018-19)	9	3

Assessment SFR : 16

Note: Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:

< = 15 - 20Marks
< = 17 - 18Marks
< = 19 - 16Marks
< = 21 - 14 Marks
< = 23 - 12Marks
< = 25 - 10Marks
> 25.0 - 0 Marks

5.2. Faculty Cadre Proportion (25)

The reference Faculty cadre proportion is 1(F1):2(F2):6(F3)

- F1: Number of Professors required = 1/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1=**1**
- F2: Number of Associate Professors required = 2/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1=**2**
- F3: Number of Assistant Professors required = 6/9 x Number of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (N) as per 5.1= **7**

Table 5.2: Faculty Cadre Ratio

	PROFESSORS		ASSOCIATE PROFESSORS		ASSISTANT PROFESSORS	
	Required	**Available**	**Required**	**Available**	**Required**	**Available**
CAY (2020-21)	(1/9*210/20) ≈1	0	(2/9*210/20) ≈2	1	(6/9*210/20) =7	8+3*
CAYm1 (2019-20)	(1/9*210/20) ≈1	0	(2/9*210/20) ≈2	1	(6/9*210/20) =7	8+3*
CAYm2 (2018-19)	(1/9*216/20) ≈1	0	(2/9*216/20) ≈2	1	(6/9*216/20) ≈7	8+3*
Average No.	**RF1=1**	**AF1=0**	**RF2=2**	**AF2=1**	**RF3=7**	**AF3=11**

*Contractual/Guest faculty included

Cadre Ratio Marks= [(AF1/RF1) + (AF2*0.6)/RF2 + (AF3*0.4)/RF3] * 12.5
=[(0/1)+{(1*0.6)/2}+{(11*0.4)/7}]*12.5=0.928*12.5
=11.6

Cadre Ratio Marks= 11.6

5.3. Faculty Qualification (25)

FQ =2.5 x [(10X +4Y)/F)] where x is no. of regular faculty with Ph. D., Y is no. of regular faculty with M. Tech., F is number of regular faculty required to comply 1:20 Faculty Student ratio (number of faculty and number of students required are to be calculated as per 5.1)

Table 5.3: Faculty Qualification

Session	X	Y	F	FQ=2.5 x [(10X +4Y)/F)]
CAY (2020-21)	**6**	**6**	**9**	**23.33**
CAYm1 (2019-20)	**6**	**6**	**9**	**23.33**
CAYm2 (2018-19)	**5**	**7**	**9**	**21.67**
Average Assessment				**22.77**

5.4 Faculty Retention (25)

Number of regular faculty members in
CAY (2020-21) = 9
CAYm1 (2019-20) = 9
CAYm2 (2018-19) = 9

Table 5.4.1: Faculty Retention

Items	Marks
>=90% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	**25**

>=75% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	20
>=60% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	15
>=50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	10
<50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	0

Table 5.4.2: Faculty Retention

Description	2020-21	2019-20	2018-19
No of regular Faculty Retained	12	12	12
Number of Faculty required to comply 20:1 (Faculty Student ratio)	10	10	10
% of faculty retained of Required Faculty	100.00	100.00	100.00
Average Assessment	100.00		

Assessment Marks: 25.0

5.5. Innovations by the Faculty in Teaching and Learning (20)

The objective of innovative teaching is to ease the assimilation of theoretical concepts being taught in class rooms through the use of several technical tools and resources. It promotes the active participation of students in learning process, helps to gain new insights and therefore enhance essential and creative thinking ability of students to associate with new concepts. The resources that are being used and provided to students for better learning are as follows:

Following are the innovative tools used by the Faculty in Teaching and Learning Process:

- **Multimedia Learning Process:**

The faculties are using projectors in the Class room. It will help the faculties to represent the content in a more meaningful way using different media elements.

Table 5.5.1

Tools	Methods	Metaphor

Power Point Presentation by referring E-learning videos	Prepared using popular multimedia techniques.	Slide based
Acrobat Reader	Prepared Notes for the easy understanding of subjects	E-Book based
Collaborative Learning	Group Assignments	Interactive based
Demonstration Videos and Lectures	ICT Based	Web based learning

Table 5.5.2: Question Bank Developed and Available for Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Microprocessor
	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Digital Electronics	Power Transmission and Distribution	Electrical Drives
	Control System	Special Electrical Machines	Introduction to Power Quality & FACTS
		Power System Analysis	Renewable Energy resources
		Power System-II	

Table 5.5.3: Surprise Test / Quiz Taken Developed and Available For Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Microprocessor
Programming for problem solving	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Power Plant Engineering	Power Transmission and Distribution	Renewable Energy resources
	Basic Signal System	Special Electrical Machines	Utilization of Electrical Energy and Traction
	Digital Electronics	Power System-II	
	Control System	Control System	
		Power System Analysis	
		Power Electronics	

Table 5.5.4: Video Lectures Available For Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Digital Electronics	Special Electrical Machines	Electrical Drives
	Electrical Machine-I	Power System-II	Introduction to Power Quality & FACTS
	Networks Analysis & Synthesis	Microprocessor & Microcontroller	EHVAC
	Universal Human Values	Power Electronics	Renewable Energy Sources
	Control System	Idea to Business Model	
		Power System-II	
		Power System Analysis	
		Power Electronics	

Table 5.5.5: Power Point Presentations Available for Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Introduction to Power Quality & FACTS
Programming for problem solving	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Digital Electronics	Power Transmission and Distribution	Electrical Drives
	Control System	Special Electrical Machines	Renewable Energy resources
		Power System-II	Utilization of Electrical Energy and Traction
		Power System Analysis	
		Power Electronics	

Table 5.5.6: Numerical Problems Given in the Theory Subjects for Better Understanding

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Microprocessor
	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Power Plant Engineering	Power Transmission and Distribution	Electrical Drives
	Digital Electronics	Power Electronics	Introduction to Power Quality & FACTS
	Control System	Control System	Renewable Energy resources
		Power System Analysis	Utilization of Electrical Energy and Traction
		Power System-II	

Table 5.5.7: Online Classes (Google Class) taken in the following subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Basic Signal System	Power Electronics	Utilization of Electrical Energy & Electric Traction
	Electrical Machine-I	Control System	Renewable Energy Resources
	Electrical Measurements & Instrumentation	Power System-II	Introduction to Power Quality and FACTs
		Special Electrical Machines	Electrical Drives
		Electrical Machine-II	Power Station Practice
			Introduction to smart grid
			Industrial Automation and PLC lab

5.6. Faculty as participants in Faculty Development/Training Activities/STTPS (15)

- A Faculty scores maximum five points for participation
- Participation in 2 to 5 days Faculty development program: 3 Points
- Participation>5 days Faculty development program: 5 points

Table 5.6: Participants in FDP/Training activities/STTPS

S.No	Faculty Name	Max Marks Faculty(5)		
		2020-21	2019-20	2018-19
1	Dr. S. P. Singh	5	5	5
2	Dr. Yudhishthir Pandey	5	5	5
3	Dr. Arif Iqbal	5	5	5
4	Dr. Mohammed Aslam Husain	5	5	5
5	Dr. Puneet Joshi	5	5	5
6	Mr. Lokesh Kumar Yadav	5	5	5
7	Mr. Sonu Kumar	5	5	5
8	Dr. Sanjay Agarwal	5	5	5
9	Mr. Vikas Patel	5	5	5
Total Points(Sum)		**45**	**45**	**45**
Rf= Number of Faculty required to comply with 20:1 (Students – Faculty ratio) as per 5.1		**10**	**10**	**10**
Assessment = 3* (Sum/0.5*RF)		**27**	**27**	**27**
Average assessment over three years (Marks limited to 15)		**15**		

S.No	Faculty Name	Number of events in which participation done by faculties		
		2020-21	2019-20	2018-19
1	Dr. S. P. Singh	3	3	4
2	Dr. Yudhishthir Pandey	10	2	5
3	Dr. Arif Iqbal	9	4	4
4	Dr. Mohammed Aslam Husain	5	4	4
5	Dr. Puneet Joshi	7	3	3
6	Mr. Lokesh Kumar Yadav	4	3	6
7	Mr. Sonu Kumar	10	6	10
8	Dr. Sanjay Agarwal	7	7	3
9	Mr. Vikas Patel	21	3	3

5.7. Research and Development (30)

5.7.1. Academic Research (10)

Table 5.7.1 (a): Total Publications

Faculty Publications (EED Department)										
S. No.	Name	Total Publications	h-index	i 10-index	Journals			Conference	Book Chapters	Book
					SCI	**Scopus**	**Other Peer Reviewed**			
1	Dr. S. P. Singh	117	10	13	4	7	34	72	02	1
2	Dr. Mohammed Aslam Husain	41	09	9	9	1	5	21	03	2
3	Mr. Vikas Patel	12	16	3			10	04	01	0
4	Dr. Puneet Joshi	13	2	2	1	3		2	06	1
5	Dr. Sanjay Agrawal	17	5	4	4	2		6	04	1
6	Dr. Yudhishthir Pandey	9	2	1	1	2		8	-	0
7	Mr. Lokesh Kumar Yadav	8	2	0					04	0
8	Dr. Arif Iqbal	26	5	2	7	14	1	10	-	0

9	Mr. Sonu Kumar	5	1	1				5	-	0

Table 5.7.1 (a.1): Total Number of Publications in SCI/SCOPUS/UGC listed Journals

Total Number of Publications in SCI/SCOPUS/UGC listed Journals = 69

Sr. No.	Faculty Name	SCI/SCOPUS/UGC Paper Details (before 2018-19)	SCI/SCOPUS/ UGC Paper Details (2018-19)	SCI/SCOPUS/UGC Paper Details (2019-20)	SCI/SCOPUS/UGC Paper Details (2020-21)	Grand Total	Remarks
1	Dr. S P Singh	10	2	2	4	18	2 SCI In 2021-22
2	Dr. M. Aslam Husain	6	3	1	3	13	
3	Mr. Vikas Patel	7	0	0	0	7	
4	Dr. Puneet Joshi	0	1	1	2	4	
5	Dr. Sanjay Agrawal	3	1	2	0	6	
6	Dr. Yudhishthir Pandey	0	1	2	4	7	1 SCI In 2021-22
7	Mr. Lokesh Kumar Yadav	0	0	2	0	2	
8	Dr. Arif Iqbal	6	2	1	5	16	1 SCI In 2021-22
9	Mr. Sonu Kumar	0	0	0	0	0	

Table 5.7.1 (a.2): Total Number of Publications in National/ International Conferences

Total Number of Publications in National/ International Conferences = 129

Sr. No.	Faculty Name	National/International Conference (before 2018-19)	National/International Conference (2018-19)	National/International Conference (2019-20)	National/International Conference (2020-21)	Grand Total
1	Dr. S P Singh	60	3	6	0	69
2	Dr. M. Aslam Husain	12	2	7	1	22
3	Mr. Vikas Patel	3	0	0	1	4
4	Dr. Puneet Joshi	0	0	1	1	2
5	Dr. Sanjay Agrawal	5	1	0	0	6
6	Dr. Yudhishthir Pandey	2	3	3	1	9
7	Mr. Lokesh Kumar Yadav	0	0	1	1	2
8	Dr. Arif Iqbal	3	3	3	1	10
9	Mr. Sonu Kumar	5	0	0	0	5

Table 5.7.1 (b): Total books published by Faculty

Faculty Name	Title of Book	Publisher	ISBN No.	Publication Date/Year	Whether National/International

Dr. S P Singh	Elements of Power System	Standard Publishers Distributors, Nai Sarak, Delhi-110006	978-81-8014-249-9,	2018	National
Dr. M. Aslam Husain	Wind-PV Hybrid Generation, Performance analysis of wind-PV hybrid generation system using MATLAB Simulink	LAP Lambert Academic Publishing	978-3-659-53393-8	2014	International
	DC Motor Control - A case study: FOUR QUADRANT DC MOTOR SPEED CONTROL WITH MICROCONTROLLER	BookRix GmbH & Co. KG, Munich, Germany	978-3-7438-8580-6	2018	International
Mr. Vikas Patel	None				
Dr. Puneet Joshi	Metaheuristic and Evolutionary Computation: Algorithms and Applications	Studies in Computational Intelligence 916, Springer Nature	ISBN 978-981-15-7570-9	2020	International
Dr. Sanjay Agrawal	Metaheuristic and Evolutionary Computation: Algorithms and Applications	Studies in Computational Intelligence 916, Springer Nature	ISBN 978-981-15-7570-9	2020	International
Dr. Yudhishthir Pandey	None	-	- -	- -	-
Mr. Lokesh Kumar Yadav	None	-	-	-	-
Dr. Arif Iqbal	None	-	-	-	- -
Mr. Sonu Kumar	None	-	-	-	-

Table 5.7.1 (c): Article/Chapters Published in Books

Faculty Name	Title of Book	Title of Chapter	Publisher	ISBN No.	Publication Date/Year	Whether National/International
Dr. S P Singh	Applications of Artificial Intelligence Techniques in Engineering	Performance Evaluation of Brushless DC Motor Drive Supplied from Hybrid Sources	Springer Nature Singapore Pvt. Limited, Chapter No. 41	978-981-13-1821- 4	2018	International
	Intelligent Data-Analytics for Power and Energy Systems:: Advances in models and applications	Intelligent approach for Performance Investigation of Direct Drive Generator based Energy Conversion System under variable speed operations	Springer Book Chapter-23	978-981-16-6080- 1	2021	International
Dr. M. Aslam Husain	System and Architecture, Springer pp 285-303	Aspects Involved in the Modeling of PV System, Comparison of MPPT Schemes, and Study of Different Ambient Conditions Using P&O Method	System and Architecture, Springer pp 285-303	978-981-10-8533-8_28	2018	International
	In Renewable Power for Sustainable Growth: Proceedings of International Conference on Renewal Power (ICRP 2020), Springer Nature p. 225. [Scopus Indexed]	Performance Analysis of PV Array Connection Schemes Under Mismatch Scenarios	In Renewable Power for Sustainable Growth: Proceedings of International Conference on Renewal Power (ICRP 2020), Springer Nature p. 225. [Scopus Indexed]	978-981-334-080-0	2021	International
	In Applications of Computing, Automation and Wireless Systems in	Accurate Equivalent Circuit Model for Battery States Estimation	In Applications of Computing, Automation and Wireless Systems in	978-981-13-6772-4_93	2019	International

	Electrical Engineering, Springer, Singapore pp. 1073-1085. [Scopus Indexed]		Electrical Engineering, Springer, Singapore pp. 1073-1085. [Scopus Indexed]			
	Intelligent Data Analytics for Power and Energy Systems. Springer DOI : 10.1007/978-981-16-6081-8 [Scopus Indexed]	Intelligent Approach for Performance Investigation of Direct-Drive Generator-Based Wind Energy Conversion System Under Variable Speed Operation	Intelligent Data Analytics for Power and Energy Systems. Springer DOI : 10.1007/978-981-16-6081-8 [Scopus Indexed]	978-981-16-6081-8_23	2021	International
Mr. Vikas Patel	Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems	Soft Computing Methods and Its Applications in Condition Monitoring of DGS- A Review	Springer Nature	ISBN: 978-981-15-1532-3	2020	International
Dr. Puneet Joshi	metaheuristic and Evolutionary Computation: Algorithms and Applications	Tackling Power Quality Issues using Metaheuristics	Springer Nature	978-981-15-7571-6	2021	International
	metaheuristic and Evolutionary Computation: Algorithms and Applications	Application to Metaheuristics in Power Electronics	Springer Nature	978-981-15-7571-6	2021	International
	Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems	Soft Computing Methods and Its Applications in Condition Monitoring of DGS- A Review	Springer Nature	ISBN: 978-981-15-1532-3	2020	International
	Soft Computing in Condition Monitoring and Diagnostics	Introduction to Condition Monitoring of PV System	Springer Nature	ISBN: 978-981-15-1532-3	2020	International

	of Electrical and Mechanical Systems					
	Use of AI, Robotics,and Modern Tools to Fight Covid-19	The History of Pandemics and Evolution So Far	River Publication	9.78877E+12	2021	International
	metaheuristic and Evolutionary Computation: Algorithms and Applications	Cuckoo Search Algorithm: A Review of Recent Variants and Engineering Applications	Springer Nature	978-981-15-7571-6	2021	International
Dr. Sanjay Agrawal	metaheuristic and Evolutionary Computation: Algorithms and Applications	Tackling Power Quality Issues using Metaheuristics	Springer Nature	978-981-15-7571-6	2021	International
	metaheuristic and Evolutionary Computation: Algorithms and Applications	Application to Metaheuristics in Power Electronics	Springer Nature	978-981-15-7571-6	2021	International
	Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems	Soft Computing Methods and Its Applications in Condition Monitoring of DGS- A Review	Springer Nature	ISBN: 978-981-15-1532-3	2020	International
	Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems	Introduction to Condition Monitoring of PV System	Springer Nature	ISBN: 978-981-15-1532-3	2020	International
Dr. Yudhishthir Pandey	None					
Mr. Lokesh Kumar Yadav	metaheuristic and Evolutionary Computation: Algorithms and Applications	Tackling Power Quality Issues using Metaheuristics	Springer Nature	978-981-15-7571-6	2021	International

	metaheuristic and Evolutionary Computation: Algorithms and Applications	Application to Metaheuristics in Power Electronics	Springer Nature	978-981-15-7571-6	2021	International
	Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems	Soft Computing Methods and Its Applications in Condition Monitoring of DGS- A Review	Springer Nature	ISBN: 978-981-15-1532-3	2020	International
	Soft Computing in Condition Monitoring and Diagnostics of Electrical and Mechanical Systems	Introduction to Condition Monitoring of PV System	Springer Nature	ISBN: 978-981-15-1532-3	2020	International
Dr. Arif Iqbal	None					
Mr. Sonu Kumar	None					

Table 5.7.1 (d) : Ph D. Guidance by Faculty

S. No.	Faculty member	Designation	No. of Ph.D. students guided for last 04 years	
			Guided	Pursuing
1.	Dr. S. P. Singh	Associate Professor	-	04
2.	Dr. Sanjay Agarwal	Assistant Professor	-	01
3.	Dr. M Aslam Husain	Assistant Professor	-	01

Table 5.7.1 (e) : Faculty pursuing/Awarded Ph.D.

S. No.	Faculty member	Designation	Status
1.	Dr. Yudhishthir Pandey	Assistant Professor	Awarded (Nov. 2019)
2.	Mr. Vikas Patel	Assistant Professor	Pursuing
3.	Mr. Sonu Kumar	Assistant Professor	Pursuing
4.	Mr. Lokesh Kumar Yadav	Assistant Professor	Pursuing

5.7.2. Sponsored Research (5)

Table 5.7.2: Government Sponsored Research Project

Name of the research project	Name of PI & Co-PI	Amount	Name of funding Agency	Year of sanction	Duration of project	Status
Development of IoT & Drone Based Agriculture Monitoring System with Objective of Skill Development of Socially Deprived Community	Dr. S. P Singh (PI) & Dr. M Aslam Husain (Co-PI)	Rs. 44.648 Lakhs	MEITY, New Delhi	2020	2 Years	On-going
Integrated Renewable Resources: Storage operation and Management in Smart Grid	Dr. S P Singh	Rs. 3 Lakhs	CRIP TEQIP-III AKTU, Lucknow	2019	1 Year	Completed
Development of a novel fast MPPT algorithm based solar PV system with shade tolerance for rural applications	Dr. M Aslam Husain	Rs. 9.68 Lakhs	CST UP (DST UP)	2018	2 Years	Completed

5.7.3. Development activities **(10)**

- Faculties have prepared question banks for their subjects of EED.
- Faculties motivate the students to present Technical paper/Presentation on complex issues of the subject.
- Faculties have taken online classes.
- Faculties have organized STC/Workshop/Conference/FDP/SIP and expert lectures.
- Faculties completed MOOC courses and have certifications in various subjects.

Table 5.7.3.1: STC/Workshop/Conference/FDP/SIP Organized in Electrical Engg. Department

Sr. No.	Name of program	Organizer	Duration with Date
1.	International Seminar on "Recent Advances in Science and Technology(ISRAST-2020)	REC Ambedkar Nagar through TEQIP-III	2 days (February 16-17-2020)
2.	International Conference (REC-CON-19)	REC Ambedkar Nagar through TEQIP-III	2 days(November 28-29-2019)
3.	One week workshop on "Environmental Management for Eco-Friendly Infrastructure Development"	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
4.	One week workshop on "Robotics Workshop cum Championship (ROBOFIESTA)	REC Ambedkar Nagar through TEQIP-III	One week (September 02-06, 2019)
5.	One Week short term Course On "Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar ,Wind & Fuel cell"	REC Ambedkar Nagar through TEQIP-III	One week (August 27-31, 2019)
6.	"Developing Critical Thinking using Learning Management System (LMS) and ICT tools"	REC Ambedkar Nagar through TEQIP-III	One week (August05-09, 2019)
7.	Four Week Summer Internship on "MATLAB and its Application in Electrical Engineering	REC Ambedkar Nagar through TEQIP-III	Four week (17 June-15 July 2019)
8.	Four Week Summer Internship on "Open Source Software-SCILAB,e-SIM"	Self-Sponsored	Four week (10 June-10 July 2019)
9.	Faculty Development Program On "Essentials of Teaching-Learning Process and Research Methology"	REC Ambedkar Nagar through TEQIP	One week (February 04-08, 2019)
10.	National Workshop on "Nurturing Start-up/Entrepreneurial Skills in Budding Engineers"	REC Ambedkar Nagar through TEQIP	One week (February 15-19, 2019)
11.	One Week short term Course On "Real time Simulation of FACTS and HVDC through ICT"	In collaboration with REC Ambedkar Nagar & NITTTR Chandigarh	One week (January 20-February02, 2019)
12.	One week National workshop on "MATLAB & its application in Engineering"	Entuple REC Ambedkar Nagar & Technologies Pvt. Ltd	One week (January 20-February02, 2019)

13.	Week short term Course On "Artificial Intelligence & Optimization through ICT"	In collaboration with REC Ambedkar Nagar & NITTTR Chandigarh	One week (January 21-25, 2019)
14.	One Week short term Course On "Recent Advances in Electrical engineering"	REC Ambedkar Nagar through TEQIP-III	One week (April 10-14, 2018)
15.	"One day Workshop : Ansys Maxwell"	Industry	1 day (February 02, 2018)
16.	Workshop on "Outcome Based Education (OBE)"	REC Ambedkar Nagar through TEQIP	2 days (September 09-10, 2018)
17.	ICT course on "Scilab Programming"	In collaboration with REC Ambedkar Nagar & NITTTR Chandigarh	One week (May 14-18, 2018)
18.	Short Term training program On Laboratory and Workshop Management "	In collaboration with NITTTR Kolkata	One week (April 09-13, 2018)

Table 5.7.3.2: Details of Expert Lectures Organized

Sr. No.	Name & Affiliation of Recourse Person	Title of Expert talk	Date
1.	Dr. Faiz Ahmad Minai, Integral University, Lucknow	Online webinar/expert lecture on "Internet of Things: Introduction, Architecture and its Application"	25/06/2021
2.	Mr. Saurabh Rajpoot, MITS, Gwalior	Online webinar/expert lecture on "Impact of Ambient temperature on PV cell performance characteristics"	19/06/2021
3.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Humanities course for engineering& technology-A case study of AICET model Curriculum	16/01/2020
4.	Dr. Pushpendra Singh, REC Banda	Speed Control of Three Phase Induction Motor	15/11/2019
5.	Mr. Abhijeet Singh, REC Banda	Basics of EM Waves	14/11/2019
6.	Er. Sube Singh Gurjar, RCMA (HAL, Korwa), Amethi	Power supply and EMI/EMC Aspect in military Aircraft	03/10/2019
7.	Dr. Faiz Ahmad Minai, Integral University, Lucknow	Renewable Energy	29/08/2019
8.	Mr. Om Krishan Singh, Scientist, MEITY, New Delhi	Research and Innovative Funding opportunities	16/07/2019
9.	Prof. R.K. Mishra, IIT (BHU), Varanasi	Application of particle swarm optimization	30/03/2019
10.	Er. Krishna Mohan Pandey & Mr. Chandra Mohan Pandey SOFCON Trainer Lucknow	MATLAB	26/02/2019
11.	Mr. Suraj Pandey & Mr. Mustakeem Ahmad SOFCON Trainer Lucknow	PLC/SCADA	25/02/2019
12.	Er. Sube Singh Gurjar, RCMA (HAL, Korwa), Amethi	Evolution of flight data Recorder & Certification for military application	08/05/2018
13.	Prof. S K Chaturvedi, IIT Kharagpur	Reliability Engineering and its	21/04/2018

		Applications	

Table 5.7.3.3: List of faculty who completed MOOC certification

NAME (s)	SUBJECT	Session
Dr. S. P. Singh, Mr. Vikas Patel, Dr. Puneet Joshi, Mr. Lokesh Kumar Yadav, Mr. Sonu Kumar	Orientation Towards Technical Education and Curriculum Aspects	2020-21
Dr. S. P. Singh, Mr. Vikas Patel, Dr. Puneet Joshi, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Professional Ethics & Sustainability	2020-21
Dr. S. P. Singh, Mr. Vikas Patel, Dr. Puneet Joshi, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Communication Skills, Modes & Knowledge Dissemination	2020-21
Dr. S. P. Singh, Dr. Mohammed Aslam Husain, Mr. Vikas Patel, Dr. Puneet Joshi, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Instructional Planning and Delivery	2020-21
Dr. S. P. Singh, Dr. Mohammed Aslam Husain, Mr. Vikas Patel, Dr. Puneet Joshi, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Technology Enabled Learning & Life Long Self Learning	2020-21
Dr. S. P. Singh, Dr. Mohammed Aslam Husain, Mr. Vikas Patel, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Student Assessment and Evaluation	2020-21
Dr. S. P. Singh, Dr. Mohammed Aslam Husain, Mr. Vikas Patel, Dr. Puneet Joshi, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Creative Problem Solving, Innovation and Meaningful R & D	2020-21
Dr. S. P. Singh, Dr. Mohammed Aslam Husain, Mr. Vikas Patel, Dr. Puneet Joshi, Dr Yudhishthir Pandey, Mr. Lokesh Kumar Yadav, Dr. Arif Iqbal, Mr. Sonu Kumar	Institutional Management & Administrative Procedures	2020-21
Dr. Mohammed Aslam Husain	Technical English for Engineers	2019-20
Dr. Arif Iqbal	Advanced Linear Continuous Control System: Applications with MATLAB Programming & Simulink	2019-20
Dr. Mohammed Aslam Husain, Dr. Arif Iqbal, Dr. Yudhishthir Pandey	Orientation Towards Technical Education and Curriculum Aspects	2019-20
Dr. Mohammed Aslam Husain	Professional Ethics & Sustainability	2019-20
Dr. Mohammed Aslam Husain	Communication Skills, Modes & Knowledge Dissemination	2019-20

Table 5.7.3.4: Question Bank Developed and Available For the Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Microprocessor
	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Digital Electronics	Power Transmission and Distribution	Electrical Drives

		Special Electrical Machines	Introduction to Power Quality & FACTS
			Renewable Energy resources

Table 5.7.3.5: Surprise Test / Quiz Taken Developed & Available For the Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Microprocessor
Programming for problem solving	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Power Plant Engineering	Power Transmission and Distribution	Renewable Energy resources
	Basic Signal System	Special Electrical Machines	Utilization of Electrical Energy and Traction
	Digital Electronics	Control System	
		Power Electronics	

Table 5.7.3.6: Video Lectures Available For the Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Digital Electronics	Special Electrical Machines	Electrical Drives
	Electrical Machine-I	Power System-II	Introduction to Power Quality & FACTS
	Networks Analysis & Synthesis	Microprocessor & Microcontroller	EHVAC
	Universal Human Values	Power Electronics	Renewable Energy Sources
		Idea to Business Model	
		Power Electronics	

Table 5.7.3.6: Power Point Presentations Available For the Theory Subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Introduction to Power Quality & FACTS
Programming for problem solving	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Digital Electronics	Power Transmission and Distribution	Electrical Drives
		Special Electrical	Renewable Energy resources

		Machines	
		Power Electronics	Utilization of Electrical Energy and Traction

Table 5.7.3.7: Numerical Problems Given In the Theory Subjects for Better Understanding

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Electrical Measurements & Instrumentation	Power System-I	Microprocessor
	Electrical Machine-I	Electrical Machine-II	Power Station Practice
	Power Plant Engineering	Power Transmission and Distribution	Electrical Drives
	Digital Electronics	Power Electronics	Introduction to Power Quality & FACTS
		Control System	Renewable Energy resources
			Utilization of Electrical Energy &Traction

Table 5.7.3.8: Online Classes (Google Class) taken in the following subjects

First Year	Second Year	Third Year	Fourth Year
Basic Electrical Engineering	Basic Signal System	Power Electronics	Utilization of Electrical Energy & Electric Traction
	Electrical Machine-I	Control System	Renewable Energy Resources
	Electrical Measurements & Instrumentation	Power System-II	Introduction to Power Quality and FACTs
		Special Electrical Machines	Electrical Drives
		Electrical Machine-II	Power Station Practice
			Introduction to smart grid
			Industrial Automation and PLC lab

Table 5.7.3.9: New labs established in the department

S. No.	Name of the Newly Established Labs	Details	Reason(s)for creating facility	Areas in which students are expected to have enhanced learning
1	Renewable Energy Research Centre (RERC) (Centre of Excellence)	**-Wind Emulator [220V, 2.5KW, 1500 rpm DC shunt Motor Coupled to 415V, 2.2 KW 1000 rpm 6 pole Three phase slip ring induction motor, 1024 ppr encoder included]** **- Solar Energy Module with Grid Synchronisation:**	To provide an inspiring platform to research-scholars academicians those working in power & energy domain, for disseminating research-based knowledge for the development of the Country. To provide training courses to students in the field of electric power engineering & energy systems. To provide cost-effective innovative solutions to the research problems in the field of electric power engineering and energy systems through the efficient use of advanced technology, state-of- the-art tools and methodologies. To provide outstanding testing and consultancy services to electric power & energy sector.	Wind energy generation and its control; Solar PV energy generation and control

2	Electrical workshop lab	**Electrical work bench [DS-EWB-10]**	To enable students to do pratical related to electrical wiring, soldering, drilling etc	Electrical Wiring, Soldering, Drilling, circuit development, repairing electrical equipments etc.

5.7.4. Consultancy (from industry) (5)

1. Consultancy works for the hand over process of 220 kV New Tanda-Sohawal PGCIL transmission line from UPPTCL Ayodhya, UP. The PI of this consultancy work is **Dr. M. Aslam Husain** (2020-21). [Net Amount = Rs. 62720/-]
2. Consultancy work for the hand over process of 220 kV NTPC Tanda-New Tanda transmission line from UPPTCL Ayodhya, UP. The PI of this consultancy work is **Dr. M. Aslam Husain** (2020-21). [Net Amount = Rs. 15680/-]
3. Consultancy work for the hand over process of 132KV Kadipur - Jalalpur Singlr circuit transmission line. from UPPTCL Ayodhya, UP. The PI of this consultancy work is **Dr. M. Aslam Husain** (2020-21). [Net Amount = Rs. 39200/-]

5.8. Faculty Performance Appraisal and Development System (FPADS) (30)

(a) System for faculty appraisal

The College duly recognizes the efforts of the faculty members for any academic achievement or innovative practice. Such innovations are evaluated and are given due acknowledgements in the annual appraisals for faculty members. The College has put in place a well-designed convenient 'self-appraisal system' for its faculty. Each faculty member is required to submit Annual Confidential Report (ACR) annually on the basis of parameters such as teaching hours, number of subjects taught, research papers/articles/books published, conferences attended, papers presented in the conferences, new curricula designed/developed, participation in extra-curricular/co-curricular activities, extra responsibilities assigned by the University, and other contributions made towards the society.

The ACR of the teaching staff is duly verified (confidentially) by the Heads of the respective Teaching Departments and thereafter at the Registrar level before its final acceptance by the Director. The ACR of the faculty members is based upon many parameters which are to be filled in proper detail. These parameters relate to:

- General Information
- Details of teaching carried out in past one year
- Participation in university activities (evaluation, paper setting, etc.)
- Innovations/contribution teaching related activities
- Professional competency improvement through workshop/seminar/conference/summer schools etc.
- Research contribution (Ph.D. /M Tech. guidance and research papers/projects)
- Contribution to community service
- Participation in administrative work and corporate life (co-curricular activities, student welfare and discipline)

Rajkiya Engineering College, Ambedkar Nagar, U. P., 224122
राजकीय इंजीनियरिंग कालेज, अम्बेडकरनगर, उ0 प्र0 224122

Annual Confidential Report for the year (.....)
वार्षिक गोपनीय चरित्र आख्या प्रविशिट–वर्श ..... के लिए

Part I: General Information
भाग –1 सामान्य सूचना

1- Full Name
पूरा नाम

2- Qualifications
अर्हता

3- Additional Qualifications earned during the year
वर्श के दौरान अतिरिक्त अर्हता जो प्राप्त की गयी हो।

4- Date of Birth
जन्म तिथि

5- Present Post
वर्तमान पद
(Permanent/Probation/Temporary)
(स्थायी / परीयीक्षण / अस्थायी)

6- Scale
वेतनमान

7- Period of Service in the college
संस्थान में सेवा अवधि

Part II : Details of the work done by the teacher during the year
भाग –२ : प्रविशिट की अवधि में षिक्षक द्वारा कृत कार्य का विवरण

(To be filled by the teacher concerned)

सम्बन्धित षिक्षक द्वारा भरा जाय

1- Teaching
षिक्षण

a)- Class Taught	Periods assigned Per week	Periods engaged	Steps taken for the teaching of periods missed during period of absence

कक्षायें जो पढ़ाई गई	प्रति सप्ताह के लिए निर्धारित पीरियड L. T. P एल. टी. पी	पूर्ण शैक्षिक सत्र में पढ़ाये गये पीरियड L. T. P एल. टी. पी	अनुपस्थिति के कारण न लिए गये पीरियड के अध्यापन की प्रतिपूर्ति के लिए की गयी व्यवस्था।

b) Details of instructional materials supplied to the students (enclose a copy of each)
छात्रों को दी गयी अनुदेष सामग्री का विवरण (प्रत्येक की एक प्रति संलग्न करें)

(i) Teaching plan
षिक्षण योजना

(ii) Synopsis of lectures
व्याख्यान का सार–संक्षेप

(iii) Reading Materials
पाठ्य सामग्री

(iv) Any other
अन्य

(c) Details of Participation in
निम्न में सहयोगिता का विवरण

(i) University Evaluation
विष्वविद्यालय परीक्षा मूल्यांकन

(ii) Internal Evaluation
आन्तरिक मूल्यांकन

(iii) Paper Setting
प्रष्नपत्र निर्धारण

(iv) Assessment of home assignment
गृहकार्य का मूल्यांकन

(v) Conduct of Examination
परीक्षा का संचालन

(vi) Evaluation of dissertation/projects etc.
प्रोजेक्ट/डिजर्टेषन आदि का मूल्यांकन

(vii) Any other
अन्य

(2) Details of innovations/Contribution made to improve / instruction during the year
प्रविश्टि की अवधि में षिक्षण/अनुदेष कार्य के विकास एवं अभिनवीकरण में योगदान का विवरण

(i) Improvements/ Design of Curriculum
पाठ्यक्रम की परिकल्पना एवं विकास

(ii) Teaching Methods
षिक्षण पद्धति

(iii) Setting up of new experiments
नये प्रयोगों की परिकल्पना

(iv) Improvements / Changes in evaluation methods
मूल्यांकन पद्धति में परिवर्तन/विकास

(v) Preparation of reading materials, books, laboratory materials, question banks etc.

पाठ्य सामग्री, पुस्तक,प्रयोगषाला, नियमावली, प्रष्नकोश इत्यादि का लेखन।

(vi) Any other
अन्य

(3) Research Contributions :
षोध में योगदान

(a) No.of Research Students षोध छात्रों की संख्या	At the beginning of the year वर्श के प्रारम्भ में	Registered during the year वर्श में पंजीकृत	Completed during the year जिन्होने इस अवधि मे षोध कार्य पूर्ण किया
M.E. / M.Tech. एम० ई० / एम टेक०			
Ph.D. विद्या वाचस्पति			

(b) Research Paper published during the year (enclose list with title, journal in which published, year, conference in which published / presented etc)
प्रविश्टि की अवधि में प्रकाषित षोध पत्र (षीर्शक, जनरल का नाम जिसमें प्रकाषित हुआ अथवा सम्मेलन जिसमें प्रकाषित / प्रस्तुत किया गया, आदि का विवरण देतें हुए तालिका संलग्न करें तथा षोध पत्र के प्रकाषन की स्वीकृत या षोध पत्र भी संलग्न करें।

(c) Research projects undertaken as investigator / co-investigator
अन्वेशक / सह–अन्वेशक के रुप में प्रारम्भ की गयी षोध परियोजनायें

(i) Detaile of Projects
परियोजना का विवरण

Title of Project परियोजना का विवरण	Funding Agency वित्तीयन संस्था	Date of start of project परियोजना के प्रारम्भ होने की तिथि	Duration अवधि

Amount spent on equipment उपकरण / संयत्रों पर व्यय की गयी धनराषि	Amount spent on निम्न पर व्यय की गयी धनराषि	Present status अद्यावधि स्थिति

Title of report परियोजना का विवरण	Agency to whom submitted संस्था जिसे प्रस्तुत की गयी	Nature of Report interim/final रिपोर्ट की प्रकृति अन्तरिम / अन्तिम

(iii) Detail of Seminar, Conference, Symposia, Summer-winter school etc. organised by you
गोश्ठियों, संगोश्ठियों, ग्रीश्मावकाष या / एवं षीतवकाष स्कूल इत्यादि जो आप द्वारा आयोजित किए गये

Title षीर्शक	Sponsored by प्रायोजक	Date तिथि	No. of participants आयोजन में सम्मिलित होने वालों की संख्या

(iv) Did you serve as a reviewer / editorial board member of any scientific journal. If you give Details.
क्या आप किसी 'साइन्टफिक जनरल' के समीक्षक / या सम्पादक मंडल के सदस्य है यदि हाँ तो विवरण दें।

(v) Improvement of Professional Competence
व्यवसायिक सक्षमता का विकास

(i) Summer/ winter school — Invited..... — Attended.....
ग्रीश्म / षीत अवकाष कालीन स्कूल — आमंत्रित — सम्मलित हुए

(ii) Workshop / Seminar / Conference — Invited..... — Attended.....
गोश्ठियां / संगोश्ठियां / कार्य षिविर — आमंत्रित — सम्मलित हुए

(iii) Traning Program — Invited..... — Attended.....
प्रषिक्षण कार्यक्रम — आमंत्रित — सम्मलित हुए

(iv) Any Other — Invited..... — Attended.....
अन्य — आमंत्रित — सम्मलित हुए

(v) Participation in administrative work and corporate life
प्रषासकीय एवं सामूहिक कार्यो में योगदान

(i) Administrative work
प्रषासनिक कार्य

(ii) Co-curricular / extra-curricular activites (Viz. Hostels, Games, Sports, Cultural, NCC, NSS etc.)
सहषिक्षण / षिक्षेत्तर गतिविधियाँ (उदाहरणार्थ छात्रावास प्रबन्ध, खेल, सांस्कृतिक एन०सी०सी०, एन०एस०एस० आदि)

(iii) Consultancy and Extension Activities
परामर्ष एवं प्रसार गतिविधियाँ

(iv) Interaction with other institution
अन्य संस्थाओं के साथ अन्योन्य

(v) Interaction with industries / user organisation
उद्योग / प्रयोक्ता संगठन से अन्योन्य

(vi) Consultancy rendered
परामर्ष जो दिया गया

Work done	Organisation	Total Amount
कार्य जो निश्पादित किया	संगठन	कुल धनराषि
	Charged	Received by you
	षुल्क जो माँगा गया	जो आप को प्राप्त हुआ

(vii) Special lecturer delivered at seminars / short-term course / Industrial organisation etc.
गोश्ठियों / अल्पकालिक पाठ्यक्रमों / औद्योगिकी संगठनो में दिए गए विषिश्ट व्याख्यान आदि।

(iii) Honours / Award received
सन्मान / परितोशक जो प्राप्त हुआ।

(ix) Any other information you wish to give
अन्य जो सूचना आप देना चाहते हों।

SIGNATURE OF EMPLOYEE

Part – III:

Evaluation Report of the period ending

(To be verified and filled in by the Reporting Officer)

01. Character

a) Integrity

b) Temperament

c) Amenability to Discipline

02. Capacity to Perform Duties of the Post held:

a) Physical Capacity

b) Promptness in disposal of work

03. Group Work

a) Attitude towards colleagues:

b) Attitude towards subordinates:

c) Leadership (if duties demand capability):

d) Co-operation in departmental work:

04. General Appraisal:

(Please provide proof in case of adverse entry)

a) Was there any occasion to find any serious fault with his work including examination?

b) What are his strong points in your opinion?

c) Has any deficiency been brought to his notice in the past and to what extent he has shown improvement.

05. Additional General Remarks:

06. Overall performance:

(In case of outstanding and poor, the specific acts be noted)

a) Outstanding/Very Good/Good/Satisfactory/Poor:

b) Need improvement in the following:

07. Integrity certificate:

i) Certified that there is nothing against:
Shri/Dr./Smt./Miss……..

a) Adversely reflecting his integrity:

b) He/She enjoys a good reputation and his/her integrity is good.

ii) The following facts have come to my knowledge which make his integrity doubtful.

Date:

Signature in full of the
Reporting Officer/ Reviewing Officer

Name in Block letter

Designation (Seal)

Part- IV:
Remarks of the Director

Date:

Signature of the Director
Name in Block letters

5.9. Visiting/Adjunct/Emeritus Faculty etc. (10)
Provision of inviting/having visiting/adjunct/emeritus faculty

- Proposal submission to Director for approval (covering remuneration aspect also) for majority of cases.
- Invitation through email/post/telephonic as per the requirement.
- For training related invitations from the industry, proposals are invited from targeted Industries.
- For conferences, workshops, FDP activities, invitations are sent in bulk to many resource persons.

Table 5.9.1 **Details of invited Resource Persons**

Session: 2020-21

S. No.	Topic	Action taken	Date	Resource Person With designation
1.	Impact of Ambient temperature on PV cell performance characteristics	Expert Lecture (Online Mode)	19/06/2021	Mr. Saurabh Rajput, MITS, Gwalior
2.	Internet of Things: Introduction, Architecture and its Application	Expert Lecture (Online Mode)	25/06/2021	Dr. Ahmad Faiz Minai, Integral University, Lucknow

Session: 2019-20

S. No.	Topic	Action taken	Date	Resource Person With designation
1.	Research and Funding Opportunity offered by Ministry of Electronics and Information Technology	Invited Talk	16/07/2019	Mr. Om Krishna Singh, Scientist-C, MEITY, New Delhi
2.	Developing Critical Thinking using Learning Management System and ICT Tools	One week national workshop	05/08/2019-09/08/2019	REC Ambedkar Nagar through TEQIP-III
3.	Emerging Trends in Power System Operation and Planning	Expert Lecture	17/08/2019	Prof. R. Balasubramanian, IIT Delhi
4.	Recent Advances in Renewable & Emerging Energy Technologies with emphasis on Solar, Wind & Fuel Cell	One week short term course	27/08/2019-31/08/2019	REC Ambedkar Nagar through TEQIP-III
5.	Environmental Management for Eco-friendly Infrastructure Development	One week workshop	One week (September 02-06, 2019)	REC Ambedkar Nagar through TEQIP-III
6.	Robotics Workshop cum Championship (ROBOFIESTA)	One week workshop	One week (September 02-06, 2019)	REC Ambedkar Nagar through TEQIP-III
7.	Power System Stability	Invited Talk	07/09/2019	Prof. M K Verma, IIT (BHU), Varanasi
8.	Application of Variable Frequency Transformer in Wind Energy Conversion System	Invited Talk	07/09/2019	Dr. Farhad Ilahi Bakhsh, NIT, Srinagar (J & K)

9.	Power Supply & EMI/EMC aspects of Military Aircraft	Invited Talk	03/10/2019	Er. Sube Singh Gurjar, RCMA (Korwa), Amethi
10.	Recent Advances in Science and Technology (RAST-2020)	International Seminar	2 days (February 16-17 ,2020)	REC, Ambedkar Nagar through TEQIP-III

Session 2019-18

S. No.	Gap	Action taken	Date	Resource Person With designation
1.	Industrial Automation- Challenges & Opportunities	Expert Lecture	01/12/2018	Er. Vineet Saxena, Suncor Energy, Canada
2.	Application of Particle Swarm Optimization and Genetic Algorithm in Electrical Engineering	Invited Talk	30/03/2019	Prof. R.K. Mishra, IIT (BHU), Varanasi
3.	High Frequency compact DC-DC Converter	Invited Talk	15/04/2019	Dr Sandeep Anand, IIT Kanpur
4.	Start-Up Cell "Parikalpna"	Invited Talk	02/05/2019	Gen. P K Singh, Retired Indian Army
5.	IEEEAwareness- Volunteers and Leadership	Invited Talk	26 November 2018	Dr. Aseem Chandel, REC Mainpuri (UP)

6. FACILITIES AND TECHNICAL SUPPORT (85)

6.1. Adequate and well-equipped laboratories, and technical manpower (30)

Table 6.1: Lab Facility and Technical Manpower

S. NO.	NAME OF LABORATORY	NO. OF STUDENTS PER SETUP (BATCH SIZE)	NAME OF IMPORTANT EQUIPMENT	WEEKLY UTILIZATION STATUS (ALL THE COURSES FOR WHICH THE LAB IS UTILIZED)	TECHNICAL MANPOWER SUPPORT		
					NAME OF TECHNICAL STAFF	DESIGNATION	QUALIFICATION
1.	Power Electronics Laboratory	30	Setup for studying SCR characteristics; UJT trigger circuit.; 1 phase half wave-controlled rectifier; 1 phase half wave Bridge rectifier; 3 phase half wave Bridge rectifier; 1-phase FHP Induction motor speed control; micro-controller based 1-phase cyclo-controller; triggering of IGBT/MOSFET chopper circuit,1-phase inverter circuit.	4 hrs. / week	Mr. Sanjay Maurya	Lab Assistant	Diploma (EE)
2.	Power System Laboratory	30	Setup for studying LG, LL, LLG, LLL faults; IDMT relay; location of faults by cable fault test; Ferranti effect; transformer oil test; MHO, Reactance, Distance relay; negative & positive sequence reactance of alternator	4 hrs. / week	Mr. Vivek Tiwari	Lab Assistant	ITI
3.	Electrical Engineering Laboratory	30	Setup for KVL, KCL; superposition, Thevenin's, Maximum power transfer; Power, Power factor measurement; resonance in RLC circuit.; 2 wattmeter method of power measurement; 1 phase energy meter; parameters of ac single phase series RLC circuit; dc shunt motor load test; load test of a single phase transformer	One Semester 8 hrs. / week One Semester 4 hrs. / week	Mr. Kundan Kumar	Lab Assistant	B.Tech. (EE)
4.	EMEC Laboratory (Electromechanical Energy Conversion-I & II)	30	Setup for studying different characteristics various DC generators, controlling of DC motors and transformer; 1 and 3 phase induction motor; 3-phase alternator; 3-phase synchronous motor	4 hrs. / week	Mr. Kundan Kumar & Mr. Sujeet Verma	Lab Assistant	B.Tech. (EE) & ITI respectively
5.	Electric Drives Laboratory	30	Setup for obtaining different characteristics and different speed control mechanisms of different types of DC motors, 1 & 3 phase induction motors using power electronics and other approaches.	4 hrs. / week	Mr. Krishna Kumar	Lab Assistant	Diploma (EE)
6.	Micro Processor Laboratory	30	Setup of 8085,8086,8086A microprocessor system; Pentium Processor; and various other programming based experimental setup	4 hrs. / week	Mr. RajmaniVerma& Mr. Rahul Verma	Lab Assistant	Both ITI

7.	Communication Laboratory	30	Setup to study amplitude modulation using a transistor and determine depth of modulation; generation of DSB-SC signal using balanced modulator; generation of SSB signal; envelope detector for demodulation of AM signal and observe diagonal peak clipping effect; super heterodyne AM receiver and measurement of sensitivity, selectivity and fidelity; frequency modulation using voltage controlled oscillator; detect FM signal using Phase Locked Loop; measure noise figure using a noise generator; study PAM, PWM and PPM; realize PCM signal using ADC and reconstruction using DAC and 4 bit/8bit system and various other setups.	4 hrs. / week	Mr. Niteesh Kr. Singh	Lab Assistant	B.Tech. (EE)
8.	Electronics Laboratory	30	Setup to Plot V-I characteristics of junction diode and Zener diode; input / output characteristics for common base transistor; R-C coupled common emitter amplifier; R-C Phase shift / Wein Bridge oscillator; study operation IC 555 based astable and mono-stable multi vibrators; application of Operational Amplifier as summer integrator and voltage Comparator: To study operation of Op-Amp based astable and mono-stable multi vibrators and many more experiment setups.	4 hrs. / week	Mr. Niteesh Kr. Singh & Mr. Suresh Kr. Maurya	Lab Assistant	B.Tech (EE) & Diploma (EE) respectively
9.	Control System Laboratory	30	Setup To study and calibrate temperature using resistance temperature detector (RTD);P, PI and PID temperature controller; DC position control system; speed-torque characteristics of an ac servomotor; servo voltage stabilizer; determine response of first order and second order systems for step input for various values of constant 'K' using linear simulator unit and compare theoretical and practical results; study behavior of separately excited dc motor in open loop and closed loop conditions at various loads	4 hrs. / week	Mr. Suresh Kr. Maurya	Lab Assistant	Diploma (EE)
10.	EMMI Laboratory (Electrical Measurement & Measuring Instruments Laboratory)	30	Setup of Calibration of AC voltmeter and AC ammeter; Maxwell's Bridge; Hay's Bridge; Anderson's Bridge; Owen's Bridge; De Sauty Bridge; Schering Bridge; Kevin's Double bridge; measurement of phase difference and frequency of AC signal using CRO; Measurement of Power using CT & PT; Measurement of iron loss in a ring by using Maxwell's Bridge; To measure high resistance by using loss of charge method.	4 hrs. / week	Mr. Sanjay Maurya	Lab Assistant	Diploma (EE)
11.	EI Lab (Electrical Instrumentation Laboratory)	30	Setup for Measurement of displacement using LVDT; load using strain gauge-based load cell; water level using strain gauge based water level transducer; temperature by RTD;	4 hrs. / week	Mr. Suresh Kr. Maurya	Lab Assistant	Diploma (EE)

			Design and Test a signal conditioning circuit for any transducer; Simulate and analyze the frequency domain measurement of electrical signals using spectrum analyzer; Study of PID controllers in flow measurement; Measurement of flow rate by anemometer; Measurement of solar energy using sensor; Implementation of Color Sensor for differentiating frequencies; Determine rotational speed and angle of a motor shaft using Encoder; Range finding and object detection using detection sensor; Measurement using various sensors and analyzing the output using Lab-VIEW software; Design a circuit for noise reduction in measurement system.				
12.	Network Laboratory	30	Setup for verification of super position theorem; Thevenin, Norton& max power transfer theorem; Tellegin,s theorem; Transient Response of current in R L&RC; Frequency response of current in RLC circuit with AC input; Z&H (DC only) for A network &computation of Y&ABCD parameters; Driving point and transfer function of a two port ladder network and verify theoretical values; Image & characteristic impedance; Frequency response of a twin-T notch filter; Attenuation characteristic of active filter.	4 hrs. / week	Mr. Rajmani Verma	Lab Assistant	ITI
13.	Electrical CAD Laboratory	30	25 Desktop Computer with Licensed Windows and other Academic Licensed Software, Open Source Software, LCD Projector, Printers, CCTV Camera.	4 hrs. / week	Mr. Rahul Verma	Lab Assistant	ITI
14.	Advanced Simulation Laboratory	30	25 Desktop Computer with Licensed Windows and other Academic Licensed Software, Open Source Software, LCD Projector, Printers, CCTV Camera.	4 hrs. / week	Mr. Rahul Verma	Lab Assistant	ITI
15.	Electrical Workshop	30	Study of different electrical system kits, module of electrical wiring, equipment of component testing and circuit design.	4 hrs. / week	Mr. Rahul Verma	Lab Assistant	ITI

6.2. Additional facilities created for improving the quality of learning experience in laboratories (25)

Table 6.2.1: Additional Facility Created for learning experiences

SR. NO.	FACILITY NAME	DETAILS	REASON(S) FOR CREATING FACILITY	UTILIZATION	AREAS IN WHICH STUDENTS ARE EXPECTED TO HAVE ENHANCED LEARNING	RELEVANCE TO PSO
1.	Centre of Excellence in Renewable	The equipment set is used to investigate the design and operation of modern	For giving students/Faculty a platform to present their ideas in the	Exact emulation of the technology of the current multi-	Renewable Energy (Solar and Wind)	PSO 1, 2, 3, 4, 5, 9

	Energy	wind power stations with double-fed induction generators. The effect of wind force and the mechanical design of wind power stations can be emulated in realistic detail using the machine testing stand and the software. The control unit for the double-feed asynchronous machine (as a generator for the wind power plant) ensures user-friendly operation and visualization during the experiments. The corresponding Interactive software is designed to convey knowledge and provide interactive support for carrying out the experiments and allows for PC-assisted evaluation of the measured data.	field of Renewable Energy	megawatt wind power generators A fully working and functional training system for wind turbines with double-fed induction generators (DFIG) A wind simulation, which exactly mathematically emulates the wind at the shaft		
2.	Fabrication Lab.	PCB design machine, soldering equipment, PCB testing kit, Edwinxp software.	For giving students/Faculty a platform to present their ideas in the field of Renewable Energy			
3.	Newly purchased software	• MATLAB • NI LabVIEW /MultiSim • Proteus • CASPOC • EDWIN XP • D-space	For skill developments of simulation and circuit design	Active learning and skill development	To develop skills of simulation and circuit design to fill the gaps of academics and industries.	PSO 1, 2, 3, 4, 5, 9

Table 6.2.2: Proposed Laboratory

SR. NO.	FACILITY NAME	DETAILS	Purpose
1.	Centre of excellence-Solar Energy	Solar PV Training and research system and Solar PV grid tied training system	To research and development of the most progressive renewable energy technologies
2.	PLC and Automation Lab	PLC-35 PLC Trainer system with SIEMENS S7-1200 and Human Machine Interface	To develop the skill of student in control and automation
3.	Robotics IOT Laboratory	Robotics Simulation software and internet of robotics kit with robotics band for brain wave technology and sensor	To design and development of IoT enabled projects which are cost effective and socially relevant

4.	Electric Vehicle Laboratory	Hybrid (Petrol + Electric) 2 wheeler electric vehicle with two wheeler and tricycle development system trainer	To develop state of art technologies for Electric Vehicles (EVs). Its goal to develop a static and dynamic wireless charging for 2- wheeler and 3 - wheeler electric vehicles and to optimize charging and discharging pattern of electric vehicles based on grid demands

6.3. Project laboratory (20)

Table 6.3: Project Lab Details

S. NO.	FACILITY NAME	FACILITY	UTILIZATION
1.	Electrical Workshop	Project implementation tools like soldering kit, power electronics switches; bread boards etc.	As a Lab for various implementation of small electrical projects and their prototypes.
2.	Renewable Energy Lab.	Prototypes of solar PV, wind power generation, wavect software etc.	For research and development activities.
3.	Fabrication Lab	PCB design machine, soldering equipment, PCB testing kit, Edwinxp software	As a Lab for design of electrical PCB

6.5. Safety measures in laboratories (10)

Table 6.4: Safety Measures

Name of the Laboratory	Safety measures
All Labs	• Fire Extinguishers • Auto cut MCBs • UPS to control voltage fluctuations. • Proper Electrical fittings with earthing • Data Backup facility • CCTV camera • 24-hour power supply • First Aid Box • Antivirus (Labs having computer) • Safety guidelines for the students

CRITERION 7: Continuous Improvement

Criterion 7	Continuous Improvement	75

7.1 POs & PSOs Attainment Levels and Actions for improvement (30)
Session: 2020-21

POs	Target level	Attainment level	Observations
PO1: **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.			
PO 1	1.8	2.57	Attainment is more than the target level.
Action1: No action is required.			
PO 2: **Problem Analysis**: Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	1.8	2.48	Attainment is more than the target level.
Action 1: No action is required.			
PO3: **Design/Development of Solutions**: Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	1.8	2.26	Attainment is more than the target level.
Action 1: No action is required.			
PO4: **Conduct investigations of complex problems**: Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	1.8	2.06	Attainment is more than the target level.
Action1: No action is required.			
PO5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	1.8	1.61	Attainment is marginally less than the target level.
Action 1: • Motivate the students for doing their projects in interdisciplinary fields. **Action 2:** • As every faculty member is involved in exploring in latest trends in their discipline, so sharing knowledge of respective research area with the students and motivating them for designing real life applications.			

- Students are encouraged to use tools like MATLAB etc. and techniques to do their projects

PO6 :

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 6	1.8	1.72	Attainment is less than the target level.

Action 1:

- To improve professional skills and learn the changes in the society, guest lecture, workshop &SDP are organized.

Action 2:

- Motivate the students to develop such application, which must be acceptable by society and fulfill the economic and environmental constraints.
- Students are encouraged to conduct and participate in social activities like blood donation camp, donating necessary items like clothes, medicines etc. to the poor.

Action 3:

- Industrial visits are organized to get in touch with professional environment and to know real-time applications.

Action 4:

- To enhance the management and professional skills, department encourages students to participate in multiple management and professional competitions.

Action 5:

- More emphasis on lectures, tutorials will be given on subjects i.e. Human values, Environmental studies & Industrial Management etc.

PO7:

Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 7	1.8	1.64	Attainment is less than the target level.

Action 1: Awareness towards societal and environmental contexts through expert lectures.

PO8 :

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 8	1.8	1.59	Attainment is less than the target level.

Action 1: Communication and more ethical classes to be organized.

PO9 :

Individual and team work: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 9	1.8	1.55	Attainment is less than the target level.

Action 1: To develop team spirit through assigning works (Project, Seminar etc.) in groups			
PO 10: **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO 10	1.8	1.44	Attainment is less than the target level.
Action1: Soft skills training is imparted to students to enhance various aspects of communication/technical talks by group discussions, presentations and new learning outcomes**.**			
PO11: **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	1.8	1.61	Attainment is less than the target level.
Action 1: To develop managerial and financial skills through assigning Project works in groups			
PO12: **Life-long learning**: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.			
PO 12	1.8	1.96	Attainment is more than the target level.
Action 1: No action is required.			
PSO	Target level	Attainment level	observations
PSO1: An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.			
PSO 1	1.8	2.40	Attainment is more than the target level.
Action 1: No action is required.			
PSO2: An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.			
PSO2	1.8	2.43	Attainment is more than the target level.
Action 1: No action is required.			
PSO3: An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.			
PSO3	1.8	2.16	Attainment is more than the target level.
Action 1: No action is required.			

POs	Target level	Attainment level	Observations
PO1: **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.			
PO 1	1.8	2.38	Attainment is more than the target level.
Action1: No action is required.			
PO 2: **Problem Analysis**: Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	1.8	2.30	Attainment is more than the target level.
Action 1: No action is required.			
PO3: **Design/Development of Solutions**: Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	1.8	2.04	Attainment is more than the target level.
Action 1: No action is required.			
PO4: **Conduct investigations of complex problems**: Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	1.8	2.01	Attainment is more than the target level.
Action1: No action is required.			
PO5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	1.8	1.62	Attainment is marginally less than the target level.
Action 1: • Motivate the students for doing their projects in interdisciplinary fields. **Action 2:** • As every faculty member is involved in exploring in latest trends in their discipline, so sharing knowledge of respective research area with the students and motivating them for designing real life applications. • Students are encouraged to use tools like MATLAB etc. and techniques to do their			

projects

PO6 :

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 6	1.8	1.54	Attainment is less than the target level.

Action 1:

- To improve professional skills and learn the changes in the society, guest lecture, workshop &SDP are organized.

Action 2:

- Motivate the students to develop such application, which must be acceptable by society and fulfill the economic and environmental constraints.
- Students are encouraged to conduct and participate in social activities like blood donation camp, donating necessary items like clothes, medicines etc. to the poor.

Action 3:

- Industrial visits are organized to get in touch with professional environment and to know real-time applications.

Action 4:

- To enhance the management and professional skills, department encourages students to participate in multiple management and professional competitions.

Action 5:

- More emphasis on lectures, tutorials will be given on subjects i.e. Human values, Environmental studies & Industrial Management etc.

PO7:

Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 7	1.8	1.69	Attainment is less than the target level.

Action 1: Awareness towards societal and environmental contexts through expert lectures.

PO8 :

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 8	1.8	2.05	Attainment is less than the target level.

Action 1: Communication and more ethical classes to be organized.

PO9 :

Individual and team work: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 9	1.8	1.56	Attainment is less than the target level.

Action 1: To develop team spirit through assigning works (Project, Seminar etc.) in groups			
PO 10: **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO 10	1.8	1.41	Attainment is less than the target level.
Action1: Soft skills training is imparted to students to enhance various aspects of communication/technical talks by group discussions, presentations and new learning outcomes**.**			
PO11: **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	1.8	1.44	Attainment is less than the target level.
Action 1: To develop managerial and financial skills through assigning Project works in groups			
PO12: **Life-long learning**: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.			
PO 12	1.8	1.91	Attainment is more than the target level.
Action 1: No action is required.			
PSO	Target level	Attainment level	observations
PSO1: An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.			
PSO 1	1.8	2.03	Attainment is more than the target level.
Action 1: No action is required.			
PSO2: An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.			
PSO2	1.8	2.13	Attainment is more than the target level.
Action 1: No action is required.			
PSO3: An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.			
PSO3	1.8	1.72	Attainment is marginally less than the target level.
Action 1: Skill development activities has been started for career development			

POs	Target level	Attainment level	observations
PO1: **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.			
PO 1	1.8	2.46	Attainment is more than the target level.
Action1: No action is required.			
PO 2: **Problem Analysis**: Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	1.8	2.28	Attainment is more than the target level.
Action 1: No action is required.			
PO3: **Design/Development of Solutions**: Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	1.8	2.01	Attainment is more than the target level.
Action 1: No action is required.			
PO4: **Conduct investigations of complex problems**: Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	1.8	2.01	Attainment is more than the target level.
Action1: No action is required.			
PO5: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	1.8	1.82	Attainment is more than the target level.
Action1: No action is required.			
PO6 : **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO 6	1.8	1.53	Attainment is less than the target level.

Action 1:

- To improve professional skills and learn the changes in the society, guest lecture, workshop &SDP are organized.

Action 2:

- Motivate the students to develop such application, which must be acceptable by society and fulfill the economic and environmental constraints.
- Students are encouraged to conduct and participate in social activities like blood donation camp, donating necessary items like clothes, medicines etc. to the poor.

Action 3:

- Industrial visits are organized to get in touch with professional environment and to know real-time applications.

Action 4:

- To enhance the management and professional skills, department encourages students to participate in multiple management and professional competitions.

Action 5:

- More emphasis on lectures, tutorials will be given on subjects i.e. Human values, Environmental studies & Industrial Management etc.

PO7:

Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 7	1.8	1.51	Attainment is less than the target level.

Action 1: Awareness towards societal and environmental contexts through expert lectures.

PO8 :

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 8	1.8	1.99	Attainment is less than the target level.

Action 1: Communication and more ethical classes to be organized.

PO9 :

Individual and team work: Ability to function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 9	1.8	1.46	Attainment is less than the target level.

Action 1: To develop team spirit through assigning works (Project, Seminar etc.) in groups

PO 10:

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO 10	1.8	1.39	Attainment is less than the target level.

Action1: Soft skills training is imparted to students to enhance various aspects of communication/technical talks by group discussions, presentations and new learning outcomes**.**

PO 11: **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	1.8	1.44	Attainment is less than the target level.
Action 1: To develop managerial and financial skills through assigning Project works in groups			
PO 12: **Life-long learning**: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive exams and other aspects.			
PO 12	1.8	1.81	Attainment is more than the target level.
Action 1: No action is required.			
PSO	Target level	Attainment level	observations
PSO1: An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career.			
PSO 1	1.8	1.98	Attainment is more than the target level.
Action 1: No action is required.			
PSO2: An ability to analyze and control the electric drive system using solid state power electronics converters, and apply the gained skills for future prospects.			
PSO2	1.8	2.00	Attainment is more than the target level.
Action 1: No action is required.			
PSO3: An ability to specify, design and implement the learning in electrical instrumentation, control and automation applications for career development.			
PSO3	1.8	1.80	Attainment is more than the target level.
Action 1: No action is required.			

7.2 Academic Audit and actions taken thereof during the period of Assessment (15)

- **360^{o} Feedback:** 360^{o}feedback is being initiated in the University to make it more effective, productive and satisfied in terms of its objectives. Classroom feedback is taken from the students for all the subjects during each semester. Provision of online feedback from all the stake-holders like students, parents, Alumni and Industry/Employers helps us to understand the range of perceptions they have of the University and how the activities being carried out here affect them. This feedback gives a set of rich information wherein the University feels proud of its strengths, plan further development and achieve higher performance more easily.

  Academic audit is done at two levels: College Level and Department Level

Objectives of Academic Auditing:

a) To ensure academic accountability.
b) To define quality of each component of the functionalities and to ensure quality of technical education throughout the system.
c) To safeguard functionalities of technical education.
d) To define effectiveness of teaching-learning process and to devise methodology to confirm maximum output from faculty members as well as students.

Documents to be produced for Audit:

Each faculty has to maintain the details of various academic activities in the form of documents given below. These documents shall be made available to the auditor as and when required.

1) Attendance record;
2) Internal marks statement;
3) Copies of test question papers;
4) Samples of answer sheets;
5) Class assignments;
6) Samples of PPT slides and other teaching materials;
7) List of experiments conducted in laboratories.

College Level:

- Auditing of Academic activities is done through Dean Academic Affairs as per Direction of Director
- Verification of compliance for Lecture Plan, time table, assignments & Tutorial, monthly attendance report etc. is also done.
- Student performance in internal and external exams, placements activities etc. are also audited.
- Adherence to activities defined as per the academic calendar.
- Overall observations are discussed with the concerned HODs for necessary corrective action.

Department Level:

Some of the important methods for academic audits are:

Table 7.1: Academic Audit & Implementations at department Level

S. No.	Academic Audit Tools/Methods	Implementations & Actions
1.	Syllabus Coverage	Audit of ▪ Adherence to lecture plan ▪ status of assignment (uploaded &Checked) ▪ Status Tutorial &Quizzes ▪ Coverage of Lab Experiments ▪ Course Files.
2.	Student Performance	Audit of ▪ Performance of students in Internal & External Exams subject wise/Student wise. ▪ Performance of students in other curricular and Technical activities.
3.	Attendance monitoring	▪ Attendance Registers ▪ Attendances of students are displayed on notice boards twice a semester.
4.	Academic surveys	▪ Graduate exit survey, ▪ Surveys for PO/PEO mapping, ▪ Alumni survey ▪ Course End Survey
5.	Lab audits	Audit of ▪ Lab equipment's by lab in-charge ▪ Software resources ▪ Student lab records ▪ Overall lab inventory ▪ Lab experiments
6.	Student Project Audits	Monitoring system (weekly) for assessment of project progress. ▪ Monthly project presentations. ▪ One faculty coordinator for each project group. ▪ Regular interaction with guide

After the audit, action taken report is sent to head of the department. Academic audit and actions taken are carried out with the help of different components as explained in the following graph:

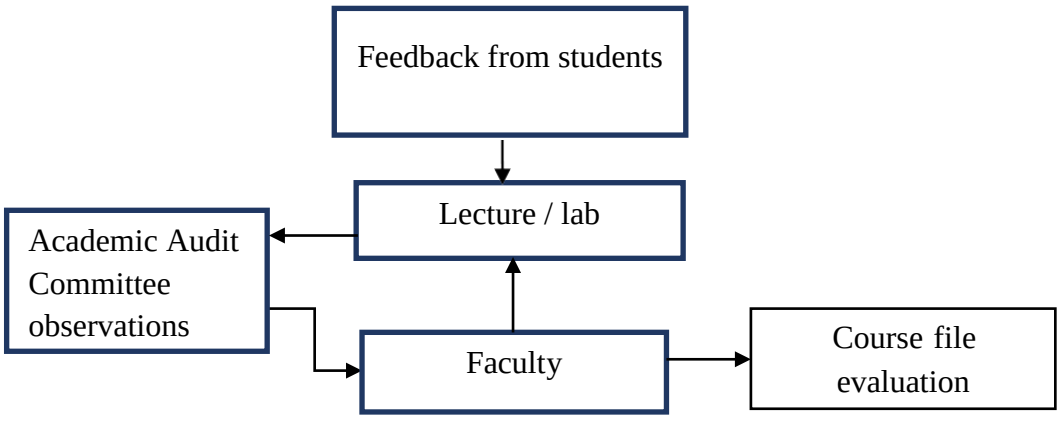


Fig. 7.1: Block Diagram of Academic Audit at Department level

1. Course file evaluation

Course files are prepared by faculty members before the semester starts. The academic committee consisting of HOD, course coordinator and few of departmental senior faculty members performs audit of course files i.e. verify the contents of the course file, lesson plan, assignments, extra material lecture notes, etc. at the end of semester. The comments of the committee are given as feedback to the faculty member to include the recommended material. This audit ensures the quality of education delivered to the students.

2. Lectures/ Lab evaluation

The academic audit committee during their random observation of the lectures/lab check delivery of course material as per the lesson plan, teaching aids used, communication skill and classroom management etc. parameters to ensure the teaching methods as per the standards are being used throughout the institute. Feedback is communicated to the faculty member. The academic audit committee for observation consists of HOD, and few senior faculty members.

❖ Action taken by the faculty members:

Faculty members incorporate changes suggested by the academic committee, if any gaps are found, to ensure quality deliverables.

3. Lectures/ Lab evaluation

The academic audit committee during their random observation of the lectures/lab check delivery of course material as per the lesson plan, teaching aids used, communication skill and classroom management etc. parameters to ensure the teaching methods as per the standards are being used throughout the institute. Feedback is communicated to the faculty member. The academic audit committee for observation consists of HOD, and few senior faculty members.

❖ Action taken by the faculty members:

Faculty members incorporate changes suggested by the academic committee, if any gaps are found, to ensure quality deliverables.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Table 7.2: Status of Placement, Higher Studies and Entrepreneurship

Items	CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
No. of Students Placed in Companies or Government Sector (X)	07	07	23
No. of Students admitted to higher studies with valid qualifying scores (GATE or Equivalent State or National Level Tests, GRE, GMAT, etc.) (Y)	03	02	12
No. of students turned entrepreneur in engineering / technology (Z)	-	-	-

Assessment is based on improvement in:

- Placement: number, quality placement, core industry, pay packages etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier institutions
- Entrepreneurs

Improvement in the quality of students admitted to the program (20)

Assessment is based on improvements in terms of ranks/score in qualifying state level/ national level entrance tests, percentage marks in Physics, Chemistry and Mathematics in 12^{th} Standard and percentage marks of the lateral entry students.

7.4. Improvement in the quality of students admitted to the program (10)

Table 7.3: Admitted Students Quality

Items		CAY (2020-21)	CAYm1 (2019-20)	CAYm2 (2018-19)
National Level Entrance Examination(Name of the Entrance Examination)	No. of Students admitted	-	-	-
	Opening Score/Rank	-	-	-
	Closing Score/Rank	-	-	-
State/University/Level Entrance Examination/Others **(SEE)**	No. of Students admitted	63	65	63
	Opening Score/Rank	104	4212	4852
	Closing Score/Rank	59433	63187	90329
Name of the Entrance Examination for Lateral Entry or Lateral entry details OLET	No. of Students admitted	6	6	12
	Opening Score/Rank	12	98	119
	Closing Score/Rank	235	1031	3974
Average CBSE/Any other Board Result of admitted students (Physics, Chemistry & Mathematics)		-	-	-

CRITERION 8	First Year Academics	50	Institutional Points = 44.7

8.1 First Year Student-Faculty Ratio (FYSFR) (5)

Institutional Points=3.42

Data for first year courses to calculate the FYSFR:

Year	Number of students (approved intake strength)	Number of faculty members (considering fractional load)	FYSFR	*Assessment = (5 ×20)/ FYSFR (Limited to Max. 5)
2020-21	180	**9**	20.00	3.75
2019-20	180	8	23.00	3.26
2018-19	180	8	23.00	3.26
Average	180	8.33	22.00	**3.42**

Table B.8.1

8.2 Qualification of Faculty Teaching First Year Common Courses (5)

***Institutional Points*=5.32**

Assessment of qualification=(5*x*+3*y*)/*RF*, *x*=Number of Regular Faculty with Ph. D., *y*=Number of Regular Faculty with Post-graduate qualification *RF*=Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Year	X (Ph.D.)	Y (M.Tech./M.B.A)	RF	Assessment of faculty qualification (5*x*+3*y*)/*RF*
2020-2021	8	1	9	4.77
2019-2020	9	1	9	5.33
2018-2019	10	1	9	5.88
Average Assessment				**5.32**

Table B.8.2

8.3: First Year Academic Performance **(10)**

Institutional Points=6.96

Session	No. of Students Appeared	No. of Students Successful	Mean CGPA on 10 Scale	Academic Performance
2020-21	191	187	7.65	7.48
2019-20	196	196	6.97	6.97
2018-19	183	182	6.48	6.44
Average				**6.96**

Table B.8.3

Academic performance = 6.96

8.4: Attainment of Course Outcomes of first year courses (10)

Institutional Points=10

8.4.1. Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Institutional Points=5

At the initial stage of outcome based education (**OBE**), ensuring their compatibility with the topic-wise delivery objective, the **course outcomes** (**COs**) are written (using Bloom's **action verbs**) for all the courses, while remembering all through the process that ultimately **each one of the COs** has necessarily to show a level of correlation (1, 2, or 3) with some of the **Programme Outcomes** (**POs**). Of course, ultimately, it is POs attainment levels that are valued as a confirmation of the fact about achieving a standard towards the accomplishment of larger goals.

The concerned faculty members of FY & various Technical Departments who teach the FY students collectively identify, assimilate, and prepare data of all theory/lab courses in a particular Semester of an Assessment Year, culminating into computation of the **attainment levels** of the POs through respective COs attainments.

The CO attainment-levels are measured on a scale of 3 as given below:

Attainment Levels	Condition	Target (%)
1	60 % of students scored more than	**60** (say)
2	70 % of students scored more than	
3	80 % of students scored more than	

Table B.8.4

At the end of each assessment process, the involved COs are computed and evaluated to check whether or not the set targets for COs, and ultimately the POs have been achieved. And, for those COs/POs wherein attainment levels are falling short of set targets, **shortcomings** are analyzed and suitable **actions** are implemented.

The **Fig. B. 8.4.1** gives schematic representation of the **assessment process** used for the computation & evaluation of COs/POs of FY courses.

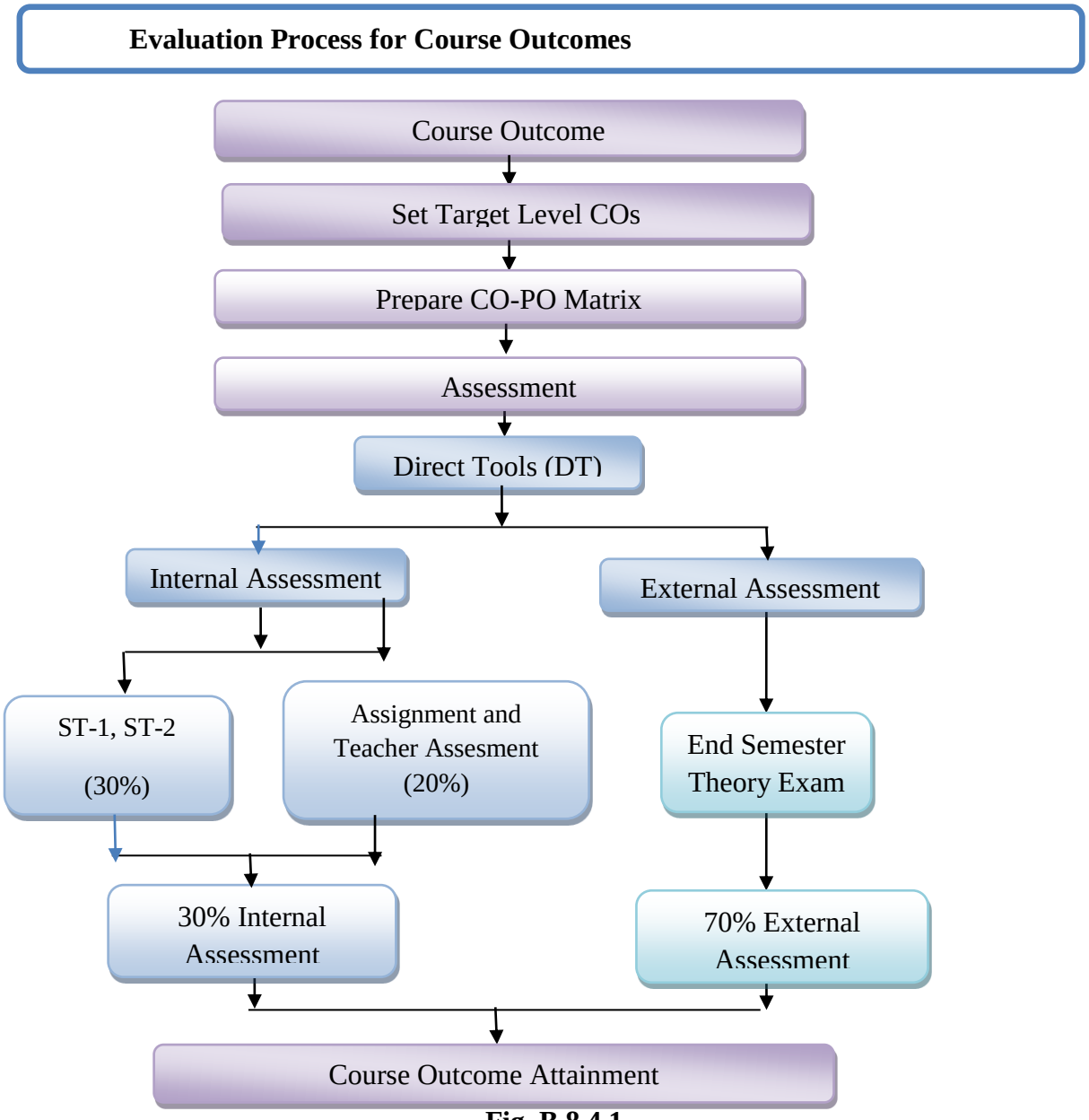


Fig. B.8.4.1

Direct Assessment method –The knowledge and skills learnt by the student are assessed directly from their performance through internal assessment and external assessment processes.

- *External assessment*- Performance of student is recorded in university examination.
- *Internal assessment*- Performance of student is recorded through class assignments and tutorials, internal assessment tests, laboratory assignments, seminars and project progress review and evaluation.

Following tools are used for Assessment process.

Assessment Methods		
S.No.	**Assessment Tool**	**Method Description**
1.	External Semester Examination	Marks obtained in external semester examination (theory or practical) are the basis for external assessment to record the attainment of course outcomes. Attainment level is calculated based on the attainment criteria decided at the departmental level. A Semester Examination is more focused on attainment of course outcomes and uses a descriptive examination.
2.	Internal Assessment Test	Interanl Marks in a theory paper are based on – 1. Sessional 1(35% -40% syallbus) 2. Sessional 2 (Remaining syllabus) It is a metric to continuously assess the attainment of course outcomes w.r.t course objectives. Average of the better marks obtained from two tests shall contribute to the internal assessment marks along with teaching assessment marks (based on tutorial/assignment) and attendance marks for the relevant subject.
3.	Assignments/Tutorial	Tutorials are given in class tutorial period where students solve problem based on topics learnt in class. Also, students are given assignments to submit after completion of each unit of syllabus. Tutorial and assignments are graded and it helps teacher to understand the level of understanding of students.

Table B.8.5

Department follows the courses as per the evaluation scheme and syllabus of the university. Each course has four to five course outcomes designed by subject faculties. CO's are aligned with PO.

In the Outcome Based Education (OBE), assessment is done through one or more than one processes, carried out by the department, that identify, collect, and prepare data to evaluate the achievement of course outcomes (CO's).

CO Assessment Process
The assessment processes and tools are used for showing
o Relevance of process and tools with theory subject. o For each subject four or five COs are designed and are mapped with Program Outcomes and Program Specific Outcomes. o Each question in sessional test is mapped with the COs.
o Relevance of process and tools with practical. o For each subject four or five COs are designed and are mapped with Program Outcomes.

Table B.8.6

8.4.2. Record the attainment of Course Outcomes of all first-year courses (5)

Institutional Points=5

Program shall have set attainment levels for all first year courses. (The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the University examination)

A course's **attainments** of **COs**, displaying student's knowledge and skills acquired, are computed in a particular CAY in terms of their performance in **CIA** and **SEE** results, using the following **weightage scheme:**

0.7*SEE + 0.2*CIA + 0.1*Assignments

If CO attainment is more or equal to 60% (1.8) then YES (Y) otherwise NO (N)

Course CO Targets (2020-2021)

S. No.	COURSE NAME	AKTU Code	CO1	CO2	CO3	CO4	CO5	AVG	Achieved (Y/N)
1	Engineering Physics	KAS 101T / 201T	2.21	2.17	2.25	2.27	-	2.23	Y
2	Engineering Chemistry	KAS 102T / 202T	2.84	3	3	2.84	-	2.922	Y
3	Maths - I	KAS 103T	1.32	1.12	1.32	1.32	1.32	1.28	N
4	Basic Electrical Engineering	KEE 101/201	2.94	2.96	2.96	2.96	2.97	2.95	Y
5	Emerging Domain in Electronics Engineering	KEC 101T/ 201T	2.27	2.03	2.25	2.21	2.50	2.25	Y
6	Programming for Problem Solving	KCS 101T / 201T	2.92	2.82	2.97	2.9	2.53	2.83	Y
7	Maths - II	KAS 203 T	3	3	3	3	3	3	Y
8	Fundamentals of Mechanical Engineering & Mechatronics	KCE 101 / 201	2.9	2.8	3	3	2.9	2.9	Y
9	AI For Engineering	KMC 101T / 201T	2.26	2.01	1.90	2.18	2.49	2.18	Y
10	Emerging Technology for Engineering	KMC 102T / 202T	2.22	1.95	2.13	2.23	2.4	2.12	Y
11	Soft Skill 1	KNC 101	1.88	1.88	1.88	1.88	1.88	1.88	Y
12	Soft Skill II	KNC 201	3	3	3	3	3	3	Y

Table B.8.7

Course CO Targets (2019-2020)

S. No.	COURSE NAME	AKTU Code	CO1	CO2	CO3	CO4	CO5	AVG	Achieved (Y/N)
1	Engineering Physics	KAS 101 / 201	2.65	2.65	2.65	2.61	-	2.63	Y
2	Engineering Chemistry	KAS 102/202	2.68	3	3	2.84	-	2.88	Y
3	Maths - I	KAS 103	2.52	2.48	3	3	3	2.80	Y
4	Basic Electrical Engineering	KEE 101/201	2.52	2.52	2.58	2.52	2.58	2.54	Y
5	Programming for Problem Solving	KCS 101T/ 201T	2.64	2.56	2.56	2.60	2.53	2.58	Y
6	Maths - II	KAS 203	2.52	2.64	2.84	2.84	2.84	2.74	Y
7	Professional English	KAS204	1.72	1.88	1.88	1.88	1.4	1.76	N

Table B.8.8

Course CO Targets (2018-2019)

S. No.	COURSE NAME	AKTU Code	CO1	CO2	CO3	CO4	CO5	AVG	Achieved (Y/N)
1	Physics	KAS 101 / 201	2.54	2.54	2.54	2.54	-	2.54	Y
2	Chemistry	KAS 102/202	2.52	2.68	2.52	2.52	-	2.56	Y
3	Maths - I	KAS 103	2.52	2.68	2.84	2.68	2.08	2.56	Y
4	Basic Electrical Engineering	KEE 101/201	2.19	2.19	2.25	2.19	2.25	2.21	Y
5	Programming for Problem Solving	KCS 101T/ 201T	2.38	2.38	2.47	2.35	2.47	2.41	Y
6	Maths - II	KAS 203	2.68	2.32	3	2.84	2.84	2.74	Y
7	Professional English	KAS204	1.80	1.80	1.80	1.80	1.80	1.80	Y

Table B.8.9

8.5: Attainment of Program Outcomes from first year courses (20)

Institutional Points=19

8.5.1. *Indicate results of evaluation of each relevant PO and/or PSO if applicable (10)*

Institutional Points=10

The relevant program outcomes addressed by first year courses need to be identified by the Institution. Program Outcome attainment levels shall be set for all relevant POs through first year courses. PO Attainment Procedure:

1. Do mapping of CO's with PO's (a scale of 1,2 3).
2. If CO attainment is more or equal to 60%, Yes(Y), if less than 60% , No (N).
3. PO attainment is calculated as per PO calculation Table, illustrated below for each subject:

PO TARGET SETTING TABLE

POs target determined by taking average across all courses addressing that PO.

PO Targets (2020-2021)

AKTU CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CAY : 2020-21											
KAS 101T / 201T	2.75	2.25	2.25	1.5	2.25	2	1					
KAS 102T / 202T	3	3	3	3	2.25	1	1.75	1		1	1	1.75
KAS 103T	1.60	1.60	2.00	2.80								
KEE 101/201	3	1.8	1.2	1		1					1	2
KEC 101T/ 201T	3	2.6	2.6	2.2	1.33						2	2.6

KCS 101T / 201T	3	2.6	2.6	2.2	1.333	2.2	2	2.2	2	2	2	2.6
KAS 203 T	2.40	2.20	3.00	1.80								
KCE 101 / 201	1.50	1.83	1.25	1.50	1.25	1.00	2.00	1.00	1.50	1.00	1.00	1.00
KMC 101T / 201T	1.6	2	2	1.8	1						1.6	1
KMC 102T / 202T	2	2.4	2.4	1.6	1	0.6	-	-	-	-	2.2	2.4
KNC 101	3	3	3	2.2	2.2	0.8					0.8	2
KNC 201	3	3	3	2.2	2.2	0.8					1.6	2
Direct attainment	2.45	2.36	2.36	1.98	1.65	1.18	1.13	0.84	0.7	0.8	2.49	2.36

Table B.8.10

PO Targets (2019-2020)

AKTU CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CAY : 2019-20											
KAS 101 / 201	2.75	2.25	2.25	1.5	2.25	2	1					
KAS 102/202	3	3	3	3	2.25	1	1.75	1		1	1	1.75
KAS 103	2.80	2.20	2.00	2.00								
KEE 101/201	2.54	2.20	2.20	1.70	0.85		1.02		0.85	0.85		0.85
KCS 101T/ 201T	3	2.6	2.6	2.2	1.33	2.2	2	2.2	2	2	2	2.6
KAS 203	2.80	2.20	2.00	2.60	2.25							
KAS204	3	3	3	2.2	2.2	0.8					1	2
Direct attainment	2.84	2.49	2.43	2.17	1.85	1.5	1.44	1.6	1.43	1.28	1.33	1.8

Table B.8.11

PO Targets (2018-2019)

AKTU CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CAY : 2018-19											
KAS 101 / 201	2.75	2.25	2.25	1.5	2.25	2	1					
KAS 102/202	3	3	3	3	2.25	1	1.75	1		1	1	1.75
KAS 103	2.80	2.40	2.20	2.00	2.60							

KEE 101/201	3	2.6	2.6	2	1		1.2		1	1		1
KCS 101T/ 201T	1.6	2	2	1.8	1						1.6	1
KAS 203	2.80	2.40	2.20	2.00								
KAS204	3	3	3	2.2	2.2	0.8					1	2
Direct attainment	2.70	2.52	2.46	2.07	1.88	1.26	1.31	1	1	1	1.2	1.43

Table B.8.12

PO ATTAINMENTS OF FIRST YEAR COURSES (2020-21)

AKTU CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CAY : 2020-21											
KAS 101T / 201T	2.0	1.7	1.7	1.1	1.7	1.5	0.7					
KAS 102T / 202T	2.90	2.90	2.90	2.90	2.91	2.90	2.94	2.90		2.90	2.90	2.89
KAS 103T	1.60	1.60	2.00	2.80								
KEE 101/201	2.96	1.77	1.18	0.99		0.93					0.99	1.97
KEC 101T/ 201T	2.09	2.47	2.47	2.09	0.95						1.9	2.47
KCS 101T / 201T	2.3	1.98	1.98	1.68	1.02	1.68	1.53	1.68	1.53	1.52	1.52	1.99
KAS 203 T	2.40	2.20	3.00	1.80								
KCE 101 / 201	1.50	1.83	1.25	1.50	1.25	1.00	2.00	1.00	1.50	1.00	1.00	1.00
KMC 101T / 201T	1.66	1.51	1.51	1.36	0.75						1.21	0.75
KMC 102T / 202T	1.89	2.26	2.26	1.51	0.94	0.56					2.08	2.26
KNC 101	1.60	1.60	1.60	1.60	1.60	1.60					1.60	1.60
KNC 201	3.00	3.00	3.00	3.00	3.00	3.00					3.00	3.00
Direct attainment	2.16	2.07	2.07	1.86	1.28	1.31	1.02	0.78	0.43	0.77	1.47	1.63

Table B.8.13

PO ATTAINMENTS OF FIRST YEAR COURSES (2019-20)

AKTU CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CAY : 2019-20											
KAS 101 / 201	2.4	2.0	2.0	1.3	2.0	1.8	0.9					

KAS 102/202	2.85	2.85	2.85	2.85	2.84	2.80	2.89	2.90		2.85	2.85	2.83
KAS 103	2.80	2.20	2.00	2.00								
KEE 101/201	3	2.6	2.6	2	1		1.2		1	1		1
KCS 101T/ 201T	2.75	2.38	2.38	2.01	1.22	2.01	1.83	2.01	1.83	1.83	1.83	2.38
KAS 203	2.43	1.91	1.73	2.25	1.95							
KAS204	1.44	1.44	1.44	1.44	1.44	1.50					1.60	1.44
Direct attainment	2.52	2.19	2.14	1.97	1.74	2.02	1.70	2.45	1.41	1.89	2.09	1.91

Table B.8.14

PO ATTAINMENTS OF FIRST YEAR COURSES (2018-19)

AKTU CODE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CAY : 2018-19											
KAS 101 / 201	2.3	1.9	1.9	1.3	1.9	1.7	0.8					
KAS 102/202	2.45	2.45	2.45	2.45	2.44	2.50	2.46	2.40		2.45	2.45	2.43
KAS 103	2.10	1.80	1.65	1.50	1.95							
KEE 101/201	2.22	1.92	1.92	1.48	0.74		0.89		0.74	0.74		0.74
KCS 101T/ 201T	1.27	1.16	1.16	1.04	0.58						0.92	0.58
KAS 203	2.61	2.24	2.05	1.87								
KAS204	0.78	0.78	0.78	0.79	0.79	0.90					0.90	0.78
Direct attainment	1.96	1.75	1.70	1.49	1.4	1.7	1.38	2.4	0.74	1.59	1.42	1.13

Table B.8.15

8.5.2. Actions taken based on the results of evaluation of relevant POs and PSOs (10)

Institutional Points=9

Target set was 50% for all PO's of B.Tech. first year academics in consultation with faculty members & Dean Faculty (Engineering & Technology).

PO Attainment Levels and Actions for Improvement – Session 2020-21 – Mention for relevant PO's

PO's	Target level	Attainment level	Observations
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	2.45	2.07	Target value is greater than attainment level

Action: Participation of first year students in various extra curricular activities.			
PO2 Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	2.36	2.07	Target value is greater than attainment level
Action: Students learning is enhanced by providing complex numerical problems in the field of science and engineering.			
PO3 Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	2.36	2.07	Target value is greater than attainment level
Action: Remedial Classes to be taken for weak students in corresponding subjects. **PO4** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	1.98	1.86	Target value is greater than attainment level
Action: -- Faculty was instructed: 1. To make familiarise students for interpretation of data using latest research method. 2. To follow experimentation standard procedure and error is calculated foreach. 3. Visit of R&D laboratories were planned.			
PO5 Modern Tool Usage**:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	1.65	1.28	Target value is greater than attainment level
Action: Remedial Classes to be taken for weak students in corresponding subjects.			
PO6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO 6	1.18	1.31	Target value is less than attainment level
Action: No action needed.			
PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO 7	1.13	1.02	Target value is greater than attainment level
Action1: Student learning to be enhanced by increased use of books related to environmental contexts. Action 2: Students were told to do innovation for its usefulness to society. They are required to work on projects from first rear.			
PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO 8	0.84	0.78	Target value is greater than attainment level
Action: Faculty/ experts to familiarize about plagiarism and copyright rules.			

PO9 Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO 9	0.17	0.43	Target value is less than attainment level
Action: No action needed.			
PO 10 Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO 10	0.8	0.77	Target value is greater than attainment level
Action: Student to do more practice for enhancing communication skill by organizing special coaching classes/ lecture.			
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	2.49	1.47	Target value is greater than attainment level
Action: Faculty to conduct exercises / group activity regarding the management principles and managing projects.			
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO 12	2.36	1.63	Target value is greater than attainment level
Action: To provide training of students in yoga and sports			

Table B.8.16

PO Attainment Levels and Actions for Improvement – Session 2019-20 – Mention for relevant PO's

PO's	**Target level**	**Attainment level**	**Observations**
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	2.84	2.52	Target value is greater than attainment level
Action: All best possible students' academics improvement programmes have been designed and implemented such as extra classes, help desk and even hostel visit during semester examination.			
PO2 Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	2.49	2.19	Target value is greater than attainment level
Action: Encouraged the students to solve problems beyond the prescribed syllabus.			
PO3 Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	2.43	2.14	Target value is greater than attainment level
Action: Science Day has been planned for the students and many real time science and engineering projects are presented and displayed to the students under the guidance of faculty members. Students are encouraged to participate in various exhibitions. **PO4**			

Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	2.17	1.97	Target value is greater than attainment level
Action: -- Faculty was instructed: 1. To make familiarise students for interpretation of data using latest research method. 2. To follow experimentation standard procedure and error is calculated foreach.			
PO5 Modern Tool Usage**:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	1.85	1.74	Target value is greater than attainment level
Action: Remedial Classes to be taken for weak students in corresponding subjects.			
PO6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			
PO 6	1.5	2.02	Target value is less than attainment level
Action: No action needed.			
PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO 7	1.44	1.70	Target value is less than attainment level
Action: No action needed.			
PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO 8	1.60	2.45	Target value is less than attainment level
Action: No action needed.			
PO9 Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO 9	1.43	1.41	Target value is greater than attainment level
Action: Students to be motivated to organize and participate in quiz contest and group participation in events. Motivate to do teamwork in projects.			
PO 10 Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO 10	1.28	1.89	Target value is less than attainment level
Action: No action needed.			
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	1.33	2.09	Target value is less than attainment level
Action: No action needed.			

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO 12	1.8	1.91	Target value is less than attainment level
Action: No action needed.			

Table B.8.17

PO Attainment Levels and Actions for Improvement – Session 2018-19 – Mention for relevant PO's

PO's	**Target level**	**Attainment level**	**Observations**
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.			
PO 1	2.70	1.96	Target value is greater than attainment level
Action: All best possible students' academics improvement programmes have been designed and implemented such as extra classes, help desk and even hostel visit during semester examination.			
PO2 Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
PO 2	2.52	1.75	Target value is greater than attainment level
Action: Students learning is enhanced by providing complex numerical problems in the field of science and engineering.			
PO3 Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.			
PO 3	2.46	1.70	Target value is greater than attainment level
Action: Science Day has been planned for the students and many real time science and engineering projects are presented and displayed to the students under the guidance of faculty members. Students are encouraged to participate in various exhibitions. **PO4** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.			
PO4	2.07	1.49	Target value is greater than attainment level
Action: -- Faculty was instructed: 1. To make familiarise students for interpretation of data using latest research method. 2. To follow experimentation standard procedure and error is calculated foreach. 3. Visit of R&D laboratories were planned.			
PO5 Modern Tool Usage**:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
PO 5	1.88	1.4	Target value is greater than attainment level
Action: Remedial Classes to be taken for weak students in corresponding subjects.			
PO6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.			

PO 6	1.26	1.7	Target value is less than attainment level
Action: No action needed.			
PO7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.			
PO 7	1.31	1.38	Target value is less than attainment level
Action: No action needed.			
PO8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
PO 8	1	2.4	Target value is less than attainment level
Action: No action needed.			
PO9 Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.			
PO 9	1	0.74	Target value is greater than attainment level
Action: Students to be motivated to organize and participate in quiz contest and group participation in events. Motivate to do teamwork in projects.			
PO 10 Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.			
PO 10	1	1.59	Target value is less than attainment level
Action: No action needed.			
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.			
PO 11	1.2	1.42	Target value is less than attainment level
Action: No action needed.			
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.			
PO 12	1.43	1.13	Target value is greater than attainment level
Action: To provide training of students in yoga and sports			

Table B.8.18

CRITERIA 9	STUDENT SUPPORT SYSTEM	50

9. STUDENT SUPPORT SYSTEM (50)

9.1 Mentoring system to help at individual level (5)

The institute provides student support and mentoring system at department as well as institute level. At department level each year has one mentor or class coordinator who can help the students by discussing the issues (academics and personal) related to them. Class coordinator is also act as a counselor for the same year students.

The coordinators of Electrical Engineering Department for various batches are as follows:

Table 9.1: List of coordinators in Electrical Engineering

Sr. No.	Name of Course	Coordinator/mentor
1.	B. Tech. First Year	Dr. Amit Kumar Pandey
2.	B. Tech. Second Year	Dr. Yudhishthir Pandey
3.	B. Tech .Third Year	Dr. Mohd. Aslam Husain
4.	B.Tech. Fourth Year	Dr. S.P. Singh

At college level mentoring of the students is done by different offices of college i.e., office of Director of institution, Dean Student welfare (DSW), Training and placement cell, Student counselor at department level. Following are some points of mentoring:

Career Guidance:

- To help students to check out academic and career roadmaps for themselves.
- To create awareness among the students about emerging professional trends and entrepreneurship and market needs etc.
- To provide guidance to the students on various options available for higher studies available in India and abroad.
- To help the students in the development of their strengths, sharpening their interests planning for a satisfying future.
- To provide guidance for personality development, positive attitude and inter-personal skills.
- To promote Value System and National Integration among students.

Pre-Placement Courses:

- Strengthen Industry-Institute Interaction.
- To prepare a comprehensive list of industries.
- To visit industries frequently to explore possibilities of student's recruitment through campus interviews
- To prepare list of students along with bio-data eligible for various interviews.
- To conduct workshops/programs for students in areas like personality development, communication skills
- To help students to get vocational training in industries during vacation.
- To make facilities available for the smooth conduct of interviews by visiting industry personnel.

9.2 Feedback analysis and reward /corrective measures taken, if any (10)

The college is proactive for continuous improvement. To achieve this, it follows a 360° feedback system from Students, Alumni Parents, Peer group and Industry. Student Feedback is very important factor. For time being Offline Feedback system is available and students are asked to give their confidential feedback for theory as well as practical subjects taught to them at the end of the semester. The feedback of alumni Parents, Peer group and industry person is also recorded time to time to improve the methodology of teaching and learning.

9.3 Feedback on facilities (5)

The feedback of the students is not limited to the scope of improving teaching learning process. It also involves taking feedback of students for the laboratories for up gradation of software, Internet facilities, Library resources etc. An exit survey is conducted for final year students (a copy of questionnaire attached) to gather their feedback for the various facilities provided to them in their four-year program. These changes are then genuinely incorporated.

9.4. Self-learning (5)

- Students are encouraged for Self-Learning program through MOOCS (Massive Open Online Course)
- The college has access to various e-books, journals and magazines which are available in the Institute Library to help students to explore and read about their areas of interest.
- In addition, there is an access of high speed Internet in each hostel which helps them to be tech savvy and moreover a free thinker.
- This helps student to come up with new ideas and new techniques.
- Faculty from time to time change adopt new ways in the course to enhance self-learning such as:
- Presentation of seminars
- Industrial Training
- Projects
- Assignments
- Dissertation in some courses are compulsory as a part of their course requirements.

In addition, these practices are highly encouraged to make learning more student-centric. Performance in these activities gives an excellent opportunity to students to improve upon their knowledge level.

Technical fests, contests, debates, etc. are arranged and organized mostly by the students themselves so that student-cantered learning exercises are developed both at the department and institute level. This improves the qualities such as leadership, decision making, self-learning from experience.

MOOC Courses

The University has incorporated MOOCs courses in its curriculum from the session January 2018 onwards to promote Self Learning. These are online courses run on an IT platform known as SWAYAM& SWAYAM PRABHA, an initiative taken by Govt. of India.

College Library

The Knowledge Centre (Central Library) at the Rajkiya Engineering College (REC), Ambedkar Nagar, is a Resource Centre for academic and research activities in the areas of Engineering Teaching and Literatures in English language. The Central Library has been built to International Standards. It spread over to an area of 4500 sq. m. with ground plus three

floors. The library is equipped with a Reference Section with a seating capacity 100 students, Cyber Library (Digital Library) Room, Audio Visual Section, Journal Section, Newspaper and Magazine Section, Conference Room, Research Scholar Section. It has numerous specialized collections of Books, Journals, NDL, ASME (*American Society of Mechanical Engineers*), ASTM (The American Society Of Mechanical Engineers), IEEE-ASPP (Institute of Electrical and Electronics Engineers - All Society Periodicals Package), Springer, Gate Engineering, and McGraw Hill (Nalanda E-Consortium –AKTU e-consortium Project). The library is fully computerized system which enables the students to search the required books they specifying the author, title, subject and keywords. It facilitates the users to reserve the books they need, and also updates on the status of a particular book and that of the User. The state-of-the library is the heart of engineering institute's teaching, learning and research activities with access to most of the referred databases of the world. The fully-automated library is powered by LibSys / Koha and Dspace library software and has the facility to access e-resources 24x7 within and in the campus. The library has been actively conducting National Digital Library of India (NDL) and NPTEL Video courses for students every evening.

A well-equipped library, having an area of 2287.5m^2 (carpet area inclusive of ground floor, first floor and second floor) and ground area about 762.5m^2, number of titles available is 386 and 8384 number of volumes available. The capacity of library is 125 students. The library provides open access to students and faculty for search of reading material and the library services are computerized besides Internet and reprographic facilities. The Library has been computerised for circulation and search of books with Libsis Software. The Cyber room of Library has 25 Computers for open access of e-resources.

9.5 Career Guidance, Training, Placement (10)

In order to meet the counseling needs of engineers, the college has a separate Career & counseling cell which provides counseling to students in areas like stress management, positive thinking, preparation for various competitive exams and general guidance regarding career. The college runs regular communication skills programs in all the undergraduate courses. The course is designed to provide expertise in written language. Language lab is functional for developing the soft skills among students.

Students Counselors:

Table 9.2: List of Faculty Counselor in Electrical Engineering

Civil Engineering First Year	Dr. Ayush Mittal
Information Technology First Year	Dr. Ashish Kumar Mishra
Electrical Engineering First Year	Dr. Puneet Joshi

TPO Cell of College:

Table 9.3: TPO Cell of College

Training and placement officer (TPO)	Mr. Shivendra Pandey
Departmental TPO:	
Civil Engineering	Mr. Avaneesh Kumar Yadav
Electrical Engineering	Dr. S. P. Singh
Information Technology	Mr. Amit Kumar

Objective of career and counseling cell are as follows:

- To create awareness among the students about entrepreneurship and emerging professional trends and market needs etc.
- To provide guidance to the students on various available options for higher studies in India and abroad.
- To help the students in the development of their strengths, sharpening their interests planning for a satisfying future.
- To provide guidance for personality development, positive attitude and inter-personal skills.
- To promote Value System and National Integration among students.

Placement record:

Table 9.4 A. Placement record in Session 2019-20

S. No.	Company Name	Selected Students
1.	GATE Qualified	35
2.	Pinncledia Tech.	5
3.	Acezd	2
4.	Pie Infocomm Pvt. Limited	5
5.	TCS	1
6.	CEDCOSS Technology Pvt. Limited	1
7.	BYJU's	2
8.	Allin Call Research and Solutions Pvt. Limited	1
	Grand Total	**52**

Table 9.4 B. Students admitted for Higher Education in Session 2019-20

S. No.	Name of Student	Name of Branch	Name of Institute	Course
01.	Akash Deep Arya	Power Electronics	IIT BHU (Varanasi)	M.Tech.
02.	Sumit Rawat	Environmental Engg.	NIT, Kurushetra	M.Tech.
03.	Neeraj Kumar	Environment Engg.	MMMUT, Gorakhpur	M.Tech.
04.	Anjali	Computer Science & Engg.	Indian Institute of Information Technology, Pune	M.Tech.
05.	Rajat Kumar	Computer Science & Information Technology	MNIT, Jaipur	M.Tech.
06.	Dharmendra Bharti	Computer Science & Information Technology	MNIT, Jaipur	M.Tech.
07.	Rohit Kumar	Computer Science & Information Technology	MNIT, Jaipur	M.Tech.

Table 9.5 Placement record in Session 2018-19

S. No.	Company Name	Selected Students
1.	GATE Qualified	27
2.	Textron Technologies Pvt. Ltd	15
3.	Vidya Enterprises	10
4.	Neptune Infra solution	02
5.	Raj Construction	25
6.	CEDCOSS Technology Pvt. Ltd.	04
7.	Cognizant	01
8.	NIIT	02
9.	Micro Focus	02
10.	Sonus Networks India	02
	Grand Total	**90**

Table 9.6 Placement record in Session 2017-18

S. No.	Company Name	Selected Students
1.	GATE Qualified	37
2.	Wipro Technology	02
3.	CEDCOSS Technology Pvt. Ltd.	02
4.	TCS	03
5.	Applicate Innovation Simplify	01
	Grand Total	45

9.6. Entrepreneurship/ Start-Up Cell : Parikalpana

Start-Up Cell was established under the Technical Education Quality Improvement Programme, Phase-III (TEQIP-III) (as per the Start-up policy launched by AICTE on 16th November 2016). The cell with its team of chairman, coordinators, faculty members and E-cell student volunteers of the institute is meant for nurturing the potential start-up ideas that will cater need of both tech and non-tech solution to various social, economic and industrial problems of the nation.

With a vision to cultivate the young innovators studying in Rajkiya Engineering College Ambedkar Nagar, we established a Start-Up Cell in 2019 supported by TEQIP-III and together we call Parikalpana. Our plan is to create a facility in Rajkiya Engineering College Ambedkar Nagar, where students of any branches can avail softwares to have a simulation experiment to realize their innovative ideas.

9.7. Co-curricular and Extra-Curricular Activities (10)

(The College may specify the co-curricular and extra-curricular activities) (Quantify activities such as NCC, NSS etc.)Apart from the academic, co-curricular and extracurricular activities, students are also take part in various fest coordinated and conducted by themselves under the able guidance of institute and faculty.

Table 9.7: Extra-Curricular Activities (On-line Mode) in Session 2020-21 (upto December 2020)

S. No.	Activity	Date
1.	Students Excellence & Learning Program by Art of Living	August 04-09, 2020
2.	Webinar on **"Electrical Vehicle Development Using Ansys Multiphysics"**	August 17, 2020
3.	International E-conference on **"Effect of COVID-19 Pandemic on Agriculture & Allied Sciences-(ECPAAS-2020)"**	August 23-24, 2020
4.	Hackathon Competition	September 15, 2020
5.	Plantation and cleanliness under Swach Bharat Campaign	October 01, 2020
6.	Celebration of Gandhi Jayanti	October 02, 2020
7.	Public Movement Campaign on COVID-19	October 08, 2020
8.	Painting, Sketching, Slogan Writing and Essay Competition on Birthday Celebration of former President Dr. A.P.J. Abdul Kalam	October 15, 2020
9.	Online debate, Understanding of POSCO ACT, Poster on Child Marriage Prevention under Women Empowerment Program	October 17-25, 2020
10.	Celebration of National Unity Day on Birthday of Sardar Vallabh Bhai Patel and Valmiki Jayanti	October 31, 2020
11.	A webinar on ICT for Student & Teachers in collaboration with YMCA Faridabad under Twinning Activity	November 02, 2020
12.	Workshop on **Emerging Trends in Civil Engineering Impacting the Construction Industry	November 03-07, 2020
13.	Celebration of Community Unity Week	November 19-25, 2020
14.	Celebration of Constitution Day	November 26, 2020
15.	Quiz Competition on International Human Rights Day	December 10, 2020
16.	Online FDP on Power System Optimization and Control	December 14-18, 2020
17.	National Mathematics Day	December 22, 2020

Table 9.8 A : Extra-Curricular Activities (On-line Mode) in Session 2019-20

A. MOOCS/NPTEL Courses completed by students:

A- NPTEL STUDENTS				
S.No.	**Student Name**	**Subject**	**Percentage**	**Year**
1.	Manvendra Singh	1. Problem Solving Through Programming In C	65%	Jan-Apr 2019 (12 Week Course)
		2. Joy of Computing Using Python	65%	Jan-Apr 2019 (12 Week Course)
2.	Aakash Singh	1. Programming, Data Structures and Algorithms Using Python	70%	Jan-Mar 2019 (8 Week Course)
		2. Problem Solving Through Programming In C	85%	Jan-Apr 2019 (12 Week Course)
		3. Joy of Computing Using Python	84%	Jan-Apr 2019 (12 Week Course)
3.	Prashant Kumar	Introduction to Automata, Languages and Computation	52%	Jan-Apr 2019 (12 Week Course)
4.	Akash Kumar Maurya	Machine Learning for Engineering and Science Applications	50%	Jan-Apr 2019 (12 Week Course)
5.	Ankush Pandey	Machine Learning for Engineering and Science Applications	62%	Jan-Apr 2019 (12 Week Course)
6.	Rohit Kumar	1. Machine Learning for Engineering and Science Applications	49%	Jan-Apr 2019 (12 Week Course)
		2. Joy of Computing Using Python	59%	Jan-Apr 2019 (12 Week Course)
7.	Amrendra Pratap Singh	1. Introduction to Automata, Languages and Computation	87%	Jan-Apr 2019 (12 Week Course)
		2. Discrete Mathematics	86%	Jan-Apr 2019 (12 Week Course)
		3. Joy of Computing Using Python	68%	Jan-Apr 2019 (12 Week Course)
8.	Manthan Bhagtani	Programming, Data Structures and Algorithms Using Python	57%	Jan-Mar 2019 (8 Week Course)
9.	Mohit Chaudhari	Plastic Waste Management	73%	Feb-Apr 2019 (8 Week Course)
10.	Saurav Singh	Digital Land Surveying and Mapping (DLS & M)	58%	Feb-Apr 2019 (8 Week Course)
11.	Ashish Kumar Saroj	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
12.	Rohit Singh	Programming, Data Structures and Algorithms Using Python	55%	Jan-Mar 2019 (8 Week Course)
13.	Akash Deep Arya	ELECTRICAL MACHINES - II	63%	Jan-Apr 2019 (12 Week Course)
14.	Vikas Patel	Introduction to Automata, Languages and Computation	55%	Jan-Apr 2019 (12 Week Course)
15.	Rahul Kumar	Introduction to Automata, Languages and Computation	58%	Jan-Apr 2019 (12 Week Course)
16.	Akash Raj	Introduction to Automata, Languages and Computation	67%	Jan-Apr 2019 (12 Week Course)
17.	Sarika Yadav	Introduction to Automata, Languages and Computation	57%	Jan-Apr 2019 (12 Week Course)

18.	Ritesh Kushwaha	Introduction to Automata, Languages and Computation	60%	Jan-Apr 2019 (12 Week Course)
19.	Sarvesh Kumar Maury	Introduction to Automata, Languages and Computation	55%	Jan-Apr 2019 (12 Week Course)
20.	Nikku Verma	Introduction to Automata, Languages and Computation	83%	Jan-Apr 2019 (12 Week Course)
21.	Dipmala Kumari	Introduction to Automata, Languages and Computation	48%	Jan-Apr 2019 (12 Week Course)
22.	Rashmi Shukla	Introduction to Automata, Languages and Computation	58%	Jan-Apr 2019 (12 Week Course)
23.	Harsh Vardhan	Introduction to Automata, Languages and Computation	54%	Jan-Apr 2019 (12 Week Course)
24.	Tushar Tomar	Introduction to Automata, Languages and Computation	92%	Jan-Apr 2019 (12 Week Course)
25.	Suryank Saroj	Introduction to Automata, Languages and Computation	54%	Jan-Apr 2019 (12 Week Course)
26.	Satyam Gupta	1. Joy of Computing Using Python	82%	Jan-Apr 2019 (12 Week Course)
		2. Data Mining	66%	Feb-Apr 2019 (8week Course)
27.	Anubhav Bharti	Problem Solving Through Programming In C	58%	Jan-Apr 2019 (12 Week Course)
28.	Rohit Kumar	Soil Mechanics / Geotechnical Engineering I	41%	Jan-Apr 2019 (12 Week Course)
29.	Rishabh Dev Tripathi	Digital Land Surveying and Mapping (DLS & M)	40%	Feb-Apr 2019 (8 Week Course)
30.	Anubhav Gupta	Problem Solving Through Programming In C	51%	Jan-Apr 2019 (12 Week Course)
31.	Nanci Salonia	1. Enhancing Soft Skills and Personality	67%	Feb-Apr 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	60%	Aug-Oct 2019 (8 Week Course)
32.	Ashutosh Singh	Problem Solving Through Programming In C	53%	Jan-Apr 2019 (12 Week Course)
33.	Pankaj	1. Joy of Computing Using Python	85%	Jan-Apr 2019 (12 Week Course)
		2. Data Mining	64%	Feb-Apr 2019 (8 Week Course)
34.	Vipin Kumar Sahu	1. Data Mining	68%	Feb-Apr 2019 (8 Week Course)
		2. Joy of Computing Using Python	85%	Jan-Apr 2019 (12 Week Course)
35.	Shivam Verma	Soil Mechanics / Geotechnical Engineering I	50%	Jan-Apr 2019 (12 Week Course)
36.	Sumit Kumar Singh	Principles of Signals and Systems	42%	Jan-Apr 2019 (12 Week Course)
37.	Rajverdhan Verma	Principles of Signals and Systems	60%	Jan-Apr 2019 (12 Week Course)
38.	Aman Kumar	Soil Mechanics / Geotechnical Engineering I	73%	Jan-Apr 2019 (12 Week Course)
39.	Rohit Kumar	Soil Mechanics / Geotechnical Engineering I	48%	Jan-Apr 2019 (12 Week Course)

40.	Harshit Yadav	Problem Solving Through Programming In C	72%	Jan-Apr 2019 (12 Week Course)
41.	Shalini Keshri	Principles of Signals and Systems	45%	Jan-Apr 2019 (12 Week Course)
42.	Abhinav Bajpai	Principles of Signals and Systems	51%	Jan-Apr 2019 (12 Week Course)
43.	Samant Srivastava	Principles of Signals and Systems	77%	Jan-Apr 2019 (12 Week Course)
44.	Shailendra Singh	Principles of Signals and Systems	66%	Jan-Apr 2019 (12 Week Course)
45.	Rohit Singh	Principles of Signals and Systems	85%	Jan-Apr 2019 (12 Week Course)
46.	Vishal	Soil Mechanics / Geotechnical Engineering I	60%	Jan-Apr 2019 (12 Week Course)
47.	Vartika Singh	Introduction to Automata, Languages and Computation	65%	Jan-Apr 2019 (12 Week Course)
48.	Dipmala Kumari	Introduction to Automata, Languages and Computation	48%	Jan-Apr 2019 (12 Week Course)
49.	Anju Lata Sen	Introduction to Automata, Languages and Computation	57%	Jan-Apr 2019 (12 Week Course)
50.	Rajarshi Singh	Introduction to Automata, Languages and Computation	71%	Jan-Apr 2019 (12 Week Course)
51.	Abhijeet Verma	Problem Solving Through Programming In C	68%	Jan-Apr 2019 (12 Week Course)
52.	Raj Mani	Problem Solving Through Programming In C	46%	Jan-Apr 2019 (12 Week Course)
53.	Anshuman Singh	Problem Solving Through Programming In C	52%	Jan-Apr 2019 (12 Week Course)
54.	Divyanshu Verma	Problem Solving Through Programming In C	40%	Jan-Apr 2019 (12 Week Course)
55.	Rajnesh Kumar	Electrical Machines-II	40%	Jan-Apr 2019 (12 Week Course)
56.	Akash Kumar Dwivedi	Engineering Mathematics-I	68%	Jan-Apr 2019 (12 Week Course)
57.	Shivam Vishwakarma	Engineering Mathematics-I	55%	Jan-Apr 2019 (12 Week Course)
58.	Abhishek Pandey	Electric Vehicles – Part 1	46%	Feb-Mar 2019 (4 Week Course)
59.	Gaurav Vishesh	Principles of Signals and Systems	56%	Jan-Apr 2019 (12 Week Course)
60.	Rajarshi Singh	Principles of Signals and Systems	48%	Jan-Apr 2019 (12 Week Course)
61.	Kavita	Principles of Signals and Systems	46%	Jan-Apr 2019 (12 Week Course)
62.	Keerti Soni	Enhancing Soft Skills and Personality	72%	Feb-Apr 2019 (8 Week Course)
63.	Sadhana Kumari	Enhancing Soft Skills and Personality	58%	Feb-Apr 2019 (8 Week Course)
64.	Aditya Kumar	Enhancing Soft Skills and Personality	82%	Feb-Apr 2019 (8 Week Course)
65.	Kumari Anjali Singh	Introduction to Smart Grid	51%	Jul-Sep 2019 (8 Week Course)

66.	Manthan Bhagtani	Data Base Management System	69%	Jul-Sep 2019 (8 Week Course)
67.	Shikha Srivastava	Data Base Management System	66%	Jul-Sep 2019 (8 Week Course)
68.	Harsh Vardhan	Data Base Management System	54%	Jul-Sep 2019 (8 Week Course)
69.	Prateek Nayak	Data Base Management System	86%	Jul-Sep 2019 (8 Week Course)
70.	Nikku Verma	Data Base Management System	78%	Jul-Sep 2019 (8 Week Course)
71.	Ritesh Kushwaha	Data Base Management System	72%	Jul-Sep 2019 (8 Week Course)
72.	Rashmi Shukla	Data Base Management System	66%	Jul-Sep 2019 (8 Week Course)
73.	Vishal Jaiswal	Data Base Management System	92%	Jul-Sep 2019 (8 Week Course)
74.	Virendea Singh Bohra	Data Base Management System	80%	Jul-Sep 2019 (8 Week Course)
75.	Pankaj Gangwar	ELECTRICAL MACHINES - II	58%	Jan-Apr 2019 (12 Week Course)
76.	Prince Kumar Singh	Fluid Mechanics	50%	Aug-Oct 2019 (8 Week Course)
77.	Jitendra Gond	Remote Sensing and Digital Image Processing of Satellite Data	59%	Aug-Oct 2019 (8 Week Course)
78.	Pankaj Kushwaha	Scheduling Techniques in Projects	62%	Aug-Sep 2019 (4 Week Course)
79.	Saurav Singh	Scheduling Techniques in Projects	62%	Aug-Sep 2019 (4 Week Course)
80.	Mohit Chaudhari	Remote Sensing and Digital Image Processing of Satellite Data	68%	Aug-Oct 2019 (8 Week Course)
81.	Rohit Yadav	Fluid Mechanics	50%	Aug-Oct 2019 (8 Week Course)
82.	Nityanand Kushwaha	Remote Sensing and Digital Image Processing of Satellite Data	68%	Aug-Oct 2019 (8 Week Course)
83.	Anurag Gautam	Integrated Waste Management for a Smart City	69%	Jul-Oct 2019 (12 Week Course)
84.	Shivam Vishwakarma	Problem Solving Through Programming In C	54%	Jul-Oct 2019 (12 Week Course)
85.	Suraj Prasad	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
86.	Sawan Kanaujiya	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
87.	Rumi Singh	Developing Soft Skills and Personality	68%	Aug-Oct 2019 (8 Week Course)
88.	Raj Singh	Developing Soft Skills and Personality	85%	Aug-Oct 2019 (8 Week Course)
89.	Deepak Kumar	1. Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
		2. Patent Law Engineers and Scientists	51%	Jul-Oct 2019 (12 Week Course)
90.	Ankit Kumar Gautam	Developing Soft Skills and Personality	67%	Aug-Oct 2019 (8 Week Course)

91.	Ankesh Kumar	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
92.	Sarvesh	Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
93.	Satendra Gangwar	Developing Soft Skills and Personality	66%	Aug-Oct 2019 (8 Week Course)
94.	Aditya Kumar	Developing Soft Skills and Personality	63%	Aug-Oct 2019 (8 Week Course)
95.	Anand Kumar Balmiki	Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
96.	Priya Kanaujiya	Developing Soft Skills and Personality	88%	Aug-Oct 2019 (8 Week Course)
97.	Satyendra Kumar Bhardwaj	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
98.	Suraj Kumar	Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
99.	Akash Rawat	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
100.	Utkarsh Verma	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
101.	Sadhana Kumari	Developing Soft Skills and Personality	63%	Aug-Oct 2019 (8 Week Course)
102.	Shivangi Shah	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
103.	Pranjal Pandey	Developing Soft Skills and Personality	97%	Aug-Oct 2019 (8 Week Course)
104.	Girijesh Kumar Gond	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
105.	Pratik Kumar Gautam	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
106.	Ankit Kumar	Developing Soft Skills and Personality	65%	Aug-Oct 2019 (8 Week Course)
107.	Pawan Kumar	Developing Soft Skills and Personality	64%	Aug-Oct 2019 (8 Week Course)
108.	Avinash Kumar	Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
109.	Aditya Kumar	Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)
110.	Abhishek Mishra	1. Developing Soft Skills and Personality	84%	Aug-Oct 2019 (8 Week Course)
		2 Problem Solving Through Programming in C	61%	Jul-Oct 2019 (12 Week Course)
111.	Pramod Gupta	1. Developing Soft Skills and Personality	80%	Aug-Oct 2019 (8 Week Course)
		2. Problem Solving Through Programming in C	56%	Jul-Oct 2019 (12 Week Course)
112.	Deepika Mourya	Developing Soft Skills and Personality	85%	Aug-Oct 2019 (8 Week Course)
113.	Priyanka Singh	Cloud Computing	47%	Aug-Oct 2019 (8 Week Course)
114.	Shivendera	Developing Soft Skills and	61%	Aug-Oct 2019 (8 Week

	Kumar Nayak	Personality		Course)
115.	Jayendra Pratap	Developing Soft Skills and Personality	64%	Aug-Oct 2019 (8 Week Course)
116.	Nidhi Pal	Data Base Management System	56%	Jul-Sep 2019 (8 Week Course)
117.	Anuj Kumar	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
118.	Shivam Vishwakarma	Developing Soft Skills and Personality	77%	Aug-Oct 2019 (8 Week Course)
119.	Vivek Kumar	1. Fluid Mechanics	75%	Aug-Oct 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	72%	Aug-Oct 2019 (8 Week Course)
120.	Sooraj Kumar	Developing Soft Skills and Personality	73%	Aug-Oct 2019 (8 Week Course)
121.	Vaibhav Kumar	1. Developing Soft Skills and Personality	83%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	64%	Aug-Oct 2019 (8 Week Course)
122.	Akhilesh Singh	1. Developing Soft Skills and Personality	69%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	61%	Aug-Oct 2019 (8 Week Course)
123.	Rohit Kumar	1. Developing Soft Skills and Personality	81%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	69%	Aug-Oct 2019 (8 Week Course)
124.	Narendra Kumar Yadav	1. Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
		2. Fluid Mechanics	75%	Aug-Oct 2019 (8 Week Course)
125.	Juli Varun	Developing Soft Skills and Personality	65%	Aug-Oct 2019 (8 Week Course)
126.	Jahnvi Divyam	Developing Soft Skills and Personality	85%	Aug-Oct 2019 (8 Week Course)
127.	Abhishek Kumar Gautam	1. Fluid Mechanics	53%	Aug-Oct 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	79%	Aug-Oct 2019 (8 Week Course)
128.	Sonam Sahni	Problem Solving Through Programming In C	40%	Jan-Apr 2019 (12 Week Course)
129.	Ranjana Yadav	Problem Solving Through Programming In C	56%	Jan-Apr 2019 (12 Week Course)
130.	Aakash Yadav	Problem Solving Through Programming In C	46%	Jan-Apr 2019 (12 Week Course)
131.	Shubham Chaudhary	Problem Solving Through Programming In C	61%	Jan-Apr 2019 (12 Week Course)
132.	Lakshmi Patel	1. Problem Solving Through Programming In C	56%	Jan-Apr 2019 (12 Week Course)
		2. Programming in C++	51%	Jan-Mar 2019 (12 Week Course)
		3. Data Base Management System	65%	Feb-Apr 2019 (8 Week

				Course)
		4. Programming in Java	68%	Jan-Apr 2019 (12 Week Course)
133.	Maneesh Kumar Gupta	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
134.	Aakash Gangwar	Fundamentals of Power Electronics	60%	Jan-Apr 2019 (12 Week Course)
135.	Preeti Gautam	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
136.	Simran Yadav	Fundamentals of Power Electronics	53%	Jan-Apr 2019 (12 Week Course)
137.	Asheesh Rajbhar	1. Electric Vehicles – Part 1	69%	Feb-Mar 2019 (4Week Course)
		2. Fundamentals of Power Electronics	52%	Jan-Apr 2019 (12 Week Course)
138.	Krishan Pal Singh	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
139.	Kumari Renu	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
140.	Shalini Patel	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
141.	Kumari Anjali Singh	Fundamentals of Power Electronics	50%	Jan-Apr 2019 (12 Week Course)
142.	Sweta Kumari	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
143.	Manish Kumar Bharati	Fundamentals of Power Electronics	40%	Jan-Apr 2019 (12 Week Course)
144.	Dravid Singh	1. Problem Solving Through Programming In C	62%	Jan-Apr 2019 (12 Week Course)
		2. Better Spoken English	78%	Jan-Apr 2019 (12 Week Course)
145.	Girijesh Kumar	Problem Solving Through Programming In C	40%	Jan-Apr 2019 (12 Week Course)
146.	Deepak Kumar	Problem Solving Through Programming In C	45%	Jan-Apr 2019 (12 Week Course)
147.	Deveshwar Nishad	Problem Solving Through Programming In C	68%	Jan-Apr 2019 (12 Week Course)
148.	Shashank Varahney	1. Problem Solving Through Programming In C	55%	Jan-Apr 2019 (12 Week Course)
		2. Developing Soft Skills and Personality	71%	Jan-Apr 2019 (12 Week Course)
149.	Alok Kumar	Control Engineering	41%	Jan-Apr 2019 (12 Week Course)
150.	Sandeep Kumar	Soil Mechanics / Geotechnical Engineering I	47%	Jan-Apr 2019 (12 Week Course)
151.	Ayush Pal	1. Electrical Machines –II	40%	Jan-Apr 2019 (12 Week Course)
		2. Better Spoken English	68%	Jan-Apr 2019 (12 Week Course)
152.	Ashwin Kumar Yadav	Electric Vehicles – Part 1	52%	Feb-Mar 2019 (4Week Course)
153.	Durgesh	Enhancing Soft Skills and	80%	Feb-Mar 2019 (4Week

	Kumar Yadav	Personality		Course)
154.	Ravi Shankar Gautam	Electrical Machines -II	43%	Jan-Apr 2019 (12 Week Course)
155.	Archana Yadav	Principles of Signals and Systems	54%	Jan-Apr 2019 (12 Week Course)
156.	Shantanu Singh	1. Machine Learning for Engineering and Science Applications	47%	Jan-Apr 2019 (12 Week Course)
		2. Data Base Management System	81%	Feb-Apr 2019 (8 Week Course)
157.	Deepak Kumar Kannaujiya	Electric Vehicles – Part 1	43%	Feb-Mar 2019 (4 Week Course)
158.	Tushar Tomar	Programming, Data Structures and Algorithms Using Python	70%	Jan-Mar 2019 (8 Week Course)
159.	Pawan Gupta	Advanced Topics in the Science and Technology of Concrete	43%	Jan-Feb 2019 (4 Week Course)
160.	Aman Singh	Advanced IOT Applications	46%	Jan-Mar 2019 (8 Week Course)
161.	Abhishek Kumar	Advanced Topics in the Science and Technology of Concrete	57%	Jan-Feb 2019 (4 Week Course)
162.	Ankit Kumar Gupta	Introduction to Remote Sensing	90%	Jan-Feb 2019 (4 Week Course)
163.	Prabhutva Singh	Advanced Topics in the Science and Technology of Concrete	47%	Jan-Feb 2019 (4 Week Course)
164.	Shashikant Singh	1. Concrete Technology	68%	Jul-Oct 2018 (12 Week Course)
		2. Soil Mechanics / Geotechnical Engineering I	47%	Jan-Apr 2019 (12 Week Course)
165.	Amit Kumar	Plastic Waste Management	60%	Feb-Apr 2019 (8Week Course)
166.	Pallavi Tripathi	Problem Solving Through Programming In C	45%	Jan-Apr 2019 (12 Week Course)
167.	Nidhi Pal	Introduction to Automata, Languages and Computation	49%	Jan-Apr 2019 (12 Week Course)
168.	Somesh Kumar Yadav	Data Mining	78%	Feb-Apr 2019 (8 Week Course)
169.	Pankaj Gangwar	Electrical Machines -II	58%	Jan-Apr 2019 (12 Week Course)
170.	Shivraj Vishwakarma	1. Fundamentals of Power Electronics	49%	Jan-Apr 2019 (12 Week Course)
171.	Durgesh Kumar Yadav	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
172.	Dileep Kumar	Developing Soft Skills and Personality	60%	Aug-Oct 2019 (8 Week Course)
173.	Pawan Kumar	Developing Soft Skills and Personality	64%	Aug-Oct 2019 (8 Week Course)
174.	Deveshwar Nishad	Developing Soft Skills and Personality	83%	Aug-Oct 2019 (8 Week Course)
175.	Keerti Soni	Developing Soft Skills and Personality	75%	Aug-Oct 2019 (8 Week Course)
176.	Palak Jain	Developing Soft Skills and	72%	Aug-Oct 2019 (8 Week

		Personality		Course)
177.	Jayanti Soni	Developing Soft Skills and Personality	69%	Aug-Oct 2019 (8 Week Course)
178.	Sachin Kumar	Developing Soft Skills and Personality	79%	Aug-Oct 2019 (8 Week Course)
179.	Pranshu Tripathi	Fluid Mechanics	60%	Aug-Oct 2019 (8 Week Course)
180.	Anjali Omar	GPS Surveying	60%	Jul-Aug 2019 (4 Week Course)
181.	Priya Chaudhary	GPS Surveying	49%	Jul-Aug 2019 (4 Week Course)
182.	Shubham Singh	1. Calculus of One Real Variable	69%	Jul-Sep 2019 (8 Week Course)
		2. Developing Soft Skills and Personality	76%	Aug-Oct 2019 (8 Week Course)

B. Coursera Courses completed by Students

Coursera Courses Done By Students							
S.No.	**Name**	**Branch**	**Year**	**Course 1**	**Course 2**	**Course 3**	**Course 4**
1	Mansi Gupta	EE	Second	Introduction to personal branding			
2	Saurabh Kumar	IT	Second	OOP in Java			
3	Mohd. Shadab	IT	Second	Java course by Duke University	Java programming: Solving problem with Software		
4	Dimpy Yadav	IT	Second	Programming for everyday (Getting started with python)			
5	Pallavi Pandey	IT	Second	Python Data Structures			
6	Amit Tiwari	IT	Second	Programming with everybody (Python)			
7	Vikas Yadav	IT	Second	C++ for C Programmers, Part-A	Python Basics	AI for Everyone	
8	Harsh Mishra	CE	Second	AI for Everyone	Programming for Everybody (Getting Started with Python)	Grammar and Punctuation	
9	Amit Kumar	CE	Second	AUTOCAD			
10	Hari Pratap	CE	Second	Python			
11	Sanjay Kumar	CE	Second	Programming for everybody (Getting started With			

				Python)			
12	Navneet Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
13	Amit Kumar Gautam	EE	Second	C and C++			
14	Amit Kumar Gautam	EE	Second	C and C++			
15	Chandra Bhusan Yadav	IT	Second	Programming for Everybody (Getting Started with Python)	Python Data Structures		
16	Adit Srivastava	IT	Second	Google IT Support	Introduction to web development	Introducti on to html5	Introductio n to CSS3
17	Manas Singhal	IT	Second	Programming Fundamentals	Introduction to HTML5	Build a full Website using WordPress	Covid 19 : What you need to know
18	Amit Kumar	IT	Second	HTML, CSS and JavaScript for web developers	Introduction to HTML 5	Introductio n to CSS 3	Creative Problem Solving
19	Kajal Gautam	IT	Second	Programming for Everybody (Getting Started with Python)			
20	Janmejay Kumar	CE	Second	AutoCAD (INTERNSHALA)			
21	Prashant Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
22	Pankaj Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
23	Prashant Kumar	IT	Second	Programming for Everybody (Getting Started with Python)			
24	Sushama Kumari	IT	Second	Python for everybody	Grammar and punctuation		
25	Saurabh Verma	CE	Second	Autocad			
26	Noor Mohammad	IT	Second	Excel Skills for Business essentials			

27	Aayush Kumar Vishodiya	IT	Second	Programming for Everybody (Getting Started with Python)			
28	Atul Paswan	IT	Second	Programming with python			
29	Aditya Singh	IT	Second	Programming for Everybody (Getting Started with Python)			
30	Ayush Varma	IT	Second	Programming for Everybody (Getting Started with Python)			
31	Ajay Kushwaha	IT	Second	Programming for Everybody (Getting Started with Python)			
32	Priya Singh	IT	Second	Object Oriented Programming in Java			
33	Arvind Yadav	IT	Second	Programming for everybody (getting started with python)			
34	Prashant Kumar	IT	Second	Python for everybody: Getting started with python	Python training	Professional email writing	
35	Prashant Kumar	IT	Second	Python for everybody: Getting started with Python	Python training	Professional email writing	
36	Goud Akash Ramanuj	EE	Second	Programming with C and C++ training			
37	Goud Akash Ramanuj	EE	Second	Programming with Cand C++ training			
38	Aman Chhabra	IT	Second	Speak English Professionally: In Person, Online and on the Phone			
39	Shivam Tiwari	CE	Second	Autodesk Certified Professional: AutoCAD for Design and Drafting Exam Preparation			
40	Shivam Tiwari	CE	Second	Autodesk Certified Professional: AutoCAD for Design and			

				Drafting Exam Preparation			
41	Noor Mohammad	IT	Second	Excel Skills for Business: Essentials			
42	Astha Vats	IT	Second	Programming for everybody (getting started with python)			
43	Neha Verma	IT	Second	Programing for everybody(getting started with python)			
44	Shivji	CE	Second	Programming for Everybody (Getting Started with Python)			
45	Abhishek Singh	IT	Second	Programming for Everybody (Getting Started with Python)	Python Data Structures		
46	Mausami Saroj	IT	Fourth	Python			
47	Manvendra Singh	IT	Fourth	Introduction to Artificial Intelligence	Cloud computing		
48	Manvendra Singh	IT	Fourth	Introduction to Self Driving Cars	Introduction To Data science Using Python	Python Basics	Data collection And Processing With Python

C. On-line Quiz Series organized by college

Quiz Date	Quiz Series	Total Participant
04/07/2020	Python Quiz for Beginners-1	922
13/07/2020	Python Quiz for Beginners-2	830
22/07/2020	Python Quiz for Beginners-3	480
30/07/2020	Python Quiz for Beginners-4	325
10/08/2020	Python Quiz for Beginners-5	304
24/08/2020	Python Quiz for Beginners-6	311
Total number of participants		**3,172**

Table 9.8 B: Extra-Curricular Activities (Off-line Mode) in Session 2019-20

Events	Descriptions	Date(s)
Dr. A.P.J. Technical, Literary & Management Fest	Activities at Zonal Level	8-9 November 2019
FEST EVENT KSHITIZ'19	National level Sport fest	1-3, March 2019

CRADLE 2018	It was an event of tree plantation in college campus	27, April 2018
FEST EVENT AVIGHNA	Annual Fest ,Technical cultural cum ,sport fest	4-7 April 2018
ROBOTICS Workshop	It was a 2 day workshop where students were introduced to Robotics	September 2017
SEMINAR	Seminar for final year student on YOGA	November 2017
FEST EVENT KSHITIZ'17	National level sport fest	2-,23 March 2017
TREASURO HUNT	Technical event	October 2016

Composition of CSA Team:

Table 9.9: Composition of CSA Team

1.	Chairman CSA	Mr. Prince Rajput
2.	Convenor of Sports Council	Dr. Ashish Kumar Mishra
3.	Convenor of Literary Council	Dr. Sushant Chaturvedi
4.	Convenor of Cultural Council	Mr. Sonu Kumar
5.	Convenor of Hobby Club	Mr. Amit Kumar Pandey
6.	Convenor of Photography and Fine Art Club	Mr. Sharad Verma
7.	Convenor of Technical Council	Dr. Arif Iqbal

List of events organized by different Councils:

Events of Sports Council

S.No.	Name of event	Venue
1.	Athletics	Eklavya Stadium, Akbarpur
2.	Cricket	Eklavya Stadium, Akbarpur
3.	Foot ball	BNKV College, Akbarpur
4.	Table Tennis	Student Activity Centre
5.	Chess	Student Activity Centre
6.	Carom	Student Activity Centre
7.	Badminton	Eklavya Stadium, Akbarpur
8.	Volleyball	Volleyball Court
9.	Basketball	Basketball Court

Literary Council:

Sr. No.	Name of event	Venue
1.	Extempore (Hindi + English)	CSA Hall
2.	Poem (Hindi + English)	CSA Hall
3.	Dumb Charades	CSA Hall
4.	Vocabulary Quiz	CSA Hall
5.	Story Writing	CSA Hall
6.	Quiz	CSA Hall
7.	Philosophical Talk	CSA Hall

Hobby Club:

Sr. No.	Name of event	Venue
1.	Quiz	CSA Hall
2.	Balloon Pyramid + Balloon Race	Ground near Admin
3.	Arrow throw + Dare Dance + News Paper Reading, Writing	Ground near Admin
4.	Sack Race + Bath Tub + Mud Race + Clue Puzzle	Ground near Admin

Photography and Fine Art Club:

Sr. No.	Name of event	Venue
1.	Tattoo Making	Near CSA Hall
2.	Face Painting	Near CSA Hall
3.	Open Painting	Near CSA Hall
4.	T-Shirt Painting	Near CSA Hall
5.	Wall Painting	Near CSA Hall
6.	Charcoal Painting	Near CSA Hall
7.	Sketching	Near CSA Hall
8.	Rangoli Making	Near CSA Hall

Achievement of Students

Session: 2017-18

Event: ASMITA'17 (IIIT, ALLAHABAD), 9-11, February, 2017

Students Achievement in Sport Activity

Event	Name(s)	Gold	Silver	Bronze	Other
Volleyball	Anand Kumar Chandra Shekhar Verma Akash Yadav Santosh Raj Manoj Verma Nishant Kumar Shubham Verma Shantanu Singh		Silver		
Basketball	Raj Shekhar Kushwaha Ghazanfar Hasan Praveen Kumar Mukul Dev Somesh Yadav				4th
	Tarunesh Shivam Shivam Haldwaniya Suryank				

Event: AVIGHNA'17 (REC, AMBEDKAR NAGAR), 4-8 APRIL, 2017

Total Strength: 82

Students Achievement in Sport Activity

Event	Winner Team (3rd year)	Runner up team (1st year)
Cricket	Mohit Maurya (Captain)	Tarunesh Shivam
	Vikas Singh (vice-captain)	Suryank
	Arvind Kumar Shukla	Ashish Kumar
	Arnav Singh	Rahul Kumar
	Rahul	Mukul Tripathi
	Anand Kumar Gupta	Pranshu
	Akash Yadav	Vikas Sonkar
	Manish Sahni	Rohit Sonkar
	Manvendra Tripathi	Aditya
	Rishikant Barman	Ambuj Yadav
	Piyush Singh	Akash
	Dileep Yadav	Sarvesh Kumar

Badminton	Winner team (3rd year)	Runner up team (final year)
	Anand Kumar Gupta	Abhishek Sagar
	Mohit Maurya	Mayank Tyagi
	Praveen Kumar	Anil Kumar
	Arnav Singh	Golu Sonkar

Football	Winner team (3rd year)	Runner up team (Final Year)
	Rahul	Shashwat Gupta
	Mohit Maurya	Rahul Mishra
	Shivam Halwaniya	Abhishek Sagar
	Vikas Singh	Anil Kumar
	Arnav Singh	Manoj
	Manind Singh Chauhan	Golu Sonkar
	Rahul	Mayank Tyagi
	Anand Kumar Gupta	Sanjay Kumar Yadav
	Arvind Kumar Shukla	Ujjawal Sharma
	Ghazanfar Hasan	Mohit Bhaskar
	Bimal Patel	Ashish Kumar

Volleyball	Winner team (2nd year)	Runner up team (3rd year)
	Shantanu Singh	Akash Yadav
	Pratyush Yadav	Chandra Shekhar Verma
	Atul Tiwari	Shubham Verma
	Prashant Pratap Singh	Shubham Dixit
	Mayank Kumar	Manoj Verma
	Hemant	Anand Kumar
	Anoop	Piyush Singh
	Vijay Kumar	Abhishek Rai

Basketball	Winner team (1st year)	Runner up team (3rd year)
	Suryank	Ghazanfar Hasan
	Tarunesh Shivam	Manind Singh Chauhan
	Rajarshree Singh	Shivam haldwaniya
	Md. Hammad	Praveen Kumar
	Harsh Vardhan	Abhay Rao
	Abhishek	Vikas Singh
	Aditya	Mohit Maurya

Chess	Winner team (3rd year)	Runner up team (2nd year)
	Himanshu Soni Keshlal Rajat Kumar	Vedansh Singh Chandel Abhishek Priyadarshini

Carrom	Winner team (Final year)	Runner up team (2nd year)
	Anil Kumar Golu Sonkar	Shivam Kumar Rohit Kumar

Table Tennis	Winner team (Final year)	Runner up team (1st year)
	Manish Shahni (3rd year) Praveen Kumar (3rd year)	Rajrshee Singh (1st year) Tarunesh Shivam (1st year)

Athletics events	Winner(s)	Runner up(s)	2nd runner up(s)
100 m	Bimal Kumar Patel (3rd year)	Anand Kuamr Gupta(3rd year)	Sunil Kumar (final year)
4*100 m relay	Anand Kumar Gupta Bimal Kumar Patel Vikas Singh Mohit Maurya (All 3rd Year)	Abhishek Sagar Sunil Kumar Anil Kumar Mayank Tyagi (All Final Year)	Mukul Dev Vibhanshu Vaibhav Neeraj Singh Prashant Pratap Singh (All 3rd Year)
Long jump	Anand Kumar Gupta (3rd Year)	Sunil Kumar (Final Year)	Bimal Kuamr Patel (3rd Year)
High jump	Bimal Kumar Patel (3rd Year)	Anand Kumar Gupta (3rd Year)	Sunil Kumar (Final Year)

Event	Winner team (2st year)	Runner up team (1st year)
Basketball	Alka Kumari Komal Verma Saraswati Kushawaha Komal Gautam Renu Aarti Yadav Greenish Satalwal	Vidu Manwal Ritu Singh Sikha Vertika Anita Shreya

Volleyball	Winner team (2nd year)	Runner up team (1st year)
	Sarita Kumari	Mausami Saroj
	Rajni Kumari	Shalini Keshari
	Deeksha Singh	Harshita Chaudhary
	Alka Kumari	Priyanka
	Komal Gautam	Kavita
	Shushma Gautam	Apoorva Rao

Athletics events	Winner team	Runner up	2nd runner up
High jump	Sarita Kumari (2nd Year)	Saraswati Kushwaha (2rd Year)	Ritu Saini (2nd Year)
Shotput	Lakshmi Patel (1st Year)	Sarita Kumari (2nd Year)	Komal Gautam (2nd Year)
Long jump	Lakshmi Patel (1st Year)	Harshita Chaudhary (1nd Year)	Ritu Saini (2nd Year)
Discuss throw	Lakshmi Patel (1st Year)	Sarita Kumara (2nd Year)	Harshita (1st Year)
Javelin throw	Lakshmi Patel (1st Year)	Sarita Kumari (2nd Year)	Mausami Saroj (1st Year)
1500m race	Saraswati Kushwaha (2nd Year)	Ritu Saini (2nd Year)	Sarita Kumari (2nd Year)
800m race	Saraswati Kushwaha (2nd Year)	Ritu Saini (2nd Year)	Komal Gautam (2nd Year)
100m race	Komal Gautam (2nd Year)	Ritu Saini (2nd Year)	Saraswati Kushwaha (2nd Year)
200m race	Komal Gautam (2nd Year)	Saraswati Kushwaha (2nd Year)	Ritu Saini (2nd Year)

Event: SPARDHA'17 (IIT (BHU)), 21-23 October, 2017

Total Strength: 41

Students Achievement in Sport Activity

Events	Name	Gold	Silver	Bronze	Other
Carom	Preeti Valmiki Priyanka Singh Mausami Saroj	Gold			
High jump	Sarita Kumari		Silver		
Shot put	Lakshmi Patel		Silver		
Discuss throw	Lakshmi Patel			Bronze	

Event	Name	Gold	Silver	Bronze	Other
Carrom	Anil Kumar Pritam Abhishek Sagar Golu Sonkar	Gold			

Event: TVARAN'18 (KNIT SULTANPUR), 21-23 February, 2018
Total Strength: 48

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Volleyball	Madhu Shukla Vijeta Sharma Sakshi Agrawal Sarita Kumari Rajni Kumari Shalini Keshari Mausami Saroj Lakshmi Patel	Gold			
Basketball	Sarita Kumari Alka Kumai Komal Gautam Vidhu Manwal Ritu Singh Saraswati Kushawaha Aarti Yadav		Silver		
Table Tennis	Kamini Singh Shivalika Dev Sakshi Agrawal Simran Prakash	Gold			
Chess	Sadhna Nidhi Shivangi Vertika		Silver		
Carrom	Deepti Chawla Gomti Singh Priyanka Singh Mausami Saroj		Silver		
Shotput	Sarita Kumari		Silver		
Shotput	Lakshmi Patel	Gold			
Long jump	Lakshmi Patel			Bronze	
200 m	Vijeta Sharma		Silver		
100 m	Vijeta Sharma	Gold			
400 m	Ritu Saini Harshita Chaudhary		Silver	Bronze	
800 m	Saraswati Kushwaha	Gold			

Event	Name	Gold	Silver	Bronze	Other
Volleyball	Santosh Raj Akash Yadav Shantanu Singh Chandra Shekhar Shubham Verma Shubham Dixit Prashant Pratap Singh				4th
Cricket	Vaibhav Rai Mohit Maurya Vikas Singh Arnav Singh Arvind Kumar Shukla Akhilesh Kumar Amit Kumar Rahul Neeraj Singh Tarunesh Shivam Rahul Kumar Ashish Kumar				3rd
Chess	Rahul Mishra Himanshu Kumar Vedansh Singh Chandel	Gold			
Long jump	Anand Kumar Gupta		Silver		

Session: 2018-19

Event: UDGHOSH'18 (IIT KANPUR), 3-7 October, 2018

Total Strength: 33

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Javelin throw	Lakshmi Patel		Silver		

Event: KSHITIZ'19 (REC, AMBEDKAR NAGAR), 1-3, MARCH 2019

Students Achievement in Sport Activity

Events	Name(s)	Gold	Silver	Bronze	Other
Volleyball	Anand Kumar Chandra Shekhar Verma Akash Yadav Santhosh Raj Manoj Verma Nishant kumar Shubham Verma Shantanu Singh		Silver		
Basketball	Raj Shekhar Kushwaha Ghazanfar Hasan Praveen Kumar Mukul Dev Somesh Yadav Tarunesh Shivam Shivam Haldwaniya Suryank Rajashir Singh		Silver		

Event	Winner Team (3rd year)	GOLD	SILVER	BRONZE
Cricket	Mohit Maurya (Captain) Vikas Singh (Vice-Captain) Arvind Kumar Shukla Arnav Singh Rahul Ashish Tarunesh Suryanak Avinash Neeraj Sauarabh Vinay	Gold		

Volleyball	Winner Team	GOLD	SILVER	BRONZE
	Anand Chand Shekhar Shubham Dixit Shantanu Prashant Hemant Om Singh Vishambhar Prakhar Amit		SILVER	

Football	WINNER TEAM	GOLD	SILVER	BRONZE
	Rahul Kapil Nikhil Virendra Alok Anubhav Suyank Varunesh Ritesh Deveshwar Ankit Devanand Rajan Saurabh			

Chess	Winner team	GOLD	SILVER	BRONZE
	Himanshu Soni & Team	GOLD		

Basketball	Winner team	GOLD	SILVER	BRONZE
	Suryank Tarunesh Shivam Rajarshree Singh Gajanfar Rajsheker Mukul Dev Praveen Vaibhav Somesh		SILVER	

Carom	Winner team	GOLD	SILVER	BRONZE
	Shreyas & Team	GOLD		

Table tennis	Winner team	GOLD	SILVER	BRONZE
	Manish Shahni & Team	GOLD		

Athletics events	Winner (s)	GOLD	SILVER	BRONZE
100m	Rajan Kumar		SILVER	
4*100 m relay	Mukul Dev & Team	GOLD		
200 m	Rajan Kumar			BRONZE
400 m	Mukul Dev	GOLD		
800 m	Madhusudan		SILVER	
1500 m	Rahul Raj		SILVER	
3000 m	Amar Gond	GOLD		
5000 m	Rahul Raj	GOLD		
Long jump	Saurabh Singh			BRONZE
High jump	Mohit Maurya		SILVER	

Event	Winner team	GOLD	SILVER	BRONZE
Basketball	Sarita Kumari & Team	Gold		

Volleyball	Winner team			
	Vijeta Sharma & Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
BADMINTON	Alka Kumari and Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
CHESS	Sadhana Priyadarshi and Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
CARROM	Deepti Chawla and Team	GOLD		

EVENT	WINNER	GOLD	SILVER	BRONZE
KABADDI	Sarita Kumari and Team	GOLD		

Athletics events	Winner team	GOLD	SILVER	BRONZE
High jump	Sarita	GOLD		
Shotput	Lakshmi Patel	GOLD		
Long jump	Harshita	GOLD		
Discuss throw	Sarita	GOLD		
Javelin throw	Lakshmi Patel	GOLD		
3000 m	Ritu Saini	GOLD		

1500 m race	Ritu Saini	GOLD		
800 m race	Ritu Saini	GOLD		
100 m race	Komal Gautam		SILVER	
200 m race	Renu		SILVER	

Event: TVARAN'18 (KNIT SULTANPUR), 21-23 February, 2018

Total Strength: 48

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Volleyball	Santosh Raj Akash Yadav Shantanu Singh Chandra Shekhar Shubham Verma Shubham Dixit Prashant Pratap Singh				4th
Cricket	Vaibhav Rai Mohit Maurya Vikas Singh Arnav Singh Arvind Kr. Shukla Akhilesh Kumar Amit Kumar Rahul Neeraj Singh Tarunesh Shivam Rahul Kumar Ashish Kumar				3rd
Chess	Rahul Mishra Himanshu Kumar Vedansh Singh Chandel	Gold			
Long jump	Anand Kumar Gupta		Silver		

Event: UDGHOSH'18 (IIT KANPUR), 3-7 October, 2018

Total strength: 33

Students Achievement in Sport Activity

Event	Name	Gold	Silver	Bronze	Other
Javelin throw	Lakshmi Patel		Silver		

CRITERION 10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120

10.1. Organization, Governance and Transparency (55)

10.1.1. State the Vision and Mission of the Institute (5)

Vision

To attain the global level of excellence in scientific and technical education, fostering research, innovation, leadership qualities and entrepreneurial attitude, contributing to the advancement of the society and mankind.

Mission

- To create an ambience for new idea, research, innovation and entrepreneurial attitude, with a high level of ethics, communication and leadership qualities.
- To enhance knowledge and skills of students in science, technology and human behavior that will serve the nation.
- To develop ability and passion to work wisely, creatively, and effectively in each member of college for the betterment of the mankind and all living beings.

10.1.2. Governing body, administrative setup, functions of various bodies, service rules, procedures, recruitment and promotional policies (10)

(List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed.)

(The published rules including service rules, policies and procedures; year of publication shall be listed. Also state the extent of awareness among the employees/students.)

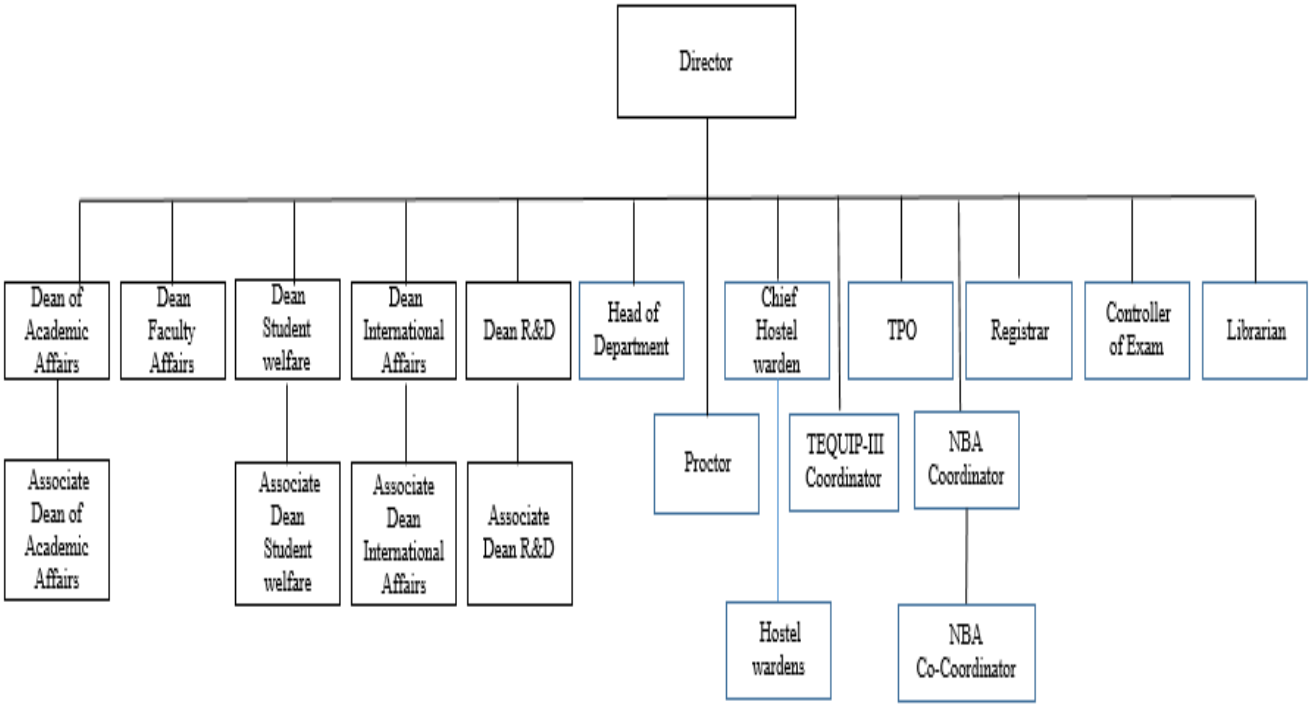
Link of minutes of various meetings and bye-laws

1. Memorandum of Association http://recabn.ac.in/?page_id=2675
2. Minutes of BoG Meetings http://recabn.ac.in/?page_id=1330
3. Audited Budget http://recabn.ac.in/?page_id=3954

Constitution of Board of Governors

S. No.		
1.	Minister Vocational and Technical Education, U.P.	Chairman
2.	Principal Secretary/Secretary, Vocational and Technical Education Department, (U.P.)	Vice-Chairman
3.	Secretary, Finance Department, (U.P.)	Member
4.	Director, Indian Institute of Technology, Kanpur	Member
5.	Director, MNNIT Allahabad (U.P.)	Member
6.	Director, Technical Education, Uttar Pradesh, Kanpur	Member
7.	A nominee of the All-India Council for Technical Education.	Member
8.	One eminent Technologist/Engineer having specialization in the field advent to college to be nominated by the Board.	Member
9.	Vice-Chancellor of the University to which the college is affiliated.	Member
10.	One professor to be nominated by the Board for one year by rotation in order of seniority.	Member
11.	Two eminent person in the field of Technical Education to be nominated by the state government.	Member
12.	One eminent person from industry to be nominated by the state government.	Member
13.	One representative from scheduled caste/scheduled tribe from amongst reputed teachers /educationist/ industrialist nominated by the chairman, Governing Body.	Member
14.	One representative from other Backward class from reputed teacher/educationist /industrialist nominated by the chairman, Governing Body.	Member
15.	Director of the college.	Member/Secretary

Administrative Set Up



10.1.3. Decentralization in Working and Grievance Redressal Mechanism (5)

List the names of the faculty members who have been delegated powers for taking administrative decisions. Mention details in respect of decentralization in working. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee

Designation	**Name**
Director	Prof. (Dr.) Sandeep Tiwari
Registrar	Dr. Sanjay Agrawal
Finance & Account Officer	Mr. Vikram Pratap Singh
Head of Department, Electrical Engineering	Dr. Puneet Joshi
Head of Department, Information Technology	Dr. Sudhakar Tripathi
Head of Department, Civil Engineering	Mr. Amit Kumar Rai

Head of Department, Applied Science & Humanities	Prof. Vishal Singh Chandel
Dean Academic Affairs	Dr. Prabhudatt Dwivedi
Associate Dean Academic Affairs	Mr. Amit Kumar Rai
Dean Student Welfare	Dr. Ramesh Chandra Pandey
Associate Dean Student Welfare	Dr. Arif Iqbal
Associate Dean Faculty Affairs	Dr. Prabhudatt Dwivedi
Dean International Affairs	Dr. Sudhakar Tripathi
Associate Dean International Affairs	Dr. Sanjay Agrawal
Dean Research & Development	Dr. Sudhakar Tripathi
Associate Dean Research & Development	Dr. Ramesh Chand Pandey
Chief Vigilance Officer	Mr. Vikas Patel
I/C Maintenance	Mr. Vivekanand Singh
I/C Maintenance (Civil)	Mr. Nitin Kumar Shukla
I/C Electrical Maintenance (Electrical)	Mr. Sonu Kumar
Chairman Council of Student Activities (CSA)	Mr. Shivendu Mishra
Controller of Examination	Prof. Vishal Singh Chandel
I/C Library	Dr. Puneet Joshi
I/C Remedial Classes & Skill Development	Dr. Sushant Chaturvedi
I/C House Allotment Committee	Dr. Saurabh Srivastava
Coordinator of Digital Education	Dr. Ashish Kumar Mishra
Addl. Controller of Examination	Dr. Amit Kumar Pandey
OI /C Guest House	Mr. Shivendu Mishra
OI/C Vehicle	Dr. Saurabh Srivastava
Public Information Officer	Dr. Prabhudatt Dwivedi

Additional Public Information Officer	Mr. Vivekanand Singh
Workshop In-charge	Mr. Vivekanand Singh
I/C Central Store (Additional)	Dr. Arif Iqbal
I/C Security	Dr. Puneet Joshi
Co-Coordinator NBA	Mr. Amit Kumar Rai
Co-Coordinator of Digital Education	Mr. Shivendu Mishra
Co-Coordinator Social Awareness Activities	Mr. Avaneesh Kumar Yadav
l/C Internet Operation & Maintenance	Mr. Shivendu Mishra
l/C Website Hosting & Management	Dr. Ashish Kumar Mishra
l/C Horticulture & Upkeep of Campus	Mr. Sonu Kumar
Coordinator GATE	Dr. Ayush Mittal
Coordinator Start-up	Mr. Vikas Patel
OI/C Purchase	Dr. Puneet Joshi
Coordinator SWAYAM & SWAYAM PRABHA	Mr. Shivendu Mishra
Faculty Coordinator	
Faculty Coordinator Training & Placement	Mr Shivendra Kumar Pandey
Faculty Coordinator Training & Workshop	Mr. Nitin Kumar Shukla
Faculty Coordinator Internship	Mr. Sharad Verma
Departmental Representatives for Career Development Cell	
Civil Engineering Department	Dr. Ayush Mittal
Electrical Engineering Department	Mr. Sonu Kumar
Information Technology Department	Mr. Shivendu Mishra
Coordinator Alumni Affairs	

Dr. Puneet Joshi	
Mr. Amit Kumar Rai	
l/C Institute Industry Interaction Cell	
Coordinator	Mr. Sharad Verma
Civil Engineering Department	Mr. Amit Kumar Rai
Information Technology Department	Mr. Sharad Verma & Mr. Amit Kumar
Electrical Engineering Department	Mr. Vikas Patel
Officer l/C Time Table Department Representatives	
Applied Science & Humanities	Mr. Vivekanand Singh
Civil Engineering	Mr. Amit Kumar Rai
Information Technology	Dr. Ramesh Chand Pandey
Electrical Engineering	Mr. Vikas Patel
Warden Boys Hostels	
Chief Warden	Dr. Ashish Kumar Mishra
Ambedkar Hostel	Mr. Sonu Kumar
Lohia Hostel	Mr. Prince Rajpoot
Gandhi Hostel	Mr. Nitin Kumar Shukla
Atal Hostel	Mr. Sharad Verma
Abdul Kalam Hostel	Mr. Shivendra Pandey
Assistant Warden Boys Hostels	
Atal Hostel	Mr. Amit Kumar Rai
Ambedkar Hostel	Dr. Amit Kumar Pandey
Gandhi Hostel	Dr. Ayush Mittal

Wardens A.S Girls Hostel	Ms. Shweta Tiwari
Students Counsellors (First Year)	
Civil Engineering	Dr. Ayush Mittal
Information Technology	Dr. Ashish Kumar Mishra
Electrical Engineering	Dr. Puneet Joshi
Proctorial Board	
Chief Proctor	Dr. Amit Kumar Singh
Associate Chief Proctor	Dr. Sushant Chaturvedi
Members of Proctorial Board	Dr. Ashish Kumar Mishra
	Mr. Nitin Kumar Shukla
	Mr. Vivekanand Singh
TEQIP-III Cell	
Coordinator	Dr. Vishal Singh Chandel
Nodal Officer finance TEQIP-III	Mr. Vikram Pratap Singh
Co-Coordinator	Dr. Saurabh Srivastava
Nodal Officer Procurement	Mr. Sharad Verma
Nodal Officer Academic	Mr. Amit Kumar Rai
Coordinator Equity Action Plan	Mr. Sonu Kumar
Coordinator, Improvements of Language Competency, Soft Skill and Confidence Level	Dr. Sushant Chaturvedi
Conveners of the CSA	
Sport Council	Dr. Ashish Kumar Mishra
Literary Council	Dr. Sushant Chaturvedi
Cultural Council	Mr. Sonu Kumar

Hobby Club	Dr. Amit Kumar Pandey
Technical Council	Dr. Arif Iqbal
Photography & Fine Art Club	Mr. Sharad Verma

As per directive of the MHRD/AICTE for prevention of ragging in the Rajkiya Engineering College, Ambedkar Nagar Campus and hostel an anti-ragging committee has been constituted.

10.1.3.1 Anti-Ragging Committee

1.	Dr. Amit Kumar Singh	Chairman
2.	Dean Academic Affairs	Convener
3.	Chairman, Council of student activities	Member
4.	Chief Proctor	Member
5.	Conveners of various student council	Member
6.	Chief warden, (Boys and Girls) Hostel	Member

10.1.3.2 Anti –Ragging Squad

1.	Mr. Vikas Patel	Member
2.	Mr. Shivendra Kumar Pandey	Member
3.	Dr. Amit Kumar Pandey	Member

10.1.3.3 Examination Committee

1.	Dr. Vishal Singh Chandel	Controller of examination
2.	Dr. Amit Kumar Pandey	Additional controller of Examination

10.1.3.4 Faculty and Staff Grievance Redressal Cell

1.	Dr. Vishal Singh Chandel	Chairman
2.	Dr. Sudhakar Tripathi	Member
3.	Dr. Prabhudatt Dwivedi	Member
4.	Mr. Avaneesh Kumar Yadav	Member
5.	Ms. Shweta Tiwari	Member
6.	Mr. R.C. Prajapati	Staff Representative

10.1.3.5 Sexual Harassment Committee

1.	Ms. Shweta Tiwari	Member
2.	Dr. Prabhudatt Dwivedi	Member

10.1.3.6 SC/ST Committee

1.	Dr. Sudhakar Tripathi	Chairman
2.	Mr. Avaneesh Kumar Yadav	Member

3.	Mr. Sonu Kumar	Member
4.	Mr. Prince Rajpoot	Member
5.	Miss Sweta Tiwari	Member

10.1.3.7 Institute Student grievance redressal Committee (SGRC)

1.	Prof. Sandeep Tiwari	Chairman
2.	Mr. Sonu Kumar	Member
3.	Mr. Prince Rajpoot	Member
4.	Miss Sweta Tiwari	Member
5.	Mr. Divyanshu Verma (student representative)	Member

10.1.4. Delegation of Financial Powers (5)

College should explicitly mention financial powers delegated to the Director, Heads of Departments and relevant In-charges. Demonstrate the utilization of financial powers for each of the assessment years.

S. No.	Designation	Rolling Imprest
1.	Director	₹15,000
2.	All HoDs	₹3,000
3.	Deans	₹5,000
4.	Registrar	₹5,000
5.	I/C Maintenance	₹5,000

10.1.4.1 Purchase Committee:

There shall be a Central Purchase Committee (CPC) which shall consist of the following:

1.	The Director	Chairman
2.	Two senior faculty members to be nominated by the Board of Governors	Member
3.	Head of the Indenting Department	Member
4.	One member to be nominated by the Government	Member
5.	Accounts Officer	Member
6.	Registrar	Member/Secretary

There shall also be Departmental Purchase Committees consisting of the followings:

1.	Head of the Concerned Department	Chairman
2.	One senior member of concerned Department to be nominated by the Head	Member
3.	One member from another Department to be nominated by Director	Member

- Purchase up to ₹1,00,000/- pertaining to a department would be made on the recommendation of the Departmental Purchase Committee.
- All purchases above ₹1,00,000/- would be made on recommendation of the Central Purchase Committee post recommendation of Departmental Purchase Committee. The Government nominee's presence would be essential in the meetings of the Committee finalizing purchases amounting to Rs.10.00 lacs & above.
- Purchase procedures would be as per Government rules, and directives of the Government in this regard issued from time to time.

10.1.5. Transparency and availability of correct/unambiguous information in public domain
(5)

(Information on policies, rules, processes and dissemination of this information to stake holders is to be made available on the website).

10.2. Budget Allocation, Utilization, and Public Accounting at Institute Level (15)

Summary of current financial year (CFY) budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years (CFYm1, CFYm2 & CFYm3).

At College Level

Total Income at Institute level: For CFY, CFYm1, CFYm2 & CFYm3

For CFY (2020-21)

Total income				**Actual Expenditure**			**Total No. of students (819)**
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
293.94	473.76	-	33.43	505.04	-	1.29	-

For CFY (2019-20)

Total income				**Actual Expenditure**			**Total No. of students (816)**
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
319.04	436.56	-	210.95	909.25	-	-	-

For CFY (2018-19)

Total income	**Actual Expenditure**	**Total No. of students**

							(832)
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring including salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
315.60	417.51	-	373.32	735.02	-	-	

For CFY (2017-18)

Total income				**Actual Expenditure**			**Total No. of students (836)**
Fee (Lacs)	Govt. (Lacs)	Grants (Lacs)	Other Sources (Specify) (Lacs)	Recurring ıcluding salaries (Lacs)	Non-recurring (Lacs)	Special Projects/Any other specify (Lacs)	Expenditure per student (Lacs)
325.59	312.76	-	427.95	316.60	-	-	

Breakup of Budgeted Amount and Actual Expenditure

Items	**Budgeted in 2020-21 (Lacs)**	**Actual expenses in 2020-21 (Till) (Lacs)**	**Budgeted in 2019-20 (Lacs)**	**Actual expenses in 2019-20 (Lacs)**	**Budgeted in 2018-19 (Lacs)**	**Actual expenses in 2018-19 (Lacs)**	**Budgeted in 2017-18 (Lacs)**	**Actual expenses in 2017-18 (Lacs)**
Infrastructure	-	-	-	-	-	-	-	-
Built-Up	-	-	-	-	-	-	-	-
Library	1.00	0.06	1.00	1.00	2.0	0.66	25	0.238
Laboratory equipment	4.40	-	4.00	2.60	2.0	2.0	25	20.06
Laboratory consumables	1.50	0.09	1.50	-	1.0	1.02	6	4.72
Teaching and Non-teaching staff salary	672.27	438.66	546.56	576.23	534.78	515.35	544.88	316.60
Maintenance and spares	21.90	1.18	23.50	14.23	20.0	19.88	12	12
Travel	5.00	0.66	4.00	2.48	3	3	2	0.91
Miscellaneous	311.17	65.31	243.90	312.71	319.52	245.36	73.12	81.85
Total	**1017.24**	**505.96**	**824.46**	**909.25**	**882.30**	**787.28**	**688**	**435.66**

Table B.10.2b

10.2.1. Adequacy of Budget Allocation **(5)**

(The institute needs to justify that the budget allocated over the years was adequate)

The budget allocation and utilization in the Institute is a well-defined process wherein the account section of institute seeks the fund requirement from various departments of the Institute for the next financial year. These requirements are then summed up and total budget requirement is prepared at the central level. This demand is then sent to the state government for the allocation of the funds. The Institute has been receiving adequate funds to meet its expenses.

10.2.2. Utilization of Allocated Funds **(5)**

The funds are utilized as per Dr. A. P. J. Abdul Kalam Technical University (AKTU) rules. The budget allocation and utilization of the College for the past three years has been given in the above Tables.

10.2.3. Availability of the Audited Statements on the College Website **(5)**

The Audited statements are available on college website at following link.
http://recabn.ac.in/?page_id=3954

10.3 Program Specific Budget Allocation and Utilization **(30)**

(Total Budget at program Level: for CFY, CFYm1, CFYm2 and CFYm3)

Advance planning and budgeting are the important yearly activities which are undertaken by the department. The keys areas which govern the budgeting are as follows: -

- Labs and software
- Conferences and FDPs
- Faculty Development Activities
- Student Development Activities
- Guest Speakers
- Technical Events
- Student Industrial Visits
- Students Projects
- Events

Student projects and co-curricular activities: like competitions, Hackathons to be organized by the department.

Conferences & FDPs: Department regularly organizes conferences and Faculty Development Programmes. Planning & budgeting for these events is done accordingly.

Faculty Development Activities: To motivate the faculty & to abreast them with latest technologies development activities are planned for faculty. Budgeting is required to be done for the same.

Students Awards: College provides several awards to meritorious students.

Guest Speakers: Department arranges technical talks by eminent speakers from Industry for the benefit of the students & faculty. Adequate provisions are to be made in the budget.

Technical events like competition, Quizzes, paper presentations, workshops for skill up gradation of the students are organized. Winners in the competitive events are given cash prizes & certificates. The department also provides financial support to the students to attend workshop & become members of technical societies like CSI, ACM

Student's Industrial visits: Adequate budget is provided to arrange student's Industrial visits.

10.3.1 Adequacy of Budget Allocation (10)

(Program needs to justify that the budget allocated over the assessment years was adequate for the program)

Faculty in charges for laboratories and other committee's in charges generates requirements as per the need of the labs, activities planned and other infrastructure requirements of the department. After discussion in the Programme Assessment Committee (PAC) the requirements are budgeted.

Overall budget making and reviewing is done consciously to make the laboratories and the infrastructure of the program updated as per the requirement of the curriculum and to a certain extent beyond, which help in the continuous growth of the faculty and students.

The quantum of budget allocated for the program were sufficient during the assessment years as mentioned in the budgeted columns in above tables.

10.3.2 Utilization of Allocated Funds (20)

(Program needs to state how the budget was utilized during the last three assessment years)

During the last three assessment years under consideration most of the budgeted requirements were approved and executed. However at few places purchases were made beyond the scope of budget to fulfil the needs of the program. Purchases were made as per the following purchase guidelines of the college:

- Lab in charges generates requirement which are incorporated in the budget after approval of Head of the Department.
- Budget is submitted to the director and approved in the advisory body meeting.
- Requirements mentioned in the approved budgeted are raised by the department at the appropriate time.
- Director appoints the purchase committee, if required.
- The committee recommends the purchase and sets the procedure after technical and financials discussions.
- Approval is accorded by the Director/Chairman.

10.4. Library and Internet (20)

10.4.1. Quality of learning resources (hard/soft)

Details of Library Infrastructure, staff, facilities and support to students	
Carpet area of library	1680 sqm.
Reading space	356 sqm.
Number of seats in reading space	150
Number of users (issue book)	150 per day
Number of users (Reading space)	150 per day
Timings: Academic (Working day and weekend)	9.00 A.M. to 05.00 P.M.

Examination Time	9.00 A.M. to 08.00 P.M.
Number of library staff	03
Computerization for search, indexing, issue/return records	Yes
Bar-coding used	Under Process
Lib services on internet/intranet	Yes
INDEST or other similar membership	DELNET, Yes
National Digital Library	Yes
Nalanda e- Consortium	Yes

Summary of Book Titles and Volumes available in Library

S. No.	Details	Number
1	Number of Titles	788
2	Number of Volumes	12204

Summary of Book Titles, Editions and Volumes added in Library

S. No.	Details	CFY 2018-19	CFY m1 2019-20	CFYm2 2020-21
1	Number of New Titles added	325	51	90
2	Number of New editions added	107	46	78
3	Number of New Volumes added	1953	3122	3612

Relevance of available learning resources including e-resources accessibility to students Support to students for self-learning activities

Digital Library Facility	
Availability of Digital Library Contents If available	YES
Number of Courses	03 (I.T./C.E./E.E.)
Any other	National Digital Library Membership
Availability of an exclusive server	Yes
Availability over intranet/internet	Yes
Availability of exclusive space/room	Yes
Number of Users	1000 Approximate

Central Library, R.E.C. Ambedkar Nagar

The Knowledge Centre of Rajkiya Engineering College (REC) Ambedkar Nagar was established in 2010. The total area of the Library building is about 1680 Sq.ft. It stocks over 12 thousand books. The Library has been computerised for circulation and search of books with Libsis Software. The Computer room of Library has 25 Computers for open access of e-resources. **(YES)**

Departmental Library

- Departmental Library of Civil Engineering. **(YES)**
- Departmental Library of Electrical Engineering. **(YES)**
- Departmental Library of Information Technology. **(YES)**
- Various computer systems with Wi-Fi facilities for internet and e-resources access. **(YES)**

OPEN ACCESS JOURNALS

Directory of Open Access Journals http://www.doaj.org
Open j-gate Access http://www.openj-gate.com
Directory of Open Access Repositories www.opendoar.org

- Nalanda e-Consortium
  The consortium has more than 10,258 E-Books and 5,151 E-Journals like Springer, TMH, IEEE, Elsevier, Emerald, etc.
- National Digital Library

National Program on Technology Enhanced Learning (NPTEL)
http://www.nptel.iitm.ac.in **(YES)**
http://nptel.iitk.ac.in **(YES)**
https://www.youtube.com/user/nptelhrd **(YES)**
Coursera: https://www.coursera.org/
Open Courseware Consortium: http://www.ocwconsortium.org/home.html
Open Culture: http://www.openculture.com/2007/07/freeonlinecourses.html
Open Learn: http://www.open.ac.uk/openlearn/home.php/

NISCAIR Research Journals:

Annals of Library and Information Studies (ALIS) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/annals/annals0.asp
Bharatiya Vaigyanik evam Audyogik Anusandhan Patrika (BVAAP) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/bvaap/bvaap0.asp
Formerly Natural Product Radiance(NPR) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/npr/npr0.asp
Indian Journal of Biochemistry and Biophysics(IJBB) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijbb/ijbb0.asp
Indian Journal of Biotechnology (IJBT) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijbt/ijbt0.asp
Indian Journal of Chemistry, Sec A (IJC-A) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijca/ijca0.asp
Indian Journal of Chemistry, Sec B (IJC-B) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijcb/ijcb0.asp
Indian Journal of Chemical Technology (IJCT) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijct/ijct0.asp
Indian Journal of Engineering & Materials Sciences(IJEMS) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijems/ijems0.asp
Indian Journal of Experimental Biology (IJEB) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijeb/ijeb0.asp
Indian Journal of Fibre & Textile Research (IJFTR) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijftr/ijftr0.asp
Indian Journal of Marine Sciences (IJMS)Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijms/ijms0.asp
Indian Journal of Natural Products and Resources (IJNPR) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/npr/npr0.asp
Indian Journal of Pure and Applied Physics (IJPAP) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijpap/ijpap0.asp
Indian Journal of Radio and Space Physics(IJRSP) Full Articles

http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijrsp/ijrsp0.asp
Indian Journal of Traditional Knowledge(IJTK) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/ijtk/ijtk0.asp
Journal of Intellectual Property Rights(JIPR) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/jipr/jipr0.asp

Journal of Scientific and Industrial Research(JSIR) Full Articles
http://www.niscair.res.in/sciencecommunication/researchjournals/rejour/jsir/jsir0.asp

Indian Academy of Sciences Journals

Pramana: Journal of Physics	http://www.ias.ac.in/pramana/
Journal of Chemical Sciences	http://www.ias.ac.in/chemsci/index.html
Proceedings of the Indian Academy of Sciences	http://www.ias.ac.in/mathsci/index.html
Journal of Earth System Science	http://www.ias.ac.in/jess/index_body.html
Sadhana (Proceedings in engineering sciences)	http://www.ias.ac.in/sadhana/index.html
Journal of Astrophysics & Astronomy	http://www.ias.ac.in/jaa/index.html
Resonance-Journal of Science Education	http://www.ias.ac.in/resonance/
Bulletin of Materials Science	http://www.ias.ac.in/matersci/
Journal of Genetics	http://www.ias.ac.in/jgenet/
Journal of Biosciences	http://www.ias.ac.in/jbiosci/
Current Science	http://www.currentscience.ac.in/

Name of the Resource with URLs

National Program on Technology Enhanced Learning (NPTEL)
http://www.nptel.iitm.ac.in **(YES)**
http://nptel.iitk.ac.in **(YES)**
https://www.youtube.com/user/nptelhrd **(YES)**
Talk to A Teacher: Accessible at: http://co-learn.in/
Spoken Tutorial: http://www.spoken-tutorial.org/
Coursera: https://www.coursera.org/
Khan Academy: http://www.khanacademy.org/
Open Courseware Consortium: http://www.ocwconsortium.org/home.html
Open Culture: http://www.openculture.com/2007/07/freeonlinecourses.html
Open Learn: http://www.open.ac.uk/openlearn/home.php/
Open Michigan: https://open.umich.edu/
Open Yale Courses: http://oyc.yale.edu/
Webcast. Berkley: http://webcast.berkeley.edu/
World Lecture project : http://www.world-lecture-project.org/index.php?navId=1
Courses for Higher Education: https://www.edx.org/
Lecture fox: http://www.lecturefox.com
MIT: http://techtv.mit.edu
http://ocw.mit.edu
http://video.mit.edu
Berkeley University: http://ocw.uci.edu
Princeton University: www.princeton.edu/webmedia
John Hopkings University: http://ocw.jhsph.edu
Rice University: http://cnx.org
Carnegie Mellon University: http://www.cmu.edu/oli

Tufts Open Courseware: http://ocw.tufts.edu
University of Notre Dame: http://ocw.nd.edu
Paris Tech Graduate School: http://graduateschool.paristech.org
Open University of Nederland: http://ocw.tudelft.nl
University of Southern Queensland : http://ocw.usq.edu.au/
United Nations University: http://www.ocw.unu.edu
OER Commons: www.oercommons.org
Open learning object repository:(Merlot): http://merlot.org/merlot/materials.htm? materialType= Learning%20Object%20Repo
Open textbooks: (Connexions): http://cnx.org/
Aggregated video: Academic Earth:http://www.academicearth.org
Mixed Media: Wikimedia: http://en.wikipedia.org/wiki/Mixed
University of Minnesota: (Open academics textbook catalogue)
: http://open.umn.edu/opentextbooks/
Open textbooks for K12: (Siyavula): http://www.siyavula.com/
Excel Tutorial: http://www.excel-easy.com/

Contemporary eBooks

These collections for free e-books published a little more recently. There are thousands of contemporary books available in digital form to be found here. All are free to read and/or download.

Free eBooks.net :On this site, you can download thousands of free titles in every genre from biography to erotica. Newer and independent authors are featured which is a win-win for everyone: readers get free books, and budding authors gain exposure.

Baen eBooks Free Library: Baen eBooks is a company offering cross-platform ebooks in exchange for a membership fee. They have also made a number of titles available to read online or download in just about any format completely free through their online library.

Get Free eBooks: The site's name is pretty self-explanatory and, aside from the free eBooks, you can also find interesting articles and links to other eBook resources. This site is always publishing new lists of places to find free eBooks.

eBook Lobby: This site collection of eBooks that anyone read. There are several categories to choose from including children's books, self-help, cooking, and more.

Book yards: Book yards' motto is "Library to the World" and in keeping with that they work to provide as many free eBooks to as many people as possible. The site is entirely free, but one can make a donation via PayPal to help sustain their efforts.

Specialty eBooks

These sites feature collections of free e-books that are more specialized in nature.

Librivox: On Librivox, one can download audio-versions of public domain books for free. All titles are orated by volunteers, and one can pay it forward by volunteering to read a chapter – or an entire novel – for the site.

Free Computer Books: This site focuses solely on eBooks in computer and tech-related categories. One can find guides and books about programming, mathematics, networking, design, and more – all for free.

(YES)

Online Programming Books: For something a little more specific, look here for all kinds of books about nothing but programming. Software, website building, guides to programming languages.

(YES)

Free eBooks from Poem Hunter: Find thousands of classic and contemporary poems on this page. All are available in PDF format and are free to use.

ManyBooks.net: Find classics, contemporary fare, reference books, and more here. All are free to download on any e-reader device. The site is run as a courtesy service by people who want to make literary works available to everyone.

Accessibility to students

Through digital library in main library and departmental library. **(YES)**

Support to students for self-learning activities

- Opening of library beyond normal university hours.
- Reading section in the library. **(YES)**
- Availability of books beyond curriculum. **(YES)**
- Availability of newspapers and magazines (both general and technical). **(YES)**
- Reference Books. **(YES)**

10.4.2. Internet **(10)**

Details of Internet, Wi-Fi Facilities and Security Arrangements	
Internet Provider	BSNL
Available Bandwidth	➢ Bandwidth: 400 MBPS (1:1) lease line ➢ Media: Fiber back bone
Wi-Fi availability	➢ user authentication ➢ Mac Address Filtering ➢ User Access Log Capturing ➢ Content Filtering

Internet access in labs, classrooms, library and offices of all Departments	➢ Network backbone is fiber optic. All main buildings are connected through Fiber ➢ Connectivity is extended in Labs and offices through CAT6 Cable and Gigabyte Switches ➢ Controlled Wi-Fi access is also provided wherever is required
Security arrangements	➢ Cyberoam Firewall ➢ Application level control and User Access control list with application traffic flow analytics ➢ Intrusion deduction system to avoid intrusion attack on system ➢ Monitoring of the traffic on all Ethernet ports for security of publicly accessible port ➢ Single level gateway between outer network and our application to enable filtering of traffic reaching the application at the gateway level ➢ Stateful and deep inspection of network packet. Ability to proxy certain application traffic ➢ Control applications or individual applications features to increase network security and enhance network productivity ➢ Firewall engine scans all inbound, outbound and intra zone traffic for viruses, Trojans, Key loggers and other malware in files of unlimited length and size across all ports and TCP streams

Name of the Internet provider	:	BSNL
Available bandwidth	:	400 Mbps
Wi Fi availability	:	Yes, 24 X 7
Security arrangements	:	Cyberoam Firewall
Internet access in labs, classrooms, library and offices of all Departments	:	Yes, through Wi-Fi and Wired network

Declaration

I undertake that, the college is well aware about the provision in the NBA's accreditation manual concerned for this application, rules, regulations, notifications, and NBA expert visit guidelines in force as on date and the college shall fully abide by them.

It is submitted that information provided in this Self-Assessment Report is factually correct. I understand and agree that and an appropriate disciplinary action against the college will be initiated by NBA, in case of any false statement/Information is observed during pre-visit, visit, post visit and subsequent to grant of accreditation.

Date: **Prof. (Dr.) Sandeep Tiwari**

Place: Director

Rajkiya Engineering College, Ambedkar Nagar (U. P.)

Annexure I

Program Outcomes (POs) of Electrical Engineering Department

POs	Engineering Graduates will be able to:
PO1	**Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems of Electrical Engineering.
PO2	**Problem analysis:** Ability to identify, formulate, review research literature and analyze complex problems of electrical engineering with a view to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions:** Ability to design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO4	**Conduct investigations of complex problems:** Ability to use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Ability to function effectively as an individual, and as a member or

	leader in diverse teams, and in multidisciplinary settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO11	**Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO12	**Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change, for succeeding in competitive examinations and other aspects.

Program Specific Outcomes (PSOs) of Electrical Engineering Department

PSO1	An ability to specify, design and analyze the systems that efficiently generate, transmit, distribute, utilize electrical power, and apply the gained knowledge for future career. (Professional Skill)
PSO2	An ability to specify, design and implement the concepts of electric drive system, solid state power electronics converters, electrical instrumentation, control and automation, recent advances in Science & Technology and apply the gained skills for future prospects. (Professional Skill)
PSO3	To pursue higher education or be placed in industries/PSUs/Central or State Departments after qualifying competitive examination at National and global level. (Competitive Skill)