MANDATORY DISCLOSURE

Department of Aeronautical Engineering

	For each Programme the following details are to be given of last three years (2019-20, 2020-21, 2021-22	**2020-21**	**2021-22**	**2022-23**
	Name	**Aeronautical Engineering**		
	Number of Seats	**60**	**60**	**54**
	Duration	**4 Years**	**4 Years**	**4 Years**
	Cut off marks/rank of admission during the last three years	36.79	66.07	60.62
	Fee (as approved by the state government)	113000/-	113000/-	
	Placement Facilities	1) Expert lectures of industry person 2) Personality Development Programs	1) Expert lectures of industry person 2) Personality Development Programs	1) Expert lectures of industry person 2) Personality Development Programs 3) Soft Skill Communication
	Campus placement in last three years with minimum salary ,maximum salary and average salary	No. of students placed: 8 **Maximum Salary: 4.8 LPA** **Average Salary : 4 LPA**	No. of students placed: 8	No. of students placed: 2
7				
	Course/Branch wise list Faculty members:	1) Dr. G. Mehta 2)Mr. M. Mahore 3) Mr. S. Patil 4) Mr. V. Kaushik	1) Dr. P .Khope 2)Mr. M. Mahore 3) Mr. S. Patil 4) Mr. V. Kaushik 5) Mr. S. Giri 6) Mr. A. Meshram 7) Ms. T. Dawre	) Dr. P .Khope 2)Mr. M. Mahore 3) Mr. S. Patil 4) Mr. V. Kaushik 5) Mr. S. Giri 6) Mr. A. T. Meshram 7) Mr. A. D. Meshram 8) Mr. R. L. Wahane 9) Ms. D. Joshi
	Permanent Faculty	1) Dr. G. Mehta 2)Mr. M. Mahore 3) Mr. S. Patil 4) Mr. V. Kaushik	1) Dr. P .Khope 2)Mr. M. Mahore 3) Mr. S. Patil 4) Mr. V. Kaushik 5) Mr. S. Giri	1) Dr. P .Khope 2)Mr. M. Mahore 3) Mr. S. Patil 4) Mr. V. Kaushik 5) Mr. S. Giri
	Adjunct Faculty	**Nil**	**Nil**	Nil
	Permanent Faculty: Student Ratio			
	Number of Faculty employed and left during the last three years			

	List of Major Equipment/Facilities in each	**Available**	**Available**	**Available**
	Laboratory/Workshop			
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	**Available**	**Available**	**Available**
	Internet Bandwidth	**1050 MBPS**	**1050 MBPS**	**1050 MBPS**
	Number and configuration of System	**30**	**30**	**30**
	Total number of system connected by LAN	**30**	**30**	**30**
	Total number of system connected by WAN			
	Major software packages available			
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	**Yes Centralised**	**Yes Centralised**	**Yes Centralised**
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	1) Classroom ready with camera and mic (Online Meetings such as Google Meet)for theory And practical	1) Classroom ready with camera and mic (Online Meetings such as Google Meet)for theory And practical	1) Classroom ready with camera and mic (Online Meetings such as Google Meet)for theory And practical
17				
	Number of Projects carried out, funding agency, Grant received	**Nil**	**Nil**	**Nil**
	Publications (if any) out of research in last three years out of masters projects			
	Industry Linkage	-	-	-
	MoUs with Industries (minimum3(10))	-	-	-

Department: Artificial Intelligence & Data Science

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	Department of Artificial Intelligence & Data Science		
	Number of Seats	120	120	120
	Duration	4 Year	4 Year	4 Year
	Cut off marks/rank of admission during the last three years	8.72	51.89	70.09
	Fee (as approved by the state government)	**113000/-**	**113000/-**	
	Placement Facilities			
	Campus placement in last three years with minimum salary, maximum salary, and average salary	NA	NA	NA
7	*Faculty*			
	Course/Branch wise list Faculty members:	Dr. G. M. Asutkar Dr. A. C. Kailuke Dr. U. P. Akare Mrs. Supriya Jawale Ms. Bhagyashree Hambarde Mrs. U. A. S. Gani	Dr. G. M. Asutkar Dr. A. C. Kailuke Dr. U. P. Akare Mrs. Supriya Jawale Mrs. U. A. S. Gani Ms. Sayali Jadhav Ms. Ashwini Varma	Dr. G. M. Asutkar Dr. A. C. Kailuke Dr. U. P. Akare Mrs. Supriya Jawale Mr. M. R. Gupta Mrs. U. A. S. Gani Ms. Ashwini Varma Mrs. Jaishree Wankhede Ms. Trupti Thakre Mrs. Gargi Tiwari Mrs. Ashwini Mahajan Mr. Girish Umratkar
	Permanent Faculty	Dr. G. M. Asutkar Dr. A. C. Kailuke Dr. U. P. Akare Mrs. Supriya Jawale	Dr. G. M. Asutkar Dr. A. C. Kailuke Dr. U. P. Akare Mrs. Supriya Jawale	Dr. G. M. Asutkar Dr. A. C. Kailuke Dr. U. P. Akare Mrs. Supriya Jawale
	Adjunct Faculty			
	Permanent Faculty: Student Ratio			
	Number of Faculty employed and left during the last three years			
	List of Major Equipment/Facilities in each Laboratory/Workshop			

	List of Experimental Setup in each Laboratory/Workshop Computing Facilities			
	Internet Bandwidth	1050 Mbps	1050 Mbps	1050 Mbps
	Number and configuration of System	80 Computers	80 Computers	80 Computers
	Total number of system connected by LAN	80 Computers	80 Computers	80 Computers
	Total number of system connected by WAN			
	Major software packages available			
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	Yes	Yes	Yes
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Yes	Yes	Yes
	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses give the following		NA	NA
16	*Enrolment and placement details of students in the last 3years*	NA		
17	*List of Research Projects/ Consultancy Works*			
	Number of Projects carried out, funding agency, Grant received			
	Publications (if any) out of research in last three years out of Master's projects			
	Industry Linkage			
	MoUs with Industries (minimum3(10))	1		

Department of Biotechnology

6	For each Programme the following details are to be given of last three years(2021-22, 2022-23)	**2021-22**	**2022-23**
	Name	**Biotechnology**	
	Number of Seats	60	54
	Duration	4 years	4 years
	Cut off marks/ rank of admission during the last three years	1.6	19.84
	Fee(as approved by the state government)	113000/-	
	Placement Facilities	Available	Available
	Campus placement in last three years with minimum salary,maximum salary,and average salary		
7	*Faculty*		
	Course/Branchwise list Faculty members:	Dr M A Soni Dr V P Bhange Dr A P Kopulwar Dr S G Suke Mr P A Raut Mr A D Chahande Mr Y P Moharkar Mrs.Nisha Nikam Mr.Shubham Murai Ms. Bhagyashree Balpande Mrs.Latasha Taiwade Ms.Lakshana Mandve	Dr M A Soni Dr V P Bhange Dr A P Kopulwar Dr S G Suke Mr P A Raut Mr A D Chahande Mr Y P Moharkar Mrs.Nisha Nikam Mr.Shubham Murai Ms. Bhagyashree Balpande Mrs.Latasha Taiwade Ms. Aishwarya Patil
	Permanent Faculty	Dr M A Soni Dr V P Bhange Dr A P Kopulwar Dr S G Suke Mr P A Raut Mr A D Chahande Mr Y P Moharkar	Dr M A Soni Dr V P Bhange Dr A P Kopulwar Dr S G Suke Mr P A Raut Mr A D Chahande Mr Y P Moharkar
	Adjunct Faculty	Nil	Nil
	Permanent Faculty: Student Ratio	1:25.7	1:26.28
	Number of Faculty employed and left during the last three years		Employed: 10 Left:07
	List of Major Equipment/Facilities in each Laboratory/Workshop		Annexure I

	List of Experimental Setup in each Laboratory/Workshop Computing Facilities		
	Internet Bandwidth	1050 Mbps	1050 Mbps
	Number and configuration of System	32	
	Total number of system connected by LAN		37
	Total number of system connected by WAN		
	Major software packages available		Nil
	Special purpose facilities available(Conduct of online Meetings/Webinars/ Workshops,etc.)		Green Lab Smart classroom
	Facilities for conduct of classes/courses in online mode(Theory &Practical)		Green Lab Smart classroom
	For each PG Programme the following details are to be given of last two years(2021-22, 2022-23)	**NA**	
	Title of the Course		
	Curricula and Syllabi		
	Laboratoryfacilitiesexclusivet othePostGraduateCourse		
	Special Purpose		
	Software,all design tool sincase		
	Academic Calendar and framework		
16	*Enrolment and placement details of students in the last3years*		
	Number of Projects carried out, funding agency,Grant received	Dr. SG Suke as the Project Guide for SRF Project "To study the effects of nanoencapsulated herbal compound on silica-induced lung fibrosis in rats" ICMR, Ministry of Health (Govt. of India), (Rs. 18.12 Lakhs). 2021-23	
	Publications (if any) out of research in last three years out of masters projects		NA
	Industry Linkage		

	MoUs with Industries (minimum3(10))		

PRIYADARSHINI COLLEGE OF ENGINEERING

DEPARTMENT OF BIOTECHNOLOGY

Annexure-I

List of Equipment

BIOCHEMISTRY/ANALYTICAL TECHIQUE

Sr.No	**Name of Equipment**	**Make**	**Model No**	**Cost**
1	Colorimeter	Elico	CL-223	10900
2	Cetrifuge	Remi	R-4C	22792
3	Sonicator	LABCO	1550/1	56951
4	Spectrophotometer	ELICO	SL-159	173196
5	Cyclomixer	Remi	CM-101	4950
6	Magnetic Stirrer	Remi	2MLH	8400
7	Waterbath Shaker	Remi	RSB-12	50504
8	Chromatography Chamber			8000
9	TLC column	Borosil		650
10	Digital Balance	Wensar	PGB-200	18000
11	PH Meter	Elico	Model-LI/100	11475
15	Muffle Furnance	BTI	BTI-36	24100
16	Digitally temperature controlled hot air Oven	BTI	BTI-29	42187
			Total	4,00,650/-

PRIYADARSHINI COLLEGE OF ENGINEERING

DEPARTMENT OF BIOTECHNOLOGY

Immunology Laboratory

Sr.No	**Name of Equipment**	**Make**	**Model No**	**Cost**
1	PH Meter	Elico	615	9894.5
2	Rotary Shaker	REMI	RS-24-BL	82639.84
3	Fermentor	Napro	AEF03	325125
4	Magnetic Stirrer with Hot plate	REMI	Remi- 1 MLH	4800
				4,83,253/-

Molecular Biology				
1	Digital Weighing Balance	Wenser	PGB 200-W	24000
2	Cetrifuge	Remi	C-24 BL	183301
3	Cetrifuge	B Genei	Table top Micro	11550
4	Cooler	B.Genei	Mini cooler	2850
5	Deep Freezer	Blue Star	200 C	20300
6	PCR	Biorad	1709703	409500
7	Electrophoresis Unit	Sub mini	MINI 10	16900
8	Electrophoresis Vertical	Biorad	1658025	158,000
9	Electrophoresis Horizontal	Cleaver	MS MIDI DUO	22800
10	Elctrophoresis Vertical Unit	Omni	FBS Omni	68100
11	Elctrophoresis vertical	Mini Gel	Medox (M.No. 1230-01)	7313
12	Gel Prime (Gel Documentation System)	Zenith	Gel Prime 312 nm	241546
13	Rotor Head	Remi	ML-R 248	8437
14	Western Blotting System	MEDOX	MX-1248-02	19687
15	Stabilizer	REMI-	MODEL NO- VSO3	11925
16	Elisa Reader, micro-plate reader	Atere, easy reader	Central scientific	182900
17	Shimadzu UV-Vis Spectrophotometer UV- 10MMCELL GSKIT. USB CABLE FOR PC	Toshvin Analytical	Central scientific	424800
18	Delux pH meter	E.I.	101 HSN	7900
19	Water Bath	BTI	BTI-57	6850
20	Gel Rocker with Electronic Timer	GeneiCat	P.I.-GR-2	28050
21	Frosty Mate	Abdos	P11104	5620
22	Semi dry Blotter MIDI	GeneiCat	P.I.-SDB-5	54648

23	Transilluminator (UV)	Zenith	GEL-V-U-04-06	62550
			Total	1916977

PRIYADARSHINI COLLEGE OF ENGINEERING

DEPARTMENT OF BIOTECHNOLOGY

List of Equipment

PROJECT LABORATORY

Sr.No	Name of Equipment	Make	Model No	Cost
1	Incubator	Labco	1556	12656
2	Hot air Oven	Labco	1546	12577
3	Colorimeter	Elico	CL-223	6545
4	Laboratory Centrifuge	Remi	RHC-R-8C	24308
5	Magnetic Stirrer with Hot plate	REMI	Remi- 1 MLH	5600
6	Fall Glass Filter Holder	Borosil	Cat- 5350024	12517
7	Vacuum Pump	BTI	BTI- 53(B)	6962
8	Kjeldhl Distillation Assembly	ASGI	Cat- 1766	4366
9	All Quartz Double Distillation Unit	Borosil	M-3365041	140567
10	Water bath	BTI	BTI-57	8438
11	Cyclomixer	Remi	CM-101 PLUS	7000
12	Soxhlet Extraction heating mantle	BTI	BTI-41	23872
13	Autoclave	Mac	MSW-101	79422
14	Transilluminator (UV)	Medox	-	25143
			Total	3,35,896/-

PRIYADARSHINI COLLEGE OF ENGINEERING

DEPARTMENT OF BIOTECHNOLOGY

List of Equipment

TISSUE CULTURE

Sr.No.	Name of Equipment	Make	Model No	Cost
1	BOD Incubator	Remi	CKOG	89500
2	Glass Bead Sterilizer	Hi-Media	LA-715	13500
3	Culture Rack(3)	Innovative Bioscience	_	76950
4	Air Curtain	Yarco	YS/210	19500
5	Distillation Unit	Borosil	3363	25550
6	Orbital Shaking Incubator	BTI	BTI-38(A)	164475
7	Microwave Oven	LG	ML-3483FRR	28687.5
8	Laminar Biosafe Cabinet	Genaxy	M.No.-1525/01	176776
9	Finnpipette Vol 0.5-10ul	Borosil	0.5-10ul-B7012	5247
10	Finnpiette Vol 100ul-1000ul	Borosil	100ul- 1000-B7012	5247
11	Autoclave Vertical	Jindal	2792	55000
12	Fumigator Machine	Metro	SS-M	16500
13	PH Meter	Elico	Model- 615	10012
14	Water Softener	Borosil		10462
15	Laminar Air Flow	MSW- 161(B)	LH-42	119197
16	Laminar Air Flow	Rescholar	RH-58-13	74000
17	Autoclave Vertical	BTI- 02	BTI- 02	38837
18	Digital Balance	Citizen	CY-220	35500
			Total	964940.5

PRIYADARSHINI COLLEGE OF ENGINEERING

DEPARTMENT OF BIOTECHNOLOGY

List of Equipment

MICROBIOLOGY

Sr.No	Name of Equipment	Make	Model No	Cost
1	Autoclave Vertical	BTI- 02	Central scientific	101126
2	Laminar Flow	Rescholar	RH-58-13	127440
3	Incubator(Bacteriological)	BTI	BTI-25	34300
4	LX-300 LED Trinocular Microscope with camera Module	Labomed	Lx-300	98629
5	Autoclave table top	BTI	BTI-30	13584
6	Microscope (2)	Olympus	Olympus HB	26975
7	Laboratory research Microscope (2)	Coslab	HL-10	39200
8	Laboratory research Microscope(1)	Coslab	HL-10	28463
9	Digital Weighing balance	Citizen	CMP 1000	6050
10	Colony Counter		E.I. Model- 1363	10700
11	Water Still Distillation Unit	BTI	BTI-59	8381
			Total	3,52,363/-
Biochemistry Metabolism				
1	Homogeniser	Remi	RQ-127 A/D	13064
2	Digital Photo Colorimeter	Electronic India	_	6500
3	Cetrifuge	Remi	R-4C	22792
4	Single Pan Balance	Dhona		12650
5	PH Meter	Elico		6500
6	Cyclomixer	Remi	CM-101	4950
7	Magnetic Stirrer	Remi	2Mlh	6350
8	Distillation Unit	Labco	882/10	14962
9	Water bath	LABCO	1538/2	17288
			Total	1,05,056/-

B.Tech Chemical Engineering

6	For each Programme the following details are to be given of last three years (2021-22, 2022-23)	**2021-22**	**2022-23**
	Name	**BTECH, CHEMICAL ENGINEERING**	
	Number of Seats	60	60 (54)
	Duration	4 YEARS	4 YEARS
	Cut off marks/rank of admission during the last three years	11.87	46.94
	Placement Facilities	C2C, CRT, SOFT SKILL TRAINING ETC ORGANISED FOR CAMPUS RECRUITMENT	C2C, CRT, SOFT SKILL TRAINING ETC ORGANISED FOR CAMPUS RECRUITMENT
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	12 MAX : 5LPA MIN : 1.2 LPA AVG : 2.85LPA ANNEXURE A ATTACHED	13 MAX : 6.5LPA MIN : 1.14 LPA AVG : 2.19LPA ANNEXURE A ATTACHED
	Course/Branch wise list Faculty members:	ANNEXURE I ATTCHED	ANNEXURE I ATTCHED
	Permanent Faculty	15	15
	Adjunct Faculty	NIL	NIL
	Permanent Faculty: Student Ratio	13.93	13.46
	Number of Faculty employed and left during the last threeyears	LEFT : JOINED :	LEFT : JOINED :
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	ANNEXURE II ATTACHED	ANNEXURE II ATTACHED
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	ANNEXURE III ATTACHED	ANNEXURE III ATTACHED
	Internet Bandwidth	1050 MBPS	1050 MBPS
	Number and configuration of System	40	40
	Total number of system connected by LAN		
	Total number of system connected by WAN	17	17
	Major software packages available	NIL	NIL

	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	NIL	NIL
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	GOOGLE MEET	GOOGLE MEET
	For each Programme the following details are to be given of lastthree years (2021-22, 2022-23)	**2021-22**	**2022-23**
	Title of the Course	M.TECH	M.TECH
	Curricula and Syllabi	ANNEXURE IV ATTACHED	ANNEXURE IV ATTACHED
	Laboratory facilities exclusive to the PostGraduate Course	PROJECT/RESEARCH LAB	PROJECT/RESEARCH LAB
	Special Purpose	NIL	NIL
	Software, all design tools in case	NIL	NIL
	Academic Calendarand framework	ANNEXURE V ATTACHED	ANNEXURE V ATTACHED
16	*Enrolment and placement detailsof students in the last 3years*	NIL	NIL
17			
	Number of Projects carried out, fundingagency, Grant received	NIL	NIL
	Publications (if any) out of research in last three years out of Master's projects	NIL	NIL
	Industry Linkage	➢ NDUSTRIAL :02VISIT:MAHANANDA MILK INDUSTRY ➢ EXPERT TALK:	➢ NDUSTRIAL VISIT: 02 1.COCACOLA SUPERIOR DRINKS , 2. NEERI

		MR. JASPAL SINGH NOTAY ➢ MOU SIGNED : 02 ➢ NTERNSHIPS : INVENTYS RESEARCH CO., PVT.LTD: 30 STUDENTS	➢ EXPERT TALK: 01 ➢ INTERNSHIPS :03 MAHARASHTRA STATE POWER GENERATION CO. LTD. CHANDRAPUR
	MoUs with Industries (minimum3(10))	02 ANACON LABS PVT LTD (5 YEARS) SRIJAN SANCHAR PVT LTD (3 YEARS)	NIL

ANNEXURE A
Department of Chemical Enginering,
Session 2022-2023
List of Placed Student of 2023 Passed out Student
On /Off Campus

Sr. No.	Name of Student	Company	Designation	CTC Lakh/ annum
1.	Ms. Manjeeri Manvatkar	Technip Energies	Graduate Engineer Trainee	6.50
2.	Mr. Saurabh Ramteke	Macleods Pharmaceutucal Limited	Apprentice	1.14
3.	AISHWARYA GUPTA	Zar Metamorphose Combine Pvt. Ltd	Sales officer	5.00
4.	AKSHAY DORLIKAR	Macleods Pharmaceutucal Limited	Apprentice	1.14
5.	AMAR PADOLE	Macleods Pharmaceutucal Limited	Apprentice	1.14
6.	ANUPKUMAR PALIWAL	Macleods Pharmaceutucal Limited	Apprentice	1.14
7.	ANURAG DASGUPTA	Macleods Pharmaceutucal Limited	Apprentice	1.14
8.	SHRUTI CHOPKAR	Zar Metamorphose Combine Pvt. Ltd	Trainee R&D	2.40
9.	OWAISUL HASAN	Zar Metamorphose Combine Pvt. Ltd	Trainee (Production Supervisor)	3.0
10.	MANISH SUGANDH	Macleods Pharmaceutucal Limited	Apprentice	1.14
11.	SANMITRA MANKAR	Macleods Pharmaceutucal Limited	Apprentice	1.14
12.	SAMIKSHA DHOLE	Teachnook Edutech	Sales Associate	1.80
13.	KRUTIKA BURBURE	Teachnook Edutech	Sales Associate	1.80

Department of Chemical Enginering,
Session 2021-2022
List of Placed Student of 2022 Passed out Student
On /Off Campus

Sr. No.	Name of Student	Company	Designation	CTC Lakh/ annum
1.	Anisha Killi	TCS	Assistant System Engineer-Trainee	3.37
2.	Tasmiya Baig	BYJUS	Academic Specialist	4.00
3.	Jay Arora	WIPRO	Intern	3.50
4.	Dharmendra Yadav	Western Caol Limited	Mining Depart. Trainee	3.00
5.	Akshita Shau	NEERI Nagpur	Project Associate -1	3.96
6.	Sameeksha Bhoyar	Indus Valley Partners (India) Pvt. Ltd Nodia	Associate Solution Engineer	5.0
7.	Priya Jadav	Plastroot Waste Management & Solution Pvt. Ltd	Operation Executive	1.20
8.	Mohd. Huzaifa Akbani	Inventys Research Company Pvt Ltd.	Trainee Production Officer	1.80
9.	Mohd. Shayan Ansari	Inventys Research Company Pvt Ltd.	Trainee Production Officer	1.80
10.	Sandeep Bisen	Inventys Research Company Pvt Ltd.	Trainee Production Officer	1.80
11.	Charu Rewatkar	BPCL-Kochi Refinery	Graduate Apprentice _Chemical	3.00
12.	Aman Naik	Mahajenco , Khaparkheda	Trainee	1.80

Priyadarshini College of Engineering, Nagpur
Department of Chemical Enginering,
Session 2020-2021
List of Placed Student of 2021 Passed out Student
On /Off Campus

Sr. No.	Name of Student	Company	Designation	CTC Lakh/ annum
1.	Mr. Akshay Pote	Inventys Research Company Pvt Ltd.	Trainee Production Officer	1.80
2.	Mr. Mohd. Sufiyan	Petrocon Engineers & Consultant	Junior Process Engineer	2.10
3.	Mr. Siddhesh Baware	Lars Enviro Pvt. Ltd	Business Development Executive	3.00

ANNEXURE I
LIST OF FACULTY
SESSION 2022-2023

S. No.	Name	PAN No.	Qualification	Area of Specialization	Designation	Date of Joining	Date on which Designated as Professor/ Associate Professor	Currently Associated (Y/N)	Nature of Association (Regular/Contract/ Adjunct)
1	Dr.S.R.Mote	AHRPM2679R	Ph.D	Heat transfer ,process calculation ,waste water treatment ,solid waste management ,sustainable development	HOD,Associate professor	01-07-2001	30-10-2015	Y	Regular
2	Dr.A.Waheed Deshmukh	AIUPD5059N	Ph.D	Process contarol and dynamic ,Fluid mechanics,Drying of food materials,Reactive extraction,sustainable energy and environment engineering	Assistant professor	01-12-2007	01-12-2007	Y	Regular
3	Dr.K.D.Bhuyar	ALTPB8916E	Ph.D	Environment Engineering, Biochemical Engineering ,Waste water treatment ,Energy conservation	Assistant professor	28-08-2012	28-08-2012	Y	Regular
4	Mr.Mayuresh Shivramwar	CQCPS0851H	M.Tech	Reactive Extraction ,Renewable energy sources,petroleum Technology	Assistant professor	8-8-2016 , 20-05-2021	8-8-2016 , 20-05-2021	Y	Regular
5	Ms.P.K. Baitule	BMEPB4219H	Ph.D (Pursuing)	Environment Engineering, Corrosion ,Electrochemistry,Mass transfer operation ,Green chemistry	Assistant professor	3-7-2018, 20-05-2021	3-7-2018, 20-05-2021	Y	Regular
6	Mr.Abdul Rahim	PSOPA0789F	Ph.D (Pursuing)	Waste water treatment	Assistant professor	11-06-2018 ,30-08-2021	11-06-2018 ,30-08-2021	Y	Regular
7	Mrs.Snehal Deshmukh	AUBPD9796P	M.Tech	Hazradous waste ,Carbon capture,Nanometerial	Assistant professor	01-10-2021	01-10-2021	Y	Regular
8	Mrs.Anjali Kurve	BPJPK1027C	M.Tech	Renewable energy sources,Heat transfer ,waste water manegement	Assistant professor	08-11-2021	08-11-2021	Y	Regular
9	Mrs.Minal Patil	CDRPB8640K	M.Tech	Chemical engineering,waste management	Assistant professor	28-01-2022	28-01-2022	Y	Regular

10	Dr.Pooja Jaiswal	AXAPJ8322R	Ph.D	$C0_2$ Sequenstration ,Sustainable environment benign development ,API Synthesis,Determination impurities in ETP discharge,	Assistant professor	28-02-2022	28-02-2022	Y	Regular
11	Ms.Payal Bhautik	BDTPB4845H	Ph.D (Submitted)	Chemical engineering,waste management	Assistant professor	02.09.2022	02.09.2022	Y	Regular
12	Mrs.Ashwini Aaglawe	BOUPA2680D	M.Tech	Chemical engineering	Assistant professor	15-11-2021	15-11-2021	Y	Regular
13	Ms.Maheshwari Kandekar	DFHPK6807J	M.Tech	Chemical engineering	Assistant professor	15-11-2021	15-11-2021	Y	Regular
14	Ms.Madhura Bhalerao	BVYPB0285N	M.Tech	Chemical engineering	Assistant professor	15-11-2021	15-11-2021	Y	Regular
15	Renuka P.Joshi	AWAPD6553D	M.Tech	Chemical engineering	Assistant professor	5-11-2020	5-11-2020	Y	Regular

Department of Chemical Engineering

LIST OF LABS ALONG WITH EQUIPMENT

Department: **Chemical Engineering**		
S. No.	**Name of the Laboratory**	**Name of the Important Equipment**
1	**Mechanical Operation**	• Trommel • Sigma mixer • Jaw crusher • Ball mill • Cyclone separator • Vibrating Screen • Ribbon Mixer • Leaf Filter • Thickner • Forth flotation cell • Ball mill(Variable speed) • Elutriator • Mineral jig • Hammer Mill • Computer controlled fluid Mixing & power consumption in agitated vessel • cyclon scrubber • Rotap sieve shaker • Magnetic seperator • Cone classiefer

2	**Fluid Mechanics**	• Combine flow meter • Triangular Notch • Bernoulli's Equipment • Impacts of Jet Set up • Reynolds Experiment • Losses due to pipe fitting, sudden enlargement & contraction
3	**Mass Transfer**	• Fluidized bed dryer • Solid liquid extraction (packed bed) • Kinetics of dissolution of benzoic acid • Extraction column • Cooling tower • Wetted wall column • Tray Dryer
4	**Separation Process**	• Packed bed absorption column • Simple steam distillation • Sieve plate distillation column • Packed bed distillation column
5	**Heat Transfer**	• Shell and tube heat exchanger • Heat Transfer in agitated vessel • Stefan Boltzman Apparatus • Emissivity Measurement Apparatus • Parallel flow & counter Current flow heat exchanger
6	**Process Control**	• Interacting-non interacting system • Control valve characteristics • Pressure control trainer • Temperature control Trainer Level • control Trainer • Multi process Trainer
7	**Computer Lab**	• Computers with latest configuration
8	**Project Lab**	• Water Analysis kit • Fuel Cell • Compressor • Batch Distillation Setup • Fluidized Bed • Various Project Submitted by Students
9	**Environmental Engineering Laboratory**	• Moisture Analyzer • Digital PH Meter • Digital Conductivity Meter
10	**Chemical Reactor Design**	• RTD studies in Packed Bed Reactor • RTD studies in Tubular Plug Flow Reactor • RTD studies in Continuous Stirred Tank Reactor • Packed Bed Reactor • Adiabatic Batch Reactor • Isothermal Batch Reactor Plug Flow Reactor (Straight Tube Type) • Continuous Stirred Tank Reactor

Annexure III
Department of Chemical Engineering
List of Experiments Lab-wise

1. Heat Transfer

1. To determine the total thermal resistance and thermal conductivity of the composite wall
2. To determine the thermal conductivity of lagging material
3. To study the heat transfer in a pin fin in natural convection
4. To study the heat transfer in a pin fin in forced convection
5. To determine Stefan – Boltzmann constant for radiation heat transfer
6. To determine the overall heat transfer coefficient in shell and tube heat exchanger
7. To study plate-type heat exchangers and determine the overall heat transfer coefficient
8. To plot the temperature vs time response of three pipes (Heat Pipe Demonstrator)
9. To determine the heat transfer coefficient for heating in a jacketed agitated kettle
10. To evaluate the material and heat balance, capacity and economy at steady state conditions for single effect evaporator
11. To study the heat transfer phenomena in vertical condensers and horizontal condensers
12. To study radiation heat transfer by black plate and test plate (emissivity measurement apparatus)
13. To determine the experimental and theoretical heat transfer coefficient for drop-wise and film-wise condensation.
14. To study the boiling phenomenon in a jacketed kettle with and without stirring.
15. To find the heat transfer coefficient and heat transfer rate from the vertical cylinder in natural convection

2. Mass Transfer I

1. Winkelmann's method – To find the diffusion Coefficient of vapour in still air
2. Liquid Diffusion – To find the Diffusion Coefficient for a liquid-liquid system
3. To calculate the rate of Drying.
4. Studies of crystallization phenomena in Batch Crystallization
5. To evaluate the performance of the Cooling Tower.
6. To find the mass transfer coefficient in a wetted wall Column
7. Determination of solid-liquid mass transfer coefficient.
8. Evaporation from the free surface.
9. Determination of HTU in a packed bed.
10. Study of the Ion exchange process.
11. Removal of impurities by use of adsorption techniques.
12. To construct the boiling point diagram for binary – miscible system

3. Mass Transfer II

1. Batch/ Continuous Leaching
2. Membrane separation
3. Distillation using Sieve Plate, Bubble Cap Column
4. To verify Rayleigh's Equation for Simple Distillation

5. To determine the thermal and vaporization efficiencies in Steam Distillation
6. Single/multiple-stage extraction studies
7. To prepare the ternary phase diagram.
8. Soxhlet Extraction
9. Absorption studies in a packed column
10. Absorption studies in bubble column

4. Chemical Reactor Design

1. To study a non-catalytic homogeneous second-order liquid phase reaction (Equimolar) in an isothermal Batch Reactor at ambient conditions
2. To study of a non-catalytic homogeneous second order liquid phase reaction (non-equimolar) in an isothermal Batch Reactor
3. To determine the pseudo first order reaction rate constant for the selected reaction in a constant volume adiabatic batch reactor
4. To determine the Effect of Temperature on Reaction rate constant and to determine the Activation Energy for selected reaction in a Batch Reactor
5. To determine overall order of Reactions for bimolecular reactions in Semi-Batch Reactor
6. To Study the performance of isothermal continuous stirred tank reactor (CSTR) for selected reaction
7. To study the kinetics of selected reaction in isothermal Plug Flow Reactor (PFR)
8. To Study the performance of various combinations of PFR and CSTR in series for selected reaction
9. To study the performance of CSTRs in series for the selected reaction scheme
10. To study Residence Time Distribution (RTD) of CSTR and determine the dispersion number
11. To study residence time distribution (RTD) in a Plug Flow Reactor and to find out Peclet Number.
12. To study residence time distribution (RTD) in a Trickle Bed Reactor and to find out Peclet number.
13. To study residence time distribution (RTD) in a Packed Bed Reactor and to find out Peclet Number.
14. Finding conversion and rate of polymerization reactions using gravimetric method
15. Studies in recycle bed reactor.
16. To study the performance of a fluidized bed reactor.
17. To study the heterogeneous catalysis in the fixed bed reactor
18. RTD Studies in a Series of CSTRs

5. Process Control & Dynamics

1. To determine the time constant of mercury in glass thermometer.
2. To determine damping coefficient, decay ratio, overshoot and characteristics time for step response of mercury manometer.
3. To study the dynamic response of liquid level in single tank system.
4. To study the dynamic response of liquid level in two tanks non-interacting liquid level system and to compare experimental and theoretical responses.
5. To study the dynamic response of liquid level in two tank interacting liquid level systems and compare experimental and theoretical responses.

6. To determine the characteristics pneumatic control valve.
7. Use of MATLAB/Scilab/DCS Trainer for performing experiments
8. To study the level control process by means of a level transmitter.
9. To study the flow control process by means of a flow sensor.
10. To study the cascade control with level.
11. To study the ratio control with flow.
12. To study the behavior of P, I and D on the process control.
13. To study the open loop or manual control.
14. To study the proportional control.
15. To study the Two mode (P+I) control for linear level control
16. To study the Two mode (P+D) control for linear level control
17. To study the Three mode (PID) control for linear level control.
18. To study the tuning of controller (Open loop method) using Zeigler-Nichols method for linear level control.
19. To study the stability of the system using the BODE PLOT for linear level control.
20. To study the autotuning of the controller for linear-level control
21. To study principles of nonlinear level control

6. Environmental Engineering

1. Measurement of the pH of a sample
2. Measurement of mineral and phenolphthalein acidity
3. To determine sulphate ion concentration in a water sample using the Turbid metric Method
4. Determine the DO content of a given sample
5. Determination of residual Cl in a water sample
6. Determination of total hardness and calcium hardness using dye indicators
7. To determine the BOD value for determining the biodegradability of the solution.
8. To determine the COD value for determining the organic strength of the solution (Open Reflux Method)
9. To determine the turbidity of a water sample
10. To determine the alkalinity of a given sample of water in mg/l.

7. Mechanical Operation

1. To study relationship between the Drag coefficient and modified Reynolds number for body falling through fluid (Cd Vs NRE)
2. To carry out the batch sedimentation test and use results to design the thickener
3. To determine the efficiency of Mineral Jig
4. To establish the filtration equation for the leaf filter system and to evaluate compressibility of cake.
5. To study the power consumption of an agitator with Reynolds and Froude number
6. To verify the laws of crushing and grinding
7. To determine the mean arithmatic diameter, mean surface diameter and mean volume diameter
8. To determine the size distribution in a given sample (Elutriation)
9. To determine the effectiveness of vibrating screen

10. To separate the various size fraction in a mixture on the basis of their settling velocities in a fluid (size separation)
11. To determine the efficiency of a cyclone separator.
12. To study separation in cone classifier.
13. To study the operation of the hammer mill and determination of the efficiency of hammer mill
14. To study the working principle of froth flotation cell
15. To study the magnetic separator and to determine the efficiency of the magnetic separator.

8. Fluid Mechanics

1. To verify Bernoulli's equation
2. To calibrate the venturi meter and obtain its coefficient of discharge
3. To calibrate the orifice meter and obtain its coefficient of discharge
4. To calibrate Rotameter
5. To calibrate the notched weir and obtain its coefficient of discharge
6. To study friction factor Vs Reynolds number for the flow of water in a pipe
7. To study friction factor Vs Reynolds number for the flow of air in a pipe
8. To study the relationship between the Fanning friction factor Vs Reynolds number for flow of fluid through coils.
9. To obtain equivalent length of pipe for various pipe fittings
10. To study the operating characteristics of centrifugal pump.
11. To study the hydrodynamic characteristics of packed bed
12. To study the hydrodynamic characteristics of a fluidized bed
13. To study two phase flow.

9. Numerical Methods in Chemical Engineering

1. Introduction to use of computers for numerical calculations
2. Solution of linear algebraic equations using Gauss elimination, Gauss-Siedel etc.
3. Solution of a non-linear equations using bracketing and Newton-Raphson method
4. Interpolation and Approximation
5. Numerical integration
6. Euler method
7. Runge-Kutta methods for ODEs
8. Solution of system of ODEs using simple methods
9. Solution of simple PDEs

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4. Interpolation and Approximation
5. Numerical integration
6. Euler method
7. Runge-Kutta methods for ODEs
8. Solution of system of ODEs using simple methods
9. Solution of simple PDEs

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	**Civil Engineering**		
	Number of Seats	60	120	120
	Duration	4 years	4 years	4 year
	Cut off marks/rank of admission during the last three years	3.7	3.04	3.27
	Fee (as approved by the state government)	113000/-	113000/-	

	Placement Facilities			
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	No. of student placed:04 Maximum annual salary:3 lakhs Minimum annual salary:0.72 lakhs Average annual salary:1.97 lakhs	No. of student placed: 02 Maximum annual salary: 4 lakhs Minimum annual salary: 4 lakhs Average annual salary:4 lakhs	No. of student placed: Maximum annual salary: 5.27 lakhs Minimum annual salary: 1.8 lakhs Average annual salary:3.8 lakhs
7	*Faculty*			
	Course/Branch wise list Faculty members:	1. Dr. S.A. Dhale 2. Mr. V. S. Ghutke 3. Mrs. V.G. Pathan 4. Mrs. P. S. Bhandari 5. Mr. V. R. Agrawal 6. Mr. V.S. Vairagade 7. Dr. S. J. Modak 8. Dr. P. T. Dhorabe 9. R.S. Dhapudkar 10. Ms. Alaka Das 11. Ms. Kirti Deshmukh (Thakre) 12. Mr. A.P. Kedar 13. Ms. M.E. Chinchghare 14. Ms. Yogita Gajare 15. Ms. P. N. Badhe 16. Mr. P. G. Bawane	1. Dr. R.M. Dhoble 2. Dr. M.A. Chandak 3. Mr. V. S. Ghutke 4. Dr. R.H. Pazare 5. Mr. P.I. Rode 6. Mrs. P. S. Bhandari 7. Mr. V. R. Agrawal 8. Ms. V.P. Kesalkar 9. Mr. S.L. Chauhan 10. Mr. P.S. Kamble 11. Ms. R.V. Moharir 12. Mrs. L.C. Gupta 13. Mr. V.S. Vairagade 14. Ms. B.R. Gautam 15. Dr. S. J. Modak 16. Dr. P. T. Dhorabe 17. Ms. Kirti Deshmukh (Thakre) 18. Ms. Bhagyashree Chelani 19. Mr. P.A Sahare 20. Ms. Alaka Das 21. Mr. A.P. Kedar 22. Ms. M.E. Chinchghare 23. Ms. S.S. Pathan	1. Dr. R.M. Dhoble 2. Dr. M.A. Chandak 3. Mr. V. S. Ghutke 4. Dr. R.H. Pazare 5. Mr. P.I. Rode 6. Mrs. P. S. Bhandari 7. Mr. V. R. Agrawal 8. Ms. V.P. Kesalkar 9. Mr. S.L. Chauhan 10. Mr. P.S. Kamble 11. Ms. R.V. Moharir 12. Mrs. L.C. Gupta 13. Mr. V.S. Vairagade 14. Ms. B.R. Gautam 15. Dr. S. J. Modak 16. Dr. P. T. Dhorabe 17. Ms. Kirti Deshmukh (Thakre) 18. Ms. Bhagyashree Chelani 19. Ms. Alaka Das 20. Mr. A.P. Kedar 21. Ms. M.E. Chinchghare 22. Ms. S.S. Pathan 23. Mr. V.M. Dhemre 24. Ms. S.S. Nibhorkar

			24. Mr. V.M. Dhemre 25. Ms. S.S. Nibhorkar 26. Ms. Roshni Dhapudkar 27. Mr. Rahul Ganorkar 28. Yogita Gajare 29. Mr. Pawan Bawane 30. Ms. Kalyani Sawarkar 31. Mr. Manish Hajare	25. Ms. Roshni Dhapudkar 26. Mr. Rahul Ganorkar 27. Yogita Gajare 28. Mr. Pawan Bawane 29. Ms. Kalyani Sawarkar 30. Mr. Manish Hajare 31. Gaurav Mahakulkar
	Permanent Faculty	16	31	31
	Adjunct Faculty	Nil	Nil	Nil
	Permanent Faculty: Student Ratio	230/16=14.37	491/31=15.84	410/31= 13.22
	Number of Faculty employed and left during the last threeyears	No. of faculty employed: 03 No. of faculty left: 00	No. of faculty employed: 06 No. of faculty left: 01	No. of faculty employed: 01 No. of faculty left: 01
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	Universal Testing Machine (UTM), Compression Testing Machine, Polariscope, Tilting Fume apparatus, Total station, Los Angeles, Abrasion Testing machine, Direct Shear Test, Spectrophotometer, Orbital shaking incubator, Computers	Universal Testing Machine (UTM), Compression Testing Machine, Polariscope, Tilting Fume apparatus, Total station, Los Angeles, Abrasion Testing machine, Direct Shear Test, Spectrophotometer, Orbital shaking incubator, Computers	Universal Testing Machine (UTM), Compression Testing Machine, Polariscope, Tilting Fume apparatus, Total station, Los Angeles, Abrasion Testing machine, Direct Shear Test, Spectrophotometer, Orbital shaking incubator, Computers
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	**Annexure 1**	**Annexure 1**	**Annexure 1**
	Internet Bandwidth	1050 Mbps	1050 Mbps	1050 Mbps

	Number and configuration of System	60	60	60
	Total number of system connected by LAN	60	60	60
	Total number of system connected by WAN	60	60	60
	Major software packages available	STAAD Pro (Bentley systems)	STAAD Pro (Bentley systems)	STAAD Pro (Bentley systems)
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)			

	Facilities for conduct of classes/courses in online mode (Theory & Practical)			
	For each Post Graduate Courses givethe following		NA	
16	*Enrolment and placement detailsof students in the last 3 years*	06/230 **Annexure 2**	02/491 **Annexure 2**	02/410 **Annexure 2**
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, fundingagency, Grant received	NIL	NIL	NIL
	Publications (if any) out of research in last three years out of Master's projects	NA	NA	NA
	Industry Linkage	NIL	NIL	NIL
	MoUs with Industries (minimum3(10))	03 **Annexure 3**	03 **Annexure 3**	03 **Annexure 3**

Annexure 1

List of Experimental Setup in each Laboratory/Workshop Computing Facilities:

S.N.	Name of the Lab	Name of Experimental Setup
1	Strength of Material	1. To Study Various Types of Strain Gauge Apparatus 2. To Determine the Tensile Strength of Steel Specimen 3. To Perform Hardness Test on Various Metals. (Brinnell Hardness Test &Dynamic Hardness Test.) 4. To Perform Standard Torsion Test on Metals 5. To Perform the Impact Test on Metal (Izod/ Charpy) 6. To Determine the Spring Constant of Closely Coiled Spring. 7. To Perform Shear Test on Different Metals 8. To Perform Fatigue Test on Mild Steel Bar. 9. To Perform Bending Test on Wooden Beam And Find Its Flexural Rigidity
2	Concrete Technology	1. Normal consistency of cement. 2. Initial and final setting times of cement. 3. Soundness of cement. 4. Compressive strength and tensile strength of cement. 5. Particle shape, texture and elongation/ flakiness index of aggregate. 6. Sieve analysis and particle size distribution of aggregate. 7. Bulk Density, Specific Gravity, Absorption & Moisture Content of Aggregate. 9. Bulking and Percentage silt in sand. 10. Workability - Slump test, Compaction factor of concrete. 11. Compressive strength of concrete cube. 12. Quality of concrete by using Rebound hammer/ Ultrasonic Pulse Velocity Instrument.
3	Structural Analysis	1. Verification of Maxwell's reciprocal theorem using simply supported beam. 2. Verification of Maxwell's reciprocal theorem using simply supported truss. 3. Horizontal thrust in two hinged arch. 4. ILD for Horizontal thrust in two hinged arch. 5. Horizontal thrust in three hinged arch.

		6. ILD for Horizontal thrust in three hinged arch. 7. Verification of flexural rigidity using simply supported beam. 8. Analysis of a continuous beam using computer software. 9. Analysis of a plane frame using computer software. 10. Analysis of a plane truss using computer software.
4	Fluid Mechanics	1. Determination of Metacentric height and its importance. 2. Calibration of Venturimeter and its practical utility 3. Calibration of Orifice meter and its practical utility 4. Calibration of Rectangular Notches/ V-Notches. 5. Calibration of Rectangular Notches/ V-Notches 6. Hydraulic Coefficients of an orifice. 7. Hydraulic Coefficients of a Mouthpiece. 8. Verification of Bernoulli's Theorem 9. Impact of jet apparatus
5	Survey Store	1. Determination of area of given polygon by tape and cross staff survey. 2. Measurement of area of plot by plane table surveying. 3. Determination of elevation of various points with Auto level. 4. Levelling – Longitudinal and cross-section and plotting 5. Measurement of Horizontal angle by using theodolite 6. Measurement of vertical angle and Trigonometric leveling using theodolite 7. Determination of Tacheometric constants. 8. Determination of elevation of points, horizontal distance and gradient by Tacheometric survey 9. Setting out of simple circular curve by offsets from chord produced method 10. Setting out of simple circular curve by Rankine method of tangential angle 11. Determination of height, remote elevation, distance between 2-3 points using total station 12. Determination of Area using total station. 13. Toposheet: Understanding and identification of different features of drawing. 16. Lay-out marking of building plan
6	Transportation Engineering	A. Test on Soil 1. CBR Test 2. AASHO Classification 3. Test on Stabilized soil B. Test on Aggregate 1. Specific Gravity & Water Absorption 2. Crushing Value test on Aggregate 3. Abrasion Value test on Aggregate 4. Impact Value test on Aggregate C. Test on Bitumen 1. Penetration Test 2. Softening Point Test 3. Ductility Test 4. Specific gravity of bitumen
7	Geotechnical Engineering	1. Moisture content and Specific gravity of soil. 2. Grain size Analysis – (Sieve Analysis). 3. Consistency limit, plastic limit and liquid limit of soil. 4. Hydrometer Analysis. 5. Constant Head Permeability test of and Falling Head Permeability test. 6. Consistency limit of soil (shrinkage limit). 7. Field Density by sand replacement method. 8. Field Density by core cutter method. 9. Unconfined compression test. 10. Direct shear Test. 11. Proctors compaction Test
8	Environmental Engineering	1. Determination of pH 2. Determination of Conductivity 3. Determination of Turbidity

		3. Determination Chlorides 4. Determination of Solid's (Suspended & dissolved) 6. Determination of Acidity and alkalinity 7. Determination of Dissolved Oxygen 8. Determination of Available Chlorine 9. Determination of Residual Chlorine 10. Jar Test (optimum dose of coagulant) 11. Only demonstration of COD, BOD. 12. Bacteriological Plate count and MPN tests
9	Computer Lab	AUTOCAD and STAAD Software

Annexure 2

Enrolment and placement details of students in the last 3years:

Sr. No.	Year	Name of student placed	Program graduated from	Name of the employer	Pay package at appointment
1	2022-2023	Rutuj Rodge	BE Civil Engg.	Cognizant Technology Solutions India Private Limited	4
2	2022-2023	Raj Rewatkar	BE Civil Engg.	Cognizant Technology Solutions India Private Limited	4
3	2022-2023	Rajat Falke	BE Civil Engg.	Home First Finance Company India Ltd.	5.25
4	2022-2023	Raj Rewatkar	BE Civil Engg.	Home First Finance Company India Ltd.	5.25
5	2022-2023	Rohit Khandate	BE Civil Engg.	Home First Finance Company India Ltd.	5.25
6	2022-2023	Shashwat Gede	BE Civil Engg.	Home First Finance Company India Ltd.	5.25
7	2022-2023	Chaitanya Dharmik	BE Civil Engg.	Teachnook Edutech	1.8
8	2022-2023	Rutuj Rodge	BE Civil Engg.	Teachnook Edutech	1.8
9	2022-2023	Shantanu Jamdar	BE Civil Engg.	Teachnook Edutech	1.8
10	2021-2022	Ameya Belsare	BE Civil Engg.	Collabera Services Pvt. Ltd.	2.7
11	2021-2022	Piyush Sisode	BE Civil Engg.	Collabera Services Pvt. Ltd.	2.7
12	2021-2022	Piyush Sisode	BE Civil Engg.	Capgemini Technology Services India Ltd	4
13	2021-2022	Kaustav Dutta	BE Civil Engg.	Collabera Services Pvt. Ltd.	2.7
14	2021-2022	Rajat Kurve	BE Civil Engg.	Cognizant Technology solutions India pvt, ltd	4
15	2021-2022	Rajat Kurve	BE Civil Engg.	Wipro Limited	3.5

16	2021-2022	Prajwal Domle	BE Civil Engg.	Ranstand India Private litd,	3
17	2021-2022	Prachi Tembhure	BE Civil Engg.	Ranstand India Private litd,	3
18	2021-2022	Abhishek Bisen	BE Civil Engg.	Ranstand India Private litd,	3
19	2021-2022	Nailesh Rahangdle	BE Civil Engg.	Base4 Architects and Engineers Pvt.Ltd.	2.16
20	2021-2022	Gaurav Chakole	BE Civil Engg.	Global Arch Technologies	1.44
21	2021-2022	Neha Halmare	BE Civil Engg.	HSM Edifice construction services pvt .ltd	1.8
22	2021-2022	Saurabh Ukey	BE Civil Engg.	Hitesh Lahoti & Associates	1.44
23	2021-2022	Yash Mahuje	BE Civil Engg.	QUESS Corp Ltd	2.97
24	2021-2022	Sanket Awaghane	BE Civil Engg.	ARTEL STUDIOS	1.8
25	2021-2022	Swarup Khandare	BE Civil Engg.	Teachnook	1.8
26	2020-2021	Dhiraj Baingane	BE Civil Engg.	Dhansmruti Buildcon Pvt.Ltd.,Pune-411014	1.68
27	2020-2021	Yash Raut	BE Civil Engg.	ADMIRE TECH VISION LLP, NAGPUR - 9527360089	0.72
28	2020-2021	Akash Jaykumar Makeshwar	BE Civil Engg.	Byjus Nagpur - VIPL Building, 8th Floor, Wing A (I Park), Plot No 28, MIDC IT Park Area, Gayatri Nagar Road, Parsodi, Nagpur - 440022	3
29	2020-2021	Raju Kamble	BE Civil Engg.	Reliance, Ahemdabad, Gujrat,-91-079-35031200	2.5
30	2020-2021	Pragati Gede	BE Civil Engg.	CAAD Centre, Nagpur-04445966100	0.96
31	2020-2021	Sakshi Mukesh Gajbhiye	BE Civil Engg.	Infocepts Technologies Pvt-Ltd.(Unit-III) 2 nd floor ,C-Wing(South Block)Central Facility building Mihan Nagpur-441108 Maharashtra India	3.62
32	2020-2021	Amol Sanjay Shastrakar	BE Civil Engg.	Modern Arch Infrastructure, Pvt.Ltd	1.86

				Nagpur	
33	2020-2021	Dhruvesh Nareshchandra Paunikar	BE Civil Engg.	Cognizant Technology Solutions India Private Limited	6
34	2020-2021	Gaurav Gokaransingh	BE Civil Engg.	Prompt Personnel Services, Private Limited	3

Annexure 3

MoUs with Industries:

S.N.	Name of Industry	Date of MOU	No of activities conducted in last three years
1	Hitesh Lahoti & Associates, Pune	05-08-2019	**03**
2	CADD Centre Dharampeth, Nagpur	27-10-2021	**03**
3	Design and draft Engineering Institute, Nagpur	21-03-2022	**01**

Department of Computer Science and Engineering

6	For each Programme the following details are to be given of last three years (2021-22, 2022-23)	**2021-22**	**2022-23**
	Name	**Computer Science & Engineering**	
	Number of Seats	120	120
	Duration	4 years	4 years
	Cut off marks/rank of admission during the last three years	70.78	80.92
	Fee (as approved by the state government)	113000/-	
	Placement Facilities	Available	Available
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	Placed - 72 Min. Sal - 2.5 Lacs Avrg. Sal - 3.5Lacs Max Sal - 6 Lacs	Placed - 46 Min. Sal - 2.5 Lacs Avrg. Sal - 3.5 Lacs Max Sal - 5 Lacs
7.	Course/Branch wise list Faculty members:	Dr. (Mrs.)L. H. Patil Mr. C. U. Chauhan Mrs. B. P. Dharaskar Dr. (Miss.) U. K. Thakur Dr. N. M. Shelke Mrs. S. R. Dhabarde Mr. H. V. Taiwade Mrs. V. Ganesh Mrs. N. S. Khade Mr. P. H. Govardhan Mr. V. P. Yadav Mrs. Pratibha Waghale Mrs. B.S Joshi Mrs. Amita Suke Mr. P.G. Dhule Ms. S. B. Meshram Ms. Rupali S. Saha Ms. Sanjana Panjwani Mrs. Poonam Agrawal Mrs. Rashmi Deshmukh Mr. Akash Jamgade Mrs. Pallavi Mutharkar Mrs. Vina Borkar Mr. Nawnit Uke Mrs. Rashmi Janbandhu Mrs. Manisha Gaikwad Mr. Nikesh Aote	Dr. L. H. Patil Prof. B. P.Dharaskar Prof. S. D. Dhabarde Prof. H. V. Taiwade Prof. N. S. Khade Prof. V. Ganesh Prof. P. H. Govardhan Prof. V. P. Yadav Prof. R. D. Pote Prof. R. S. Saha Prof. T. P. Malewar Prof. S. O. Gill Prof. M. A. Chore Prof. Nikesh Aote Prof. N. Mohod Prof. Aniruddh Bhagwat Prof. Vaishali N Pahune Prof. Shraddha P Raut Prof. Raksha P Kardak Prof. Monali Gotaphode Prof. Sanjana Panjwani Prof. Poonam Agrawal Prof. Rashmi Deshmukh Prof. Akash Jamgade Prof. Vina Borkar Prof. Nawnit Uke Prof. Rashmi Janbandhu
	Permanent Faculty	27	27
	Adjunct Faculty	--	--
	Permanent Faculty: Student Ratio	1:15	1:15
	Number of Faculty employed and left during the last two years	02	01

	List of Major Equipment/Facilitiesin each Laboratory/Workshop		
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	Desktop Computer	Desktop Computer
	Internet Bandwidth	1050 Mbps	1050 Mbps
	Number and configuration of System	Computer - 160 **CPU:**Lenovo Thinkcenter Neo 50T Gen 3_ADL **Platform:** 260 watt PSU, Motherboard: Intel Alder Lake B660, Processor: 12th Gen Intel core TM i5-12400(2.5 Ghz up tp 4.40 Ghz) DIMM Memory 8 GB DDR 4-3200 Mhz **Second storage selection:** 256GBSSD M.2 2280PCIe NVMe Gen4 TLC Opal **Keyword:**LenovoUSB, Traditional black **Mouse:** USB Calliope mouse Black **Monitor:** BenQ G702AD LCD monitor	Computer - 160 **CPU:**Lenovo Thinkcenter Neo 50T Gen 3_ADL **Platform:** 260 watt PSU, Motherboard: Intel Alder Lake B660, Processor: 12th Gen Intel core TM i5-12400(2.5 Ghz up tp 4.40 Ghz) DIMM Memory 8 GB DDR 4-3200 Mhz **Second storage selection:** 256 GB SSD M.2 2280PCIe NVMe Gen4 TLC Opal **Keyword:** Lenovo USB, Traditional black **Mouse:**USBCalliope mouse Black **Monitor:** BenQ G702AD LCD monitor
	Total number of system connected by LAN	160	160
	Total number of system connected by WAN	--	--
	Major software packages available	--	--
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	Google Suite	Google Suite
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Smart Class Room	Smart Class Room
	For each Programme the following details are to be given of lastthree years (2021-22, 2022-23)	--	-

16	*Enrolment and placement detailsof students in the last 3years*	Enrolled - 153 Placed - 72	Enrolled - 136 Placed - 46
17	Number of Projects carried out, funding agency, Grant received	Nil	QHF 2.06 Lacs
	Publications (if any) out of research in last three years out of Master's projects	Nil	Nil
	Industry Linkage	03	03
	MoUs with Industries (minimum3(10))	04	03

Department of Computer Technology

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	COMPUTER TECHNOLOGY		
	Number of Seats	107	111	120
	Duration	4YRS	4YRS	4YRS
	Cut off marks/rank of admission during the last three years	55.51	61.7	74.51
	Fee (as approved by the state government)	113000/-	113000/-	

	Placement Facilities			
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	Campus Placement: 43 Min Salary-1.32L Max. Salary-10K Average Salary-3.94L	Campus Placement: 47 Min Salary-2.25L Max. Salary-6.75L Average Salary-3.75L	Campus Placement: 59 Min Salary-2.52 L Max. Salary- 5.25 L Average Salary-3.8 L
7	*Faculty*			
	Course/Branch wise list Faculty members:	24	18	19
	Permanent Faculty	24	18	19
	Adjunct Faculty	-	01	-
	Permanent Faculty: Student Ratio	17.83	23.44	21.68
	Number of Faculty employed and left during the last threeyears	Employed: 07 Left :01	Employed: 05 Left :11	Employed: 04 Left :03
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	Yes	Yes	Yes
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	Yes	Yes	Yea
	Internet Bandwidth	1050 Mbps		1050 Mbps

	Number and configuration of System	Dell Vostro Desktop 3670SFF Core i3 Gen Processor Dell Monitor E2216HV (120 PCs)	Lenovo Desktop TC Think center Neo 50t Gen3 ,Intel Alder Lake B660 12th Gen Intel Core i5 12400 2.5 Ghz 8GB RAM Monitor think Vision (160 PCs)	Lenovo Desktop TC Think center Neo 50t Gen3 ,Intel Alder Lake B660 12th Gen Intel Core i5 12400 2.5 Ghz 8GB RAM Monitor think Vision (160 PCs)
	Total number of system connected by LAN	Yes	Yes	Yes
	Total number of system connected by WAN	NIL	Nil	NIL
	Major software packages available	One	One	One
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	Yes	Yes	Yes
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Yes	Yes	Yes
	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses givethe following			
	Title of the Course			
	Curricula and Syllabi			
	Laboratory facilities exclusive to the PostGraduate Course			

	Special Purpose			
	Software, all design tools in case			
	Academic Calendarand framework			
16	*Enrolment and placement detailsof students in the last 3years*			
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, fundingagency, Grant received			
	Publications (if any) out of research in last three years out of Master's projects			
	Industry Linkage			
	MoUs with Industries (minimum3(10))			

Department of Electrical Engineering

6	For each Programme the following details are to be given of last three years (2021-22, 2022-23)	**2021-22**	**2022-23**
	Name	**Electrical Engineering**	
	Number of Seats	120	108
	Duration	4 Year	4 Year
	Cut off marks/rank ofadmission during the last three years	4.19	33.08
	Fee (as approved by the state government)		

	Placement Facilities	Provided by T&P	Provided by T&P
	Campus placement in last three years with minimum salary, maximum salary, and average salary	Placed students = 10 Min Salary = 1.44 LPA Max. Salary = 6.3 LPA Av. Salary = 3.58 LPA	Placed students = 05 Min Salary = 2.3 LPA Max. Salary = 3.75 LPA Av. Salary = 2.87 LPA
7	Course/Branch wise list Faculty members:	Annexure 1	
	Permanent Faculty	23	19
	Adjunct Faculty	-	-
	Permanent Faculty: Student Ratio	18.86	19.83
	Number of Faculty employed and left during the last threeyears	Employed = 02 Left = 02	Employed = 01 Left = 05
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	Annexure 2	
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	Annexure 3	
	Internet Bandwidth	1050Mbps	1050Mbps
	Number and configuration of System		
	Total number of system connected by LAN		
	Total number of system connected by WAN		
	Major software packages available		
	Special purpose facilities available (Conduct of online Meetings/ Webinars/Workshops, etc.)		

	Facilities for conduct of classes/courses in online mode (Theory & Practical)		
	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**NA**	
16	*Enrolment and placement detailsof students in the last 3years*	Enrolled-75 Placed- 10	Enrolled- 67 Placed- 05
17			
	Number of Projects carried out, fundingagency, Grant received	---	--
	Publications (if any) out of research in last three years out of Master's projects	---	--
	Industry Linkage	01	01
	MoUs with Industries (minimum (10))	01	01

Annexure-1
List of Faculty members available in Department
Session 2022-23

S. No.	Name	PAN No.	Qualification	Area of Specialization	Designation	Date of Joining	Date on which Designated as Professor/ Associate Professor	Currently Associated(Y/N)	Nature of Association (Regular/Contract/ Adjunct)	If contractual mention Fulltime or Part time	Date of Leaving (In case Currently Associatedis
1	Dr. R.A. Keswani	APLPK3605D	Ph.D., M.Tech., B.E.	Power System, Drives	Associate Professor	02/07/2007	31/10/2015	Yes	Regular		--
2	Dr. J. P. Sathe	AJFPB0353D	Ph.D. ME., B.E.	Power System and Power Electronics	Assistant Professor	17/07/2002		Yes	Regular		--
3	Dr. U.B. Malkhandale	AKCPM5914D	Ph.D., M.Tech., B.E.	Power System	Assistant Professor	31/7/2002		Yes	Regular		--
4	Ms. H. B. Sarvaiya	BOOPS3945B	M.Tech., B.E.	Integrated Power System	Assistant Professor	02/07/2007		Yes	Regular		--
5	Mrs. M. K. Parve	ASKPP7590C	M.Tech. B.E.	Integrated Power System	Assistant Professor	13/06/2008		Yes	Regular		--
6	Mr. M. R. Shelke	ASSPS7497R	M.Tech. B.E.	Power System	Assistant Professor	01/06/2011		Yes	Regular		--
7	Dr. S. N. Dhurvey	BCDPD1282P	Ph.D., M.Tech., B.E	Power System	Assistant Professor	02/06/2011		Yes	Regular		--
8	Dr. V.G. Umale	ABMPU3218R	Ph.D., M.Tech., B.E	Power System	Assistant Professor	01/07/2012		Yes	Regular		--
9	Mr. Md. Bashir Sheikh	BEFPM2699P	M.Tech. B.E.	Integrated Power System	Assistant Professor	18/07/2012		Yes	Regular		--
10	Mr. A.A. Deosant	ATBPD3916C	M.Tech. B.E.	Electric Vehicle, application of Supercapacitor,	Assistant Professor	19/07/2014		Yes	Regular		--
11	Ms. P.S. Manware	AKCPM5914D	M.Tech. B.E.	Integrated Power System	Assistant Professor	06/08/2014		Yes	Regular		--
12	Mr. L.M. Bopche	BAXPB1687C	M.Tech. B.E.	Integrated Power System	Assistant Professor	04/11/2015		Yes	Regular		--

13	Mr. Muneeb Ahmad		M.Tech. B.E.	Integrated Power System	Assistant Professor	02/11/2015		Yes	Regular		--
14	Mr. V. Sable	CVXPS6718M	M.Tech.	Electrical Power System	Asstt. Prof.	01/09/2017		Yes	Regular		--
15	Ms. N. Dekate	ANYPH4079F	M.Tech.	Electrical Power System	Asstt. Prof.	21/12/2018		Yes	Regular		--
16	Ms. R. Vyawahare	AQRPV9821F	M.Tech.	Integrated Power System	Asstt. Prof.	25/08/2020		Yes	Regular		--
17	Ms. V. Patil	BKQPP7339L	M.Tech.	Integrated Power System	Asstt. Prof.	25/08/2020		Yes	Regular		--
18	Ms. A. P. Sarkar	FXKPS7018N	M.Tech.	Integrated Power System	Asstt. Prof.	15/02/2022		Yes	Regular		--
19	Ms. P. N. Gaurkar	CTOPG9142C	M.Tech.	Electrical Power System	Asstt. Prof.	15/02/2023		Yes	Regular		--

Annexure-2
PRIYADARSHINI COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL ENGINEERING
List of Major Equipment/Facilities in each Laboratory/Workshop

Name of Laboratory: Electrical Machines-I

Sr. No.	Name of Equipment
1	M.G. Set DC motor 3 HP,1500 r.p.m.,220 V, shunt type, Generator 1.8KW,220V 1500r.p.m. shunt type
2	M.G. Set DC shunt motor 7.5 HP/5.5KW,1500 r.p.m.,220Volts, 30A,Alternator 5KVA, 7A, 1500 r.p.m. 415volts
3	Scott Connection Demonstrator along with 3-phase

Name of Laboratory: Electrical Machines-II

Sr. No.	Name of Equipment
1	Thyristorised Controlled DC power supply (3 phase AC to DC)
2	DC shunt motor and alternator (3 phase) set with motor starter (2 SETS)
3	Synchronous Motor (3 phase) and DC Shunt Generator with load bank
4	Synchronization Panel for synchronization of load sharing in the laboratory
5	Repulsion Motor and DC Generator Set up with load bank and starter
6	Synchronous Motor Generator Panel

7	Experimental set up for Universal Motor with mechanical loading and and control panel
8	Experimental set up for AC series motor copled with generator (MG Set) along with control panel and load bank
9	Brushless motor set up

Name of Laboratory: High Voltage Engineering

Sr No	Name of Equipment
1	High Voltage AC Test Kit, 100KV, 100mA
2	Oil Insulation Test Kit (Manual), 0-60KV
3	Solid Insulator Tester, 0-30KV, 30mA
4	Electrolytic Tank, With different electrodes
5	Oil Test Setup (tanδ), 0-600V
6	Oil Insulation Test Kit (Motorised), 0-100KV
7	Disc Insulators (6 discs), 11 KV
8	Capacitance Divider, 100KV
9	Sphere Gap - i)150mm diameter sphere, ii)100mm diameter sphere, iii)62.5mm sphere
10	Rod Gap- i)Pointed electrode ii)Square tripeed electrode iii)Parallel plat electrode

Name of Laboratory: Electrical Installation Design

Sr. No.	Name of Equipment
1	Power Factor Demonstator
2	Automatic Power Factor Correction
3	Automatic Star Delta Starter Demonstrator
4	Three Phase Induction Motor Demonstrator

Name of Laboratory: Switchgear and Protection

Sr. No.	Name of Equipment
1.	Electro- mechanical directional over current relay (IDMT) test kit
2.	Electro-mechanical earth fault relay (IDMT) test kit
3.	Electro- mechanical over voltage relay (IDMT) test kit
4.	Electro- mechanical under voltage relay (IDMT) –test kit
5.	MCB & fuse test setup EDAS mcb-01
6.	Automatic transformer ratio meter for CTs/PTs Siva/Atram-1m

7.	Static % biased differential relay test set up
8.	Numerical overcurrent relay test setup relay model: EDAS-PLOC-numerical
9.	Single phase transformer protection

Annexure-3
PRIYADARSHINI COLLEGE OF ENGINEERING
DEPARTMENT OF ELECTRICAL ENGINEERING
List of Experimental Setup in each Laboratory/Workshop

Equipment pertaining to perform the following experiments:

Sub- Introduction to Python Programming

Experiment No	Name of Experiments
1	Write a program to perform different arithmetic operations on numbers in python.
2	Write a program to create, concatenate and print a string and access sub-string.
3	Write a program to create, append and remove list in python.
4	Write a program to demonstrate the working with tuples in python.
5	Write a program to demonstrate the working with dictionaries in python.
6	Write a program to find largest of three numbers.
7	Write a program to construct pattern using nested for loop.
8	Write a program that accept length of 3 sides of triangle as input.
9	Write a python script to print current date in given format.
10	Write a program to define a module to find fibonacci number and import the module to program

Sub- Electrical Measurement & Instrumentation

Experiment No	Name of Experiments
1	To determine unknown resistance using Kelvin's bridge method.
2	To determine unknown resistance post office box trainer kit.
3	To determine unknown inductance by Maxwell inductance Bridge method.
4	To determine unknown capacitance by Schering bridge method.
5	To determine unknown capacitance by De-sauty's bridge method.
6	To determine unknown inductance and Quality factor using Hay's Bridge method.
7	To study Input output characteristics of LVDT.

8	To study single phase energy meter for different load conditions.
9	To determine linear range operation of Strain gauge.
10	To measure Three Phase Power by Two wattmeter method.

Sub- Analog Devices and Circuits

Experiment No	Name of Experiments
1.	To study and plot V-I Characteristics of Silicon diode- a) Forward bias b) Reverse bias
2.	To study Single phase Half wave & Full wave Rectifier with & without filter.
3.	To study Single phase Bridge type full wave rectifier with & without filter
4.	To study and plot characteristics of Zener diode
5.	To study Zener diode as a voltage regulator.
6.	To study characteristics of BJT in common emitter configuration
7.	To study characteristics of BJT in common base configuration
8.	To study BJT in common emitter amplifier.
9.	To study R-C phase shift oscillator
10.	To study Weins bridge oscillators
11.	To Study operational amplifier: a) inverting b) non-inverting mode
12.	To Study of Differentiator and Integrator using Operational Amplifier
13.	To study IC-555 timer.

Sub- Network Analysis

Experiment No	Name of Experiments
1.	To verify the Superposition theorem.
2.	To verify the Thevenin's theorem.
3.	To verify the Norton's theorem.
4.	To verify the Reciprocity theorem.
5.	Verification of the maximum power transfer theorem.
6.	To verify the Tellengen's theorem.
7.	Study of resonance in series RLC circuit and to find in Resonance frequency.
8.	Study of resonance in parallel RLC circuit and to find it's Resonance frequency.
9.	To determine Z parameter of a passive two port network.

10.	Study of ABCD parameter of passive two port network.

Sub- Simulation and Programming Techniques

Experiment No	Name of Experiments
1	Write a program to demonstrate the use of Printf and Scanf statement.
2	Write a program to demonstrate the use of following operators: a)Arithmetic operator, b)Logical operator, c)Conditional operator
3	Write a program to interchange the values of two variables.
4	Write a program to enter a number from 1 to 7 and display the corresponding day of the week using Switch Case statement.
5	Write a program to implement binary search.
6	Write a program to implement Bubble Sort.
7	Write a program to generate the following pattern using For loop.
8	To study Object Oriented programming concept.
9	Write a program in MATLAB for computing sum of series.
10	Write a program in MATLAB to generate sine wave.

Sub- Electrical Machines-I

Experiment No	Name of Experiments
1	Conversion of two winding Transformer into Auto Transformer with polarity marking.
2	Speed control of induction motor (Slip-ring) by Rotor resistance method
3	Reversal of rotation & speed control of 3Ø Induction Motor by voltage variation method
4	Determination of Equivalent Circuit Parameters of a Three-Phase Induction Motor by performing Blocked Rotor and No Load Test.
5	Speed control of a D.C. shunt motor 1. By varying field current with armature voltage kept constant. By varying armature current with field current kept constant.
6	To find magnetization characteristics of D.C. shunt Generator
7	To study SCOTT connection of transformer
8	To study back to back test of transformer
9	To find the regulation of alternator by direct loading.
10	To find the regulation of alternator by performing O. C. Test and S. C. Test.

11	To perform the open circuit and short circuit test on three phase transformer

Sub- Digital Electronics

Experiment No	Name of Experiments
1	To verify the truth table of different Logic Gates
2	To study and verify the NAND and NOR gates as a universal gates
3	To study and verify truth table of Multiplexer and Demultiplexer
4	To study and verify truth table of half adder
5	To study and verify truth table of full adder
6	To study and verify truth table of subtractor
7	To study and verify truth table of different types of flip flops
8	To study Arithmetic Logic Unit
9	To study Ring Counter

Sub- Electrical Machines-II

Experiment No	Name of Experiments
01	To find the regulation of alternator by performing O. C. Test
02	To find the regulation of alternator by performing S. C. Test
03	To find the regulation of alternator by direct loading.
04	To find xd and xq of a salient pole rotor type synchronous machine by slip test
05	To determine sub transient direct axis (xd'') and quadrature axis (xq") synchronous reactance of an alternator.
06	To study the synchronization of two alternators by dark lamp and bright lamp method.
07	To plot v & inverted v curves of a synchronous motor.
08	To perform load test on repulsion motor

Sub- Electrical Simulation and Design

Experiment No	Name of Experiments
1	Introduction to Lucidchart.
2	To draw single line diagram of 11KV/400V Substation using Lucidchart.
3	Study of control of bus voltage through On load tap changer using Virtual Lab.

4	Monitoring Feeder Parameters from Workstation on Virtual Lab.
5	Introduction to MATLAB / Electric Circuit Studio.
6	Verify Superposition Theorem using Electric Circuit Studio.
7	Analysis of AC Circuit (RLC Series Circuit) using Electric Circuit Studio.
8	Introduction to PCB and PCB software- Express PCB and PCB Driod.
9	PCB layout of Full Wave Diode Bridge Rectifier using PCB Driod.
10	Prepare a presentation with animation on any topic of 5 Semester Subject.
11	To simulate Half Wave Uncontrolled Rectifier with R load using MATLAB Software.
12	To study RLC Series circuit using MATLAB Software.
13	To simulate Half Wave Uncontrolled Rectifier using R load using MATLAB Software.
14	To Design 3 – phase Inverter (180° Mode) using MATLAB Software.

Any 8 Experiments

Sub- Control System-I

Experiment No	Name of Experiments
1.	To verify the operation of an Open loop system.
2.	The verification of performance of basic close loop feedback system.
3.	To verify the torque –speed characteristics of DC servomotor.
4.	To verify the torque –speed characteristics of AC servomotor.
5.	To perform DC potentiometer as error detector.
6.	To obtain time response analysis of second order system.
7.	To obtain Root Locus Response of any given system using MATLAB software.
8.	To obtain bode plot Response of any given system using MATLAB software.
9.	To obtain Nyquist plot Response of any given system using MATLAB software.
10.	To obtain Transfer function of any given state model using MATLAB software.

Sub- Power Electronics

Experiment No	Name of Experiments
1.	To study and plot V-I Characteristics of Silicon controlled rectifier. Also determine latching & holding current.
2.	To study and plot V-I Characteristics of DIAC.

3.	To study and plot V-I Characteristics of TRIAC.
4.	To study and plot V-I Characteristics of UJT.
5.	To study UJT as a relaxation oscillator
6.	To study and plot the transfer and output characteristics of MOSFET
7.	To study the transfer and output characteristics of IGBT
8.	To study the single-phase half-controlled bridge converter with R & RL Load.
9.	To study the single phase fully controlled bridge converter with R & RL Load.
10.	To study step-down DC chopper
11.	To study step-up DC chopper
12.	To study single phase PWM inverter

Sub- High Voltage Engineering

Experiment No	Name of Experiments
1	To find Breakdown strength of solid insulating material
2	To find Breakdown strength of Transformer oil
3	To study arching phenomenon using horn gap apparatus
4	Study of Impulse voltage generator using virtual lab
5	Study of Impulse current generator using virtual lab
6	Critical Flash-over of a sphere gap using virtual lab
7	To study functioning of voltage Doubler using virtual lab
8	To study functioning of 3-stage Cockcroft-Walton voltage Multiplier

Sub- Electrical Installation Design

Experiment No	Name of Experiments
1	To Study the Electric Bill
2	To Plot the Characteristics of MCB
3	Introduction to ETAP Software
4	To Perform Load Flow Analysis using ETAP software
5	To Draw Single Line Diagram of Substation or Substation Layout
6	To Design Layout of Seminar Hall or Laboratory using VISIO Software
7	To Study Different types of Line Apparatus
8	To Study the various types of Transformer Protection Devices

9	To Study Horn Gap Fuse
10	To write a Report on Substation Visit of 11KV/400 V at Priyadarshini College of Engineering Power House
11	To Study the Earthing System

Sub- Switchgear and Protection

Experiment No	Name of Experiments
1	To study the electromechanical under voltage relay and plot time current characteristics at different TMS.
2	To study the construction of Non directional Inverse Time Earth Fault relay and plot time current characteristics at different TMS.
3	To study the construction of Overvoltage relay and plot time current characteristics at different TMS.
4	To understand Spill current principle and plot characteristics of Through fault current Vs spill current.
5	To verify characteristics of Differential current vs Effective Bias current for Static Percentage Biased Differential Relay.
6	To obtain operating characteristics of MCB class B and C.
7	To obtain Current characteristics of minimum fusing current of semi-enclosed rewirable fuse
8	To study Transformer Protection study unit model.
9	To study the over current relay and effect of PSM and TSM by using virtual Lab.
10	To study Differential Protection of 3 phase Delta Delta connected three phase transformer by using virtual lab..

Sub- Computer Application in Power System

Experiment No	Name of Experiments
1.	To determine the element node incidence matrix & bus incidence matrix for given power system.
2.	To determine the bus admittance matrix by singular transformation for the given power system.
3.	To form the Zbus for the given power system by step by step algorithm.
4.	To convert impedance matrix of phase co-ordinates into symmetrical components using transformation matrix.
5.	To perform short circuit study for given power system network for 3 phase fault and L-G Fault
6.	To find solution of power flow using gauss-seidel method.

7.	Program to plot swing curve of a given power system by step-by-step method.
8.	To find Power handling capacity of transmission line.
9.	To study the ferranti effect in transmission line
10.	Transient stability analysis of multimachine power systems.
11.	Solution of power flow using Newton-Raphson method
12.	Modelling of facts devices using Simulink.
13.	Modelling of transmission lines parameter.

Department of Electronics and Power Engineering

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	**Electronics and Power**		
	Number of Seats	120	60	60
	Duration	4 Years	4 Years	4 Years
	Cut off marks/rank of admission during the last three years	11.8	3.04	8.75
	Fee (as approved by the state government)	113000/-	113000/-	

	Placement Facilities	Campus placement through T and P Cell	Campus placement through T and P Cell	Campus placement through T and P Cell
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	List attached	List attached	List attached
7	*Faculty*			
	Course/Branch wise list Faculty members:			
	Permanent Faculty	19	23	27
	Adjunct Faculty	NIL	NIL	NIL
	Permanent Faculty: Student Ratio	21	15	20
	Number of Faculty employed and left during the last threeyears			
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	List attached	List attached	List attached
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	List attached	List attached	List attached
	Internet Bandwidth	1050 Mbps	1050 Mbps	1050 Mbps
	Number and configuration of System			
	Total number of system connected by LAN			
	Total number of system connected by WAN			
	Major software packages available	MATLAB- Server based, ETAP	MATLAB- Server based, ETAP	MATLAB- Server based, ETAP

	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	Google meet and zoom meet facilities available.	Google meet and zoom meet facilities available.	Google meet and zoom meet facilities available.
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Google meet and zoom meet facilities available.	Google meet and zoom meet facilities available.	Google meet and zoom meet facilities available.
	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses givethe following			
	Title of the Course	M.Tech. Industrial Drives & Control	M.Tech. Industrial Drives & Control	M.Tech. Industrial Drives & Control
	Curricula and Syllabi	on University Website		
	Laboratory facilities exclusive to the PostGraduate Course	Advance Drives Laboratory	Advance Drives Laboratory	Advance Drives Laboratory
	Special Purpose	Electrical Drives control using converters	Electrical Drives control using converters	Electrical Drives control using converters
	Software, all design tools in case	MATLAB , ETAP & PSIM software	MATLAB , ETAP & PSIM software	MATLAB , ETAP & PSIM software
	Academic Calendarand framework	Semester wise Academic calendar (Yearly 2 Semester)	Semester wise Academic calendar (Yearly 2 Semester)	Semester wise Academic calendar (Yearly 2 Semester)
16	*Enrolment and placement detailsof students in the last 3years*	All PG students are placed in off campus drive.	All PG students are placed in off campus drive	All PG students are placed in off campus drive
17	*List of Research Projects/Consultancy WorkS*			
	Number of Projects carried out, fundingagency, Grant received			Grants Received: 1.Grants received from AICTE under MODROB : 10.58 Lakh session 2019-20 2. Grants received from AICTE under Training and learning (ATAL) FDP: Rs 93000 Dated 14.12.2021
	Publications (if any) out of research in last three years out of Master's projects	List attached	List attached	List attached
	Industry Linkage	Yes for projects and Internship	Yes for projects and Internship	Yes for projects and Internship
	MoUs with Industries (minimum3(10))	1.Shree Ashoka Solar And Energy Pvt Ltd,	1.Shree Ashoka Solar And Energy Pvt Ltd,	1.Shree Ashoka Solar And Energy Pvt Ltd,

		Nagpur 2.Shiv Malhar Laboratories Pvt. Ltd. Nagpur 3.Agreen Allied Services Pvt. Ltd. Nagpur Total = 3	Nagpur 2.Shiv Malhar Laboratories Pvt. Ltd. Nagpur 3.Agreen Allied Services Pvt. Ltd. Nagpur Total = 3	Nagpur 2.Shiv Malhar Laboratories Pvt. Ltd. Nagpur 3.Agreen Allied Services Pvt. Ltd. Nagpur Total = 3

Department of Electronics & Communication Engg.

6	For each Programme the following details are to be given of last three years (2021-22, 2022-23)	**2021-22**	**2022-23**
	Name	**Electronics & Communication Engineering**	
	Number of Seats	120	120
	Duration	4 yrs	4 yrs
	Cut off marks/rank of admission during the last three years	4.19	49.44
	Fee (as approved by the state government)	113000/-	
	Placement Facilities	Institute level Training & Placement cell , The T&P cell works with respective Departmental coordinators to arrange for campus drives by various companies. It also arranges Campus Recruitment Training for Third year students. Campus drives and training are organised for third year students also and in-house training activities. Soft Skill Trainings etc.	
	Campus placement in last three years with minimum salary, maximum salary, and average salary		Annexure 1
7.	Course/Branch wise list Faculty members:		Annexure 2
	Permanent Faculty		12
	Adjunct Faculty		Nil
	Permanent Faculty: Student Ratio		278/12= 1:23.16
	Number of Faculty employed and left during the last threeyears		Left = 01 Employed = 03
	List of Major Equipment/Facilitiesin each Laboratory/Workshop		Annexure 3
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities		Annexure 4
	Internet Bandwidth		1050 MB
	Number and configuration of System		88 Pentium (R) , Dual Core, 64 bit, 2.8GHz, 80GB Hard disk, 2 GB RAM

	Total number of system connected by LAN		88
	Total number of system connected by WAN		88
	Major software packages available		FEKO ANTENNA DESIGN SOFTWARE, MATLAB-7
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)		Web-ex, Zoom
	Facilities for conduct of classes/courses in online mode (Theory & Practical)		Computer , Web Camera , Headphones with mic and speaker, ICT Tools, Gsuit accounts etc
	For each Programme the following details are to be given of lastthree years (2021-22, 2022-23)	**2021-22**	2022-23
	Title of the Course		Electronics (Communication) Engg
	Curricula and Syllabi		Annexure 5A, 5B, 5C, 5D
	Laboratory facilities exclusive to the PostGraduate Course		Annexure 06
	Special Purpose		
	Software, all design tools in case		FEKO ANTENNA DESIGN SOFTWARE Date of purchase:-29/03/2017, 5 USER, Total cost:- 2,77,333.00/-
	Academic Calendarand framework		Annexure 07
16	*Enrolment and placement detailsof students in the last 2years*		-
	Number of Projects carried out, fundingagency, Grant received		Nil
	Publications (if any) out of research in last three years out of Master's projects		Nil
	Industry Linkage		Annexure 8
	MoUs with Industries (minimum3(10))		Annexure 9

Annexure 01

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

Placement								
S.No.	**Academic Year**	**Name of the Company**	**No of students recruited**	**Minimum salary Offered(Lacs)**	**Maximum salary offered(Lacs**	**Average salary offered**	**Median salary offered**	**Name of Students**
1	**2021-22**	1)Mastersoft ERP 2) Byju's 3)Capegemini 4) Tech Mahindra 5) Infocepts 6) Wipro 7) Delloite 8) Dassault 9) ctrlsCloud4C	**10**	**1.5**	**7.5**	**3.85**	**3.36**	1) Amey Raoot 2) Ayush Soni 3)MrunalUmredkar 4) Prajakta Zade 5) Rahul Choudhari 6) Swejal Lanjewar 7) Vikram Kale 8) Yugeshwari Isapure 9) Vaishali Nikhade 10) Yashwant Shinganjude
2	**2020-21**	1.Capegemini 2.E-Zest 3.Accenture 4.HCL 5.Infocept 6.Mastersoft 7.Vodaphone 8.HP 9.ATOS	**09**	**2.4**	**6.79**	**3.3**	**3.62**	1)Babli Sahoo 2) Sayali Gurao 3) Saurabh Patle 4) Payal Rahangdale 5) Yuganti Thombare 6) Abhijeet Mahalle 7) Avinash Kumbhare 8) Chinmay Dakhane 9) Saurabh Bangre
3	**2019-20**	1)Infosys 2)Accenture 3)PersolKelly 4)Join Ventures 5) Alacrity 6) Pushpam Digital Solutions	**06**	**2.57**	**7**	**3.86**	**3.5**	1)HeenaShinganjude 2) Mayuri Kulkule 3)Gaurav Khotpal 4) Nayan Turankar 5)Pragati Gautam 6) Subhash Katole

Enrolment and placement details of students in the last 3years

Placement									
S.No.	**Academic Year**	**No.of Students Enrolled**	**Name of the Company**	**No of students recruited**	**Minimum salary Offered (Lacs)**	**Maximum salary offered(Lacs**	**Average salary offered**	**Median salary offered**	**Name of Students**
1	**2021-2022**	**45**	**1)Mastersoft ERP 2) Byju's 3)Capegemini 4) Tech Mahindra 5) Infocepts 6) Wipro 7) Delloite 8) Dassault 9) ctrlsCloud4C**	**10**	**1.5**	**7.5**	**3.85**	**3.36**	1) Amey Raoot 2) Ayush Soni 3)MrunalUmredkar 4) Prajakta Zade 5) Rahul Choudhari 6) Swejal Lanjewar 7) Vikram Kale 8) Yugeshwari Isapure 9) Vaishali Nikhade 10) Yashwant Shinganjude
2	**2020-21**	**45**	**1)Capegemini 2)E-Zest 3)Accenture 4)HCL 5)Infocept 6)Mastersoft 7)Vodaphone 8)HP 9)ATOS**	**09**	**2.4**	**6.79**	**3.3**	**3.62**	1)Babli Sahoo 2) Sayali Gurao 3) Saurabh Patle 4) Payal Rahangdale 5) Yuganti Thombare 6) Abhijeet Mahalle 7) Avinash Kumbhare 8) Chinmay Dakhane 9) Saurabh Bangre
3	**2019-2020**	**16**	**1)Infosys 2)Accenture 3)PersolKelly 4)Join Ventures 5) Alacrity 6) Pushpam Digital Solutions**	**06**	**2.57**	**7**	**3.86**	**3.5**	1)HeenaShinganjude 2) Mayuri Kulkule 3)Gaurav Khotpal 4) Nayan Turankar 5)Pragati Gautam 6) Subhash Katole

Annexure 02

List of Faculty Members (Session 2022-23)

Sr. No.	Department	Name of Faculty	Designation	Date of Joining in the Institute	PAN Card
1	E & C Engg.	Dr.(Mrs.)A.P.Rathkanthiwar	HOD, Associate Professor	16.07.2002	ABNPR6747B
2	E & C Engg.	Dr.(Mrs.) S. A. Chaturvedi	Associate Professor	16.08.1999	ADSPC0631L
3	E & C Engg.	Mr. V. V. Dabhade	Assistant Professor	06.07.2005	AIQPD1587R
4	E & C Engg.	Dr.(Mrs.) V. B. Bagde	Assistant Professor	06.07.2005	AJGPG9440B
5	E & C Engg.	Dr. A. D. Bijwe	Assistant Professor	26.07.2006	AISPB9006B
6	E & C Engg.	Mr. R. V. Bobate	Assistant Professor	02.07.2007	AIUPB7632H

7	E & C Engg.	Mr. D. A. Kapgate	Assistant Professor	02.07.2007	APPPK8292Q
8	E & C Engg.	Mrs. S. S. Wasnik	Assistant Professor	12.06.2008	ABLPW5929J
9	E & C Engg.	Dr. (Mrs.) G. P. Halde	Assistant Professor	30-04-2011	AEMPH0301P
10	E & C Engg.	Ms. A. S. Gawarle	Assistant Professor	02.06.2011	AROPG5999H
11	E & C Engg.	Miss. S. I. Parihar	Assistant Professor	11.06.2012	AMCPV9252D
12	E & C Engg.	Mr. R. S. Lonkar	Assistant Professor	19.07.2014	AEDPL8600G
13	E & C Engg.	Mr. V. R. Barwat	Assistant Professor	19.07.2014	CCEPB5339M
14	E & C Engg.	Mrs. P. G. Chavan	Assistant Professor	19.07.2014	AHBPR5312E
15	E & C Engg.	Ms. P. A. Bhosale	Assistant Professor	19.07.2014	AZTPB9835C
16	E & C Engg.	Mr. A. V. Warhade	Assistant Professor	30.10.2015	ADKPW8591K
17	E & C Engg.	Ms. V. V. Shirpurkar	Assistant Professor	01.12.2015	BJFPS8143H
18	E & C Engg.	Mr. G.G.Sarmokaddam	Assistant Professor	12.09.2022	BKAPS6581H
19	E & C Engg.	Ms. Pranali Misal	Assistant Professor	15-11-2021	BJOPM5964K
20	E & C Engg.	Ms. Snehal Shembalkar	Assistant Professor	06-01-2020	GOSPS9716H

Annexure 03

List of Major Equipments

Sr. No.	Name of Equipment	Quantity	Cost in Rs.
1.	Digital Storage Oscilloscope 200MHz, M: D36200CA HOO3DSO1208009	1	1,31,580.00/-
2.	Digital Storage Oscilloscope(100 MHz, 2 channel)	2	6,85,816.00/-
3.	Spectrum Analyzer	1	1,00,620.00/-
4.	Data Communication Trainer	1	50,000/-
5.	Link - E Fiber Optics Trainer Kit	1	55,000/-
6.	Optical Fiber Communication Principal Experiment Kit along with Suite case A) WDM Components B) Optical Power Meter C) Video Transmission System Components	1 Set	1,83,750
7.	DEO Development and Educational board with power supply	4	41,895
8.	FPGA Development board with power supply	2	59,850
9.	Universal Xilinx FPGA/ CPLD Education platform with P.S Model	2	47,590
10.	FEKO Antenna Design Software	5 User	2,77,333.00/-
11.	MATLAB 2016b	60 User	5,09,969.75/-

Sr. No.	Year	Semester	Name of Laboratory	List of Experimental Setup
1	2nd	3rd	**Components for Electronic circuit design Lab**	1. Familiarization with the Electronic Instruments like function generator, CRO, DC power supply, use of multimeter as voltmeter, ammeter, Ohmmeter, continuity meter, different types of transformers and Centre tapped transformer, Dimmer stat, Rheostat, AC voltage tester, concept of earthing. Measurement of voltage and frequency with CRO and DSO. Concept of saving and accessing waveform on DSO 2. Familiarization with different types of passive electronic components like resistor, inductor, capacitor. And miscellaneous components like winding wire, Ferrite Cores, connectors, general purpose PCB, and Bread board, relays, diodes, etc.

				3.To study basic wiring and design a switchboard/extension board for power distribution of 230V AC and electrical safety, fuses and MCBs, ELCB, contactors etc. 4. To study the concept of phase shift on CRO and DSO and measure phase shift in degrees and radians. 5. Design a a) forward bias circuit of a 1n4001 diode with a DC voltage of 5V and which will provide 5mA current with a suitable series resistor. Find unknown resistor and internal forward resistance of diode using this experiment. Measure forward voltage drop across diode, b)Design a reverse bias circuit of a 1n4001 diode with a DC voltage of 5V. Measure the reverse bias current and find reverse resistance of this diode. 6. Design a a) Half-wave rectifier using a capacitor-input filter. Use diode 1N4001 and Electrolytic capacitor of 100uF and at 3 different resistive loads. Measure peak to peak ripple voltage. b) Design a Full-wave rectifier using two diodes and a capacitor-input filter. Use diode 1N4001 and Electrolytic capacitor of 100uF and at 3 different resistive loads. Measure peak to peak ripple voltage, c)Design a Bridge wave rectifier using four diodes and a capacitor-input filter. Use diode 1N4001 and Electrolytic capacitor of 100uF and at 3 different resistive loads. Measure peak to peak ripple voltage. Compare answers with two diode rectifier and half wave rectifier. 7. Design a)Unregulated power supply of 12V DC using bridge wave rectifier. Ripple voltage should be less than 5mVpp. b) Convert this to regulated power supply using 7812 Linear voltage regulators.Measure efficiency against input supply variation. Plot the graph of efficiency verses input supply variation. 8. Design diode 1N4001 as a positive and negative clipper with a peak to peak voltage of 5Vpp and load resistance of 5kOhms. Use suitable frequency. Plot Waveforms. 9. Design a diode in voltage clamping mode with doubling the voltage for input voltage of 5Vpp and frequency of 50Hz. 10. To determine the operating voltages of different colours of LEDs and measure minimum current and forward bias voltages across them. 11. Design an optocoupler based switching circuit to switch a group of 5 LEDs connected in parallel.12. To design Transistor as a switch using a driving Relay and switch on and off a 230 V AC/10 W LED Bulb using concept and circuit modification of a) a normally open (N/O) switch(inverter) and b) a normally closed(N/C) switch. 13. To design transistor as an audio amplifier using microphone to amplifier different audio frequencies of 20Hz to 20kHz, test it on DSOs and save different pattern of waveforms at different frequencies, Measure its efficiency. 14. To design a) Audio Frequency Oscillator (RC) of 1kHz using transistor by determining values of R and C for a fixed frequency, b)To design Radio Frequency Oscillator of 1MHz (LC) by determining values of L and C for a fixed frequency. 15. To design transistorized AstableMultiviabrator for a frequency of 5kHz and 5Vpp. 16. To design a D.C. Power supply of 9V using Full Wave Rectifier of two diodes 1N4007 and suitable Zener Diode. Calculate efficiency. 17. To design an LED blinking circuit using Transistor BC547 and LDR. Use 12V DC power supply for biasing. 18. a)To measure the unknown values of inductors and capacitors using the Voltage divider and AC voltage of 24 V pp and 50Hz frequency, b)To find the value of unknown capacitor using a series RC circuit and AC voltage of 12Vpp and 50Hz, c)To find the value of unknown inductor using a series RL circuit and AC voltage of 12Vpp and 50Hz.

				19. a)To use BJT as driver for amplifying switching pulses to 9Vpp at different switching frequencies of 1kHz to 100kHz,b)To use MOSFET as driver for amplifying switching pulses to 12Vpp at different switching frequencies of 1kHz to 100kHz, c)To use IGBT as driver for amplifying switching pulses to 15Vpp at different switching frequencies of 1kHz to 100kHz. 20. To develop an LED blinking of on and off time of 1second each using a charge and discharge concept of RC circuit.
2.	2nd	3rd	**Digital System Design Lab**	1. To verify NAND(IC 4011) & NOR(IC 4001) gates as a universal gate. 2. Implementation of the given Boolean function using logic gates in both Sum of products (SOPs) and Product of Sum (POS) forms. 3. Design and implementation of code converters using Logic gates. 4. To design and verify operation of half adder and full adder(IC CD 4008). 5. Implementation of 4-bit parallel adder using CD 4008 IC. 6. Implementation and verification 16:1 multiplexer using 8:1 Mux(CD 4051) and 2:1 Mux 7.Implementation and verification of decoder/de-multiplexer and encoder using logic gates. 8. To explore 4 bit ALU(CD 40181) and verify its function table 9. Verification of state tables of RS, JK, T and D flip-flops using NAND(IC 4011) & NOR(IC 4001) gates.10. Design and implement the sequential circuits such as registers and sequence generator. 11. Simplification and implementation of a Boolean function using k - map technique 12. Design and implementation of Binary,BCD adders and Subtractor using IC 4008 and gates 13. Design and implementation binary and BCD comparator using of using CD 4063 14. Parity generator and checker using X-OR gate(CD 4070) 15. Design and implementation of ripple and synchronous counters using JK(CD 4027) and D FF(CD 4013) and additional gates 16. Design of counter using ICs like 4029 (ripple) and CD 40192(synchronous) 17. Design and implementations of random sequence counter using JK(CD 4027) and D FF(CD 4013) ICs 18. Study of shift registers CD 54HC194 for different modes. 19. Study of characteristics of typical TTL and CMOS IC's like fan out, noise margin, propagation delay 20. Write a program using 8085 Microprocessor for Decimal, Hexadecimal addition and subtraction of two Numbers. 21. Write a program using 8085 Microprocessor for addition and subtraction of two BCD numbers. 22. To find the largest and smallest number in an array of data using 8085 instruction set.
3	2nd	3rd	**Electronics Workshop I Lab**	1.Study of Resistors(All types and their applications) 2.Study of Capacitors (All types and their applications) 3.Study of Inductors (All types and their applications) 4.Study of Diodes-(All types and their applications) 5.Study of Transistors/ MOSFETs/IGBTs 6.PCB Designing on software 7.Study of Photodiodes/Phototransistor 8. Study of Optocoupler 9. Study of Solar Cell 10. Study of Sensors/Encoders/Accelerometer

				11. Study of Actuators 12. Study of All kinds of motors like DC motor/Induction motors. 13. Study of Stepper Motors and their drives.
4	**2nd**	**4th**	**MICROCONTROLLER AND APPLICATIONSLAB**	1. Write and execute ALP for 8051 to convert two digit decimal numbers present in external data memory into its equivalent ASCII code. 2. Write and execute ALP for 8051 to swap nibbles of 10 bytes present in external data memory. 3. Write an ALP for 8051 to finding the smallest and largest number from given data bytes stored in internal/external data memory location 4. Write and execute ALP for 8051 to exchange two data strings present in external data memory. 5. Write and execute an ALP for 8051 to exchange the data of two memory location. 6. Write and execute ALP for 8051 to convert two digit decimal number present in external data memory into its equivalent ASCII code. 7. Write a 8051 assembly language program to copy a data from DATA space(internal Ram) into the EXTERNAL memory space starting at address 8000H.8. Assume that 5 BCD data items are stored in RAM locations starting at 40H. Write a 8051 assembly language program to find the sum of all the numbers. The result must be in BCD. 9. Write a 8051 assembly language program to find largest no. of given 10 bytes of data stored in memory location 5000H 10. MCU 8051 Timer interrupt programming using Timer0 model for blinking LED using interrupt 11. Interface 8 LEDs with 8051 and write a program to glow alternate LEDs. Modify the experiment further to blink an LED lamp of 230V AC/10W with an on and off time of 1 Second 12. Interface microcontroller 8051 with LCD display and display a string of “Welcome to microcontroller Programming” and a table of 5 13. Design an interfacing of seven segment display with microcontroller 8051 and generate all numbers from 0 to 9 with a time duration of 1 second. 14. Interface Microcontroller 8051 with DAC and generation of triangular wave of frequency 10kHz triggering through timer (on chip timer) 15. Design a Stepper Motor Controller Using 8051 Microcontroller. Rotate this motor with an RPM of 150 both in clockwise and anticlockwise directions 16. Design an MCU AVR Atmega32 interfacing with LCD and displaying string and table of 5. Modify this program to interface LM 34 for displaying temperature in Degree Centigrade and Fahrenheit on LCD display. 17. Write and execute ALP for AVR Atmega32 to generate square wave of 1kHzs frequency on any one of the pin of output port. Modify this experiment further to generate pulses of different duty ratios starting from 10% to 90 %. 18. Interface stepper motor with AVR Atmega 32 microcontroller and write a program to

				rotate in clockwise and anticlockwise direction at a speed of 150 RPMs 19. Design a water level controller using AVR Atmega 32 in a) timer mode of operation and sensor mode of operation(I/O programming) 20. Design an interfacing of alphanumeric display with AVR Atmega 32 and generate all numbers from 0 to 9 and all letters from A to Z with a time duration of 1 second. 21. Establish Serial Communication between two MSP 430 microcontrollers 22. Write a program to interface an LED to the port 2 of MSP 430 microcontroller. Use both conditions of active low and active high in program. 23. Write a program to generate PWM pulses of 1kHz using MSP 430 microcontroller at a varying duty cycle of 10 % to 90 %. 24. Interface MSP 430 microcontroller with a matrix keyboard and display different characters on LCD 25. Using Arduino interrupt programming concept, interface a push button switch with it and switch on and off an LED lamp of 230V AC/10 W. 26. Design a PWM speed control system of 12V DC motor using Arduinoand run it at a speed of 10 % to 100%.. 27. Write a program to generate saw tooth waveform of frequency 1kHz with Arduino. 28. Design a traffic light controller using Arduino in timer mode for four roads. Use 3 LEDs, Red, Green and Yellow in each direction.
5	**2nd**	**4th**	**Analog and Digital Electronics Lab**	1. To use OPAMP for switching on and off a 230 V AC bulb of min 20W by designing necessary circuit 2. To use OPAMP for speed control of a 5V DC motor 3. To use OPAMP as an amplifier for amplifying thermocouple voltage to proportionate 12V DC 4. To use OPAMP as a current to voltage converter for amplifying solar cell signal 5. To use OPAMP as a voltage to current converter for converting 0-10V Dc to 4-20 mA DC 6. To use OPAMP as a triangular wave generator of frequency 5kHz 7. Use of OPAMP as PWM wave generator for frequency 10kHz and varying duty ration of 10% to 90 % 8. Use of OPAMP to generate switching pulses for a Power BJT with 15V DC9. To use OPAMP as a digital latch with single switch and two switches and use it to for switching of a 230V/10 W LED bulb 10. To design load cell amplifier using concept of instrumentation amplifier and associated noise handling circuit 11. Design of an RTD amplifier and calibrate its gain with zero offset adjustment 12. To study and Design of a Voltage to frequency converter with linearity 13. To study and Design of a frequency to voltage converter with linearity 14. To design OP-AMP as Integrator and Differentiator and plot its input/output waveforms. 15. To design OP-AMP as Precision Half wave rectifier and plot the waveforms.

				16. Design and verify Multivibrator circuits using IC 555 and generate switching pulses of 1kHz at different duty ratios for SMPS switching application 17. Design RC oscillator/ transistorized LC oscillator using OP-AMP and calculate its frequency. 18. Design first & second order low pass Butterworth filer with a cutoff frequency of 1kHz. 19. Design of series voltage regulators of 12V/5V DC with a current capacity of 500mA
6	**2nd**	**4th**	**Programming and Data Structure Lab**	1. Practicals based on Introduction to Problem Solving 2. Practicals based on classes and objects 3. Practicals based on Inheritance 4. Practicals based on Polymorphism 5. Practicals based on Exception Handling 6. Practicals based on IO streams and File handling. 7.Practicals based on Stacks & Queues using Arrays 8. Practicals based on Linked Lists 9. Practicals based on Stacks & Queues using Linked Lists 10. Practicals based on Binary Search Trees 11. Practicals based on Graphs 12.Practicals based on Spanning trees
7	**3rd**	**5th**	**Embedded System Design Lab**	**Use Assembly & Embedded C Language for following Programs.** **1.** To study the ARM Development Board. **2.** To Write & Demonstrate the program for addition, subtraction Multiplication & Division of 16 / 32 bit number. **3.** To Write & Demonstrate the program to find largest / Smallest of a Ten data Words. **4.** To Write & Demonstrate the program for arranging the multiple data in Ascending / Descending Order. **5.** To Write & Demonstrate the program for the swapping of 16 / 32 bit data. **6.** To Write & Demonstrate the program for factorial of a given number **7.** To Write & Demonstrate the program for display of number from 11 to 99 on seven segment display. **8.** To Write & Demonstrate the program for Binary to Gray & Gray to Binary Number Conversion. **Use Embedded C Language for following Programs** **9.** To Write and demonstrate the program for flashing of LEDS Using ARM DEVELOPMENT BOARD. **10.** To Write and demonstrate the program for interfacing ADC and DAC Using ARM DEVELOPMENT BOARD. **11.** To Write and demonstrate the program for interfacing of a stepper motor and Rotate it in clockwise & anti-clock wise direction with equal delay Using ARM DEVELOPMENT BOARD. **12.** To Write and demonstrate the program for interfacing of real time clock and serial port Using ARM DEVELOPMENT BOARD. **13.** To Write and demonstrate the program for interfacing LED and PWM Using ARM DEVELOPMENT BOARD. **14.** To Write and demonstrate the program for sending SMS to any mobile number Using ARM DEVELOPMENT BOARD. **15.** To Write and demonstrate the program for Interfacing of pen drive for writing the predefined file Using ARM DEVELOPMENT BOARD
8.	**3rd**	**5th**	**Digital Signal Processing Lab**	1. To plot and represent following basic discrete time signals using MATLAB functions. : Unit impulse, unit step, ramp, real and complex exponential and its representations. 2. Sampling of Continuous time Signal. Reconstruction of Discrete time Signal and Illustration of Aliasing 3. To plot linear convolution of discrete signals using MATLAB functions. 4. Write a program to test stability of given discrete- time system.

				5. To find Z transform of discrete time signal and its ROC with corresponding plot. 6. To find inverse Z transform of given discrete time signal. 7. Write a program to find frequency response of given system. (Transfer Function/ Differential equation form). 8. To compute DFT and IDFT of discrete time signals. 9. Write a program to find FFT and IFFT of given sequences. 10. Compute linear and circular convolution using DFT / IDFT method. 11. Designing of Digital IIR filter using MATLAB functions 12. Designing of Digital FIR filter using MATLAB functions 13. Designing of Digital FIR filter using GUI tool box. 14.Genefration of sinusoidal signal through filtering 15.Implementation of Decimation ,interpolation Process **Contents beyond syllabus** 1. To Study DSP Processor using TMS 5416 and TMS 6713 starter kits. 2. To perform linear convolution and circular convolution on Processor kit. 3. Designing and implementation of High pass filter on DSP processor. 4. Generation of DTMF signals
9.	**3rd**	**5th**	**Electronic Workshop -II**	1. Design of PCB using PCB Layout Design software This practical must include the introduction to PCB design steps, Hands-on PCB layout design software and fabrication of PCB. 2. Design of basic electronic circuits using Electronic Simulation software In this practical, the students should be given hands-on training on various electronic simulation software and design of some basic electronic circuits using these software 3. Hands-on Arduino Board Demonstrate the Arduino board, its programming and interfacing of Arduino board with some basic electronic components and sensors. 4. Hands-on Raspberry-Pi module Demonstrate basic model of Raspberry Pi, its programming and interfacing of Raspberry-Pi with basic electronic components and sensors. 5 . Mini project using Arduino or Raspberry Pi Hardware mini-project should be based on Arduino or Raspberry Pi and should consist of circuit design, PCB fabrication, assembling and testing of small digital or analog application circuit. Mini Project should be carried out by a group of maximum three students and should submit the report of their mini-project containing all the details of the project.
10	**3rd**	**6th**	**Computer Communication Networks lab**	1. To study Network Hardware components – Cables, NIC, Repeaters, Hubs, Bridges, Switches and Routers. 2. To demonstrate the formation of Local Area Network 3. To demonstrate data transmission using Ping protocol, tracert and IP configuration. 4. To study Network Simulator “ns-2”. **5.** To perform the simulation of 2 Nodes in ns-2. **6.** To create a Simple Network Topology in ns-2. 7. To understand TCP protocol using ns-2 8. To understand UDP protocol using ns-2. 9. To perform PC to PC communication using RS-232 port. 10. To configure Router. 11. To understand IP address of the system and Network Address Translation. 12. To study the Domain Name Server (DNS)

11.	**3rd**	**6th**	**Internet of Things Lab**	1. Study various types of Arduino and install Arduino IDE. 2. Study temperature/humidity sensor. and write a program to monitor temperature/humidity using Arduino. 3. Study and implement RFID using Arduino. 4. Implement MQTT protocol using Arduino. 5. To study and Configure Raspberry Pi. 6. Study and implement Zigbee protocol using Arduino/ Raspberry Pi. 7. To interface Bluetooth with Arduino/ Raspberry Pi and write a program to send the sensor data to smartphone using Bluetooth 8. To interface LED/Buzzer with Arduino/ Raspberry Pi and write a program to turn on LED for 1 seconds after every two seconds. 9. To interface OLED with Arduino/ Raspberry Pi and write a program to print temperature and humidity. 10. To interface motor using relay with Arduino/ Raspberry Pi and write a program to turn on the motor. 11. Interface Ultrasonic sensor and IR sensor with Raspberry Pi and write a program to detect an object. 12. To interface ultrasonic sensor with Raspberry Pi/ Arduino and write a program to calculate distance of object. 13. Study of implementation of Web server using Node MCU and ESP module. 14. To create a local server using Node MCU. 15. To fetch humidity and temperature using DHT 11 sensor and sent it to local server. 16. Write a program to continuously monitor sensor reading through internet. 17. To generate API and program Node MCU. 18. To create Web page and control Home Appliances through Wi-Fi. 19. To create Adafruit account and using Adafruit to read sensor values and send data to node MCU. 20. To create local host server.
12	**3rd**	**6th**	**Wireless Sensor Networks Laboratory**	1 Introduction of Wireless sensor network applications and its simulation. 2 Network Simulator installation of wireless sensor network. 3 Write TCL script for transmission between mobile nodes. 4 Write TCL script for sensor nodes with different parameters. 5 Generate TCL script for udp and CBR traffic in WSN nodes. 6 Generate TCL script for TCP and CBR traffic in WSN nodes. 7 Implementation of routing protocol in NS2 for AODV protocol. 8 Implementation of routing protocol in NS2 for DSR protocol. 9 Implementation of routing protocol in NS2 for TORA protocol. 10 Study other wireless sensor network simulators.
13.	**4th**	**7th**	**DSP PROCESSOR AND ARCHITECTURE**	1.To study architecture of TMS320C54XX & Motorola DSP563XX 2.To generate basic signals using TMS320C54XX . 3.Write an ALP using instruction of TMS processors to add two numbers. 4.Write ALP to subtract two numbers. Write an ALP to multiply two numbers of unsigned 32 bit data. 5.Write an ALP to divide 16 –bit data by an eight bit data. 6.Implementation of FFT using code Composer studio. 7.To implement Interpolation filter by Matlab. 8.To implement Decimation filter by Matlab. 9.To design FIR filter using MATLAB and find finite word length effect & cross verify using DSP processor. 10. To design IIR filter using MATLAB and find finite word length effect & cross verify using DSP Processor.
14.	**4th**	**7th**	**TELEVISION AND VIDEO**	1. To study & understand TV Receiver block diagram & analyze and synthesize TV Pictures.

			ENGINEERING	2. To study & understand the color composite video signal. 3. To study & understand the RF tuner section & measure the voltage at different test points. 4. To study & understand the VIF & SIF section & measure the voltage at different test points. 5. To study & understand the chroma section & measure the voltage at different test points. 6. To study & understand the vertical & horizontal section & measure the voltage at different test points. 7. To study & understand the EHT section. 8. To study & understand power supply section of colour TV system. 9. To study & understand the different patterns with the help of pattern generator. 10. Case study of live broadcasting (e.g. Cricket match/football match). 11. To study & understand HDTV standards. 12. To study & understand various faults and trouble shooting of colour T.V. 13. To study & understand different TV receiver picture tube. 14. To study & understand Digital TV satellite System
15.	**4th**	**7th**	**Advanced Digital System Design**	1.Design of basic logic gates using VHDL. 2.Design of full adder/substractor using VHDL. 3.Design of Multiplexer/ Demultipelxer using VHDL. 4.Design of Priority encoder using VHDL. 5.Design of BCD-to-Seven segment encoder. 6.Design of n-bit up-down counter. 7.Design of n-bit shift register using VHDL. 8.Design of sequence detector using Mealy FSM. 9.Design of sequence detector using Moore FSM. 10.Design of 4-bit ALU using VHDL. 11.Design & Implementation of 4-bit barrel shifter using FPGA / CPLD. 12.Design & Implementation of 4-bit multiplier using FPGA / CPLD. 13.Design & Implementation of 4 X 4 keyboard scanner using FPGA / CPLD. 14.Design of Asynchronous sequential circuit using VHDL. 15.Design & implement Mini project on FPGA/CPLD.
16.	**4th**	**8th**	**MICROWAVE & RADAR ENGINEERING**	1. Study the characteristics of Klystron Tube and to determine its electronic tuning range. 2. To study the V-I characteristics of Gunn Diode. 3. To study the following characteristics of Gunn Diode. (a) Output power and frequency as a function of voltage. (b) Square wave modulation through PIN diode. 4. Study the function of Magic Tee by measuring the following parameters. (a) Measurement of VSWR at different ports and (b) Measurement of isolation and coupling coefficient. 5. Study the function of Isolator / Circulator by measuring the following parameters. (a) Input VSWR measurement of Isolator / Circulator. (b) Measurement of insertion loss and isolation. 6. Study the function of Attenuator (Fixed and Variable type) by measuring the following parameters. (a) Input VSWR measurement. (b) Measurement of insertion loss and attenuation. 7. Study the function of Multi Hole Directional Coupler by measuring the following parameters. (a) To measure main line and auxiliary line VSWR. (b) To measure the coupling factor and directivity. 8. Study of a network analyzer and measurements using it. 9. Verification of port characteristics of Microwave Tees (E, H, E-H planes)10. Verification of port characteristics of Directional Coupler,

				study of Coupling factor, Insertion loss and Directivity. 11. To plot the radiation pattern of Horn Antenna and calculate its Antenna Gain and Beam width. 12. To plot the radiation pattern of Dish Antenna and calculate its Antenna Gain and Beam width. 13. Simulation of detection of target (i.e.to find distance and position of the target) 14. Simulation of Doppler effect (for moving target). 15. Study of different tracking Radar System (Mono pulse / conical scan / pulse swapping Radar) 16. Study of different types of Antenna (cassegain antenna /Parabolic Antenna) 17. Study of Servo-mechanism for Antennas of Radar Syatem. 18. Study of Pulse Radar System. 19. Study of FMCW Radar System. 20. Study of MTI Radar System.
18.	**4th**	**8th**	**COMPUTER COMMUNICATION NETWORK**	1.To study network simulator & get familiar with NS2 2.To create network Topology in NS2. 3.To demonstrate data transmission using Ping protocol, tracert, IP configuration & hub. 4.To study the fundamental of socket programming. 5.To understand IP address of the system, dhcp, network address translation. 6.To understand the domain name server. 7.To Study Protocol analyzer. 8.To configure router 9.To Study of FTP ,HTFT protocol. 10.To perform PC to PC communication using RS-232 port. 11.To understand Wireless TCP and UDP protocols 12.To demonstrate Network security cryptography

Department: Electronics & Telecommunication Engineering

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	**Electronics & Telecommunication Engineering**		
	Number of Seats	120	120	120
	Duration	4 yrs	4 yrs	4 yrs
	Cut off marks/rank of admission during the last three years	61.66	23.69	61.66
	Fee (as approved by the state government)	113000/-	113000/-	
	Placement Facilities	Institute level Training & Placement cell , The T&P cell works with respective Departmental coordinators to arrange for campus drives by various companies. It also arranges Campus Recruitment Training for Third year students. Campus drives and training are organised for third year students also and in-house training activities. Soft Skill Trainings etc.		
	Campus placement in last three years with minimum salary, maximum salary, and average salary	Annexure 1		Annexure 1
7	*Faculty*			
	Course/Branch wise list Faculty members:	Annexure 2		Annexure 2
	Permanent Faculty	20	20	24
	Adjunct Faculty	Nil	Nil	NIl
	Permanent Faculty: Student Ratio	1:14.25	1:17.05	1:15.25
	Number of Faculty employed and left during the last three years	Nil	Nil	Nil
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	Annexure 3		Annexure 3
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	Annexure 4		Annexure 4
	Internet Bandwidth	1050 Mbps	1050 Mbps	1050 Mbps

	Number and configuration of System	1)CPU, Intel Pentinum dual core intel 4 GB DDR, RAM, Kingsten SATA, TFT monitor 17" Logitech K/B, mouse. 2)CPU, Intel 29 Ghz intel mother board DH6, Segate HDD 500 GB, SATA, I-Ball	1) CPU, Intel Pentinum dual core intel 4 GB DDR, RAM, Kingsten SATA, TFT monitor 17" Logitech K/B, mouse. 2) CPU, Intel 29 Ghz intel mother board DH6, Segate HDD 500	105 Intel,Core,i5-8100 CPU@3.6 GHz,DDR4,SDI RAM 8 GB
	Total number of system connected by LAN	160	160	105
	Total number of system connected by WAN	160	160	105
	Major software packages available	Annexure-5		Annexure-5
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	Web-ex, Zoom,Google meet	Web-ex, Zoom, Google meet	Web-ex, Zoom
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Computer , Web Camera , Headphones with mic and speaker, ICT Tools, Gsuit accounts etc	Computer , Web Camera , Headphones with mic and speaker, ICT Tools, Gsuit accounts etc	Computer , Web Camera , Headphones with mic and speaker, ICT Tools, Gsuit accounts etc

	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	2022-23
	For each Post Graduate Courses givethe following			
	Title of the Course	Electronics (Communication) Engg		Electronics (Communication) Engg Electronics(VLSI)
	Curricula and Syllabi			
	Laboratory facilities exclusive to the PostGraduate Course			
	Special Purpose	Higher studies and research work		
	Software, all design tools in case	FEKO ANTENNA DESIGN SOFTWARE Date of purchase:-29/03/2017, 5 USER, Total cost:- 2,77,333.00/-		
	Academic Calendarand framework			

16	*Enrolment and placement detailsof students in the last 3 years*	173		87
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, fundingagency, Grant received			Nil
	Publications (if any) out of research in last three years out of Master's projects			Nil
	Industry Linkage			Annexure 8
	MoUs with Industries (minimum3(10))			Annexure 9

Name of the Department: Electronics and Telecommunication Engineering

1) Placement Records for last three years with minimum salary, maximum salary and average salary

Academic Year	**Name of the Company**	**No of students recruited**	**Minimum salary Offered (Lacs)**	**Maximum salary offered (Lacs)**	**Average salary offered (Lacs)**
2022-23	Amantya Technology Priyadarshini College Campus, Hingna Rd, near CRPF, Midc, Nagpur, Maharashtra 440019	1	4.0	5.0	4.5
2022-23	TCS Address:-Barrister Rajni Patel Marg, Nariman Point, Mumbai, Maharashtra 40002	2	3.6	3.6	3.6
2022-23	Cognizant Baghmane Tech Park, 65/2 -1 Adj LRDE, Byrasandra, C.V.Raman Nagar Bengaluru - 560093, Karnataka	4	3.52	4.0	3.76
2022-23	L Cube Innovative Solution Pvt Ltd 6th Ave, Aishwarya Colony, Thiruvalluvar Colony, Anna Nagar, Chennai, Tamil Nadu 600040	1	3.0	3.0	3.0
2022-23	Hexaware	1	4.0	4.75	4.375
2022-23	Infocept	2	5.0	5.0	5.0
2022-23	Deloitte Consulting	1	4.5	4.5	4.5
2022-23	Teachnook	5	4.0	4.26	4.13
	Total	**17**	**3.96**	**4.26**	**4.11**
2021-22	TCS Address:-Barrister Rajni Patel Marg, Nariman Point, Mumbai, Maharashtra 40002	1	3.45	7.0	5.22

2021-22	Cognizant Baghmane Tech Park, 65/2 -1 Adj LRDE, Byrasandra, C.V.Raman Nagar Bengaluru - 560093, Karnataka	4	4.02	4.02	4.02
	Total	**05**	**3.735**	**5.51**	**4.62**
2020-21	Wipro Ltd Doddakannelli, Sarjapur Road Bengaluru - 560 035, India	1	3.50	3.50	3.50
2020-21	3EA Ltd 114, Inspite Hub, Adani Western Height, andheri West Mumbai	1	5.0	6.0	5.50
2020-21	Accenture Pvt Ltd 7th Floor, 1, Express Tower, Nariman Point, Mumbai, Maharashtra 400021	1	4.5	4.5	4.5
2020-21	L Cube Innovative Solution Pvt Ltd 6th Ave, Aishwarya Colony, Thiruvalluvar Colony, Anna Nagar, Chennai, Tamil Nadu 600040	1	4.9	4.9	4.9
2020-21	Collabera Services Pvt. Ltd Unit No 102, Tower I, Matrix World Trade Centre, Village Kharadi, Sub-District of Taluka, Haveli, District Pune India	1	2.6	2.6	2.6
2020-21	TCS Address:-Barrister Rajni Patel Marg, Nariman Point, Mumbai, Maharashtra 40002	1	3.45	7.0	5.22
	Total	**06**	**3.99**	**4.75**	**4.37**

Priyadarshini College of Engineering,Nagpur
Department of Electronics and Telecommunication
Information of Faculty(UG)
Session 2022-23

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Dr. Mrs. S.W. Varade	AAQPV8489A	Ph.D.	Signal Processing, Wireless communication	Professor	12/09/96 P-30/10/2015	P-30/10/2015	Y	Regular	--	NA
2	Dr.V. K.Taksande	ACBPT7691M	Ph.D.	Wireless communication	Associate Professor	4/10/1996 AP-30/10/2015	R4/10/1996 AP-30/10/2015	Y	Regular	--	NA
3	Dr.. P.U. Chati	ADSPCO552C	Ph.D.	VLSI	Assistant Professor	01/08/2001	--	Y	Regular	--	NA
4	Dr. Mrs. Y. A. Nafde	AECPN2551F	Ph.D.	Antenna Designing and RF MEMS	Assistant Professor	02/08/2001	--	Y	Regular	--	NA
5	Dr. A.B. Jirapure	AGLPJ1903E	Ph.D.	Embedded Systems, Wireless communication	Assistant Professor	01/09/2004	--	Y	Regular	--	NA
6	Dr. N.S. Ambatkar	AFPPA0398K	Ph.D.	Signal Processing, Wireless communication	Assistant Professor	06/07/2005	--	Y	Regular	--	NA
7	Mr. O.G. Hastak	ABVPH6319R	M.Tech	Wireless Communication and Networking	Assistant Professor	05/07/2005 22/07/2002 A	--	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
8	Dr. V.G. Girhepunje	AMOPG6938K	Ph.D.	Wireless Communication and Networking	Assistant Professor	26/06/2006	--	Y	Regular	--	NA
9	Mrs. A. H. Chakhawala	AHRPCO368B	M.E.	Signal Processing, Wireless	Assistant Professor	26/06/2006 01/09/2004	--	Y	Regular	--	NA
10	Dr.(Mrs.) J. M. Bhattad	AJHPB9218M	Ph.D.	Wireless communication	Assistant Professor	01/07/2006	--	Y	Regular	--	NA
11	Dr.(Mrs). S.P. Washimkar	ACBPH3395N	Ph.D.	Communication, Signal and Image Processing	Assistant Professor	01/07/2006	--	Y	Regular	--	NA
12	Mr. D.G. Gahane	AMCPG69368	M.Tech	Signal Processing,	Assistant Professor	02/07/2007	--	Y	Regular	--	NA
13	Mrs. K.A.Mankar	AQQPM2645H	M.Tech	Communication	Assistant Professor	02/07/2007	-	Y	Regular	--	NA
14	Dr.(Mrs). A.R.Kondelwar	AXWPK9694H	Ph.D.	Wireless communication	Assistant Professor	02/07/2007	--	Y	Regular	--	NA
15	Mr.V.Panchbhai	ASMPP7101M	M.E.	Image processing and Embedded Systems,	Assistant Professor	03/07/2007	--	Y	Regular	--	NA
16	Dr.P.P.Ashtankar	AMNPA2044F	Ph.D.	Wireless Communication and Networking	Assistant Professor	16/05/2011	--	Y	Regular	--	NA
17	Dr.(Ms).V. G. Nasre	AIRPN5077F	Ph.D.	Analog VLSI Design &IC design	Assistant Professor	09/06/2012	--	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
18	Ms. J.C.Kolte	BADPK2221H	M.Tech	Antenna Designing and Image Processing	Assistant Professor	09/06/2012	--	Y	Regular	--	NA
19	Mrs.P.J.Suryawanshi	BIBPS0058J	M.Tech	Signal Processing and Communication	Assistant Professor	03/06/2019	--	Y	Regular	--	NA
20	Mr.C.N.Bhoyar	AIEPB2682D	M.Tech	VLSI	Assistant Professor	1/7/2006	--	Y	Regular	--	NA

Priyadarshini College of Engineering,Nagpur
Department of Electronics and Telecommunication
Information of Faculty(PG) Communication

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Dr.P.R.Rothe	ABEPR7023F	Ph.D.	Image Processing and Neural Network	Associate Professor	03/06/2019	8/7/1991 AP-21/12/2017	Y	Regular	--	NA
2	Mr. M.K.Demde	AJZPD2295G	M.Tech	Wireless Communication, Image Processing	Assistant Professor	01/06/2006	--	Y	Regular	--	NA
3	Ms.S.Naktode	AELPN7850E	M.Tech	VLSI	Assistant Professor	09/06/2012	--	Y	Regular	--	NA

Information of Faculty(PG) VLSI Session 2022-23

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Ms.S.G.Mungale	AZUPM4074F	M.Tech	VLSI	Assistant Professorr	1/6/2010		Y	Regular	--	NA
2	Mr. R. C. Iyer	ABTPI6897B	M.Tech	System Engineering	Assistant Professor	1/6/2010	--	Y	Regular	--	NA
3	Dr(Mrs.)A. S. Khobragade	ATHPK6033D	PhD.	wireless communication	Assistant Professor	15/6/2011	--	Y	Regular	--	NA

Priyadarshini College of Engineering,Nagpur Department of Electronics and Telecommunication Information of Faculty(UG) Session 2021-22

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Dr. Mrs. S.W. Varade	AAQPV8489A	Ph.D.	Signal Processing, Wireless communication	Professor	12/09/96 P-30/10/2015	P-30/10/2015	Y	Regular	--	NA
2	Dr.V. K.Taksande	ACBPT7691M	Ph.D.	Wireless communication	Associate Professor	4/10/1996 AP-30/10/2015	R4/10/1996 AP-30/10/2015	Y	Regular	--	NA
3	Dr(Mrs).A.RathKanthiwar	ABNPR6747B	Ph.D.	Signal Processing, Wireless communication	Associate Professor	16/07/2002 AP-30/10/2015	R -16/07/2002 AP-30/10/2015	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
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5	Dr. Mrs. Y. A. Nafde	AECPN2551F	Ph.D.	Antenna Designing and RF MEMS	Assistant Professor	02/08/2001	--	Y	Regular	--	NA
6	Dr. A.B. Jirapure	AGLPJ1903E	Ph.D.	Embedded Systems, Wireless communication	Assistant Professor	01/09/2004	--	Y	Regular	--	NA
7	Dr. N.S. Ambatkar	AFPPA0398K	Ph.D.	Signal Processing, Wireless communication	Assistant Professor	06/07/2005	--	Y	Regular	--	NA
8	Mr. O.G. Hastak	ABVPH6319R	M.Tech	Wireless Communication and Networking	Assistant Professor	05/07/2005 22/07/2002 A	--	Y	Regular	--	NA
9	Dr. V.G. Girhepunje	AMOPG6938K	Ph.D.	Wireless Communication and Networking	Assistant Professor	26/06/2006	--	Y	Regular	--	NA
10	Mrs. A. H. Chakhawala	AHRPCO368B	M.E.	Signal Processing, Wireless	Assistant Professor	26/06/2006 01/09/2004	--	Y	Regular	--	NA
11	Dr.(Mrs.) J. M. Bhattad	AJHPB9218M	Ph.D.	Wireless communication	Assistant Professor	01/07/2006	--	Y	Regular	--	NA
12	Dr.(Mrs). S.P. Washimkar	ACBPH3395N	Ph.D.	Communication, Signal and Image Processing	Assistant Professor	01/07/2006	--	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
13	Mr. D.G. Gahane	AMCPG69368	M.Tech	Signal Processing,	Assistant Professor	02/07/2007	--	Y	Regular	--	NA
14	Mrs. K.A.Mankar	AQQPM2645H	M.Tech	Communication	Assistant Professor	02/07/2007	-	Y	Regular	--	NA
15	Dr.(Mrs). A.R.Kondelwar	AXWPK9694H	Ph.D.	Wireless communication	Assistant Professor	02/07/2007	--	Y	Regular	--	NA
16	Mr.V.Panchbhai	ASMPP7101M	M.E.	Image processing and Embedded Systems,	Assistant Professor	03/07/2007	--	Y	Regular	--	NA
17	Dr.P.P.Ashtankar	AMNPA2044F	Ph.D.	Wireless Communication and Networking	Assistant Professor	16/05/2011	--	Y	Regular	--	NA
18	Dr.(Ms).V. G. Nasre	AIRPN5077F	Ph.D.	Analog VLSI Design &IC design	Assistant Professor	09/06/2012	--	Y	Regular	--	NA
19	Ms. J.C.Kolte	AIRPN5077F	M.Tech	Antenna Designing and Image Processing	Assistant Professor	09/06/2012	--	Y	Regular	--	NA
20	Mrs.P.J.Suryawanshi	BIBPS0058J	M.Tech	Signal Processing and Communication	Assistant Professor	03/06/2019	--	Y	Regular	--	NA
21	Ms.P.V.Upadhye	ACUPU5973E	M.Tech	VLSI Design	Assistant Professor	25/05/2015	-	N	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
22	Mr.Pravin lakhe	ACJPL5122D	M.Tech	Embedded System	Assistant Professor	11/06/2018	-	N	Regular	--	NA
23	Ms.V.Ghodichor	BDIPG3924M	M.Tech	Communication	Assistant Professor	15/12/2015	-	N	Regular	--	NA
24	Dr.(Mrs.) N. A. Bodhaye	AWKPB8544N	Ph.D	Communication	Assistant Professor	10/06/2015	-	N	Regular	--	NA

Priyadarshini College of Engineering,Nagpur Department of Electronics and Telecommunication Information of Faculty(PG)

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S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Dr.P.R.Rothe	ABEPR7023F	Ph.D.	Image Processing and Neural Network	Associate Professor	03/06/2019	8/7/1991 AP-21/12/2017	Y	Regular	--	NA
2	Mr. M.K.Demde	AJZPD2295G	M.Tech	Wireless Communication, Image Processing	Assistant Professor	01/06/2006	--	Y	Regular	--	NA
3	Ms.S.Naktode	AELPN7850E	M.Tech	VLSI	Assistant Professor	09/06/2012	--	Y	Regular	--	NA

Priyadarshini College of Engineering,Nagpur Department of Electronics and Telecommunication Information of Faculty(UG)

Session 2020-21

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Dr. Mrs. S.W. Varade	AAQPV8489A	Ph.D.	Signal Processing, Wireless communication	Professor	12/09/96 P-30/10/2015	P-30/10/2015	Y	Regular	--	NA
2	Dr.V. K.Taksande	ACBPT7691M	Ph.D.	Wireless communication	Associate Professor	4/10/1996 AP-30/10/2015	R4/10/1996 AP-30/10/2015	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
3	Dr(Mrs).A.RathKanthiwar	ABNPR6747B	Ph.D.	Signal Processing, Wireless communication	Associate Professor	16/07/2002 AP-30/10/2015	R -16/07/2002 AP-30/10/2015	Y	Regular	--	NA
4	Dr.. P.U. Chati	ADSPCO552C	Ph.D.	VLSI	Assistant Professor	01/08/2001	--	Y	Regular	--	NA
5	Dr. Mrs. Y. A. Nafde	AECPN2551F	Ph.D.	Antenna Designing and RF MEMS	Assistant Professor	02/08/2001	--	Y	Regular	--	NA
6	Dr. A.B. Jirapure	AGLPJ1903E	Ph.D.	Embedded Systems, Wireless communication	Assistant Professor	01/09/2004	--	Y	Regular	--	NA

7	Dr. N.S. Ambatkar	AFPPA0398K	Ph.D.	Signal Processing, Wireless communication	Assistant Professor	06/07/2005	--	Y	Regular	--	NA
8	Mr. O.G. Hastak	ABVPH6319R	M.Tech	Wireless Communication and Networking	Assistant Professor	05/07/2005 22/07/2002 A	--	Y	Regular	--	NA
9	Dr. V.G. Girhepunje	AMOPG6938K	Ph.D.	Wireless Communication and Networking	Assistant Professor	26/06/2006	--	Y	Regular	--	NA
10	Mrs. A. H. Chakhawala	AHRPCO368B	M.E.	Signal Processing, Wireless	Assistant Professor	26/06/2006 01/09/2004	--	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
11	Dr.(Mrs.) J. M. Bhattad	AJHPB9218M	Ph.D.	Wireless communication	Assistant Professor	01/07/2006	--	Y	Regular	--	NA
12	Dr.(Mrs). S.P. Washimkar	ACBPH3395N	Ph.D.	Communication, Signal and Image Processing	Assistant Professor	01/07/2006	--	Y	Regular	--	NA
13	Mr. D.G. Gahane	AMCPG69368	M.Tech	Signal Processing,	Assistant Professor	02/07/2007	--	Y	Regular	--	NA
14	Dr.(Mrs). A.R.Kondelwar	AXWPK9694H	Ph.D.	Wireless communication	Assistant Professor	02/07/2007	--	Y	Regular	--	NA
15	Mr.V.Panchbhai	ASMPP7101M	M.E.	Image processing and Embedded Systems, Wireless communication	Assistant Professor	03/07/2007	--	Y	Regular	--	NA
16	Dr.P.P.Ashtankar	AMNPA2044F	Ph.D.	Wireless Communication and Networking	Assistant Professor	16/05/2011	--	Y	Regular	--	NA
17	Dr.(Ms).V. G. Nasre	AIRPN5077F	Ph.D.	Analog VLSI Design &IC design	Assistant Professor	09/06/2012	--	Y	Regular	--	NA

18	Ms. J.C.Kolte	AIRPN5077F	M.Tech	Antenna Designing and Image Processing	Assistant Professor	09/06/2012	--	Y	Regular	--	NA
19	Mrs.P.J.Suryawanshi	BIBPS0058J	M.Tech	Signal Processing and Communication	Assistant Professor	03/06/2019	--	Y	Regular	--	NA

S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
20	Ms.P.V.Upadhye	ACUPU5973E	M.Tech	VLSI Design	Assistant Professor	25/05/2015	-	N	Regular	--	NA
21	Mr.Pravin lakhe	ACJPL5122D	M.Tech	Embedded System	Assistant Professor	11/06/2018	-	N	Regular	--	NA
22	Ms.V.Ghodichor	BDIPG3924M	M.Tech	Communication	Assistant Professor	15/12/2015	-	N	Regular	--	NA
23	Dr.(Mrs.) N. A. Bodhaye	AWKPB8544N	Ph.D	Communication	Assistant Professor	10/06/2015	-	N	Regular	--	NA
24	Mrs. Prachi Pendke	BVWPP3482P	M.Tech	Communication	Assistant Professor	25/05/2015	-	N	Regular	--	NA

Priyadarshini College of Engineering,Nagpur
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S.No.	Name	PAN No.	Qualification	Area of specialization	Designation	Date of Joining	Date on which Designated as Professor/Associate Professor	Currently Associated (Y/N)	Name of Association(Regular/ Contract/Adjunct)	If contractual mention full time or part time	Date of Leaving(Incase currentlyAssociated is "No")
1	Dr.P.R.Rothe	ABEPR7023F	Ph.D.	Image Processing and Neural Network	Associate Professor	03/06/2019	8/7/1991 AP-21/12/2017	Y	Regular	--	NA
2	Mr. M.K.Demde	AJZPD2295G	M.Tech	Wireless Communication, Image Processing	Assistant Professor	01/06/2006	--	Y	Regular	--	NA
3	Ms.S.Naktode	AELPN7850E	M.Tech	VLSI	Assistant Professor	09/06/2012	--	Y	Regular	--	NA

Department: Industrial IOT

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	**B.Tech. (Industrial IOT)**		
	Number of Seats			60
	Duration			4 Years
	Cut off marks/rank of admission during the last three years			54.16
	Fee (as approved by the state government)			
	Placement Facilities	Training and Placement Cell		
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	Not Applicable		
7	*Faculty*			
	Course/Branch wise list Faculty members:			Dr.S.S.Shriramwar, Ms.D.Meshram, Ms.S.G.Mungale, Mrs.K.M.Bogawar
	Permanent Faculty			4
	Adjunct Faculty			0
	Permanent Faculty: Student Ratio			1:15
	Number of Faculty employed and left during the last three years			Nil
	List of Major Equipment/Facilitiesin each Laboratory/Workshop			**Sensors & Actuators Lab** LVDT Coil Strain Guage Inductive Proximity Sensor Potentiometric Displacemnet sensor Humidity Sensor Digital Multimeter with Temp/TRms 100 Mhz Digital Storage Oscilloscope **Logic Design and Microcontroller Lab** Flip Flop Trainer Counters Trainer Shift Register Trainer 8051 Universal Development Platform Display Module Motor Drive Module 100 Mhz Digital Storage Oscilloscope

				DM-97 Digital Multimeter with Temp/TRms
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities			**Embedded System Lab** Arduino UNO Devlopment Board NODEMCU Devlopment Board **Analog Digital Communication Lab** Amplitude Modulation Transmitter kit Amplitude demodulation Receiver Kit Frequency Modulation Kit FM Demudulation Using PLL-IC TDM PAM Channel Modulation and Demudulation PAM-PwM-PPM Modulation Demodulation FM Trasmitter Frequency Demodulation Receiver Kit Signal Sampling and Reconstruction Trainer Kit Pulse Code Modulation Kit Pulse Code De-Modulation Kit Delta, Adaptive Delta & Sigma Delta Modulation & Demodulation Kit ASK/FSK/PSK Modulation Kit BPSk,DBPSK Modulation & Demodulation Kit
	Internet Bandwidth			1050 mbps
	Number and configuration of System			**Motherboard:-** Intel Alder Lake B660 **Processor:** 12th generation Intel Cre TMi5-124000 Processor 92.50Ghz upto 4.40Ghz) DIMM Memory :- 8 Gb DDR4 - 3200Mhz (UDIMM) Second Storage Selection :- 256 Gb SSD M.2 2280 PCle NVMe Gen4 TLC Opal Optical Drive:- No optical Drive Graphics:- Intgrated Graphics Wireless LAN:- Intel wifi 6 AX 201 282 AX & Blutooth 5.0 or above
	Total number of system connected by LAN			48
	Total number of system connected by WAN			
	Major software packages available			All Open source tools
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)			Google meet
	Facilities for conduct of classes/courses in online mode (Theory & Practical)			Google Classroom

	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses give the following		NA	
16	*Enrolment and placement detailsof students in the last 3 years*			
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, funding agency, Grant received			
	Publications (if any) out of research in last three years out of Master's projects.			3
	Industry Linkage			1) Internship provided to students by Electus Technologies Pvt. Ltd 2) workshop conducted in linkage.
	MoUs with Industries (minimum3(10))			2

Department of Information Technology

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	**Information Technology**		
	Number of Seats	120	120	120
	Duration	4 yrs	4 yrs	4 yrs
	Cut off marks/rank of admission during the last three years	60.57	67.29	77.94
	Fee (as approved by the state government)	113000/-	113000/-	
	Placement Facilities			
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	36 (Max sal : 6.5L) (Min sal : 1.46L) (Avg sal : 3.77L)	49 (Max sal : 50L) (Min sal : 1.8L) (Avg sal : 4.56L)	39 (Max sal : 6.78L) (Min sal : 3L) (Avg sal : 4.32L)
7	*Faculty*			
	Course/Branch wise list Faculty members:	12	18	18
	Permanent Faculty	12	18	18
	Adjunct Faculty			
	Permanent Faculty: Student Ratio	16.42	22.89	22.17
	Number of Faculty employed and left during the last threeyears		03	05
	List of Major Equipment/Facilitiesin each Laboratory/Workshop			
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities			
	Internet Bandwidth	1050 Mbps	1050 Mbps	1050 Mbps
	Number and configuration of System	**Number:** 100 **Configuration:** Processor: Intel I3 RAM : 4GB Hard Disk: 1TB	**Number:** 100 **Configuration:** Processor: Intel I3 RAM : 4GB Hard Disk: 1TB	
	Total number of system connected by LAN	Operating system : Ubantu 16.04 (64 bit)	Operating system : Ubantu 16.04 (64 bit)	154

	Total number of system connected by WAN			
	Major software packages available			
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	Available	Available	Available
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	Available	Available	Available
	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses givethe following		NA	
16	*Enrolment and placement detailsof students in the last 3years*	36/61	47/137	39/136
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, fundingagency, Grant received	NIL	NIL	NIL
	Publications (if any) out of research in last three years out of Master's projects	23	42	16
	Industry Linkage			
	MoUs with Industries (minimum3(10))	NIL	01	02

Department : Mechanical Engineering

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	BE in Mechanical Engineering		
	Number of Seats	120+180+240=540	120+180+240=540	120+180+180=480
	Duration	4 years	4 years	4 years
	Cut off marks/rank of admission during the last three years	44.83	62.33	2.13
	Fee (as approved by the state government)	113000/-	113000/-	
	Placement Facilities	1.CRT Classes 2.Expert lecture of industrial person 3.Personality development program	1.CRT Classes 2.Expert lecture of industrial person 3.Personality development program	1.CRT Classes 2.Expert lecture of industrial person 3.Personality development program
	Campus placement inlast three years with minimum salary, maximum salary, and average salary	No of students placed 36 minimum salary 3 lakh maximum salary 6.5 lakh average salary 4.75 lakh	No of students placed 50 minimum salary 1.77 lakh maximum salary 4.68 lakh average salary 3.22 lakh	No of students placed 30 minimum salary 1.8 lakh maximum salary 6.5 lakh average salary 4.15 lakh
7	*Faculty*			
	Course/Branch wise list Faculty members:	Annexure I	Annexure I	Annexure I
	Permanent Faculty	43	48	29
	Adjunct Faculty	NIL	NIL	NIL
	Permanent Faculty: Student Ratio	12.55	11.25	16.55
	Number of Faculty employed and left during the last threeyears	NIL	NIL	NIL
	List of Major Equipment/Facilitiesin each Laboratory/Workshop	Annexure II	Annexure II	Annexure II
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities	Annexure III	Annexure III	Annexure III
	Internet Bandwidth	1050Mbps	1050Mbps	1050Mbps

	Number and configuration of System	30 (Dell Vostro 3670 i3 8th gen. processor, 4GB ram, 1tb HDD) 110 (DH61WW Intel 2.7 GHz, 4GB RAM, 500 GB HDD)	30 (Dell Vostro 3670 i3 8th gen. processor, 4GB ram, 1tb HDD) 110 (DH61WW Intel 2.7 GHz, 4GB RAM, 500 GB HDD)	60 (Dell Vostro & Lenovo 3670 i3 8th gen. processor, 4GB ram, 1tb HDD) 110 (DH61WW Intel 2.7 GHz, 4GB RAM, 500 GB HDD)
	Total number of system connected by LAN	30	30	60
	Total number of system connected by WAN	NIL	NIL	NIL
	Major software packages available	CREO 3.0 & CREO 6.0 ANSYS 18.0	CREO 3.0 & CREO 6.0 ANSYS 18.0	CREO 3.0 & CREO 6.0 ANSYS 18.0
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)	1) Online Meetings 2) Webinars 3) Workshops	1) Online Meetings 2) Webinars 3) Workshops	1) Online Meetings 2) Webinars 3) Workshops
	Facilities for conduct of classes/courses in online mode (Theory & Practical)	1) Classroom ready with camera and mic for theory class 2) Online Meetings such as Google Meet, Webex, etc.available for practical 3) Virtual Lab facility also available for practical		
	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses givethe following			
	Title of the Course	1. M-Tech (Mechanical Engg. Design)	1. M-Tech (Mechanical Engg. Design) 2. M.Tech. in Defence Technology	1. M-Tech (Mechanical Engg. Design) 2. M.Tech. in Defence Technology
	Curricula and Syllabi	Annexure IV	Annexure IV	Annexure IV
	Laboratory facilities exclusive to the PostGraduate Course	1. Mechanical Vibration Lab 2. Stress Analysis Lab	1. Mechanical Vibration Lab 2. Stress Analysis Lab	1. Mechanical Vibration Lab 2. Stress Analysis Lab
	Special Purpose	NIL	NIL	NIL
	Software, all design tools in case	NIL	NIL	NIL
	Academic Calendarand framework	Annexure V	Annexure V	Annexure V
16	*Enrolment and placement detailsof students in the last 3years*	-	-	-
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, fundingagency, Grant Received	NIL	NIL	NIL

	Publications (if any) out of research in last three years out of Master's projects	7	8	3
	Industry Linkage	NIL	NIL	NIL
	MoUs with Industries (minimum3(10))	4	3	3

Annexure I

PRIYADARSHINI COLLEGE OF ENGINEERING DEPARTMENT OF MECHANICAL ENGINEERINGLIST OF MAJOR EQUIPMENTS

Sr.No	Name of Laboratory	Name of Equipment	Total Cost
1	Mechatronics	Linear Actuator trainer	50625
		PLC Trainer model PLC-1400 with Laptop (HP)	185250
		PLC Simulator Based on Allen Bradley 800 Series with optional attachment cards and Laptop (ACER)	177375
		Pneumatic Trainer with PLC	249750
		Hydraulic ckt Trainer with PLC	307125
2	Engineering Metallurgy	Double Disc Polishing Machine	52000
3	Dynamics of Machine	Universal Vibration Apparatus -New	55000
		Cam analysis apparatus-speed controller,	50625
		Gyroscope Apparatus-rotor disc,	54000
		Balancing of Reciprocating several Masses in a (single plane)	142234
4	Mechanical Measurement & Metrology	Vibration& Acceleration Measurement using Vibration Pick Up	47000
		Rotameter Trainer	105000
		PC Based Data Acquisition Tutor	135000
		Profile Projector, Model PPT-200 Complete with all standard accessories & graticles	75000
		Profile Projector, Model PPT-150, G.G. Make	48850
		Sodium monochromatic light unit,specimen set, include 4 test surface of dia. 50mm	65812
		Tool Makers Microscope, TM-50 With Accessories, G.G. Make	96000
		Floating Carriage Diameter Measuring Machine, 75 mm, G.G.Make	66000
		Clinometer, G.G. Make	78500
		Autocollimator with angle Dekkor	243979
5	Heat Transfer	Vertical Condenser	63563
6	Flexible Manufacturing System	CNC XL Turn Lathe CNCMILL Milling Machine Robotic Arm Arsto 6E Liner Slide Tooling package for above machine ASRS FMS Controller CNC train & Mill software	4150000
		ANSYS Academic Teaching Introductory Version - 11.0 - 32000 Nodes (25 Users Perpetual)	468000
		DONC simulator	391670

7	Hydraulic Machinery	Bernoulli's theorem appratus	57053
		Venturimeter, orifice meter & rotameter combine test rig	57375
		Pelton turbine	241875
		Francis Turbine	343125
		Kaplan Turbine	449100
		Reciprocating pump test rig	84488
		Centrifugal pump test rig	76500
		Axial Flow Pump	198000
8	Energy Conversion	Cut section model for petrol engine	73775
		Cut section model for Diesel engine	62425
		Rotary Air Compressor Test Rig	96000
		Computerized 4-Stroke Single Cylinder Petrol Engine	785000
		Hydraulic Circuit Trainer	151875
		Pneumatic Circuit Trainer	140625
		Air Compressor Test Rig	129375
		Single Cylinder Diesel Engine Test Rig	163125
9	Refrigeration & Air Conditioning	Dynamic Make Window Air Conditioner Test Rig.	49000
		Refrigerant Compressor Cut Section Model 1)Reciprocating 2) Centrifugal 3) Rotary	42000
		Vapour absorption refrigeration trainer	225000
		Vortex tube apparatus with compressor	214312
		Vapour compression refrigeration system test Rig	123750
		Mini Air Conditioning Test Rig	108000
10	Stress Analysis	Defused Light Research Polariscope,	237635
		Strain gauge Rossete appratus	90000
		Deflection of Curved beam appratus	90000
11	Vibration Analysis	Rion FFT Analyzer Model SA-78 with Following Accessories	578064
12	Mechanics of Material	Universal Testing Machine(UTM)	607430
		Torsion Testing Machine	161805
		Spring Testing Machine	128110
		Izod/Charpy Impact Testing Machine	86940
		Hardness Tester	57960

Annexure II

Rashtrasant Tukadoji MaharajNagpur University, Nagpur
Faculty of Engineering & Technology
Course and Examination Scheme for Master of Technologyin
Mechanical Engineering Design (MED)
Choice Base Credit System (CBCS)I

Semester

Subject code	Name of Subject	Teaching Scheme			Examination Scheme				
					Marks				
		Hours per Week		No. of Credits	Duration of Paper (Hrs.)	College Assessment	University Assessment	Total Marks	Minimum Passing Marks
		L	P						
PGMED101T	Advanced Mechanisms	4	-	4	3	30	70	100	50
PGMED102T	Dynamics of Machinery	4	-	4	3	30	70	100	50
PGMED103T	Mechanical Vibrations	4	-	4	3	30	70	100	50
PGMED104T	Elective -I (Discipline)	4	-	4	3	30	70	100	50
PGMED105T	Elective —II (Open)	4	-	4	3	30	70	100	50
PGMED106P	Advanced Mechanisms	-	2	1	-	50	50	100	50
PGMED107P	Mechanical Vibrations	-	2	1	-	50	50	100	50
Total		**20**	**4**	**-**	-	-	-	-	-
Semester Total		**24**		**22**				**700**	

Note:

I) List of Elective-I (Discipline)
   1) Computer Aided Mechanical Design
   2) Reliability, Maintainability & Wear

II) Elective-II (open) is to be selected from the list attached in Annexure-

Rashtrasant Tukadoji MaharajNagpur University, Nagpur
Faculty of Engineering & Technology
Course and Examination Scheme for Master of Technology
in
Mechanical Engineering Design (MED)
Choice Base Credit System (CBCS)

II Semester

Subject code	Name of Subject	Teaching Scheme			Examination Scheme				
					Marks				
		Hours per Week		No. of Credits	Duration of Paper (Hrs.)	College Assessment	University Assessment	Total Marks	Minimum Passing Marks
		L	P						
PGMED201T	Advanced Mechanical Drives	4	-	4	3	30	70	100	50
PGMED202T	Stress Analysis	4	-	4	3	30	70	100	50
PGMED203T	Design Of Mechanical Handling System	4	-	4	3	30	70	100	50
PGMED204T	Elective —III (Discipline)	4	-	4	3	30	70	100	50
PGMED205T	Foundation Courses -I	4	-	4	3	30	70	100	50
PGMED206P	Stress Analysis	-	2	1	-	50	50	100	50
PGMED207P	Finite Element Analysis	-	2	1	-	50	50	100	50
Total		**20**	**4**	**-**	**-**	**-**	**-**	**-**	**-**
Semester Total		**24**		**22**				**700**	

Note:

I) List of Elective-III (Discipline)
   1) Tribology And Bearing Design
   2) Design Of Hydraulic And Pneumatic System

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Mechanical Engineering Design (MED)
Choice Base Credit System (CBCS)

III Semester

Subject code	Name of Subject	Teaching Scheme			Examination Scheme				
					Marks				
		Hours per Week		No. of Credits	Duration of Paper (Hrs.)	College Assessment	University Assessment	Total Marks	Minimum Passing Marks
		L	P						
PGMED301T	Elective -IV (Open)	4	-	4	3	30	70	100	50
PGMED302T	Foundation Courses -II	4	-	4	3	30	70	100	50
PGMED303P	Project Seminar	-	3	8	-	200	-	200	100
Total		**8**	**3**	**-**	**-**	**-**	**-**	**-**	**-**
Semester Total		**11**		**16**				**400**	

Note: Elective-IV (open) is to be selected from the list attached in Annexure-

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IV Semester

Subject code	Name of Subject	Teaching Scheme			Examination Scheme				
					Marks				
		Hours per Week		No. of Credits	Duration of Paper (Hrs.)	College Assessment	University Assessment	Total Marks	Minimum Passing Marks
		L	P						
PGMED401P	Project	-	6	16	-	-	400	400	200
Total		**-**	**6**	**-**	**-**	**-**	**-**	**-**	**-**
Semester Total		**6**		**16**				**400**	

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Absorption Scheme for the Students of M. Tech. Mechanical Engineering Design from Old Semester Pattern to New CBCS Semester Pattern

I Semester M. Tech. Mechanical Engineering Design

Subject Code	Name of the subject in New CBCS Pattern	Subject Code	Name of the Subject in old Pattern
PGMED101T	Advanced Mechanisms	1MED-02	Advanced Mechanisms
PGMED102T	Dynamics of Machinery	1MED-03	Dynamics of Machinery
PGMED103T	Mechanical Vibrations	1MED-05	Vibration Analysis
PGMED104T	Elective -I (Discipline) 1) Computer Aided Mechanical Design	1MED-04	Computer Aided Mechanical Design
	2) Reliability, Maintainability & Wear	3MED-01	Reliability, Maintainability & Wear
PGMED105T	Elective —II (Open) 1) Robotics	2MED-03	Robotics
	2) Mechanization In Food Processing	3MED-02	Mechanization In Food Processing
PGMED106P	Advanced Mechanisms (Practical)	---	---
PGMED107P	Mechanical Vibrations (Practical)	1MED-05	Vibration Analysis (Practical)

II Semester M. Tech. Mechanical Engineering Design

Subject Code	Name of the subject in New CBCS Pattern	Subject Code	Name of the Subject in old Pattern
PGMED201T	Advanced Mechanical Drives	2MED-01	Advanced Mechanical Drives
PGMED202T	Stress Analysis	2MED-04	Stress Analysis
PGMED203T	Design of Mechanical Handling System	3MED-02	Design of Mechanical Handling System
PGMED204T	Elective —III (Discipline) 1)Tribology And Bearing Design	---	---
	2) Design of Hydraulic And Pneumatic System	3MED-02	Design of Hydraulic & Pneumatic Systems
PGMED205T	Foundation Courses -I	---	---
PGMED206P	Stress Analysis (Practical)	2MED-04	Stress Analysis (Practical)
PGMED207P	Finite Element Analysis (Practical)	2MED-05	Finite Element Analysis (Practical)

III **Semester M. Tech. Mechanical Engineering Design**

Subject Code	Name of the subject in New CBCS Pattern	Subject Code	Name of the Subject in old Pattern
PGMED301T	Elective -IV (Open) 1) Finite Element Analysis	2MED-05	Finite Element Analysis
	2) Optimization In Engineering Design	2MED-02	Optimization In Engineering Design
PGMED302T	Foundation Courses -II	---	---
PGMED303P	Project Seminar	3MED-03	Seminar on Project Spade Work & Research Methodology

IV **Semester M. Tech. Mechanical Engineering Design**

Subject Code	Name of the subject in New CBCS Pattern	Subject Code	Name of the Subject in old Pattern
PGMED401P	Project	---	Thesis

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I Semester M. Tech. (Mechanical Engineering Design)

Subject Code: - PGMED101T
Subject:-Advanced Mechanisms

Course Objectives:

The overall objectives of this course is to understand kinematics synthesis of mechanism, to learn how to synthesis a given mechanism, when input and output is given with different methods optimal synthesis of mechanism, and synthesis of spatial mechanism along with application.

Expected Outcomes:

At the end of this course students will be able to understand various methods of synthesis, optimization of synthesis, graphical and analytical methods of synthesis along with computer application.

Syllabus:

I Introduction to kinematic synthesis type number and dimension synthesis practical applications, degree of freedom class -I, class-II chain Grumblers criteria, concept of transmission angle.

II Synthesis of planner mechanism: Introduction to function generation, path generation, path generation & rigid body guidance. Problems, accuracy points chebychev's spacing, Graphical approaches for synthesis for above problem Central point curve, circle point curve ,point position, inflection circle Bo-billior construction, Euler's savory equation, Hartman construction, vector approach &matrix approach, rotation matrix, displacement matrix, Freudenstein‟s equation, computer approach for the above problem .

III Optimal synthesis of planar mechanisms, Powells search methods least square method penalty function computer approach.

IV Kinematic analysis & synthesis of spatial mechanisms Hi notations screw matrix, kinematic analysis for linkages like R-S-S-R, R-C-P-R-C etc.

V Introduction to kinematics synthesis of Robot arms.

Tutorials: - Based on above syllabus.

References:-

1. Tao, D.C.,‖Applied Linkages‖.
2. Erdman & Sandor ,‖Advanced Mechanisms, Vol.- I,II‖,
3. Denavit & Hartenberg, –Kinematic Synthesis

Subject Code: - PGMED106P
Subject:-Advanced Mechanisms

List of Practical:

1. Synthesis using function generation.
2. Synthesis using path generation.
3. Synthesis using path generation & rigid body guidance.
4. Kinematic analysis and synthesis of spatial mechanisms.
5. Kinematic synthesis of robot arm.
6. Graphical approaches for synthesis of mechanisms.
7. Study of Powell's search methods.
8. Study of least square method.
9. One numerical on Freudenstein's equation

Department: Robotics and Artificial Intelligence

6	For each Programme the following details are to be given of last three years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	Name	**Robotics and Artificial Intelligence Department**		
	Number of Seats			60
	Duration			4 Years
	Cut off marks/rank ofadmission during the last three years			60.73
	Fee (as approved by the state government)			
	Placement Facilities			Institute level Training & Placement cell , Organizes aptitude development classes, Soft Skill Trainings etc. for 4th Sem students in order to prepare them for campus placement. The T&P cell works with respective Departmental coordinators to arrange for campus drives by various companies.
	Campus placement inlast three years with minimum salary, maximum salary, and average salary			NA
7	*Faculty*			
	Course/Branch wise list Faculty members:			1. Prof. (Mrs). M.V.Vyawhare (HOD) 2. Prof.H.K.Dubey 3. Prof.(Mrs) A. P. Khandait
	Permanent Faculty			1. Prof. (Mrs). M.V.Vyawhare (HOD) 2. Prof.H.K.Dubey 3. Prof.(Mrs) A. P. Khandait
	Adjunct Faculty			
	Permanent Faculty: Student Ratio			1:21
	Number of Faculty employed and left during the last three years			NIL
	List of Major Equipment/Facilitiesin each Laboratory/Workshop			Annexure-I
	List of Experimental Setup in each Laboratory/Workshop Computing Facilities			Annexure-II
	Internet Bandwidth			1050 MBPS
	Number and configuration of System			…….
	Total number of system connected by LAN			…….

	Total number of system connected by WAN			……..
	Major software packages available			Robo Analyzer Software and MAristo 6 axes Robot Software
	Special purpose facilities available (Conduct of online Meetings/ Webinars/ Workshops, etc.)			1. All faculty members are provided with G-Suit account on pcenagpur.edu.in domain through which it was possible to accommodate more than 100 participants for meetings/ webinars/workshop through Google meet. Also, the video recording facility was available. 2. Zoom meeting/ webinar is subscribed at centralized level and access to the Department through central login credentials is permissible as and when required. 3. Platform of Sisco Webex is also made available as and when required
	Facilities for conduct of classes/courses in online mode (Theory & Practical)			Available
	For each Programme the following details are to be given of lastthree years (2020-21, 2021-22, 2022-23)	**2020-21**	**2021-22**	**2022-23**
	For each Post Graduate Courses givethe following		NA	
16	*Enrolment and placement detailsof students in the last 3years*			NA
17	*List of Research Projects/Consultancy Works*			
	Number of Projects carried out, fundingagency, Grant received			--
	Publications (if any) out of research in last three years out of Master's projects			--
	Industry Linkage			--
	MoUs with Industries (minimum3(10))			--