MANDATORY DISCLOSURE

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY
(B.TECH DIVISION)

Pailan College of Management and Technology (B.Tech Division)
Bengal Pailan Park, Sector-I, Phase-I,
Amgachia Road (Off.Diamond Harbour Road),
Joka, Kolkata-700104, South 24 Parganas, West Bengal.

Updated On: 10.04.2024

Mandatory Disclosure

Pailan College of Management & Technology (B.Tech. Division)

1.	**Name of the Institution:**	**Pailan College of Management & Technology (B.Tech. Division)**
	Address :	Bengal Pailan Park, Sector – 1, Phase-1, Joka, (Off. Diamond Harbour Road), Kolkata- 700 104, South 24 Parganas, West Bengal.
	Telephone:	033-24535605
	Mobile:	9733722500
	E-Mail:	principal@pcmt-india.net
	Website:	www.pcmt-india.net
2.	**Name and address of the Trust/ Society/ Company and the Trustees:**	**PAILAN EDUCATIONAL TRUST**
	Address :	127, Kankulia Road, Kolkata, West Bengal
	Telephone:	033-24535605
	Mobile:	9874866131
	E-Mail:	oppositemoon20@gmail.com
3.	**Name and Address of the Principal:**	**Dr. Kousik Roy**
	Address :	6,Shyambazar Lane No-2,Post-Rajbati,Burdwan-713104,Purba Bardhaman,West Bengal
	Telephone:	033-24535605
	Mobile:	9733399246,9064448673
	E-Mail:	principal@pcmt-india.net
4.	**Name of the affiliating University:**	**Maulana Abul Kalam Azad University of Technology, West Bengal.** (Formerly Known as West Bengal University of Technology)

5. Governance

- **Members of the Board and their brief background**

Details of the Governing Body Members are given below:-

PAILAN GROUP OF INSTITUTIONS

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY

(A Division of Pailan Educational Trust)

Approved by AICTE, Ministry of H.R.D. Govt. of India & affiliated to MAKAUT Govt. of West Bengal

PAILAN College of Management & Technology

Our Ref: PCMT/Principal/BOG-BTech/2341/2023 Dated: 07.06.2023

Re-Consrtitution of Board of Governors of Pailan College of Management & Technology

It is hereby being proposed to reconstitute the Board of Governors of Pailan College of Management & Technology (B.Tech Division) as below in conformity with the guidelines of AICTE Approval Process Handbook (APH) 2023-2024:-

Sl No	Name	Occupation	Position	Represents
1	Prof.(Dr)Goutam Sengupta	B.E(J.U),PGDM(XLRI) Ph.D(BESU)FCRIM M, PMP,Life Time certification-ISM,USA,Former Vice President,Videocon Former General Manager,Philips India Adjunct Professor ,IIT Kharagpur ,member, Expert committee,National Board Of Accreditation,Vice Chancellor, Techno India University ,W.B President, Ramakrishna Seva Kendra	Chairperson	Trust
2	Mrs. Baby Saha	Managing Trustee (Acting), Pailan Educational Trust	Member	Trust
3	Mrs. Moon Moon Mahesh,	Vice-Chairperson, Pailan Group of Institutions	Member	Trust
4	Mr.Kunal Chakraborty	Registrar, Pailan Group Of Institutions	Member	Trust
5	Mr.Anil Kanwala	Founder,Chairman & Managing Director,Kanwala Industries Ltd.	Member	Trust
6	Prof.Santanu Ray	Mentor School Of Business,Sister Nivedita University	Member	Trust
7	.Mr.Somesh Dasgupta	Director ,India Power Corporation Ltd.	Member	Trust
8	Mr.Ravi Todi	Managing Director ,Shrachi Group	Member	Trust
9	Dr.Kousik Roy	Principal,B.Tech Division	Member	Trust
10	Mr.Kalyan Kar	Co- Founder & Managing Director,Incube Innoventures Pvt.Ltd.,Mentor, Webel-BCC &I tech incubation Centre	Member	Trust

This is being submitted for kind consideration & vetting/approval of proposed Board of Governors of the College in order to place the issue before next BOG meeting of Pailan College of Management & Technology (B.Tech Division) for its ratification.

Kousik Roy

(Dr.Kousik Roy)
Principal,
Pailan College of Management & Technology.

Copy to: Trustee Members, Registrar and above members

Pailan College of Management & Technology B-TECH DIVISION

Campus : Bengal Pailan Park, Plot B,187-206, Phase III, Joka, Kolkata – 700104, Tel : (033) 2453 5805,
Fax : (033) 2497 8238, Email : frontoffice@pcmt-india.net, Website : www.pcmt-india.net

DNV ISO 9001:2008 CERTIFIED INSTITUTE

- **Members of Academic Advisory Body**

Academic Advisory Committee

Sl. No.	Name	Designation	Role	Mobile No.
1	Dr. Kousik Roy	Principal	Chairperson& Convener	9733399246
2	Mr. Kunal Chakraborty	Registrar ,PGI	Member	9830087891
3	Dr. Santanu Dasgupta	Principal – PCMT(Non-AICTE)	Member	9432305402
4	Dr. Amit Kr.Vershney	Associate Professor, ECE	Member	9681956162
5	Dr. Partha Mitra	Associate Professor CSE	Member	8967941667
6	Mr. Tapas Pattanayek	Assistant Professor, CE	Member	9800338857
7	Mr. Bidrohi Bhattacharjee	Assistant Professor& Coordinator EEE	Member	8240673352
8	Mr. Animesh Das	Assistant Professor, BSc & HU	Member	9126510351
9	Mr. Anjan Patra	Architect cum Urban Planner	External Expert from Industry	9910746299
10.	Prof. Asif Ahmed	Assistant Professor North Eastern Hill University ,Shilong	External Expert from Academic	9485043429
11.	Dr. Sourav Mallik	Post Doctoral Fellow at Harvard University ,USA	External Expert from Academic	+16462504939

Academic Council shall meet twice in a academic year. Recommendation of the committee is submitted to the Vice-Chairperson of the Institute for management advice on the relevant issues.

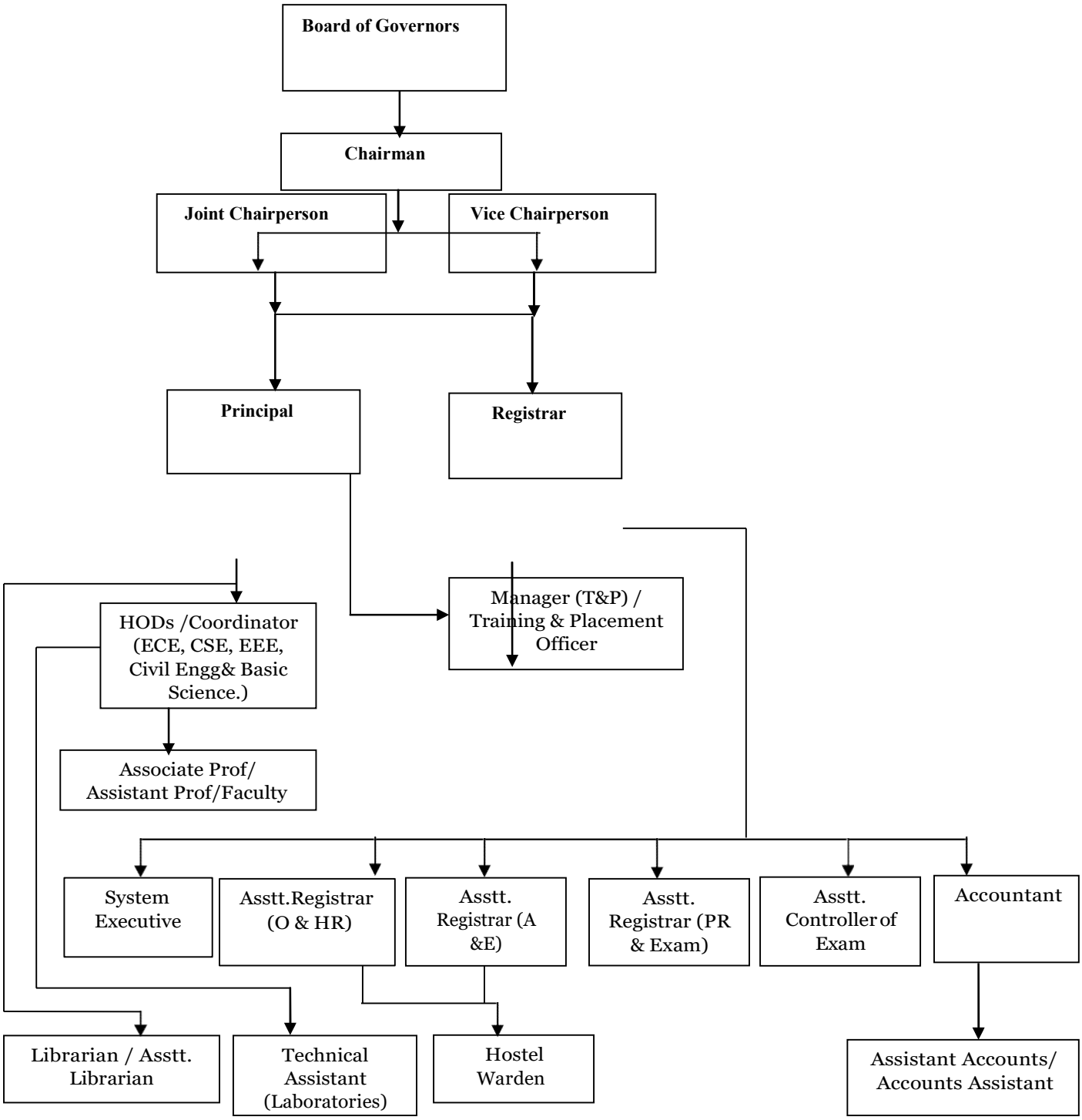
- **Frequently of the Board Meeting and Academic Advisory Body:**

Frequency of meetings: 4 times in a year

Date of Last meeting: 24th February 2020.

- **Organizational chart and processes**

  Organization chart is as given below:-



- **Nature and Extent of involvement of Faculty and students in academic affairs/improvements**

Following are the key responsibility areas of faculty members:-

1. To take classes of at least two subjects based on domain expertise of the faculty members.
2. Common academic responsibilities shall inter-alia include **a)** Question paper setting; **b)** preparation of lecture plan to be submitted to HOD / Director for approval and for its implementation; **c)** Evaluation of examination answer scripts and to forward marks under sealed cover; **d)** Reviewing subject wise lecture plan for completion of syllabus within academic session; **e)** Ensuring that allotted classes are taken as per class routine so that no class remains unattended; **f)** Attending classes well in time and in the event of absence on any college working days, Departmental HOD /Coordinator to ensure that the classes are taken by an alternative faculty member.
3. To publish at least one research paper either independently or jointly with other faculty in each academic year in a reputed national or international journal.
4. To assist in bringing consultancy project.
5. Additional academic activities shall inter-alia include; **(i)** guiding UG students for appearing in interview; **(ii)** To assist in organizing classes for soft skill development of the students; **(iii)** To organize frequent presentation / quiz etc. of the UG students for improving their presentation skill; **(iv)**Project guidance to UG students.
6. Non academic responsibilities shall include **(i)** Invigilation duty for examination; **(ii)** To assists in cultural and sports activities; **(iii)** To assist in ISO certification an NAAC / NBA Accreditation and other quality assurance measures and efforts.
7. To act as a mentor of a group of students for holistic improvements of students.
8. Take appropriate corrective measures depending on students feedback forwarded through HOD.
9. To develop and implement curriculum beyond syllabus to prepare students as per current industry norms and thereby ensuring better placement performance.
10. To take part in anti–ragging measures of college. Exercise self-discipline and maintain intellectual honesty and ethical principles for holistic development of the college.

Key Responsibility Area of Students.

1. To attend classes as per routine and maintain academic discipline.
2. To attain 75% of attendance in an academic semester session in order to became eligible to appear in the semester university examinations.
3. To submit and prepare all the assignment/project/report/ presentation given by respective faculty member to enhance their academic acumen.
4. To attend all lab / personality development/soft skill classes to sharpen their skill to crack placement opportunities.
5. To actively get involve in placement activities via student's training and placement cell.
6. To participate in seminar/ workshop/ training/ curriculum beyond syllabus classes as will be arranged for them.
7. To organize and participate in non-academic activities such as sports/cultural events/ corporate social responsibility programs.
8. To maintain overall environment and cleanliness of the campus and surrounding areas.
9. To support and contribute in all the quality improvement methods implemented by authority time to time.
10. To maintain a completely ragging free campus and disciplined environment.
11. All the students need to adhere to Code of Conduct framed by the Institute.
12. All the students need to wear the uniform as prescribed by the college.

- **Mechanism/ Norms and Procedure for democratic/ good Governance**

Mechanisms / Norms vis-a-vis procedure for good governance of the Institute are as indicated below:-

1. Besides the Key Responsibilities Areas of the faculty members, following Committees are constituted for recommending on policy matters and working methodology for holistic development of the college:-
    - Academic Council / Committee with its goal, role and responsibilities and the Committee shall meet at least two times in an academic year;
    - Departmental Committee with its goal, role and responsibilities and Departmental Committee shall meet at least twice in a semester session;
    - Examination Committee with its goal, role and responsibilities and Examination Committee shall at least meet twice in a semester session;
    - Library Committee with its goal, role and responsibilities and Library Committee shall meet at least twice per semester session;
    - Admission Committee with its goal, role and responsibilities and Admission Committee shall meet in advance before commencement of new academic session;
    - Student Welfare Committee with its goal, role and responsibilities and Student Welfare Committee shall meet at least once during the Semester session;

Convener of the above mentioned committee shall draw the proceedings of the committee and shall submit the proceedings to the Vice Chairperson of the Institute for management's advice.

Apart from above mentioned Committees, following committees have also been constituted as per the AICTE guidelines (i.e. As per AICTE Approval Process Hand Book):-

- Internal Complaint Committee;
- Grievance Redressal Committee;
- Committee for SC and ST;
- Anti-Ragging Committee;

- **Student Feedback on Institutional Governance/ Faculty performance**

  Feedback from the students is regularly collected in prescribed format which is reproduced below. Feedback is analyzed & corrective measures are taken as deemed necessary:-

Unit:.....

Feedback form for the evaluation of teachers by students

Name of Teacher: .....

Name of Department: ..... Class: .....

Semester.....Academic Session:..... ...

Subject taught & Paper code:.....

(A) Below Average:1 ; (B) Average: 2 ; (C) Good: 3 (D) Very Good: 4 ; (E) Outstanding: 5

		i	ii	iii	iv	V	vi	vii	viii	ix	x		
Sl	**Student Roll No./ Registration No**	**Regularity in taking Classes by teacher**	**Lucidity in delivering lectures on the subject**	**Focus on Syllabus**	**Communication skills**	**Inviting option and questions on subject matter from students**	**Availability of the teacher outside class hours**	**Regular conductance of class tests/snap tests**	**Helping approach towards varied academic interests of students**	**Control mechanism in effectively conducting the class**	**Motivating and inspiring the students to learn**	**Total for Each Column Total out of 50**	**Rating of the teacher based on students' feedback (Avg. Grade of students rating)**
		Max:(5)	Max: (5)	Max: (5)	Max: (5)	Max: (5)	Max(5)	Max: (5)	Max: (5)	Max: (5)	Max: (5)	Total : (50)	
01													
02													
04													
05													
06													
07													

- **Grievance Redressal mechanism for Faculty, staff and students**
  The Grievance redressal mechanism is given below:-

Sl	Category	1st Tier	2nd Tier	3rd Tier	4th Tier
1	Faculty	Coordinator	HOD	Principal	Chairman
2	Staff	Sectional Officer	Registrar	Grievance Redressel Committee	Chairman
3	Student	Batch Coordinator	HOD	Principal/Grievance Redressal Committee	Vice Chairperson

- **Establishment of Anti Ragging Committee**

PAILAN GROUP OF INSTITUTIONS

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY

(A Division of Pailan Educational Trust)

Approved by AICTE, Ministry of H.R.D. Govt. of India & affiliated to MAKAUT Govt. of West Bengal

PAILAN College of Management & Technology

Ref. No: PCMT/156/Principal/ARC/2302/2024 **Date:** 03/08/2023

NOTICE

On Anti-Ragging Committee of PCMT (B.Tech Division)

Anti-Ragging Committee is being reconstituted as below as per All India Council for Technical Education (AICTE) Notification F.No. 37-3/Legal/AICTE/2009 dated 01.07.2009 and also as per UGC Regulation F.1—16/2007(CPP-11) dated 17.05.2009. for prevention and prohibition of ragging in the campus of Pailan College of Management & Technology (including its hostel premises).

The members of the committee are as follows:

Sl. No.	Name	Designation	Role	Mobile No.
1	Dr. Kousik Roy	Principal (B.Tech division)	Chairperson	9733399246
2	Dr. Shantanu Dasgupta	Principal (Non-AICTE)	Chairperson	9432305402
3	Mr. Kunal Chakroborty	Registrar	Chairperson	9830087891
4	Moon Moon Saha	Representative of Management	Member	9874866131
5	Mr. Soumya Chatterjee	Assistant Professor	Member & Convener	9874710989
6	Ms. Mayumi Mukherjee	Assistant Professor	Member	7003817233
7	Dr. Partha Mitra	Associate Professor	Member	8967941667
8	Mrs. Basanti Bhattacharya	Assistant Professor	Member	8777309738
9	Mr. Tanajit Manna	Assistant Professor	Member	9831721959
10	Mr. Tapas Pattanayek	Assistant Professor	Member	9800338857
11	Mr. Bidrohi Bhattacharjee	Assistant Professor	Member	9433366587
12	Dr. Animesh Das	Assistant Professor	Member	9126510359
13	Mr. Pinaki Ranjan Ghosh	Assistant Professor	Member	7980848193

Dr. Kousik Roy
M.Tech. (Engineering)
Principal
Pailan College of Management & Technology
Joka, Kolkata - 700104

DNV ISO 9001:2008 CERTIFIED INSTITUTE

Campus : Campus : Bengal Pailan Park, Plot B,187-206, Phase III, Joka, Kolkata – 700104. Tel : (033) 2453 5605
Fax : (033) 2497 8238, Email : frontoffice@pcmt-india.net, Website : www.pcmt-india.net

- **Establishment of Online Grievance Redressal Mechanism**

  Online Grievance Redressal mechanism has been established in the Institute as per ACITE norms at website link: http://pcmt-india.net/feedback_grievance.

- **Establishment of Grievance Redressal Committee in the Institution and Appointment of OMBUDSMAN by the University**

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY

(A Division of Pailan Educational Trust)
Approved by AICTE, Ministry of H.R.D. Govt. of India & affiliated to MAKAUT Govt. of West Bengal

Ref. No: PCMT/156/Principal/SGRC/2303/2024 Date: 02/09/2023

NOTICE

Sub: Constitutions of student Grievance Redressal Committee

Student Grievance Redressal Committee for B.Tech Division, is being constituted as per AICTE (Redressal of Grievance of students) regulation, 2019, for establishment of grievance redressal mechanism, comprising of following personnel for Pailan College of Management & Technology with an objective to provide opportunities of certain grievances of students already enrolled in this institution.

The members of the committee are as follows:

Sl.	Name	Designation	Role	Mobile No.
1	Dr. Kousik Roy	Principal (B. Tech division)	Chairperson	9733399246
2	Dr. Partha Mitra	Associate Professor	Member & Convener	8967941667
3	Mr.Samik Banerjee	Assistant Professor	Member	7001930949
4	Ms. Leena Lahiri	Representative of CINI	Member	9830786361
5	Mr. Tapas Pattanayak	Assistant Professor	Member	9800338857
6	Mr.Bidrohi Bhattacharya	Assistant Professor	Member	9433366587
7	Ms. Mayumi Mukherjee	Assistant Professor	Member	7003817233
8	Srijan Dhara	Student	Member	8334839083
9	Rahul Mondal	Student	Member	9475227346

Members are requested to implement the above working process immediately as previous years and meet amongst themselves to decide their course of action.

Dr. Kousik Roy

Prof. (Dr.) Kousik Roy
M Tech, Ph.D (Engineering)
Principal
Pailan College of Management & Technology
Joka, Kolkata, South 24 Parganas
West Bengal - 700104

(Dr. Kousik Roy)
Principal,
Pailan College of Management and Technology (B.Tech Division)
To: Notice Boards of PCMT & B.Tech Building; Boys & Girls Hostel;
CC: Joint Chairperson, Vice Chairperson, Registrar & above Committee Members

Establishment of Internal Compliant Committee(ICC)

PAILAN GROUP OF INSTITUTIONS

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY

PAILAN College of Management & Technology

(A Division of Pailan Educational Trust)

Approved by AICTE, Ministry of H.R.D. Govt. of India & affiliated to MAKAUT Govt. of West Bengal

Ref. No: PCMT/156/Principal/Committee/2304/2024 Date: 02/09/2023

NOTICE

Sub: Reconstruction of Internal Complaint Committee as per AICTE notification

As per Section 4 of All India Council for Technical Education (Gender Sensitization, Prevention & Prohibition of Sexual Harassment of Women Employees and Students and Rederssal of Grievance in Technical Institution) Regulations, 2016 (AICTE Notification F. No. AICTE/WH/2016/01 dated10.06.2016), Internal Complaint Committee for Pailan College of Management &Technology (B.Tech Division) is constituted with an objective of resolving complaint pertaining to gender sensitization and sexual harassment of girl students, their parents and lady employees of the college. The committee consists of the following members:

SL. NO.	Name	Designation	Role	Mobile No.
1	Dr. Kousik Roy	Principal (B. Tech division)	Chairperson	9733399246
2	Mr. Kunal Chakroborty	Registrar	Member	9830087891
3	Mrs. Sayantani Patra	Admin Executive	Member	6292244978
4	Ms. Debapriya Banerjee	Assistant Professor	Member	9674702942
5	Ms. Mayumi Mukherjee	Assistant Professor	Member	7003817233
6	Dr. Partha Mitra	Associate Professor	Member	8967941667
7	Sk Nurul Islam	Assistant Professor	Member	7003271051
8	Mr. Surjashish Ghosh	Student	Member	8101291174
9	Mr. Rahul Mondal	Student	Member	9475227346

Members are requested to implement the above working process immediately and decide their course of action.

Dr. Kousik Roy

Prof. (Dr.) Kousik Roy
M.Tech. Ph.D (Engineering)
Principal
Pailan College of Management & Technology
Joka, Kolkata, South 24 Parganas
West Bengal - 700104

(Dr. Kousik Roy)
Principal,
Pailan College of Management and Technology (B.Tech Division)

To: Notice Boards of PCMT & B.Tech Building: Boys & Girls Hostel:
CC: Joint Chairperson, Vice Chairperson, Registrar & above Committee Members.

- **Establishment of Committee for SC/ ST**

PAILAN GROUP OF INSTITUTIONS

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY

PAILAN College of Management & Technology

(A Division of Pailan Educational Trust)

Approved by AICTE, Ministry of H.R.D. Govt. of India & affiliated to MAKAUT Govt. of West Bengal

Ref. No.: PCMT/156/Principal/SC&ST/2305/2024 **Date:** 02/09/2023

NOTICE

Sub: Reconstitution of SC/ST committee as per AICTE notification

SC/ST Committee of the Institute, Pailan College of Management and Technology, for B.Tech Division is being reconstituted as per the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989, No. 33 of 1989 dated 11.06.1989, to prevent commission of offences of atrocities against the members of the Scheduled castes and the Scheduled Tribes, the Committee comprises of the following members:

Sl No	Name	Designation	Role	Mobile No
1.	Dr. Kousik Roy	Principal (B. Tech division)	Chairperson	9064448673
2.	Ms. Prama Naskar	Assistant Professor	Member & Convener	8240446284
3.	Mr. Shyamal Sardar	Hotel Warden	Member	9836648995
4.	Ms. Marjina Molla	Office Assistant	Member	9830828766

Members are requested to start working process immediately and meet amongst themselves at least once in three months and decide their course of action. Minutes of the meeting is to be maintained by Convener and submitted to the undersigned.

Dr. Kousik Roy

Prof. (Dr.) Kousik Roy
M.Tech, Ph.D (Engineering)
Principal
Pailan College of Management & Technology
Joka, Kolkata, South 24 Parganas
West Bengal - 700104

(Dr. Kousik Roy)
Principal,
Pailan College of Management and Technology (B.Tech Division)

To: Notice Boards of PCMT & B.Tech Building; Boys & Girls Hostel;
CC: Joint Chairperson, Vice Chairperson, Registrar & above Committee Members

- **Internal Quality Assurance Cell**

PAILAN GROUP OF INSTITUTIONS

PAILAN COLLEGE OF MANAGEMENT & TECHNOLOGY

PAILAN College of Management & Technology

(A Division of Pailan Educational Trust)

Approved by AICTE, Ministry of H.R.D. Govt. of India & affiliated to MAKAUT Govt. of West Bengal

To: Notice Boards of PCMT & B.Tech Building; Boys & Girls Hostel;
CC: Joint Chairperson, Vice Chairperson, Registrar & above Committee Members

Ref. No: PCMT/156/Principal/IQAC/2221/2023 Date: 02/09/2023

NOTICE

On IQAC Committee of PCMT (B.Tech Division)

Internal Quality Assurance Cell (IQAC) for Pailan College of Management & Technology for B.Tech Division is reconstituted with objective to develop a mechanism to promote conscious, consistent and catalytic action plans to improve the academic and administrative performance of the Institute. The Committee comprises of the following members:

The members of the committee are as follows:

1. Dr. Kousik Roy, Principal – Chairperson
2. Mr. Soumya Chatterjee, Assistant Professor, CSE - Co-coordinator of IQAC
3. Mr. Kunal Chakraborty – Registrar, PGI, Representative of Management
4. Dr. Santanu Dasgupta-Principal , PCMT(Non AICTE)- Member
5. Ms Mayumi Mukherjee- Assistant Professor, ECE- Member
6. Mr. Tapas Pattnayek – Assistant Professor, CE – Member
7. Mr. Bidrohi Bhattacharjee – Assistant Professor, EEE - Member
8. Mr. Pinaki Ranjan Ghosh – Asst. Professor, General Sc. & HU – Member
9. Ms. Mousumi Bhattacharya – Assistant Controller of Examination – Member
10. Mr. Nabin Chandra Pramanik – Accountant, PCMT
11. Mr. Shouryadip Das – Student, EEE 4th Sem (Nominee from students)
12. Ms. Soma Chakraborty – Nominee from Parent/Stakeholder
13. Ms. Priya Mitra – EX Student B.Tech CSE (Nominee from Alumni)
14. Mr. Nilanjan Kar – Civil Engineer, Garden Reach Ship Builder, Nominee from Industry.

Members are requested to start working immediately and meet amongst themselves at least once in a month and decide their course of action. Minutes of the meeting conducted by them are to be maintained by Co-coordinators and submitted to the undersigned and soft copy should be sent to the Vice Chairperson, PGI, immediately after every meeting.

Dr. Kousik Roy

Prof. (Dr.) Kousik Roy
M... Ph.D (Engineering)
Principal
... Management & Technology
Pailan ... Joka, South 24 Parganas
Joka ... Bengal - 700 104

6. Programmes

- **Name of Programmes approved by AICTE :** ENGINEERING & TECHNOLOGY
- **Name of Programmes Accredited by NBA:** NIL
- **Status of Accreditation of the Courses:** N.A.

Our Institute offers 4 (four) Undergraduate courses under the programme "ENGINEERING AND TECHNOLOGY" as per AICTE nomenclature and details are given below:

<table>
<tr><td>Name of the Course</td><td>COMPUTER SCIENCE AND ENGINEERING</td></tr>
<tr><td>Number of seats</td><td>60</td></tr>
<tr><td>Duration</td><td>4 Years</td></tr>
<tr><td>Cut off marks/rank of admission during the last three years</td><td>As per State Statutory Body (WBJEE board)

(based on WBJEE rank& JEE (Main) Rank)
<table><tr><th>Rank of admission 2023-2024</th><th>Rank of admission 2022-2023</th><th>Rank of admission 2021-2022</th></tr><tr><td>26455-827272</td><td>14303-910611</td><td>3705-55536</td></tr></table></td></tr>
<tr><td>Fee</td><td>Rs. 453000/-</td></tr>
<tr><td>Placement Facilities</td><td>A seminar hall with a capacity of 250 students.
Spacious auditorium with hi-tech audio-
video facilities to accommodate 400 students.
Examination halls to conduct written/Aptitude test.
Conducting on-campus &off-campus placement drives
in reputed organizations.
Full-fledged laboratories to organize online examinations</td></tr>
<tr><td>Campus placement in last three years with minimum salary, maximum salary and average salary</td><td><table><tr><th>Placement</th><th>CAY 2022-23</th><th>CAY 2021-22</th><th>CAY 2020-21</th></tr><tr><td>No. of Students Placed</td><td>4</td><td>7</td><td>25</td></tr><tr><td>Minimum Salary (Lakh)</td><td>2.4</td><td>0.85</td><td>1.20</td></tr><tr><td>Maximum Salary (Lakh)</td><td>6</td><td>4.50</td><td>5.00</td></tr><tr><td>Average Salary (Lakh)</td><td>4.2</td><td>3.52</td><td>3.38</td></tr></table></td></tr>
</table>

<table>
<tr><td>Name of the Course</td><td>ELECTRICAL AND ELECTRONICS ENGINEERING</td></tr>
<tr><td>Number of seats</td><td>30</td></tr>
<tr><td>Duration</td><td>4 Years</td></tr>
<tr><td>Cut off marks/rank of admission during the last three years</td><td>As per State Statutory Body (WBJEE board)
(based on WBJEE rank & JEE (Main) Rank)
<table><tr><th>Rank of admission 2023-2024</th><th>Rank of admission 2022-2023</th><th>Rank of admission 2021-2022</th></tr><tr><td>69271</td><td>---</td><td>-----</td></tr></table></td></tr>
<tr><td>Fee</td><td>Rs. 453000/-</td></tr>
<tr><td>Placement Facilities</td><td>A seminar hall with a capacity of 250 students.
Spacious auditorium with hi-tech audio-
video facilities to accommodate 400 students.
Examination halls to conduct written/Aptitude test.
Conducting on-campus &off-campus placement drives
in reputed organizations.
Full-fledged laboratories to organize online examinations</td></tr>
<tr><td>Campus placement in last three years with minimum salary, maximum salary and average salary</td><td><table><tr><th>Placement</th><th>CAY 2022-23</th><th>CAY 2021-22</th><th>CAY 2020-21</th></tr><tr><td>Students Placed</td><td>2</td><td>2</td><td>7</td></tr><tr><td>Minimum Salary (Lakh)</td><td>2.4</td><td>0.84</td><td>1.10</td></tr><tr><td>Maximum Salary (Lakh)</td><td>2.4</td><td>4.20</td><td>4.75</td></tr><tr><td>Average Salary (Lakh)</td><td>2.4</td><td>3.50</td><td>3.35</td></tr></table></td></tr>
</table>

Name of the Course	ELECTRONICS AND COMMUNICATIONS ENGINEERING
Number of seats	30
Duration	4 Years
Cut off marks/rank of admission during the last three years	As per State Statutory Body (WBJEE board) (based on WBJEE rank & JEE (Main) Rank)

Rank of admission 2023-24	Rank of admission 2022-23	Rank of admission 2021-2022
--	78515	----

Fee	Rs. 453000/-
Placement Facilities	A seminar hall with a capacity of 250 students. Spacious auditorium with hi-tech audio-video facilities to accommodate 400 students. Examination halls to conduct written/Aptitude test. Conducting on-campus &off-campus placement drives in reputed organizations. Full-fledged laboratories to organize online examinations

Campus placement in last three years with minimum salary, maximum salary and average salary

Placement	CAY 2022-23	CAY 2021-22	CAY 2020-21
Students Placed	1	4	3
Minimum Salary (Lakh)	3.1	0.80	1.15
Maximum Salary (Lakh)	6	4.40	4.85
Average Salary (Lakh)	4.55	3.40	3.50

<table>
<tr><td>Name of the Course</td><td>CIVIL ENGINEERING</td></tr>
<tr><td>Number of seats</td><td>30</td></tr>
<tr><td>Duration</td><td>4 Years</td></tr>
<tr><td>Cut off marks/rank of admission during the last three years</td><td>As per State Statutory Body (WBJEE board)
(based on WBJEE rank & JEE (Main) Rank)
<table><tr><th>Rank of admission 2023-24</th><th>Rank of admission 2022-23</th><th>Rank of admission 2021-22</th></tr><tr><td>--------</td><td>54116</td><td>58089</td></tr></table></td></tr>
<tr><td>Fee</td><td>Rs. 453000/-</td></tr>
<tr><td>Placement Facilities</td><td>A seminar hall with a capacity of 250 students.
Spacious auditorium with hi-tech audio-
video facilities to accommodate 400 students.
Examination halls to conduct written/Aptitude test.
Conducting on-campus &off-campus placement drives
in reputed organizations.
Full-fledged laboratories to organize online examinations</td></tr>
<tr><td>Campus placement in last three years with minimum salary, maximum salary and average salary</td><td><table><tr><th>Placement</th><th>CAY 2022-23</th><th>CAY 2021-22</th><th>CAY 2020-21</th></tr><tr><td>Students Placed</td><td>1</td><td>0</td><td>1</td></tr><tr><td>Minimum Salary (Lakh)</td><td>3.1</td><td>NA</td><td>2.25</td></tr><tr><td>Maximum Salary (Lakh)</td><td>3.1</td><td>NA</td><td>2.25</td></tr><tr><td>Average Salary (Lakh)</td><td>3.1</td><td>NA</td><td>2.25</td></tr></table></td></tr>
</table>

- **Name and Duration of Programme(s) having Twinning and Collaboration with Foreign university(s) and being run in the same campus along with status of their AICTE approval. If there is foreign collaboration, give the following detail: NIL**

7. Faculty

Branch wise list Faculty members:

- Permanent Faculty

FACULTY LIST : B.TECH DIVISION

PRINCIPAL: DR. KOUSIK ROY

CSE Department	**EEE Department**
Dr. Partha Mitra	Bidrohi Bhattacharjee
Basanti Bhattacharyya	Dhrubajyoti Banerjee
Bijoyini Bagchi	Sumit Paul
Rukhsar Khatun	Shibabrata Mukherjee
Swagata Sinha	Debapriya Banerjee
Pinaki Ranjan Ghosh	Arnab Sau
Singini Bhattacharya	Dr. Sourav Deb
Priya Bhattacharyya	Sk. Sahabuddin

ECE Department	**CE Department**
Dr. Sk Nurul Islam	Tapas Pattanayek
Mayumi Mukherjee	samik Banerjee
Tanajit Manna	Prama Naskar
Soumya Chatterjee	Indrajit Pahari
Dr. Anandalal Gayen	Souvik Sen
Kunal Chakraborty	Animesh Das
Ratan Mistry	Prianka Bera

Permanent Faculty: Student Ratio: 1:20

Number of Faculty employed during the last three years: 20

Number of Faculty left during the last three years: 15

8. Profile of Vice Chancellor/ Director/ Principal/ Faculty For each Faculty givea page covering with Passport size photograph

Principal

i. **Name:** Dr. Kousik Roy

ii. **Date ofBirth**: 02.04.1979

iii. **Unique id**: 1-9488307142

iv. **Education Qualifications**: B.E(ECE), M.Tech (ECE), PhD(Engineering)

v. **Work Experience**:

- Teaching:11 years
- Research: 8 years
- Industry:
- Others (Administration):Two years and Eleven months

vi. **Area of Specialization**: Electronics and Communication Engineering

vii. Courses taught at Under GraduateLevel: Anjalog and Digital Electronics, Analog and Digital Communication, E.M Theory,Microwave

viii. **Research guidance**:

- No. of papers published in International Journals: 32
- Master: 3
- Ph.D.: 2 (ongoing)

ix. **Projects carried out**: Project ID: R.4/2/UG/2018-19/ RDUG2018002 .The project has been funded by the Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020 under R&D Grant –in – Aid Scheme. The project report entitled Fading of LF & HF signal and associated dynamics of the atmosphere was submitted by ARUP KUMAR CHANDRA (IEI MEMBERSHIP NO. SM000486-0) work done by him under my supervision and guidance.

x. **Patents:**

xi. **Technology Transfer**:

xii. **Research Publications: Journal Publications: 41**
International conference: 16, National conference: 22

xiii. **No. of Books published with details: Book chapter -6**

COMPUTER SCIENCE AND ENGINEERING

Faculty Members

i. **Name**: Mr. Arnab Sau

ii. **Date of Birth**: 09.08.1993

iii. **Unique id:**1-43919937894

iv. **Education Qualifications**: M.A.(English), B.Ed., M.Ed., NET, SET

v. Work Experience:

- Teaching: 2 Years
- Research: NA
- Industry: NA
- Others: NA

vi. **Area of Specialization: English Language Teaching**

vii. **Courses taught at Under Graduate Level:** Language, Literature, Educational Studies

viii. **Research guidance:** NIL

- No. of papers published in National/ International Journals/ Conferences: 1
- Master: NIL
- Ph.D.: NIL

ix. **Projects Carried out:** NA

x. **Patents:** NIL

xi. **Technology Transfer:** NIL

xii. **Research Publications:** 1

xiii. **No. of Books published with details**: NA

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i. **Name:** Shinjini Bhattacharya

ii. **Date of Birth:** 23.04.1994

iii. **Unique id: 1-43920978943**

iv. **Education Qualifications: B.Sc.(Physics),** M.Sc.(Bio Physics),

B.Ed, M.Ed, GATE, NET

v. **Work Experience**:

- Teaching: 2 Years
- Research: NIL
- Industry: NIL
- Others: NIL

vi. **Area of Specialization:** Physics, Bio Physics

vii. **Courses taught at Under Graduate Level**: Classical Mechanics, Quantum Physics, Electronics, Optics, Programming

viii. **Research guidance**:

- No. of papers published in National/ International Journals/ Conferences: NA
- Master : NIL
- Ph.D.: NIL

ix. **Projects carried out:** NIL

x. **Patents:** NIL

xi. **Technology Transfer:** NIL

xii. **Research Publications:** 02

xiii. **No. of Books published with details: 02**

(Exploring Inclusive Education at Secondary and Higher secondary school settings in India and Japan: A comparative analysis)
ISBN: 978-1-68576-441-8

(A study on Inclusive Education at Secondary and Higher Secondary level in Asia)
ISBN: 978-93-92446-37-5

i. **Name: Kunal Chakraborty**

ii. **Date of Birth**: 16.09.1968

iii. **Unique id**: 1-93206612 11

iv. **Education Qualifications**: Master Degree in Sociology

v. Work Experience:

- Teaching: 22
- Research : NIL
- Industry : 05
- Others: NIL

vi. **Area of Specialization**: Social Science

vii. **Courses taught at Under Graduate Level**: Principal of Management, Values & Ethics etc

viii. Research guidance:

- No. of papers published in National/ International Journals/ Conferences : NIL
- Master : NIL
- Ph.D.: NIL

ix. **Projects carried out:** NIL

x. **Patents:** NIL

xi. **Technology Transfer:** NIL

xii. **Research Publications:** NIL

xiii. **No. of Books published with details:** NIL

i. **Name: Dr. Sourav Deb**

ii. **Date of Birth: 20.01.1992**

iii. **Unique id:**

iv. **Education Qualifications: PhD in Chemistry**

v. **Work Experience:**

   a. **Teaching: 1.5 years**
   b. **Research: 6 years**
   c. **Industry: NIL**
   d. **Others: NIL**

vi. **Area of Specialization: Inorganic Chemistry, Co-ordination Chemistry, Molecular Sensor, Photo Chemistry, Spectroscopy, DFT, Boolean Logic, Fuzzy Logic**

vii. **Courses taught at Under Graduate Level: Inorganic Chemistry, Physical Chemistry**

viii. **Research guidance:**

   a. **No. of papers published in National/ International Journals/ Conferences: NIL**
   b. **Master: NIL**
   c. **Ph.D.: NIL**

ix. **Projects carried out: NIL**

x. **Patents: NIL**

xi. **Technology Transfer: NIL**

xii. **Research Publications: 14**

xiii. **No. of Books published with details: NIL**

i. **Name: BASANTI BHATTACHARYYA**

ii. **Date of Birth: 03-02-1989**

iii. **Unique id: 1-11306462218**

iv. **Education Qualifications: M.TECH(CSE)**

v. **WorkExperience:**

a. Teaching: 11 Yrs
b. Research:NA
c. Industry:NA
d. Others:NA

vi. **Area of Specialization: Image Analysis & Pattern recognition.**

vii. **Courses taught at Under Graduate Level: B.TECH**

viii. **Research guidance:**

a. No.ofpaperspublishedinNational/InternationalJournals/Conferences: NA
b. Master :NA
c. Ph.D.:NA

ix. **Projects carried out**: NA

x. **Patents:NA**

xi. **Technology Transfer: NA**

xii. **Research Publications:01**

xiii. **No. of Books published with details:NA**

i. **Name: SWAGATA SINHA**

ii. **Date of Birth: 20/09/1995**

iii. **Unique id: 1-11123726371**

iv. **Education Qualifications: M.TECH**

v. **Work Experience:**

a. Teaching: 8 MONTH
b. Research: NA
c. Industry: NA
d. Others: NA

vi. **Area of Specialization: MACHINE LEARNING**

vii. **Courses taught at Under Graduate Level: B.TECH**

viii. **Research guidance:**

a. No.ofpaperspublishedinNational/InternationalJournals/Conferences: NA
b. Master :NA
c. Ph.D.:NA

ix. **Projects carried out**: NA

x. **Patents:NA**

xi. **Technology Transfer: NA**

xii. **Research Publications:NA**

xiii. **No. of Books published with details:NA**

i. **Name: ANIMESH DAS**

ii. **Date of Birth: 25/03/1990**

iii. **Unique id: 1-43564969910**

iv. **Education Qualifications: M.TECH, Ph.D**

v. **WorkExperience:**

- Teaching: 6Yrs
- Research:NA
- Industry:2 YRS
- Others:NA

vi. **Area of Specialization: AUTOMOTIVE ENGINEERING**

vii. **Courses taught at Under Graduate Level: B.TECH**

viii. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences: 6 nos.
- Master :NA
- Ph.D.:NA

ix. **Projects carried out**: NA

x. **Patents:02**

xi. **Technology Transfer: NA**

xii. **Research Publications:6 nos.**

xiii. **No. of Books published with details:1 (Simplified Autocad, Notion Press, ISBN-9781638861539)**

i. **Name:** *Debapriya Banerjee*

ii. **Date of Birth:** *23.08.1995*

iii. **Unique id: 1-11123762371**

iv. **Education Qualifications:** *M.A., B.Ed (English)*

v. **Work Experience: 02 years**

a. Teaching: 02
b. Research: NA
c. Industry:NA
d. Others:NA

vi. **Area of Specialization:** *English*

vii. **Courses taught at Under Graduate Level: Soft kill & personality development, Communicative English.**

viii. **Research guidance: NA**

a. No .of paper spublishedinNational/InternationalJournals/Conferences:
b. Master :
c. Ph.D.:

ix. **Projects carried out**: NA

x. **Patents:NA**

xi. **Technology Transfer: NA**

xii. **Research Publications:NA**

xiii. **No. of Books published with details:NA**

i. **Name:** Tanajit Manna

ii. **Date of Birth: 14-05-1988**

iii. **Unique id:** 1-3619178941

iv. **Education Qualifications:** M. Tech (ECE)

v. **Work Experience:**

- Teaching: 9.8 years
- Research: NIL
- Industry: NIL
- Others: NIL

vi. **Area of Specialization:** Communication Engineering (Telecommunication)

vii. Courses **taught at Under Graduate Level**: Digital Communication, Telecommunication System, Satellite Communication, Wireless Communication & N/W etc.

viii. **Research guidance:** NIL

- No. of papers published in National/ International Journals/ Conferences: 6
- Master: NIL
- Ph.D.: NIL

ix. **Projects carried out:** NIL

x. **Patents:** 01

xi. **Technology Transfer:** NIL

xii. **Research Publications:** 7

xiii. **No. of Books published with details**:1

A. Dey, A. Paul, T. Manna, Microstrip Low Pass Filter system Parameters By Insertion Loss Method: MATLAB Design & Analysis, LAP LAMBERT Academic Publishing, 17-02-2014 [ISBN-13:978-3-659-438417]

i **Name:** Soumya Chatterjee

i. **Date of Birth**: 21/01/1984

ii. **Unique id**: 1-9481320615

iii. **Education Qualifications**:B.Tech.(ECE)

M.Tech. (Radio Physics & Electronics)

iv.**Work Experience**:

- Teaching: 13 years
- Research : 2 years
- Industry : NIL
- Others : NIL

v. **Area of Specialization**: RF Engineering

vi. **Courses taught at Under Graduate Level**: Solid State Devices, Analog Electronics, EM Theory and Transmission Lines, Communication, Information Theory and Coding, RF and Microwave Engineering, Renewable Energy

vii. **Research guidance**:

- No. of papers published in National/ International Journals/ Conferences: NIL
- Master : NIL
- Ph.D. : NIL

viii. **Projects carried out:** B.Tech. Projects

ix.**Patents:** NIL

x. **Technology Transfer:** NIL

xi. **Research Publications**: 01

xii. **No. of Books published with details**: NIL

i. Name: Mayumi Mukherjee

ii. Date of Birth: 11/12/1985

iii. Unique id: 1-11055093618

iv. **Education Qualifications: M.Tech**

v. Work Experience:

- Teaching: 11
- Industry: 00
- Others: 00

vi. **Area of Specialization: Advanced Communication Engineering**

vii. **Courses taught at Under Graduate Level: ECE**

viii. **Research guidance:**

- No. of papers published in National/International Journals/Conferences:
- Research: 00 • Master :
- Ph.D.:

ix. **Projects carried out**: NIL

x. **Patents:** NIL

xi. **Technology Transfer: NIL**

xii. **Research Publications:** 04

xiii. **No. of Books published with details:** NIL

i. **Name:** Tapas Pattanayek

ii. **Date of Birth:**04.04.1992

iii. **Unique id:**1-3666221469

iv. **Education Qualifications**: Diploma, B.Tech,M.Tech

v. Work Experience:

- Teaching: 6 years
- Research: NIL
- Industry: NIL
- Others: NIL

vi. **Area of Specialization**: Water Resource Engineering.

vii. **Courses taught at Under Graduate Level**: Water Resource Engineering, Construction Planning & management, Engineering Geology, Fluid Mechanics, Hydraulic Structure, Surveying, Concrete Technology, Environmental Pollution & Control etc.,

viii. Research guidance:

- No. of papers published in National/ International Journals/ Conferences: NIL
- Master:NIL
- Ph.D.:NIL

ix. **Projects carried out:** B.Tech project

x. **Patents:**NIL

xi. **Technology Transfer:** NIL

xii. **Research Publications:**3

xiii. **No. of Books published with details:**1

Dr. Syed Omar Ballari, Dr. Dharmendra, Mr. Tapas Pattanayek, Dr. Rohit Kumar," Construction Materials", ISBN No. 978-93-5757-696-3[published on December,2023]

i. **Name:** Indrajit Pahari

ii. **DateofBirth:**28/02/1995

iii. **Unique id:1-7584493059**

iv. **Education Qualifications:** M.Tech

v. WorkExperience:

- Teaching: 2years
- Research :NIL
- Industry :NIL
- Others :NIL

vi. **Area of Specialization:** Structural Engineering

vii. Courses taught at Under Graduate Level: Strength of Material, Structural Analysis, Design of Reinforced of Cement Concrete, Design of Steel Structure, Transportation Engineering, Pavement Design, Advance highway and Transportation Engineering, Environmental Engineering, Introduction to Civil Engineering

viii. Research guidance:

- No. of papers published in National/ International Journals/ Conferences: 1
- Master:NIL
- Ph.D. :NIL

ix. **Projects carried out:**B.Tech Project

x. **Patents:**NIL

xi. **Technology Transfer:** NIL

xii. **Research Publications:**NIL

xiii. **No. of Books published with details:**NIL

i. **Name: SOUVIK SEN**

ii. **Date of Birth: 24/09/1996**

iii. **Unique id: 1-11069043537**

iv. **Education Qualifications: M.TECH**

v. **Work Experience:**

- Teaching: 1.6 Yrs
- Research: NA
- Industry: NA
- Others: NA

vi. **Area of Specialization: STRUCTURAL ENGINEERING**

vii. **Courses taught at Under Graduate Level: B.TECH**

viii. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences: NA
- Master : NA
- Ph.D.: NA

ix. **Projects carried out**: NA

x. **Patents: NA**

xi. **Technology Transfer: NA**

xii. **Research Publications: NA**

xiii. **No. of Books published with details: NA**

i. **Name**: Dr. Anandala Gayen

ii. **Date of Birth**: 19.12.1976

iii. **Unique id:** 1-9604030999

iv. **Education Qualifications**: B.Sc, M.Sc., M. Tech, Ph.D

v. Work Experience:

- Teaching: 16 Year
- Research: NIL
- Industry: NIL
- Others: NIL

vi. **Area of Specialization:** Physics

vii. **Courses taught at Under Graduate Level:** Physics

viii. **Research guidance:** NIL

- No. of papers published in National/ International Journals/ Conferences: NIL
- Master: NIL
- Ph.D.: NIL

ix. **Projects Carried out:** NIL

x. **Patents:** NIL

xi. **Technology Transfer:** NIL

xii. **Research Publications:** 08

xiii. **No. of Books published with details**: NIL

i. **Name: Bijoyini Bagchi**

ii. **Date of Birth: 24.05.1983**

iii. **Unique id: 1-43393978270**

iv. **Education Qualifications:**


Photo

- Passed Madhyamik in 2000 in First Division from Carmel High School , Kolkata withpercentage of 74.75
- Passed Higher Secondary in 2002 in first Division from Carmel High School , Kolkatawith percentage of 68.33
- Passed Bachelor of Technology in Computer Science and Engineering from Meghnad Saha Institute of Technology , Kolkata in 2007 with DGPA 7.67
- Passed Master of Technology in Computer Science and Engineering from University of Calcutta in 2009 in First class

v. **Work Experience:**

- Teaching: 14 years
- Research: Admitted in Swami Vivekananda University
- Industry: Nil
- Others: Nil

vi. **Area of Specialization: Machine Learning**

vii. **Courses taught at Under Graduate Level: Btech in Computer Science and Engineering all subjects**

- **(**Learnt and practiced various programming languages like C,C++, Core Java, AdvancedJava, Visual Basic , Shell Programming, JSP, Socket Programming , Python , PHP, Java Script, SQL , HTML.
- Taken classes and laboratories of subjects – Data Structure , Operating Systems, Design and Analysis of Algorithms , Database Management Systems , Windows Programming , E-commerce, PC Software , Internet Technology, Computer Networks , Digital Electronics , System Software and Administration , Computer Graphics, Software Engineering , Object Technology and UML, Applied Digital Logic Design ,Digital Electronics, Research Methodology, Automata)

viii. **Research guidance:**

1. No. of papers published inNational/InternationalJournals/Conferences:

a. Received Best Paper for the Paper Entitled “Pap Net: A patch based multi scale deep learning framework for nucleus segmentation from Pap smear images” in an International Conference on Data Electronics and Computing (ICDEC 2022) organized byDepartment of Computer Applications , North Eastern Hilly

University.

b. Presented a paper called “An All-Inclusive Analysis on Image Segmentation Techniques”in ICCRET-2022 conducted by CSE Department , Brainware University.

- Master : nil
- Ph.D.: Admitted in Swami Vivekananda University

ix. **Projects carried out**: Nil

x. **Patents: Nil**

xi. **Technology Transfer: nil**

xii. **Research Publications: Nil**

xiii. **No. of Books published with details: Nil**

i) Name: Rukhshar Khatun

ii) Date of Birth: 04/07/1999

iii) Unique id:1-43719416316

iv)Education Qualifications: M.Tech

v) Work Experience: Teaching: 7 months
Research: NA
Industry: NA
Others: NA

vi) **Area of Specialization: Internet of Things**

vii) **Courses taught at Under Graduate Level: Data Structure and Algorithm, Computer Network, Operating System etc.**

viii)Research guidance: No. of papers published in National/ International Journals/ Conferences:
Master: NA

ix) **Projects carried out**: NA

x) **Patents: NA**

xi) Technology Transfer: NA

xii) **Research Publications: NA**

xiii) **No. of Books published with details: NA**

i. Name: Dr. Sk Nurul Islam

ii. Date of Birth: 13.02.1989

iii. Unique id: 1-11337929625

iv. **Education Qualifications:**

Ph.D

v. Work Experience:

- Teaching: 5 Years
- Research: 6 Years
- Industry: NA
- Others: NA

vi. **Area of Specialization: Microwave**

vii. **Courses taught at Under Graduate Level: Microwave, EM Theory, IoT etc.**

viii. **Research guidance:**

- No. of papers published in National/ International Journals/Conferences: 34
- Master: 4
- Ph.D.: NA

ix. **Projects carried out**:

x. **Research Publications:** 34

xi. **No. of Books published with details: NA**

i. Name: SK SAHABUDDIN

ii. Date of Birth: 21/06/1992

iii. Unique id: 1-43566358151

iv. **Education Qualifications: M.Sc, B.Ed, M.Ed**

v. Work Experience:

- Teaching:
- Research:
- Industry:
- Others:

vi. **Area of Specialization: Physical Chemistry**

vii. **Courses taught at Under Graduate Level: Chemistry**

viii. **Research guidance:**

- No. of papers published in National/ International Journals/ Conferences:
- Master :
- Ph.D.:

ix. **Projects carried out**: "Synthesis and characterization of a Ru(II) precursor and ligands of biological relevance"

x. **Patents:**

xi. **Technology Transfer:**

xii. **Research Publications:**

xiii. **No. of Books published with details:**

i. Name: PARTHA MITRA

ii. Date of Birth: 14/12/1968

iii. Unique id: 1-43564962111

iv. **Education Qualifications: Ph.D, Post-doc.(IIT-KGP**

v. Work Experience:

- Teaching: 13 yrs.
- Research: 8.5 yrs.
- Industry: 5 yrs.
- Others: NIL

vi. **Area of Specialization:** VLSI Design, Artificial Intelligence, Machine learning

vii. **Courses taught at Under Graduate Level:** Artificial Intelligence, Machine learning , Computer Architecture, Finite Automata, Computer Organization.

viii. **Research guidance:**

- No. of papers published in National/ International Journals/ Conferences: Conference 14, Journal 10
- Master : 2
- Ph.D.: NIL

ix. **Projects carried out**: NIL

x. **Patents: NIL**

xi. **Technology Transfer: NIL**

xii. **Research Publications:** Conference 14, Journal 10

xiii. **No. of Books published with details: NIL**

Faculty Details

i. **Name: SUMIT PAUL**

ii. **Date of Birth: 30/01/1982**

iii. **Unique id: 1-43564926288**

iv. **Education Qualifications: M.Tech(Electrical Engg)**

v. **Work Experience:**

- Teaching: 1 year full time, 4 years and 6 months part time
- Research:
- Industry: 14 years
- Others:

vi. **Area of Specialization: Power System**

vii. **Courses taught at Under Graduate Level: Power System, Electrical M/C, Power Electronics, Circuit Theory**

viii. **Research guidance:**

- No. of papers published in National/ International Journals/ Conferences:
- Master :
- Ph.D.:

ix. **Projects carried out**: Development SPV based UPQC controller for grid power quality improvement.

x. **Patents:**

xi. **Technology Transfer:**

xii. **Research Publications:**

xiii. **No. of Books published with details:**

i.Name: Prama Naskar

ii. Date of Birth: 24-11-1992

iii. Unique id: 1-43555205361

iv. Education Qualifications: Pursuing PhD, M.Tech in Geotechnical Engineering

v. Work Experience: 5 years of experience in academics

- Teaching: 5 years experience
- Research: 1 year
- Industry: No
- Others: NA

vi. Area of Specialization: Geotechnical Engineering

vii. Courses taught at Under Graduate Level: Soil Mechanics- I, Soil Mechanics- II, Foundation Engineering, Deep Foundation, Transportation Engineering, Pavement Design, Pavement materials, Concrete Technology, Environmental Engineering, Water Resource Engineering, Ground Improvement Techniques, Introduction to Civil Engineering, Soil mechanics Laboratory, Transportation Engineering Laboratory, Engineering Geology Laboratory and Concrete Technology Laboratory

viii. Research guidance: No

- No. of papers published in National/ International Journals/ Conferences: NO
- Master : M.Tech in Geotechnical Engineering
- Ph.D.: Pursuing PhD

ix. Projects carried out: No

x. Patents: No

xi. Technology Transfer: No

xii. Research Publications: No

xiii. No. of Books published with details: No

i. Name: Samik Banerjee

ii. Date of Birth: 01/03/1990

iii. Unique id: 1-37981327341

iv. **Education Qualifications: M.Tech.**

v. Work Experience:

- Teaching: 8.5 Years
- Research:
- Industry: 1 Year
- Others:

vi. **Area of Specialization: Structural Engineering**

vii. **Courses taught at Under Graduate Level: Civil Engineering**

viii. **Research guidance:**

- No. of papers published in National/ International Journals/ Conferences: 1 International
- Master : Structural Engineering
- Ph.D.: pursuing

ix. **Projects carried out**: NA

x. **Patents: 6**

xi. **Technology Transfer: NA**

xii. **Research Publications: 3**

xiii. **No. of Books published with details: NA**

i. **Name:** PinakiRanjan Ghosh

ii. **Date of Birth:** 02/05/1994

iii. **Unique id: 1-43565040940**

iv. **Education Qualifications:** M.Sc., PhD(Pursuing, Pre-submission Seminar done)

v. **Work Experience:**

- Teaching: 1 year
- Research: 5 year
- Industry: Nil
- Others: Nil

vi. **Area of Specialization:** Differential geometry

vii. **Courses taught at Under Graduate Level:** Linear Algebra, Multivariate Calculus, Differential Equation, Complex Analysis, Probability and Statistics, Numerical Analysis, Discrete Mathematics.

viii. **Research guidance:**

- No. of papers published in National/ International Journals/ Conferences: Nil
- Master : Nil
- Ph.D.: Nil

ix. **Projects carried out**: Nil

x. **Patents:** Nil

xi. **Technology Transfer:** Nil

xii. **Research Publications:** 8

xiii. **No. of Books published with details:** Nil

i. Name: DHRUBAJYOTI BANERJEE

ii. Date of Birth: 03.06.1986

iii. Unique id: 1-43564926240

iv. Education Qualifications: M.Tech in Electrical

v. **Engineering(Electrical Power)**

vi. WorkExperience:

- Teaching: 14 years
- Research:
- Industry:
- Others:

vii. **Area of Specialization: Power System**

viii. **Courses taught at Under Graduate Level: Basic Electrical Engineering, Circuit Theory, Power System,Machine**

ix. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences:
- Master :
- Ph.D.:

x. **Projects carried out**:

xi. **Patents:**

xii. **Technology Transfer:**

xiii. **Research Publications:01**

xiv. **No. of Books published with details:**

i) **Name: BIDROHI BHATTACHARJEE**

ii) **Date of Birth: 10/01/1980**

iii) **Unique id: 1-11140082261**

iv) **Education Qualifications: M.TECH, PhD(Submitted)**

v) Work Experience: Teaching: 18 Years

Research:7 Years

Industry: 03 Years

Others: NA

vi) **Area of Specialization: RENEWABLE ENERGY, POWER ELECTRONICS AND DRIVES**

vii) **Courses taught at Under Graduate Level: B.TECH**

viii) Research guidance: No. of papers published in National/ International Journals/ Conferences:
Master :
Ph.D

ix) **Projects carried out**: NA

x) **Patents: 10**

xi) Technology Transfer

xii) **Research Publications: 17**

xiii) **No. of Books published with details: NA**

i. Name: RATON MISTRY

ii. Date of Birth: 27.12.1988

iii. Unique id: 1-43951867140

iv. **Education Qualifications: M. Tech , MBA**

v. WorkExperience:

- Teaching: 2 YEARS
- Research:NIL
- Industry:02 YEARS
- Others:NIL

vi. **Area of Specialization:ECE**

vii. **Courses taught at Under Graduate Level: Basic Electronics, Analog Electronics etc.**

viii. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences: NIL
- Master :NIL
- Ph.D.:NIL

ix. **Projects carried out**: NIL

x. **Patents:NIL**

xi. **Technology Transfer: NIL**

xii. **Research Publications:NIL**

xiii. **No. of Books published with details:NIL**

i. Name: MR. SHIBABRATA MUKHERJEE

ii. Date of Birth: 03/07/1991

iii. Unique id: 1-43721717637

iii. **Education Qualifications: M.TECH, Ph.D (SUBMITTED)**

iv. WorkExperience:

- Teaching: 1 years
- Research:4 years
- Industry:nil
- Others:nil

v. **Area of Specialization: Illumination Technology, Free Space optical communication**

vi. **Courses taught at Under Graduate Level:** CONTROL SYSTEM, RENEWABLE ENEREGY SOURCES,ANALOG ELECTRONICS, INTERNET OF THINGS, ELECTRICAL MACHINE DESIGN, UTILIZATION OF ELECTRIC POWER.

vii. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences: 12
- Master :nil
- Ph.D.:nil

viii. **Projects carried out**: (some important ones)

Experimental Studies of Free Space Laser Communication Link for data & voice transmission in Different Atmospheric Conditions funded by D.R.D.O, India

ix. Patents:Nil

x. **Technology Transfer: nil**

xi. **Research Publications:12**

Xii. No. of Books published with details:NIL

i. Name: PRIYANKA BERA

ii. Date of Birth: 10/04/1988

iii. Unique id:

iv. **Education Qualifications: M.Sc(Botany), M.Phil(Botany), M.ED, M.A.(Education),Ph.D in education(Pursuing)**

v. WorkExperience:

- Teaching: 4.5 years
- Research:1 year
- Industry: nil
- Others:nil

vi. **Area of Specialization:** Industrial Microbiology

vii. **Courses taught at Under Graduate Level: Life Science method, Learning & Teaching etc.**

viii. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences: nil
- Master :nil
- Ph.D.-nil

ix. **Projects carried out**: Nil

x. Patents:Nil

xi. **Technology Transfer: nil**

xii. **Research Publications:4**

xiii. **No. of Books published with details:NIL**

i. Name: PRIYA BHATTACHARYYA

ii. Date of Birth: 05-12-1979

iii. Unique id: 1-9605634569

iv. **Education Qualifications: MA in English**

v. WorkExperience:

- Teaching: 11 years
- Research: Nil
- Industry:nil
- Others:nil

vi. **Area of Specialization:** English

vii. **Courses taught at Under Graduate Level: English, soft skill etc.**

viii. **Research guidance:**

- No.ofpaperspublishedinNational/InternationalJournals/Conferences: nil
- Master :nil
- Ph.D.-nil

ix. **Projects carried out**: Nil

x. Patents:Nil

xi. **Technology Transfer: nil**

xii. **Research Publications:nil**

xiii. **No. of Books published with details:NIL**

9. Fee

- **Details of fee, as approved by State Fee Committee, W.B for the Institution**

FEE STRUCTURE OF B. TECH for 2023-24 Session								
Fee Break up	Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
College Registration Fee	5000	NA	NA	NA	NA	NA	NA	NA
Tuition Fee	55000	55000	55000	55000	55000	55000	55000	55000
Library Fee	500	500	500	500	500	500	500	500
Students' Welfare Fee	500	500	500	500	500	500	500	500
TOTAL	61000	56000	56000	56000	56000	56000	56000	56000

- **Time schedule for payment of fee for the entire programme (Table)**

Sl. No.	semester	Payment Schedule
1	1st Semester	payment at the time of Admission or on and before August
2	2nd/4th/6th/8th Semester	payment in the month of December
3	3rd/5th / 7thSemester	payment in the month of May

- **No. of Full Tuition Fee waivers granted with amount and name of students (Table)**

Student Name	Batch	Tuition Fee waivers (Rs.)
NIL	2023-24	NIL

- **Number of scholarship offered by the Institution, duration and amount: 05**

- **Criteria for fee waivers/scholarship**

  The scholarship and tuition fee waiver are given to the students of the Institution based on Merit cum Means.

- **Estimated cost of Boarding and Lodging in Hostels:** Rs. 7500/- per month

- **Any other fees(please specify): NA**

10. Admission

- **Number of seats sanctioned with the year of approval**

Sl. No.	COURSE	Approved Intake (2023-24)	Applied Intake (2024-25)
1	CSE	60	60
2	ECE	30	30
3	EEE	30	30
4	CIVIL	30	30

- **Number of Students admitted under various categories each year in the last three years**

SL NO.	COURSES	Approved Intake Capacity	Admission in 2021	Admission in 2022	Admission in 2023
1	CSE	60	13+32(Lat)	26+18(Lat)	35+19(Lat)
2	ECE	30	0+41(Lat)	1+8(Lat)	01+03(Lat)
3	EEE	30	3+32(Lat)	0+28(Lat)	01+15(Lat)
4	CIVIL	30	1+63(Lat)	1+28(Lat)	00+09(Lat)

- **Number of applications received during last two years for admission under Management Quota and number admitted:** NIL

11. Admission Procedure

- The following admission test is being followed and its name & URL (website) is given below:

  1. **WBJEE,** Website link- https://www.wbjeeb.in
  2. **JEE(MAINS),** Website link- https://www.jeemain.nic.in

- Number of seats allotted to different Test Qualified candidate separately (AIEEE/ CET (State conducted test/ University tests/ CMAT/ GPAT)/ Association conducted test):**10% for JEE-MAINS and 90% for WBJEE**
- Calendar for admission against Management/vacant seats: **N/A**

12. Criteria and Weight ages for Admission

- Description of each criterion with its respective weight ages i.e. Admission Test, marks in qualifying examination etc. : As per norms stipulated by WBJEE BOARD
- The cut-off levels of percentage and percentile score of the candidates in the admission test for the last three years

Course	WBJEE / JEEMAINS Rank of admission 2021-22	WBJEE / JEEMAINS Rank of admission 2022-23	WBJEE / JEEMAINS Rank of admission 2023-24
CSE	3705-55536	14303-910611	26455-827272
EEE	0	0	69217
ECE	0	78515	---
CIVIL	58089-58089 5727-5725(L)	54116	---

- Marks obtained in JEE Test and in aggregate in qualifying examination (H.S) for all candidates who were admitted in this Institute is given below in tabular format(2022-2023):B TECH:

Sl.no	Name	Course ID	Rank	HS MARKS(%)
1	DURJOY ROY	EEE156	69217	82.8
2	RAJIB DAS	CSE 156	64156	75.8
3	ARNAB BARMAN	CSE 156	32990	72.8
4	DEBANSHU PRADHAN	CSE 156	66649	80
5	UTSAB ROYCHOWDHURY	CSE 156	20514	79.1
6	SAPTAK MODAK	CSE 156	72622	77.8
7	ADITY MAITY	CSE 156	52373	72.6

13. List of Applicants

- List of candidate whose applications have been received along with percentile/percentage score for each of the qualifying examination in separate categories for open seats:

- List of candidate who have applied along with percentage and percentile score for Management quota seats: N.A

14. Results of Admission under Management seats/Vacant seats: NA

15. Information of Infrastructure and Other Resources Available

Infrastructural information	
Number of Class Rooms and size of each:	15 Nos. of class room with 66 sq.m each.
Number of Tutorial rooms and size of each:	3 Nos. of tutorial room with 33 sq.m each.
Number of Laboratories and size of each:	26 Nos. of laboratory with 66sq.m each. 2 Nos. of laboratory with 132 sq.m each
Number of Drawing Halls with capacity of each :	1 No. of Drawing with 132 sqm.
Number of Computer Centers with capacity of each:	1 no. of Computer Center with 100 capacity
No of Work Shop :	1 No. of Workshop with 200sq.m.
No of Additional Workshop :	1 No. of Additional Workshop with 200 sq.m.
No. of Seminar Hall :	1 No. of Seminar Hall with 264 sq.m 1 No. of Seminar Hall with 132 sq.m

- **Central Examination Facility:** Available
- Online examination facility(number of nodes,bandwidth): Available
- **Barrier Free Built Environment for disabled and elderly persons :** Yes
- **Occupancy Certificate:** Available
- **Fire and Safety Certificate:** Applied and under processing
- **Hostel Facilities:** Yes

Library

- **Number of Library books/ Titles/ Journals available (program-wise):**
  - Library books:15808
  - Titles: 2056
  - Journals: National- 20, International: 4
- **List of online National/ International Journals subscribed:** KOHA on cloud, J-Gate
- **E- Library facilities:** Available.

- **National digital library(NDL)subscription details: Member (Club Registration No.:INWBNC4FWW2EQZQ)**

Laboratory and Workshop

- List of Major Equipment/Facilities in each Laboratory/ Workshop

Department	Laboratories	Count	Norms
COMPUTER SCIENCE & ENGINEERING	S/W Tools, Computer Organization, Computer Architecture Lab, Design Analysis of Algorithm Lab, Data Communication & Networking Lab, Object Oriented Programming , Data Structure & Algorithm Lab, DBMS & E-commerce Lab	6	As per the affiliating University norms & standard
ECE	EM Theory &Txln Lab &, Microprocessors and Microcontroller Lab, Digital Electronics & Integrated Circuit Lab, Digital Communication, Analog Communication Design Lab (Industrial Training Lab), Analog Electronics & Digital Electronics Circuit Lab	6	As per the affiliating University norms & standard
EEE	Power Electronics Lab & Control System Lab, Electrical Machine I & II Lab, Electrical & Electronics Measurement Lab, Basic Electrical Lab, Power System Lab-II, Circuit Theory Lab & Network Lab, Transducer & Sensor Lab.	6	As per the affiliating University norms & standard
CIVIL ENGINEERING	Surveying & Geomatics, Soil Mechanics Lab , Solid Mechanics Lab, Concrete Lab, Fluid Mechanics Lab, High way & Transportation Engg Lab,	6	As per the affiliating University norms & standard
COMMON LABORATORIES	Numerical Methods & OR Lab, Mechanical Workshop, Engg drawing Lab, Basic Physics Lab, Basic Chemistry Lab, Language Lab, PROJECT Lab.	4	As per the affiliating University norms & standard

- List of Experimental Setup in each Laboratory/ Workshop: Experiment setup for few laboratories across the departments is given below.

Analog & Digital Electronics Lab
Course Code: ESC-391

Analog Electronics

1 Design a Class A amplifier
2 Design a Phase-Shift Oscillator
3 Design of a Schmitt Trigger using 555 timer

Digital Electronics

4 Design a Full adder using basic gates & verify its output
5 Construction of simple Decoder & Multiplexer circuits using logic gates.
6 Realization of RS / JK / D flip flops using logic gates
7 Design of Shift Register using J-K / D Flip Flop
8 Realization of Synchronous Up/Down counter
9 Design of MOD- N Counter
10 Study of DAC

Data Structure & Algorithm Lab
Course Code: PCC-CS391

Linear Data Structure

1 Implementation of array operations
2 stacks & Queues: adding, deleting elements Circular Queue: Adding & deleting
3 merging Problem: Evaluation of expressions operations on Multiple stacks & queues
4 implementation of linked list: inserting,deleting,inverting a linked list.
5 Polynomial addition, Polynomial multiplication

Non Linear Data Structure

6 Recursive and Non-recursive traversal of Trees
7 Threaded binary tree traversal. AVL tree implementation
8 Applications of Trees. Application of sorting and searching algorithms
9 hash table implementation: searching, inserting and deleting, searching & sorting techniques

Computer Organization Lab
Course Code: PCC-CS392

1 familiarity with IC Chips a: multiplexor, b: decoder, c: encoder,d: comparator
Truth table verification
2 Design an Adder/Subtractor composite unit.
3 Design a BCD adder.
4 Design of a 'Carry-Look-Ahead' Adder circuit.
5 Use a multiplexer unit to design a composite ALU
6 Use ALU chip for multibit arithmetic operation
7 Implement read write operation using RAM IC
8 (a) & (b) Cascade two RAM ICs for vertical and horizontal expansion.

IT Workshop
Course Code: PCC-CS392

Programming with python

Introduction

History, Features, Setting up path, Working with Python, Basic Syntax, Variable and DataTypes, Operator

Conditional Statements

If, If- else, Nested if-else, Looping, For, While, Nested loops

Control Statements

Break, Continue, Pass

String Manipulation

Accessing Strings, Basic Operations, String slices, Function and Methods

Lists

Introduction, Accessing list, Operations, Working with lists, Function and Methods

Tuple

Introduction, Accessing tuples, Operations, Working, Functions and Methods

Dictionaries

Introduction, Accessing values in dictionaries, Working with dictionaries, Properties

Functions

Defining a function, Calling a function, Types of functions, Function Arguments,Anonymous functions, Global and local variables

Modules

Importing module, Math module, Random module, Packages, Composition, Input-Output Printing on screen, Reading data from keyboard, Opening and closing file, Reading andwriting files, Functions

Exception Handling

Exception, Exception Handling, Except clause, Try? finally clause, User Defined Exceptions.

Computer Architecture LabCode: PCC-CS492

1	HDL introduction.
2	Basic digital logic base programming with HDL
3	8-bit Addition, Multiplication, Division
4	8-bit Register design
5	Memory unit design and perform memory operations.
6	8-bit simple ALU design
7	8-bit simple CPU design
8	Interfacing of CPU and Memory.

Design & Analysis Algorithm LabCode: PCC-CS494

Divide and Conquer:	
1	Implement Binary Search using Divide and Conquer approach Implement Merge Sort using Divide and Conquer approach
2	Implement Quick Sort using Divide and Conquer approach Find Maximum and Minimum element from a array of integer using Divide and Conquer approach
3	Find the minimum number of scalar multiplication needed for chain of matrix
4	Implement all pair of Shortest path for a graph (Floyed- Warshall Algorithm) Implement Traveling Salesman Problem
5	Implement Single Source shortest Path for a graph (Dijkstra , Bellman Ford Algorithm
Brunch and Bound:	
6	Implement 15 Puzzle Problem
Backtracking:	

7	Implement 8 Queen problem
8	Graph Coloring Problem Hamiltonian Problem
Greedy method	
9	Knapsack Problem Job sequencing with deadlines
10	Minimum Cost Spanning Tree by Prim's Algorithm Minimum Cost Spanning Tree by Kruskal's Algorithm
Graph Traversal Algorithm:	
11	Implement Breadth First Search (BFS)
12	Implement Depth First Search (DFS)

Software Engineering Lab Code:ESC591

- Problem Analysis and Project Planning -Thorough study of the problem – Identify Projectscope, Objectives and Infrastructure.
- Software Requirement Analysis – Describe the individual Phases/modules of the projectand Identify deliverables. Identify functional and non-functional requirements.
- Data Modeling – Use work products – data dictionary.
- Software Designing - Develop use case diagrams and activity diagrams, build and testclassdiagrams, sequence diagrams and add interface to class diagrams.
- Prototype model – Develop the prototype of the product.

The SRS and prototype model should be submitted for end semester examination.

Operating System LabCode: PCC-CS592

1 1. **Managing Unix/Linux Operating System [8P]:**
Creating a bash shell script, making a script executable, shell syntax (variables, conditions,control structures, functions, commands). Partitions, Swap space, Device files, Raw and Block files, Formatting disks,Making file systems, Superblock, I-nodes, File system checker, Mounting file systems, Logical Volumes, Network File systems, Backup schedules and methods Kernel loading, init and the inittab file, Run-levels, Run level scripts. Password file management, Password security, Shadow file, Groups and the group file, Shells, restricted shells, user-managementcommands, homes and permissions, default files, profiles, locking accounts, setting passwords, Switching user,Switching group, Removing users &user groups.
2. **Process [4P]**: starting new process, replacing a process image, duplicating a processimage, waiting for a process, zombie process.
3. **Signal [4P]**: signal handling, sending signals, signal interface, signal sets.
4. **Semaphore [6P]**: programming with semaphores (use functions semctl, semget,semop,set_semvalue, del_semvalue, semaphore_p, semaphore_v).
5. **POSIX Threads [6P]**: programming with pthread functions (viz. pthread_create,pthread_join, pthread_exit, pthread_attr_init, pthread_cancel)
6. **Inter-process communication [6P]**: pipes(use functions pipe, popen, pclose), namedpipes(FIFOs, accessing FIFO), message passing & shared memory(IPC version V).

Object Oriented Programming Lab
Code: PCC-CS593

1. Assignments on class, constructor, overloading, inheritance, overriding
2. Assignments on wrapper class, arrays
3. Assignments on developing interfaces- multiple inheritance, extending interfaces
4. Assignments on creating and accessing packages
5. Assignments on multithreaded programming
6. Assignments on applet programming

Note: Use Java for programming

Database Management System LabCode: PCC-CS691

Structured Query Language

1. Creating Database

- Creating a Database
- Creating a Table
- Specifying Relational Data Types
- Specifying Constraints
- Creating Indexes

2. Table and Record Handling

- INSERT statement
- Using SELECT and INSERT together
- DELETE, UPDATE, TRUNCATE statements
- DROP, ALTER statements

3. Retrieving Data from a Database

1. The SELECT statement
2. Using the WHERE clause
3. Using Logical Operators in the WHERE clause
4. Using IN, BETWEEN, LIKE , ORDER BY, GROUP BY and HAVING

Clause

5. Using Aggregate Functions
6. Combining Tables Using JOINS
7. Subqueries

4. Database Management

- Creating Views
- Creating Column Aliases
- Creating Database Users
- Using GRANT and REVOKE

5. Cursors in Oracle PL / SQL

6. Writing Oracle PL / SQL Stored Procedures

Computer Networks Lab Code: PCC-CS692

1) NIC Installation & Configuration (Windows/Linux)
2) Understanding IP address, subnet etcFamiliarization with
   - Networking cables (CAT5, UTP)

- Connectors (RJ45, T-connector)
- Hubs, Switches

3) TCP/UDP Socket Programming
   - Simple, TCP based, UDP based
   - Multicast & Broadcast Sockets
   - Implementation of a Prototype Multithreaded Server
4) Implementation of
   Data Link Layer Flow Control Mechanism (Stop & Wait, Sliding Window)Data Link Layer Error Detection Mechanism (Cyclic Redundancy Check) Data Link Layer Error Control Mechanism (Selective Repeat, Go Back N)
5) Server Setup/Configuration FTP, TelNet, NFS, DNS, Firewall

Department of ECE:

Paper Code- EC391 Paper Name- Electronics Devices Lab

Topics

1. identifying and study of different components like resistor, capacitors, diodes, LED, Transistors, FET(JFET & MOSFET) etc
2. Study of different instruments used in the laboratories like, power supply, Oscilloscope, Multimeter etc.
3. CHARACTERISTICS OF PN JUNCTION DIODE a) To Plot the Volt Ampere Characteristics of PN Junction Diode under Forward and Reverse Bias Conditions. b) To find the Cut-in voltage, Static Resistance, Dynamic Resistance for Forward Bias & Reverse Bias
4. CHARACTERISTICS OF ZENER DIODE & LOAD REGULATION a) To Obtain the Forward Bias and Reverse Bias characteristics of a Zener diode. b) Find out the Zener Break down Voltage from the Characteristics. c) To Obtain the Load Regulation Characteristics.
5. COMMON BASE BIPOLAR TRANSISTOR CHARACTERISTICS a) To plot the Input and Output characteristics of a transistor connected in Common Base Configuration and to find the h – parameters from the characteristics.
6. COMMON EMITTER BIPOLAR TRANSISTOR CHARACTERISTICS a) To plot the Input and Output characteristics of a transistor connected in Common Emitter Configuration and to find the h – parameters from the characteristics
7. DESIGN SELF BIAS BJT CIRCUIT
8. JFET DRAIN & TRANSFER CHARACTERISTICS (COMMON SOURCE) a) Drain characteristics b) Transfer Characteristics. c) To find rd, gm, and μ from the characteristics.
9. Study Characteristics of Photo transistor
10. Study Characteristics of LED & LDR Course Outcome a) An ability to verify the working of different diodes, transistors, CRO probes and measuring instruments. Identifying the procedure of doing the experiment. b) Ability to understand the characteristics of BJT and FET and how to Determine different parameters for designing purpose.. c) Ability to understand properties of photoelectric devices d) Ability to measure and record the experimental data, analyze the results, and prepare a formal laboratory report.

Paper Code- EC392 Paper Name - Digital System Design Lab

Topics

1. Introduction to Digital Electronics Lab- Nomenclature of Digital Ics, Specifications, Study of the Data Sheet, Concept of Vcc and Ground, Verification of the Truth Tables of Logic Gates using TTL ICs.
2. Implementation of the Given Boolean Function using Logic Gates in Both Sop and Pos Forms.
3. Verification of State Tables of Rs, J-k, T and D Flip-Flops using NAND & NOR Gates
4. Implementation and Verification of Decoder/De-Multiplexer and Encoder using Logic Gates.
5. Implementation of 4x1 Multiplexer using Logic Gates.
6. Implementation of 4-Bit Parallel Adder Using 7483 IC.
7. Design , and Verify the 4- Bit Synchronous Counter

8. Design, and Verify the 4-Bit Asynchronous Counter.
9. Simulation of MOS Inverter with different loads using PSPICE software
10. Simulation of CMOS Inverter for different parameters Kn, Kp as a design variable in suitable circuit simulator software.
11. Design of a 4-bit Multiplexer using VHDL\Verilog
12. Design of a decade counter using VHDL\Verilog.
13. Design of a 3-input NAND gate and its simulation using suitable logic simulator Book List 1. Douglas L.Perry, "VHDL: Programming by Example", McGraw-Hill, 2002. 2. Charles H. Roth, Lizy Kurian John, "Digital systems design using VHDL", Thomson, 2008.

Paper Code - ES-CS391 Paper Name - Data Structure & Algorithm Lab.

Topics

Experiments should include but not limited to :

1. Implementation of array operations:

   Stacks and Queues: adding, deleting elements Circular Queue: Adding & deleting elements Merging Problem: Evaluation of expressions operations on Multiple stacks & queues :
2. Implementation of linked lists: inserting, deleting, and inverting a linked list.
3. Implementation of stacks & queues using linked lists: Polynomial addition, Polynomial multiplication
4. Sparse Matrices: Multiplication, addition. Recursive and Non recursive traversal of Trees
5. Threaded binary tree traversal.
6. AVL tree implementation Application of Trees.
7. Application of sorting and searching algorithms Hash tables' implementation: searching, inserting and deleting, searching & sorting techniques.

Paper Code- **EC 491** Paper Name- **Analog Communication Lab**

1. Measurement of modulation index of an AM signal.
2. Measurement of output power with varying modulation index an AM signal(for both DSB- &SSB).
3. Measurement of distortion of the demodulated output with varying modulation index of an AM signal (for both DSB-SC & SSB).
4. Measurement of power of different frequency components of a frequency modulated signal & the measurement of the bandwidth.
5. Design and set up a PLL using VCO & to measure the lock frequency.
6. Design and set up a FM demodulator using PLL.
7. Measurement of SNR of a RF amplifier.
8. Measurement of selectivity, sensitivity, fidelity of a superheterodyne receiver.
9. One innovative experiment.

Paper Code: EC492 Paper Name: **Analog Electronic Circuits Lab**

1. Conduct experiment to test diode clipping (single/double ended) and clamping

   circuits (positive/negative).
2. Design and set up the following rectifiers with and without filters and to determine ripple factor and rectifier efficiency: (a). Full Wave Rectifier (b). Bridge Rectifier

3. Design and set up the BJT common emitter amplifier using voltage divider bias with and without feedback and determine the gain- bandwidth product from its frequency response.
4. Set-up and study the working of complementary symmetry class B push pull

   Power amplifier and calculate the efficiency
5. Realize BJT Darlington Emitter follower with and without bootstrapping and

   determine the gain, input and output impedances
6. Conduct an experiment on Series Voltage Regulator using Zener diode and

   Power transistor to determine line and load regulation characteristics.
7. Design and set-up the following tuned oscillator circuits using BJT, and determine the frequency of oscillation. R-C Phase shift Oscillator/Wien Bridge Oscillator
8. Plot the transfer & drain characteristics of n-Channel mosfet.& calculate its

   parameter namely drain resistance, mutual conductance & amplification factor
9. Design, setup and plot the frequency response of Common Source

   JFET/MOSFET amplifierand obtain the bandwidth.

Paper Code: EC493 Paper **Name: Microprocessor & Microcontroller Lab**

1. Familiarization with 8085 & 8051simulator on PC.
2. Study of prewritten programs using basic instruction set (data transfer, Load/Store, Arithmetic, Logical) on the KIT. Assignments based on above
3. Programming using kit and simulator for:
   - i) Table look up
   - ii) Copying a block of memory
   - iii) Shifting a block of memory
   - iv) Packing and unpacking of BCD numbers
   - v) Addition of BCD numbers
   - vi) Binary to ASCII conversion
   - vii) String Matching, Multiplication using shift and add method and Booth's Algorithm
4. Program using subroutine calls and IN/OUT instructions using 8255 PPI on the trainer kit e.g. subroutine for delay, reading switch state and glowing LEDs accordingly.
5. Study of timing diagram of an instruction on oscilloscope..
6. Interfacing of 8255: Keyboard and Multi-digit Display with multiplexing using 8255
7. Study of 8051 Micro controller kit and writing programs as mentioned in S/L3. Write programs to interface of Keyboard, DAC and ADC using the kit.
8. Serial communication between two trainer kits

Paper Code: BS-M491 **Paper Name: Numerical Methods Lab**

1. Assignments on Newton forward /backward, Lagrange's interpolation.
2. Assignments on numerical integration using Trapezoidal rule, Simpson's 1/3 rule, Weddle's rule.

3. Assignments on numerical solution of a system of linear equations using Gauss elimination and Gauss-Seidel iterations.
4. Assignments on numerical solution of Algebraic Equation by Regular-falsi and Newton Raphson methods.
5. Assignments on ordinary differential equation: Euler's and Runga-Kutta methods.
6. Introduction to Software Packages: Matlab / Scilab / Labview / Mathematica.

Paper Code: EC591 Paper Name: Electromagnetic Wave Laboratory

Module I:

1. Plotting of Standing Wave Pattern along a transmission line when the line is opencircuited, short-circuited and terminated by a resistive load at the load end.
2. Input Impedance of a terminated coaxial line using shift in minima technique.
3. Study of Smith chart on Matlab platform.
4. Simulation study of Smith chart - Single and double stub matching.

Module II:

5. Radiation Pattern of dipole antenna.
6. Radiation Pattern of a folded-dipole antenna.
7. Radiation pattern of a 3-element Yagi-Uda Antenna.
8. Beam width, gain and radiation pattern of a 3-element, 5-element and 7-element. Yagi-Uda antenna - Comparative study.
9. Radiation pattern, Gain, Directivity of a Pyramidal Horn Antenna

Paper Code: EC592 Paper Name: Digital Communication Laboratory

1.Design, implementation and study of all the properties of 7-length and 15-length pn sequences using shift register.
2.Study of PAM and demodulation
.3. Study of PCM and demodulation.
4.Study of line coders: polar/unipolar/bipolar NRZ ,RZ and Manchester.
5. Study of delta modulator and demodulator.
6. Study of adaptive delta modulator and demodulator.
7 Study of BPSK modulator and demodulator.
8. Study of BFSK modulator and demodulator.
9. Study of ASK modulator and demodulator.
10.Study of QPSK modulator and demodulator.
11. Simulation study of probability of symbol error for BPSK modulation.
12. Simulation study of probability of symbol error for BFSK modulation.

Paper Code: EC593 Paper Name: Digital Signal Processing Laboratory

Simulation Laboratory using standard Simulator:

1. Sampled sinusoidal signal, various sequences and different arithmetic operations.
2. Convolution of two sequences using graphical methods and using commands verification of the properties of convolution.
3. Z-transform of various sequences - verification of the properties of Z-transform.
4. Twiddle factors - verification of the properties.
5. DFTs / IDFTs using matrix multiplication and also using commands.
6. Circular convolution of two sequences using graphical methods and using commands, differentiation between linear and circularconvolutions.
7. Verifications of the different algorithms associated with filtering of long data sequences and Overlap -add and Overlap-save methods.
8. Butterworth filter design with different set of parameters.
9. FIR filter design using rectangular, Hamming and Blackman windows.

Hardware Laboratory using DSP Processor and Xilinx FPGA:

Paper Code: EC692 Paper Name: Computer Network Lab

1. IPC (Message queue)
2. NIC Installation & Configuration (Windows/Linux)
3. Familiarization with a) Networking cables (CAT5, UTP)
b) Connectors (RJ45, T-connector)
c) Hubs, Switches
4. TCP/UDP Socket Programming
5. Multicast & Broadcast Sockets
6. Implementation of a Prototype Multithreaded Server
7. Implementation of a) Data Link Layer Flow Control Mechanism (Stop & Wait, Sliding Window). b) Data Link Layer Error Detection Mechanism (Cyclic Redundancy Check). c) Data Link Layer Error Control Mechanism (Selective Repeat, Go Back N)

Paper Code: EC691 Paper Name: Control and Instrumentation Laboratory

1. Familiarization with MATLAB control system toolbox and representation of pole zero and transfer function of control system.
2. Determination of transfer function of a given system from its state model and its vice-versa.
3. Determination of impulse & step response for 2nd order under damped system on CRO & calculation of control system specifications for variation of system design.
4. Determination of root Locus from transfer function and evaluation of system parameters like marginal value of gain, frequency etc. of a given control system.
5. Drawing of Nyquist plot and Bode plot from transfer function of a control system and estimation of relative system parameters like gain margin, phase margin etc.
6. Design PI, PD and PID controller for specified system requirements.
7. Study of static (accuracy, precision, repeatability, linearity) and dynamic (fidelity, speed of response) characteristics of a measuring instrument.
8. Design and study of Instrumentation Amplifier.
9. Study and analysis of electrical signal with CRO.

Paper Code EC681 Paper Name: Mini Project/ Electronic Design Workshop

1. The mini-project is a team activity having 3-4 students in a team. This is electronic product design work with a focus on electronic circuit design.
2. The mini project may be a complete hardware or a combination of hardware and software. The software part in mini project should be less than 50% of the total work.
3. Mini Project should cater to a small system required in laboratory or real life.
4. It should encompass components, devices, analog or digital ICs, micro controller with which functional familiarity is introduced.
5. After interactions with course coordinator and based on comprehensive literature survey/ need analysis, the student shall identify the title and define the aim and objectives of mini-project.
6. Student is expected to detail out specifications, methodology, resources required, critical issues involved in design and implementation and submit the proposal within first week of the semester.
7. The student is expected to exert on design, development and testing of the proposed work as per the schedule.
8. Art work and Layout should be made using CAD based PCB simulation software. Due considerations should be given for power requirement of the system, mechanical aspects for enclosure and control panel design.
9. Completed mini project and documentation in the form of mini project report is to be submitted at the end of semester.
10. The tutorial sessions should be used for discussion on standard practices used for electronic circuits/product design, converting the circuit design into a complete electronic product, PCB design using suitable simulation software, estimation of power budget analysis of the product, front panel design and mechanical aspects of the product, and guidelines for documentation /report writing

Department of EEE:

Electric circuit theory

PC-EEE391

1. Transient response of R-L and R-C network: simulation with software & hardware
2. Transient response of R-L-C series and parallel circuit: simulation with software & hardware
3. Determination of Impedance (Z) and Admittance (Y) parameter of two-port network: simulation & hardware.
4. Frequency response of LP and HP filters: simulation & hardware.
5. Frequency response of BP and BR filters: simulation & hardware.
6. Generation of Periodic, Exponential, Sinusoidal, Damped Sinusoidal, Step, Impulse, Ramp signal using MATLAB in both discrete and analog form.
7. Determination of Laplace transform and Inverse Laplace transform using MATLAB.
8. Amplitude and Phase spectrum analysis of different signals using MATLAB.
9. Verification of Network theorems using software & hardware

Analog electronic laboratory

PC-EEE392

1. Study of ripple and regulation characteristics of full wave rectifier with and without capacitor filter.
2. Study of Zener diode as voltage regulator.
3. Study of characteristics curves of B.J.T &F.E.T .
4. Construction of a two-stage R-C coupled amplifier & study of it's gain & Bandwidth.
5. Study of class A, C & Push-Pull amplifiers.
6. Study of timer circuit using NE555 & configuration for monostable & astable and bistable multivibrator
7. Study of Switched Mode Power Supply & construction of a linear voltage regulator using regulator IC chip
8. Construction of a simple function generator using IC.
9. Realization of a V-to-I & I-to-V converter using Op-Amps.
10. Realization of a Phase Locked Loop using Voltage Controlled Oscillator (VCO).
11. Study of D.A.C & A.D.C.

Numerical Methods laboratory

PC-CS 391

1. Assignments on Newton forward /backward, Lagrange's interpolation.
2. Assignments on numerical integration using Trapezoidal rule, Simpson's 1/3 rule, Weddle's rule.
3. Assignments on numerical solution of a system of linear equations using Gauss elimination and Gauss-Seidel iterations
4. Assignments on numerical solution of Algebraic Equation by Regular-falsi and Newton Raphson methods.
5. Assignments on ordinary differential equation: Euler's and Runga-Kutta methods.
6. Introduction to Software Packages: Matlab / Scilab / Labview / Mathematica.

ELECTRIC MACHINE-I LABORATORY
PC-EEE-491

1. Determination of the characteristics of a separately excited DC generator.
2. Determination of the characteristics of a DC motor
3. Study of methods of speed control of DC motor
4. Determination of the characteristics of a compound DC generator (short shunt)
5. Determination of speed of DC series motor as a function of load torque.
6. Polarity test on a single phase transformer
7. Determination of equivalent circuit of a single phase transformer and efficiency.
8. Study of different connections of three phase transformer.
9. Study of Parallel operation of a single phase transformers.
10. Determination of temperature rise and efficiency of the transformer.(Back to back test)

DIGITAL ELECTRONICS LABORATORY
PC-EEE-492

1. Realization of basic gates using Universal logic gates.
2. Code conversion circuits- BCD to Excess-3 & vice-versa.
3. .4-bit parity generator & comparator circuits.
4. Construction of simple Decoder & Multiplexer circuits using logic gates.
5. Design of combinational circuit for BCD to decimal conversion to drive 7-segment display using multiplexer.
6. Construction of simple arithmetic circuits-Adder, Subtractor.
7. Realization of RS-JK & D flip-flops using Universal logic gates.
8. Realization of Universal Register using JK flip-flops & logic gates.
9. Realization of Universal Register using multiplexer & flip-flops.
10. Construction of Adder circuit using Shift Register & full Adder.
11. Realization of Asynchronous Up/Down counter
12. Realization of Synchronous Up/Down counter
13. Design of Sequential Counter with irregular sequences.
14. Realization of Ring counter & Johnson's counter.
15. Familiarization with A/D and D/A circuits.

ELECTRICAL & ELECTRONICS MEASUREMENT LABORATORY
PC-EEE-493

1. Instrument workshop- Observe the construction of PMMC, Dynamometer, Electrothermal and Rectifier type of instruments, Oscilloscope and Digital multimeter.
2. Calibrate moving iron and electrodynamometer type ammeter/voltmeter by potentiometer.
3. Calibrate dynamometer type wattmeter by potentiometer.
4. Calibrate AC energy meter.
5. Measurement of resistance using Kelvin double bridge.
6. Measurement of power using Instrument transformer.
7. Measurement of power in Polyphase circuits.
8. Measurement of frequency by Wien Bridge.
9. Measurement of Inductance by Anderson bridge
10. Measurement of capacitance by De Sauty Bridge.
11. Measurement of capacitance by Schering Bridge

THERMAL POWER ENGINEEING LABORATORY
ES-ME-491

1. Study of Cut Models – Boilers IC Engines: Lanchashire Boiler, Bahcock& Willcox Boiler, Cochran Boiler, Vertical Tubular Boiler, Locomotive Boiler, 4S Diesel Engine, 4S Petrol Engine, 2S Petrol Engine
2. Load Test on 4 Stroke Petrol Engine & Diesel Engine by Electrical Load Box.
3. Load Test on 4 Stroke Diesel Engine by Rope Brake Dynamometer.
4. Heat Balance on 4 Stroke Diesel Engine by Rope Brake Dynamometer & by Electrical Load Box.
5. Valve Timing Diagram on 4S Diesel Engine Model & 4S Petrol Engine Model
6. To find the Calorific Value of Diesel Fuel & Coal by Bomb Calorimeter
7. To find the Flash Point & Fire Point of Petrol & Diesel Fuel
8. To find the Cloud Point & Pour Point of Petrol & Diesel Fuel
9. To find Carbon Particle Percentage in Diesel Engine Exhaust Smoke by Smokemeter and trace the BHP Vs. % Carbon Curve
10. Measurement of the Quality of Steam – Enthalpy & Dryness fraction

ELECTRIC MACHINE-IILABORATORY
PC-EEE 591

1. Different methods of starting of a 3 phase Cage Induction Motor & their comparison [DOL, Auto transformer &Star-Delta]
2. Study of equivalent circuit of three phase Induction motor by no load and blocked rotor test.
3. Study of performance of wound rotor Induction motor under load.
4. Study of performance of three phase squirrel- cage Induction motor –determination of iron-loss, friction & windage loss.
5. Speed control of 3 phase squirrel cage induction motor by different methods & their comparison [voltage control & frequency control].
6. Speed control of 3 phase slip ring Induction motor by rotor resistance control
7. Determination of regulation of Synchronous machine by a. Potier reactance method. b. Synchronous Impedance method.
8. Determination of equivalent circuit parameters of a single phase Induction motor.
9. Load test on single phase Induction motor to obtain the performance characteristics.
10. To determine the direct axis resistance [Xd] & quadrature reactance [Xq] of a 3 phase synchronous machine byslip test.
11. Load test on wound rotor Induction motor to obtain the performance characteristics.
12. To make connection diagram to full pitch & fractional slot winding of 18 slot squirrel cage Induction motor for6 poles & 4 pole operation
13. To study the performance of Induction generator
14. Parallel operation of 3 phase Synchronous generators

15. V-curve of Synchronous motor

CONTROL SYSTEMLABORATORY

PC-EEE 592

1. Familiarization with MAT-Lab control system tool box, MAT-Lab- simulink tool box & PSPICE
2. Determination of Step response for first order & Second order system with unity feedback with the help of CRO &calculation of control system specification , Time constant, % peak overshoot, settling time etc. from the response.
3. Simulation of Step response & Impulse response for type-0, type-1 & Type-2 system with unity feedback using MATLAB & PSPICE.
4. Determination of Root locus, Bode plot, Nyquist plot using MATLAB control system tool box for 2nd order system & determination of different control system specification from the plot.
5. Determination of PI, PD and PID controller action of first order simulated process.
6. Determination of approximate transfer functions experimentally from Bode plot.
7. Evaluation of steady state error, setting time , percentage peak overshoot, gain margin, phase margin with addition of Lead, Lag, Lead-lag compensator.
8. Study of a practical position control system obtaining closed step responses for gain setting corresponding to over-damped and under-damped responses. Determination of rise time and peak time using individualized components by simulation. Determination of un-damped natural frequency and damping ration from experimental data.
9. Design of Lead, Lag and Lead-Lag compensation circuit for the given plant transfer function. Analyze step response of the system by simulation.
10. Determination of Transfer Function of a given system from State Variable model and vice versa. Analysis of a physical system by State variable and to obtain step response for the system by simulation.
11. Study of State variable analysis using simulation tools. To obtain step response and initial condition response for a single input, two-output system in SV form by simulation.

POWER ELECTRONICSLABORATORY

PC-EEE 593

1. Study of the characteristics of an SCR.
2. Study of the characteristics of a Triac
3. Study of different triggering circuits of an SCR
4. Study of firing circuits suitable for triggering SCR in a single phase full controlled bridge.
5. Study of the operation of a single phase full controlled bridge converter with R and R-L load. 6. Study of performance of single phase half controlled symmetrical and asymmetrical bridge converters.
7. Study of performance of step down chopper with R and R-L load.
8. Study of performance of single phase controlled converter with and without source inductance (simulation)
9. Study of performance of step up and step down chopper with MOSFET, IGBT and GTO as switch (simulation)
10. Study of performance of single phase half controlled symmetrical and asymmetrical bridge converter.(simulation)
11. Study of performance of three phase controlled converter with R & R-L load. (simulation) 12. Study of performance of PWM bridge inverter using MOSFET as switch with R and R-L load.

ELECTRICAL AND ELECTRONICS DESIGN LABORATORY
PC-EEE 681

GROUP A

1. Designing a heating element with specified wattage, voltage and ambient temperature.
2. Designing an aircore grounding reactor with specified operating voltage, nominal current and fault current
3. Designing the power distribution system for a small township
4. Designing a double circuit transmission line for a given voltage level and power (MVA) transfer.
5. Wiring and installation design of a multistoried residential building (G+4,not less than 16 dwelling flats with a lift and common pump)

GROUP B

6. Designing an ONAN distribution transformer.
7. Designing a three phase squirrel cage induction motor.
8. Designing a three phase wound rotor induction motor.
9. Designing a split phase squirrel cage induction motor for a ceiling fan or a domestic pump
10. Designing a permanent magnet fractional hp servo motor .

GROUP C

11. Design the control circuit of a Lift mechanism
12. Design a controller for speed control of DC machine.
13. Design a controller for speed control of AC machine.
14. Electronic system design employing electronic hardware (Analog, Digital, Mixed signal), microcontrollers, CPLDs, and FPGAs, PCB design and layout leading to implementation of an application

POWER SYSTEM-II LABORATORY
PC-EEE 691

1. Study on the characteristics of on load time delay relay and off load time delay relay.
2. Test to find out polarity, ratio and magnetization characteristics of CT and PT.
3. Test to find out characteristics of (a) under voltage relay (b) earth fault relay.
4. Study on DC load flow
5. Study on AC load flow using Gauss-seidel method
6. Study on AC load flow using Newton Raphson method.
7. Study on Economic load dispatch.
8. Study of different transformer protection schemes by simulation
9. Study of different generator protection schemes by simulation
10. Study of different motor protection schemes by simulation
11. Study of different characteristics of over current relay.
12. Study of different protection scheme for feeder.

MICRO PROCESSOR AND MICRO CONTROLLER LABORATORY
PC-EEE 692

1. Programs for 16 bit arithmetic operations for 8086 (using various addressing modes)
2. Program for sorting an array for 8086
3. Program for searching for a number or character in a string for 8086
4. Program for String manipulations for 8086
5. Program for digital clock design using 8086.
6. Interfacing ADC and DAC to 8086.
7. Parallel communication between two microprocessors using 8255.
8. Serial communication between two microprocessor kits using 8251.
9. Interfacing to 8086 and programming to control stepper motor.
10. Programming using arithmetic, logical and bit manipulation instructions of 8051
11. Program and verify Timer/Counter in 8051.
12. Program and verify interrupt handling in 8051.
13. UART operation in 8051.
14. Interfacing LCD to 8051.
15. Interfacing matrix or keyboard to 8051.

16. Data transfer from peripheral to memory through DMA controller 8237/8257

DIGITAL SIGNAL PROCESSING LABORATORY
PC-EEE 891

1. Sampled sinusoidal signal, various sequences and different arithmetic operation.
2. Convolution of two sequences using graphical methods and using commands-verification of the properties of convolution.
3. Z transform of various sequences-verification of the properties of Z transform.
4. Twiddle factors-verification of the properties.
5. DFTs/IDFTs using matrix multiplication and also using commands.
6. Circular convolution of two sequences using graphical methods and using commands. Differentiation between linear and circular convolutions
7. Verification of the different algorithms associated with filtering of long data sequences and Overlap add and Overlap-save methods.
8. Butterworth filter design with different set of parameters.
9. FIR filter design using rectangular, Hamming and Blackman windows.

Hardware laboratory using either 5416 or 6713 Processor and Xilinx FPGA:

10. Writing & execution of small programs related to arithmetic operation and convolution using assembly language of TMS320C5416/6713 processor. Study of MAC instruction.
11. Writing of small programs in VHDL and downloading onto Xilinx FPGA.
12. Mapping of some DSP algorithms onto FPGA

Department of CE:

CE(ES)391 Basic Electronics

Module 1: Laboratory Sessions covering, Identification, Specifications, Testing of R, L, C Components (Colour Codes), Potentiometers, Switches (SPDT, DPDT and DIP), Bread Boards and Printed Circuit Boards (PCBs); Identification, Specifications, Testing of Active Devices – Diodes, BJTs, JFETs, MOSFETs, Power Transistors, SCRs and LEDs;

Module 2: Study and Operation of Digital Multi Meter, Function / Signal Generator, Regulated Power Supply (RPS), Cathode Ray Oscilloscopes; Amplitude, Phase and Frequency of Sinusoidal Signals using Lissajous Patterns on CRO; (CRO);

Module 3: Experimental Verification of PN Junction Diode Characteristics in A) Forward Bias B) Reverse Bias, Zener Diode Characteristics and Zener Diode as Voltage Regulator, Input and Output Characteristics of BJT in Common Emitter (CE) Configuration, Drain and Transfer Characteristics of JFET in Common Source (CS) Configuration;

Module 4: Study of Half Wave and Full Wave Rectification, Regulation with Filters, Gain and Bandwidth of BJT Common Emitter (CE) Amplifier, Gain and Bandwidth of JFET Common Source(CS) Amplifier, Gain and Bandwidth of BJT Current Series and Voltage Series Feedback Amplifiers,Oscillation Frequency of BJT based RC Phase Shift, Hartley and Colpitts Oscillators;
Module 5: Op-Amp Applications – Adder, Subtractor, Voltage Follower and Comparator; Op-Amp Applications – Differentiator and Integrator, Square Wave and Triangular Wave Generation, Applications of 555 Timer – Astable and Monostable Multivibrators;

Module 6: Truth Tables and Functionality of Logic Gates – NOT, OR, AND, NOR, NAND, XOR and XNOR Integrated Circuits (ICs); Truth Tables and Functionality of Flip-Flops – SR, JK and DFlip-Flop ICs; Serial-In-Serial-Out and Serial-In-Parallel-Out Shift operations using 4-bit/8-bit ShiftRegister ICs; Functionality of Up-Down / Decade Counter ICs;

CE(ES)392 Computer-aided Civil Engineering Drawing

Module 1: INTRODUCTION
Introduction to concept of drawings, Interpretation of typical drawings, Planning drawings to show information concisely and comprehensively; optimal layout of drawings and Scales; Introduction to computer aided drawing, co-ordinate systems, reference planes. Commands: Initial settings, Drawing aids, Drawing basic entities, Modify commands, Layers, Text and Dimensioning, Blocks. Drawing presentation norms and standards.

Module 2: SYMBOLS AND SIGN CONVENTIONS
Materials, Architectural, Structural, Electrical and Plumbing symbols. Rebar drawings and structural steel fabrication and connections drawing symbols, welding symbols; dimensioning standards

Module 3: MASONRY BONDS
English Bond and Flemish Bond – Corner wall and Cross walls -One brick wall and one and half brick wall

Module 4: BUILDING DRAWING
Terms, Elements of planning building drawing, Methods of making line drawing and detailed drawing. Site plan, floor plan, elevation and section drawingof small residential buildings. Foundation plan. Roof drainage plans. Depicting joinery, standardfittings & fixtures, finishes. Use of Notes to improve clarity

Module 5: PICTORIAL VIEW
Principles of isometrics and perspective drawing. Perspective viewof building. Fundamentals of Building Information Modelling (BIM)

CE(ES)393 Life Science

Module 1A: Plant Physiology
Transpiration; Mineral nutrition

Module 1B: Ecology e ms- Components, types, flow of matter and energy in an ecosystem; Community, ecology- Characteristics, frequency, life forms, and biological spectrum; Ecosystem structure- Biotic and a-biotic factors, food chain, food web, ecological pyramids;

Module 2A: Population Dynamics
Population ecology- Population characteristics, ecotypes; Population genetics- Concept of gene pool and genetic diversity in populations, polymorphism and heterogeneity;

Module 2B Environmental Management
Principles: Perspectives, concerns and management strategies; Policies and legal aspects- Environment Protection Acts and modification, International Treaties; Environmental Impact Assessment- Case studies (International Airport, thermal power plant)

Module 3A Molecular Genetics
Structures of DNA and RNA; Concept of Gene, Gene regulation, e.g., Operon concept

Module 3B Biaostic Totipotency and Cell manipulation; Plant &Animal tissue culture- Methods and uses in agriculture, medicine and health; Recombinant DNATechnology- Techniques and applications

Module 4 Biostatistics:-Terms used, types of data;Measures of Central Tendencies- Mean, Median, Mode, Normal and Skewed distributions; Analysis of Data- Hypothesis testing and ANNOVA (single factor)

Module 5 Laboratory & Field work Sessions
Comparison of stomatal index in different plants; Study of mineral crystals in plants; Determination of diversity indices in plant communities;To construct ecological pyramids of population sizes in an ecosystem; Determination of ImportanceValue Index of a species in a plant community; Seminar (with PPTs) on EIA of a Mega-Project (e.g.,Airport, Thermal/Nuclear Power Plant/ Oil spill scenario); Preparation and extraction of genomic DNA and determination of yield by UV absorbance; Isolation of Plasmid DNA and its separation byGel Electrophoresis; Data analysis using Bio-statistical tools

CE(ES)491 Fluid Mechanics Laboratory

Experiment 1 Calibration of Notches
Experiment 2 Calibration of Orifice meter
Experiment 3 Determination of Hydraulic Coefficient of an Orifice
Experiment 4 Performance Test on Centrifugal Pump
Experiment 5 Performance Test on Reciprocating Pump
Experiment 6 Determination of Minor Losses in Pipes due to Sudden Enlargement and Sudden Contraction
Experiment 7 Performance Test on Pelton Wheel Turbine
Experiment 8 Measurement of water surface profile for flow over Broad crested weir
Experiment 9 Measurement of water surface profile for a hydraulic jump

CE(ES)492 Solid Mechanics Laboratory

Experiment 1 Tension test on Structural Materials: Mild Steel and Tor steel (HYSD bars)
Experiment 2 Compression Test on Structural Materials: Timber, bricks and concrete cubes
Experiment 3 Bending Test on Mild Steel
Experiment 4 Torsion Test on Mild Steel Circular Bar
Experiment 5 Hardness Tests on Ferrous and Non-Ferrous Metals: Brinnel and Rockwell Tests
Experiment 6 Test on closely coiled helical spring
Experiment 7 Impact Test: Izod and Charpy
Experiment 8 Demonstration of Fatigue Test

CE(ES)493 Engineering Geology Laboratory

Experiment 1 Identification of minerals in hand specimen
Experiment 2 Identification of igneous rocks in hand specimen
Experiment 3 Identification of sedimentary rocks in hand specimen
Experiment 4 Identification of metamorphic rocks in hand specimen
Experiment 5 Study of crystals with the help of crystal models
Experiment 6 Study of geologic structures with the help of models

Experiment 7 Interpretation of geological maps: horizontal, vertical, uniclinal, folded and faulted structures
Experiment 8 Microscopic study of rocks and minerals

CE(PC)493 Surveying & Geomatics Laboratory

Experiment 1 Traverse survey by Prismatic Compass: Procedure; Computation and checks on closed traverse; Preparation of field book; Plotting the traverse; Sources of errors.
Experiment 2 Theodolite Survey: Closed traverse by transit theodolite, Preparation of field book
Experiment 3 Differential Levelling using Dumpy level: Collimation and Rise and Fall methods, Field book preparation
Experiment 4 Total Station Survey: Traversing and Levelling
Experiment 5 Visual Image Interpretation
Experiment 6 Satellite Image Pre-processing
Experiment 7 Digital Image Classification and Accuracy Assessment
Experiment 8 Stereoscopic fusion of aerial photographs using mirror stereoscope

CE(PC)494 Concrete Technology Laboratory

Test on Fine aggregates: Bulking, Specific gravity, Bulk Density, Percentage voids, Fineness Modulus. Grading curve.
Test on Coarse aggregates : Specific gravity, Bulk Density, Percentage voids, Fineness Modulus. Grading curve.
Test on Cement : Normal consistency, fineness, Initial setting and final setting time of cement. Specific gravity, soundness and Compressive strength of Cement.
Test on Fresh Concrete: Concrete mix design, Various workability tests – slump, compacting factor, vee-bee test.
Test on Hardened Concrete Spilt-tensile strength test, Flexure test, NDT Tests (Rebound hammer and Ultra-sonic pulse velocity), Poission ratio.

CE(PC)594Soil Mechanics Laboratory

Experiment 1 Field identification of different types of soil as per Indian Standards [collection of field samples and identifications without laboratory testing].
Experiment 2 Determination of natural moisture content.
Experiment 3 Determination of specific gravity of cohesionless and cohesive soils.
Experiment 4 Determination of in-situ density by core cutter method and sand replacement method.
Experiment 5 Determination of grain size distribution by sieve and hydrometer analysis.
Experiment 6 Determination of Atterberg limits (liquid limit, plastic limit and shrinkage limit).
Experiment 7 Determination of co-efficient of permeability by constant and variable head permeability tests.
Experiment 8 Determination of compaction characteristics of soil by standard proctor compaction test.
Experiment 9 Determination of unconfined compressive strength of soil by unconfined compression test.
Experiment 10 Determination of shear strength parameters of soil by direct shear test.
Experiment 11 Determination of undrained shear strength of soil by vane shear test.
Experiment 12 Determination of shear strength parameters of soil by unconsolidated undrained triaxial test
Experiment 13 Determination of California Bearing Ratio (CBR) of soil.
Experiment 14 Determination of relative density of soil
Experiment 15 Standard Penetration Test.

CE (PC) 595 Environmental Engineering

Experiment 1 Determination of turbidity for a given sample of water
Experiment 2 Determination of electrical conductivity for a given sample of water
Experiment 3 Determination of Total Solids, Suspended Solids, Dissolved Solids and Volatile Solids in a given sample

of water

Experiment 4 Determination of pH for a given sample of water
Experiment 5 Determination of carbonate, bi-carbonate and hydroxide alkalinity for a given sample of water
Experiment 6 Determination of acidity for a given sample of water
Experiment 7 Determination of hardness for a given sample of water
Experiment 8 Determination of concentration of Iron in a given sample of water
Experiment 9 Determination of concentration of Chlorides in a given sample of water
Experiment 10 Determination of the Optimum Alum Dose for a given sample of water through Jar Test
Experiment 11 Determination of the Chlorine Demand and Break-Point Chlorination for a given sample of water
Experiment 12 Determination of amount of Dissolved Oxygen (DO) in a given sample of water
Experiment 13 Determination of the Biochemical Oxygen Demand (BOD) for a given sample of wastewater
Experiment 14 Determination of the Chemical Oxygen Demand (COD) for a given sample of wastewater
Experiment 15 Determination of Colliform Bacteria: presumptive test, Confirmative test and Determination of MPN

CE (PC) 596 Transportation Engineering Laboratory

Experiment 2 Crushing Strength Test of aggregate
Experiment 3 Impact test of aggregate
Experiment 4 Los Angeles Abrasion test of aggregate
Experiment 5 Specific Gravity and Water Absorption test of aggregate
Experiment 6 Specific Gravity test
Experiment 7 Penetration test
Experiment 8 Static or Kinematic viscosity
Experiment 9 Softening point test
Experiment 10 Flash and Fire Point test
Experiment 11 Ductility test
Experiment 12 CBR value of sub-grade (Soaked and unsoaked)
Experiment 13 Marshall Stability test

CE (PC) 693 Water Resource Engineering Laboratory

Experiment 1 Catchment area delineation (Manually and using DEM)
Experiment 2 Calculation of average rainfall over a catchment area with arithmetic mean method, Thiessen polygon method and isohyetal method.
Experiment 3 Use of different type of Rain gauges.
Experiment 4 Measurement of infiltration rate using double ring infiltrometer.
Experiment 5 Measurement of evaporation using evaporimeter.
Experiment 6 Measurement of bright sunshine hours using sunshine recorder.

Basic Science Courses

Chemistry-ILaboratory

BS-CH191

1. Conductometric titration for determination of the strength of a given HCl solution by titration against a standard NaOH solution.
2. pH- metric titration for determination of strength of a given HCl solution against a standard NaOH solution.
3. Determination of dissolved oxygen present in a given water sample.
4. To determine chloride ion in a given water sample by Argentometric method (using chromate indicator solution)
5. Determination of surface tension and viscosity
6. Thin layer chromatography
7. Ion exchange column for removal of hardness of water
8. Determination of the rate constant of a reaction
9. Determination of cell constant and conductance of solutions
10. Potentiometry - determination of redox potentials and emfs.
11. Saponification/acid value of an oil
12. Chemical analysis of a salt
13. Determination of the partition coefficient of a substance between two immiscible liquids
14. Adsorption of acetic acid by charcoal
15. Use of the capillary viscosity meters to the demonstrate of the iso-electric point as the pH of minimum viscosity for gelatin sols and/or coagulation of the white part of egg.

Basic Electrical Engineering Laboratory

ES-EE191

1. First activity: Introduction to basic safety precautions and mentioning of the do's and Don'ts. Noting down list of experiments to be performed, and instruction for writing the laboratory reports by the students. Group formation. Students are to be informed about the modalities of evaluation.
2. Introduction and uses of following instruments : (a) Voltmeter (b) Ammeter (c) Multimeter (d) Oscilloscope Demonstration of real life resistors, capacitors with color code , inductors and autotransformer.
3. Demonstration of cut-out sections of machines: DC machine, Induction machine, Synchronous machine and single phase induction machine.

4. Calibration of ammeter and Wattmeter.

5. Determination of steady state and transient response of R-L, R-C and R-L-C circuit to a step change in voltage.

6. Determination of steady state response of R-L and R-C and R-L-C circuit and calculation of impedance and power factor.

7. Determination of resonance frequency and quality factor of series and parallel R-L-Circuit.

8. (a) Open circuit and short circuit test of a single-phase transformer (b) Load test of the transformer and determination of efficiency and regulation

9. Demonstration of three phase transformer connections. Voltage and current relationship, phase shifts between the primary and secondary side.

10. Measurement of power in a three phase unbalanced circuit by two wattmeter method.

11. Determination of Torque –Speed characteristics of separately excited DC motor.

12. Determination of Torque speed characteristics and observation of direction reversal by change of phase sequence of connection of Induction motor.

13. Determination of operating characteristics of Synchronous generator.

14. Demonstration of operation of (a) DC-DC converter (b) DC-AC converter (c) DC-AC converter for speed control of an Induction motor

15. Demonstration of components of LT switchgear

Engineering Graphics & Design

ES-ME191

1. Introduction to engineering drawing

2. Lettering, dimensioning, scales

3. Geometrical construction and curves

4. Projection of points, lines, surfaces

5. Projection of regular solids

6. Combination of regular solids, floor plans

7. Isometric projections

8. Sections and sectional views of right angular solids

9 overview of computer graphics, customisation&cad drawing

10. Annotations, layering & other functions

11. Demonstration of a simple team design project

Physics-I Laboratory

BS-PH191

Experiments in Optics

1. Determination of dispersive power of the material of a prism
2. Determination of wavelength of a monochromatic light by Newton's ring
3. Determination of wavelength of a monochromatic light by Fresnel's bi-prism
4. Determination of wavelength of the given laser source by diffraction method

Electricity & Magnetism experiments

1. Determination of thermo electric power of a given thermocouple.
2. Determination of specific charge (e/m) of electron by J.J. Thompson's method.
3. Determination of dielectric constant of a given dielectric material.
4. Determination of Hall coefficient of a semiconductor by four probe method.
5. To study current voltage characteristics, load response, areal characteristic and spectral response of a photovoltaic solar cell.
6. Determination of resistance of ballistic galvanometer by half deflection method and study of variation of logarithmic decrement with series resistance.
7. Determination of unknown resistance using Carey Foster's bridge
8. Study of Transient Response in LR, RC and LCR circuits using experiments.
9. Generating sound from electrical energy using experiments.

Experiments in Quantum Physics

1. Determination of Stefan-Boltzmann constant.
2. Determination of Planck constant using photocell.
3. Determination of Lande-g factor using Electron spin resonance spectrometer.
4. Determination of Rydberg constant by studying Hydrogen spectrum.
5. Determination of Band gap of semiconductor.
6. To study current voltage characteristics, load response, areal characteristic and spectral response of a photovoltaic solar cell.

Miscellaneous experiments

1. Determination of Young's modulus of elasticity of the material of a bar by the method of flexure

2. Determination of bending moment and sheer force of a rectangular beam of uniform cross-section
3. Determination of modulus of rigidity of the material of a rod by static method
4. Determination of rigidity modulus of the material of a wire by dynamic method
5. To determine the moment of inertia of a body about an axis passing through its centre of gravity andto determine the modulus of rigidity of the material of the suspended wire
6. Determination of coefficient of viscosity by Poiseulle's capillary flow method

Workshop/ManufacturingPractices

ES-ME192

1. Manufacturing Methods- casting, forming, machining, joining, advanced manufacturingmethods
2. CNC machining, Additive manufacturing
3. Fitting operations & power tools
4. Electrical &Electronics
5. Carpentry
6. Plastic molding, glass cutting
7. Metal casting
8. Welding (arc welding & gas welding), brazing

Computing Facilities

- **Internet Bandwidth :** 300 mbps
- **Number and configuration of System:** 180
- **Total number of system connected by LAN:** 180
- **Total number of system connected by WAN:** 180
- **Major software packages available:** MATLAB, XYLINX, ORACLE, AUTOCAD etc.
- **Special purpose facilities available:** Nil
- **Facilities for conduct of classes/courses in online mode (Theory & Practical):** YES
- **Innovation Cell:** Available
- **Social Media Cell:** Available
- Compliance of the National Academic Depository (NAD), applicable to PGCM/ PGDM Institutions and University Departments: Avialable

- **List of facilities available**
- Games and Sports Facilities

Indoor Sports facilities	Yes
Outdoor Sports facilities	Yes
Sports activities	Yes

- Extra-Curricular Activities : Yes
- Soft Skill Development Facilities: Yes

Teaching Learning Process

- Curricula and syllabus for each of the programmes as approved by the University: http://makautexam.net/aicte_details/aicteugdetails.html
- Academic Calendar of the University: https://makautwb.ac.in/page.php?id=229
- Academic Time Table with the name of the Faculty members handling the Course: Available
- Teaching Load of each Faculty: Available
- Internal Continuous Evaluation System and place: Available
- Student's assessment of Faculty, System in place: Available

Special Purpose

- Software, all design tools in case
- Academic Calendar and frame work

16. Enrollment of students in the last 3 years:

ADMISSION STATUS IN LAST 3 YEARS				
COURSES	**Approval Intake Capacity**	**Admission in 2019**	**Admission in 2020**	**Admission in 2021**
CSE	60	34+4	4+5*	13+32*
ECE	60	0+6	0+8*	0+41*
EEE	30	2+6	1+26*	3+32*
CIVIL	60	3+2	0+33*	1+63*

*Figure indicates number of Lateral Entry students

PLACEMENT STATUS IN LAST 3 YEARS			
COURSES	**Placement in 2019**	**Placement in 2020**	**Placement in 2021**
CSE	15	22	25
ECE	5	11	03
EEE	6	15	07
CIVIL	7	11	01

17. List of Research Projects/ Consultancy Works

- Number of Projects carried out, funding agency, Grant received: NIL
- Publications (if any) out of research in last three years out of masters projects: NIL
- Industry Linkage: NIL
- MoUs with Industries (minimum 3):

S.NO.	MoU with organization	Date
1.	National Institute For Industrial Training(NIIT)	13.02.2019
2.	Tata Power Skill Development Institute(TPSDI)	22.05.2019
3.	Tomorrow's Foundation	24.05.2019
4.	WEBTEK LABS PVT LTD	24.05.2019
5.	T.K. GHOSH(GOVT. CONTRACTOR)	25.05.2019
6.	OGMA-TECHLAB	25.05.2019
7.	Association Of Training & Placement Officers(ATPO-IICA)- E-MoU	01.06.2020

18. LoA and subsequent EoA till the current Academic Year Refer to the link, mentioned below, for all EoA and LoA.

http://www.pcmt-india.net/aicte.html

20. Accounted audited statement for the last three years: Refers to the Annexure-1

21. Best Practices adopted:

- Use of learning resources, multimedia and internet resources for teaching is in place

- Student's feedback about the teachers in respect of teaching-learning process is taken and follow-on action is implemented.
- Financial assistance to the poor and needy students is made available.

- Transparency is ensured in evaluating student's academic performance

- WI-FI Campus

- Faculty members and students are motivated to participate in National, International Conference, workshop

- Earn-while-Learn scheme is implemented for deserving candidates.

- Mentoring: The faculty members meet the students periodically, collect the pros and cons of the method and counsel them to perform better academically. Student's personal issues are also discussed and proper guidance and support is provided to them to ensure the comfort of the students in the Institute campus.

- Technical Quiz, Seminar on cutting edge technology, Workshop and hands on training on recent technology is organized on regular basis to improve student's awareness in respect of modern trends in Technology and development.

- Faculty development programme is organized on regular basis to improve human resources of our Institute.

- For each and every students Industry visit is organized on regular basis to make our students aware of industrial activity and to develop knowledge in practical field of Engineering domain.