1. **NAME OF THE INSTITUTION**

UNIVERSITY POLYTECHNIC, BIT, MESRA

OPPOSITE SIRTDO INDUSTRIAL AREA, MESRA

DIST - RANCHI – 835215

STATE - JHARKHAND

PHONE NO. - 0651-2271008,

MOBILE NO. – 9334424256

EMAIL ID: director.univpoly@bitmesra.ac.in

2. Name and address of the Trust/ Society/ Company and the Trustees

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI, JHARKHAND- 835215

Mobile No.: 0651-2275402, 2276502

Fax No.: 0651-2275401, 2276502

E-Mail- registrar@bitmesra.ac.in

3. Name and Address of the Director

Prof.(Dr.) Sandeep Singh Solanki

DIRECTOR,

UNIVERSITY POLYTECHNIC, BIT, MESRA

OPPOSITE SIRTDO INDUSTRIAL AREA, MESRA

DIST - RANCHI – 835215

STATE - JHARKHAND

PHONE NO. - 0651-2271008,

MOBILE NO. – 9334424256

4. Name of the affiliating University

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI, JHARKHAND- 835215

5. Governance

 Members of the Board and their brief background

1.	Sri Chandrakant Birla Birla Tower, 9th Floor 25, Barakhamba Road New Delhi - 110001	Chairman
2.	Director Central Universities Department of Secondary & Higher Education Shastri Bhawan New Delhi – 110001	Nominee of MHRD, Govt of India
3.	Dr. (Mrs.) Renu Batra Joint Secretary UGC Bahadur Shah Zafar Marg	Nominee of UGC
4.	Dr. Pradipta Banerjee Director, IIT, Roorkee-247667	
5.	Shri Ajay Kr. Singh IAS, Secretary Dept. Higher & Technical Education, Govt. of Jharkhand, Ranchi-834002	Ex-officio
6.	Mrs. Aradhana Patnaik, IAS, Secretary, Dept. of Primary Education & Literacy,Govt. of Jharkhand- 834002	Ex-officio
7.	Dr. Pradeep Kumar, IAS, Commissioner, South Chottanagpur Division, Ranchi, Jharkhand-834001	Ex-officio
8.	Shri S.K.Satpathy, IAS Principal Secretary to the Governor, Govt. of Jharkhand, 834001	Nominee of the chancellor

9.	Shri M.L.Pachisia, Kolkata	Nominee of HCT
10.	Shri Rohit Saboo, Jaipur	Nominee of HCT
11.	Dr. M.K.Mishra Vice-Chancellor BIT, Mesra, Ranchi-835215	Vice-Chancellor BIT, Mesra
12.	Dr. Mrs. Vibha Rani Gupta Professor, BIT, Mesra	Institute Faculty
13.	Dr. Dharmendra Kr. Chand Assistant Professor, BIT, Mesra	Institute faculty
14.	Shri. D.N.Patodia DLH City Phase-II Gurgaon	Nominee of general Council
15.	Dr. P.Ghosh Ms. BM Birla Sc. & Technology Jaipur	Nominee of general Council
16.	Dr. Arup Roy Choudhury, Chief Commissioner, West Bengal Public Service Commissioner	Nominee of general Council
17.	Shri S.N.Aggarwal, Chairman, Bhoruka Power Limited, Bangaluru	Nominee of HCT

Members of Academic Advisory Body

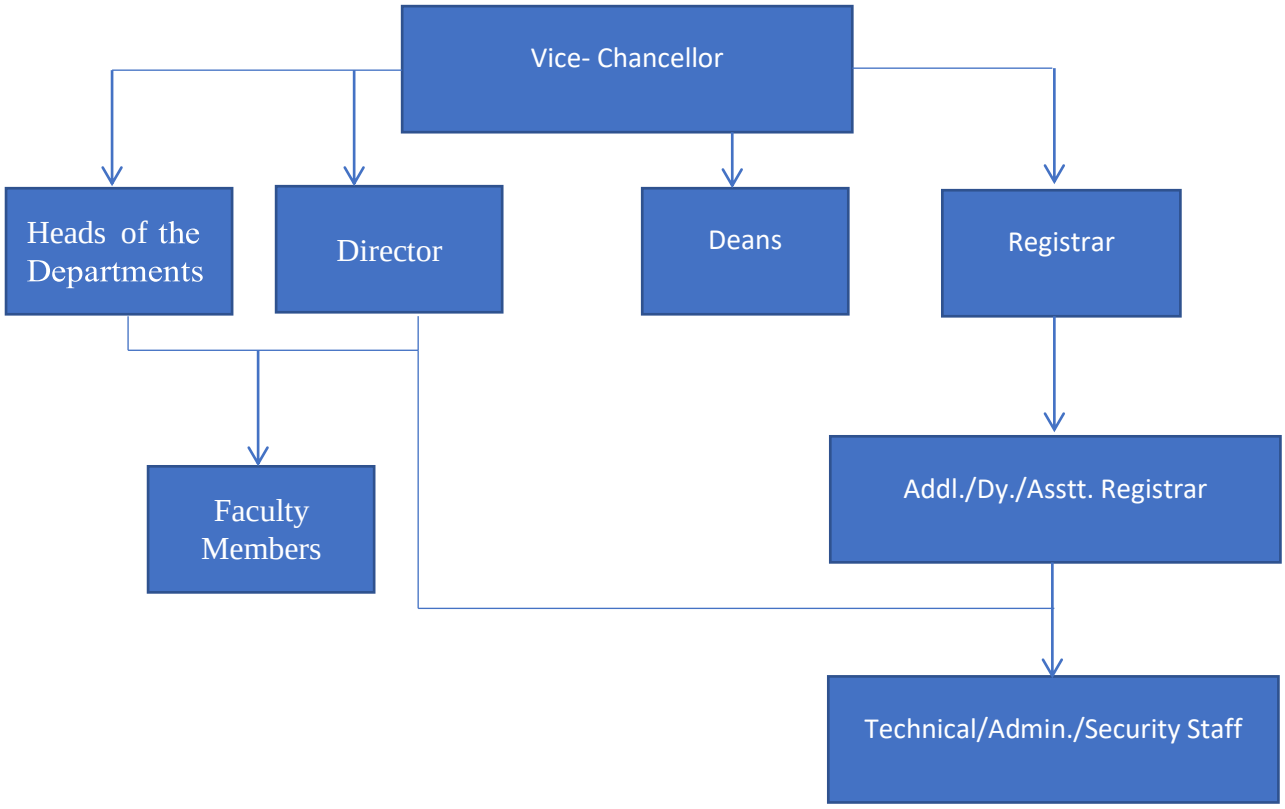
S.No.	Name	Designation	Department
1	Dr. M.K. Mishra Chairman	Vice Chancellor	Birla Institute of Technology
2	Dr (Mrs.) P. Padmanabhan	Dean Academic Programme	--do—
3	Dr. S. Konar	Dean Faculty Affairs & Spons. Research	--do—
4	Dr. Utpal Baul	Dean Alumni & International Relations	--do—
5	Dr. Sandip Dutta	Dean Admn. & Acad. Coordination	--do—
6	Dr. Mahesh Chandra	Dean Students Welfare	--do—
7	Dr. Ramesh Chandra	Professor & HoD Bio-Engineering	--do—
8	Dr. (Mrs.) Sudipta Goswami	Professor & HoD Chemical Engineering & Tech.	--do—
9	Dr. P.K. Srivastava	Professor & HoD Chemistry	--do—
10	Dr. Anand Kumar Sinha	Professor & HoD Civil & Env. Engineering	--do—
11	Dr.(Mrs.) V. Bhattacharjee	Professor & HoD Comp. Sc. & Engineering	--do—
12	Dr. P.R. Thakura	Professor & HoD Electrical & Electronics Engg.	--do—
13	Dr. Srikanta Pal	Professor & HoD Electronics & Comm. Engg.	--do—
14	Dr. (Mrs.) Manju Bhagat	Professor & HoD Management	--do—
15	Dr. Souvik Chakraborty	Professor & HoD Mathematics	--do—
16	Dr. R.P. Sharma	Professor & HoD Mechanical Engineering	--do—
17	Dr. Subir Samanta	Professor & HoD Pharm. Sciences & Technology	--do—
18	Dr. C. Jeganathan	Professor & HoD Remote Sensing	--do—
19	Dr. Sudip Das	Professor & HoD Space Engineering & Rocketry	--do—
20	Dr. Satyaki Sarkar	HoD Architecture	--do—
21	Dr. Sanjay K. Jha	HoD Production Engineering	--do—
22	Dr. Abhinav Kr. Sandilya	Incharge Hotel Mngt. & Catering Tech.	--do—
23	Dr. (Mrs.) M. Chakraborty	Professor Architecture	--do—
24	Dr. Rakesh Kumar Sinha	Professor Bio-Engineering	--do—
25	Dr. Kunal Mukhopadhyay	Professor Bio-Engineering	--do—
26	Dr. (Mrs.) M. Mukherjee	Professor Chemical Engineering & Tech.	--do—
27	Dr. Gautam Sarkhel	Professor Chemical Engineering & Tech.	--do—
28	Dr. (Mrs.) Usha Jha	Professor Chemistry	--do—
29	Dr. Birendra Kr. Singh	Professor Civil & Env. Engineering	--do—
30	Dr. (Mrs.) Bindhu Lal	Professor Civil & Env. Engineering	--do—
31	Dr. G. Sahoo	Professor Comp. Sc. & Engineering	--do—
32	Dr. Sarbani Chakraborty	Professor Electrical & Electronics Engg.	--do—
33	Dr. D.K. Mohanta	Professor Electrical & Electronics Engg.	--do—
34	Dr. T. Ghose	Professor Electrical & Electronics Engg.	--do—
35	Dr. (Mrs.) Vijaya Laxmi	Professor Electrical & Electronics Engg.	--do--
36	Dr. S.K. Ghorai	Professor Electronics & Comm. Engg.	--do—
37	Dr. (Mrs.) Nisha Gupta	Professor Electronics & Comm. Engg.	--do—
38	Dr. R. Sukesh Kumar	Professor Electronics & Comm. Engg.	--do—
39	Dr. Vibha Rani Gupta	Professor Electronics & Comm. Engg.	--do—
40	Dr. S.S. Solanki	Professor Electronics & Comm. Engg.	--do—
41	Dr. R.N. Bhagat	Professor Management	--do—
42	Dr. S.K. Jain	Professor Mathematics	--do—
43	Dr. S. Padhi	Professor Mathematics	--do—
44	Dr. D.P. Mishra	Professor Mechanical Engineering	--do—
45	Dr. P.R.P. Verma	Professor Pharm. Sciences & Technology	--do—
46	Dr. S. Jha	Professor Pharm. Sciences & Technology	--do—
47	Dr. R.N. Gupta	Professor Pharm. Sciences & Technology	--do--

48 Dr. (Mrs.) Swastika Ganguly Professor Pharm. Sciences & Technology --do—
49 Dr. K. Jayaram Kumar Professor Pharm. Sciences & Technology --do—
50 Dr. B.N. Sinha Professor Pharm. Sciences & Technology --do—
51 Dr. (Mrs.) Papiya M. Mazumder Professor Pharm. Sciences & Technology --do—
52 Dr. (Mrs.) S.M. Verma Professor Pharm. Sciences & Technology --do—
53 Dr. Sanjay Kumar Sinha Professor Physics --do—
54 Dr. Nilanchal Patel Professor Remote Sensing --do—
55 Dr. Mohan Varma Professor Space Engineering & Rocketry --do—
56 Dr. B.K. Singh Director Off-Campus Patna Invitee
57 Dr. Munish Makkad Director Off-Campus Noida Invitee
58 Dr. J.P. Pandey Controller of Examination
59 Dr. A.P. Krishna Registrar Birla Institute of Technology Member Secretary

 Frequently of the Board Meeting and Academic Advisory Body

Every six months

 Organizational chart and processes



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

Faculty members are involved in teaching process(both theory and Lab.). They are involved in Course structure upgradation and designing of syllabus.

Feedback on syllabus are taken from students.

 Mechanism/ Norms and Procedure for democratic/ good Governance

Feedback after each semester.

Feedback from students for syllabus revision.

Feedback from faculty members for syllabus revision.

Involvement of Faculty members in various administrative committees

Reformation of administrative committees after every few years

 Student Feedback on Institutional Governance/ Faculty performance: Feedback is taken from students at the end of each semester.

 Grievance Redressal mechanism for Faculty, staff and students: Online & offline Grievance submission facility for Faculty, staff and students. Grievance Redressal committee looks after all such matters.

 Establishment of Anti Ragging Committee- Yes

 Establishment of Online Grievance Redressal Mechanism- Yes

 Establishment of Grievance Redressal Committee in the Institution and Appointment of

OMBUDSMAN by the University-Yes

 Establishment of Internal Complaint Committee (ICC)-Yes

 Establishment of Committee for SC/ ST-Yes

 Internal Quality Assurance Cell-Yes

6. Programmes

 Name of Programmes approved by AICTE

DIPLOMA IN ENGINEERING

UNDERGRADUATE

 Name of Programmes Accredited by AICTE

NA

 Status of Accreditation of the Courses

NOT ACCREDIATED

 Total number of Courses

DIPLOMA – SIX(06), UNDERGRADUATE- ONE(01)

 No. of Courses for which applied for Accreditation- NIL

 Status of Accreditation – Preliminary/ Applied for SAR and results awaited/ Applied for SAR and visits completed/ Results of the visits awaited/ Rejected/ Approved for ….. Courses

NA

 For each Programme the following details are to be given:

- Name: DIPLOMA
- Number of seats: 240
- Duration: 3 years

 Cut off marks/rank of admission during the last three years:

2016-Diploma:

Category	Marks (Max.)	Marks (Min.)
UR	96.33	88.33
OBC	96.33	88.33
S.T.	91.83	55.33
S.C.	91.83	50.33
P.T.	81.67	36.67

2016-BMLT

Category	Marks (Max.)	Marks (Min.)
S.T.	64	44.2
S.C.	61.2	49.8
P.T.	47.4	47.4
OBC	80.8	50.4
UR	73	50

2017- DIPLOMA

Category	Marks (Max.)	Marks (Min.)
UR	95.33	80%
OBC	91.83	80%
S.T.	93.33	52.33%
S.C.	88.67	54.67%
P.T.	81.33	55.67%

2017-BMLT

Category	Marks (Max.)	Marks (Min.)
S.T.	66.4	49
S.C.	80.2	44
P.T.	59.6	59.6
OBC	57.33	50
UR	71	67.33

2018- DIPLOMA

Category	Marks (Max.)	Marks (Min.)
UR	99	75.5
OBC	91.5	71
S.T.	95.5	45
S.C.	95	46
P.T.	49	49

2018-BMLT

Category	Marks (Max.)	Marks (Min.)
S.T.	68	44
S.C.	79.67	52.33
OBC	76	63.67
UR	81.66	56

 Fee :

Fee Structure Diploma and BMLT

Fee Structure for Diploma in Engineering and BMLT (2018 batch)

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem	5th Sem	6th Sem
Tuition Fee	25300	25300	26500	26500	27800	27800
Development Fee	1700	1700	1800	1800	1900	1900
Institute Exam Fee	1500	1500	1600	1600	1700	1700
Sub-Total (A) :	**28500**	**28500**	**29900**	**29900**	**31400**	**31400**
Hostel Seat Rent, Electricity and Transport etc.*	3500	3500	3700	3700	3880	3880
Sub-Total (B) :	**3500**	**3500**	**3700**	**3700**	**3880**	**3880**
Total (A + B):	**32000**	**32000**	**33600**	**33600**	**35280**	**35280**
Additional amount to be paid at the time of admission						
Admission Fee (One time only- Non Refundable)	3000					
Caution Money (One time only-Refundable)	5000					
Fee for Diploma / Degree Ceremony						

 Placement Facilities: There is a Training and Placement Cell to look after various training and Placement activities of the institute. Campus drives are organized in the institute for placement of students.

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

2018-2019

Name of the Course	Student Placed	Highest Package (In Lakhs)	Lowest Package (In Lakhs)
AUTOMOBILE ENGINEERING	22	2	2
COMPUTER ENGINEERING	3	1	1
ELECTRONICS ENGINEERING	2	1	1
MECHANICAL ENGINEERING	16	2	2
MANUFACTURING ENGINEERING	7	2	2
ELECTRICAL AND ELECTRONICS ENGG.	9	2	2
Medical Lab Technology	0	0	0

2017-2018

Name of the Course	Student Placed	Highest Package (In Lakhs)	Lowest Package (In Lakhs)
AUTOMOBILE ENGINEERING	18	2	1
COMPUTER ENGINEERING	5	1	1
ELECTRONICS ENGINEERING	10	1	1
MECHANICAL ENGINEERING	16	2	1
MANUFACTURING ENGINEERING	7	2	2
ELECTRICAL AND ELECTRONICS ENGG.	16	2	2
MEDICAL LAB TECHNOLOGY	0	0	0

2016-2017

Name of the Course	Student Placed	Highest Package (In Lakhs)	Lowest Package (In Lakhs)
AUTOMOBILE ENGINEERING	24	2	1
COMPUTER ENGINEERING	1	1	1
ELECTRONICS ENGINEERING	16	1	1
MECHANICAL ENGINEERING	16	2	1
MANUFACTURING ENGINEERING	5	0	0
ELECTRICAL AND ELECTRONICS ENGG.	14	2	1
MEDICAL LAB TECHNOLOGY	0	0	0

 Name and duration of programme(s) having Twinning and Collaboration with Foreign University(s) and being run in the same Campus along with status of their AICTE approval. If there is Foreign

NOT APPLICABLE

Collaboration, give the following details:

Details of the Foreign University

 Name of the University- **NOT APPLICABLE**

 Address- **NOT APPLICABLE**

 Website - **NOT APPLICABLE**

 Accreditation status of the University in its Home Country- **NOT APPLICABLE**

 Ranking of the University in the Home Country- **NOT APPLICABLE**

 Whether the degree offered is equivalent to an Indian Degree? If yes, the name of the agency which has approved equivalence. If no, implications for students in terms of pursuit of higher studies in India and abroad and job both within and outside the country

 Nature of Collaboration- **NOT APPLICABLE**

 Conditions of Collaboration - **NOT APPLICABLE**

 Complete details of payment a student has to make to get the full benefit of Collaboration

 For each Programme Collaborated provide the following: - **NOT APPLICABLE**

 Programme Focus-- **NOT APPLICABLE**

 Number of seats- **NOT APPLICABLE**

 Admission Procedure- **NOT APPLICABLE**

 Fee - **NOT APPLICABLE**

 Placement Facility- **NOT APPLICABLE**

 Placement Records for last three years with minimum salary, maximum salary and average salary- **NOT APPLICABLE**

 Whether the Collaboration Programme is approved by AICTE? If not whether the Domestic/Foreign - **NOT APPLICABLE**

University has applied to AICTE for approval - **NOT APPLICABLE**

7. Faculty

 Branch wise list Faculty members:

 Permanent Faculty

S.No.	Name of Faculty Member	Branch
1.	Mr. Pradeep Toppo	Automobile
2.	Mr. Shankar Kumar	Automobile
3.	Mr. Manoj Kr. Jha	Mechanical
4.	Mr. Rakesh	Mechanical
5.	Mr. P.R.Mahto	Mechanical
6.	Mr. Ramkesh	Manufacturing
7.	Mrs. Rekha Mehta	Manufacturing
8.	Mr. R.K.Prasad	Manufacturing
9.	Dr. G.M.Ansari	Computer
10.	Mr. Abhay Kumar	Computer
11.	Mr. Ramnish Sinha	Computer
12.	Mr. Niraj Kumar	Computer
13.	Mr. Rajendra Mahto	Computer
14.	Mr. D.K.Jain	Electronics
15.	Dr. Sumana	Electronics
16.	Mrs. Nirupam	Electronics
17.	Mr. Maqbool Hosain	Electronics
18.	Dr. Meena Singh	EEE
19.	Mr. N.K.Mukherjee	EEE
20.	Dr. S.S.Kumar	Chemistry
21.	Dr. Satish Kumar	Chemistry
22.	Dr. Sandhya Rani	Chemistry
23.	Dr. T.K.Prashar	Physics
24.	Dr. Neeru Singh	MLT
25.	Dr. Mohd. Neyaz Ahsan	MLT
26.	Dr. Chanchal Kr. Mishra	MLT
27.	Mr. Sanjay Jha	MLT
28.	Mr. N.K.Singh	PT&Games
29.	Dr. R.K.Chatterjee	Mathematics

 Adjunct Faculty- NA

 Permanent Faculty: Student Ratio 30: 810

 Number of Faculty employed and left during the last three years: LEFT – 01,

Appointed – 01(FT) & 09(PT)

8. Profile of Director

i. Name: Prof.(Dr.) Sandeep Singh Solanki

ii. Date of Birth: 18.10.1969

iii. Unique id: 381212903456

iv. Education Qualifications- Ph.D.

v. Work Experience

 Teaching- 18

 Research-06

 Industry-05

 others-NA

vi. Area of Specialization- AUDIO SIGNAL PROCESSING & AUTOMATION

vii. Courses taught at Diploma/ Post Diploma/ Under Graduate/ Post Graduate/ Post Graduate

Diploma Level

UG- Microprocessor & Microcontroller, Digital Electronics, Intelligent Instrumentation, Electronics Measurement & Instrumentation, Sensor & Transducer, Speech Processing & Reorganization

PG- adv. Instrumentation, PLC, Process Control, Applied Instrumentation, Industrial Instrumentation, sensor and transducer.

viii. Research guidance

 No. of papers published in National/ International Journals/ Conferences- 51

 Master- 37

 Ph.D.- 06

ix. Projects Carried out- 03

x. Patents-NA

xi. Technology Transfer-NA

xii. Research Publications-51

xiii. No. of Books published with details-02(Signal Analysis of Hindustani Classical Music (Signals and Communication Technology, springer, Separation and classification of Different Musical Instruments Sound, Lombard)

Faculty Profile:

Pradeep Toppo

Designation	Assistant Professor
Qualification	M.E (Heat Power in Mechanical Engg.)B.I.T Mesra,Ranchi, B.E Mechanical Jiwaji University Gwalior
Area of Interest	Heat Power,I.C Engine,Thermal Engg.,Fluids Mechanics,Gas Turbines
Research Field	
Email id	pradeep@gmail.com
Contact no	+91 933428575

Shankar Kumar

Designation	Teaching assistant
Qualification	B. E. (Automobile Engg.), M.Tech(Automotive Technology)Pursuing
Area of Interest	Complete Vehicle Design, Engine Development(Hydrogen)
Research Field	Design of New Vehicle and Components, Electric and Solar Vehicle, Different Diagnostics Methods of Vehicle.
Email id	singhshankar1986@gmail.com, shankar@bitmesra.ac.in
Contact no	+91 9122231714, +91 8210616626

Dr. Gholam Mursalin Ansari

Designation	Assistant Professor(Stage II)
Qualification	Ph.D.(Computer Science & Engg.,BIT Mesra)
Area of Interest	Advance DBMS, RDBMS, Networking, Web Technology
Research Field	Cyber Attack and Defense
Email id	mursalin.suza@bitmesra.ac.in
Contact no	+91-9334436202

Abhay kumar

Designation	Assistant Professor(Stage II)
Qualification	M.Tech.(Computer Science)
Area of Interest	Data Structure , JAVA , DCNA , DBMS
Research Field	Data Mining,Pattern Recognition
Email id	abhaykumar@bitmesra.ac.in
Contact no	+91-9431382701

RAMNISH SINHA

Designation	Assistant Professor
Qualification	M.Tech(Computer Science)
Subjects taught	C Programming, Object Oriented Programming C++, Data Structures, Computer Organization, Computer Architecture, Operating System, Software Engineering, System Analysis and Design
Research Field	
Email id	ramnish@bitmesra.ac.in
Contact no	+91-9472780482

Rajendra Mahto

Designation	Assistant Professor
Qualification	MCA
Subject taught	DBMS, Data Structures, Operating System, Software Engineering, Computer Organization, C Programming, C++, JAVA, Fundamental of Computer
Research Field	
Email id	rmahto2250@gmail.com
Contact no	+91-8987508461

Niraj Kumar

Designation	Assistant Professor
Qualification	M.Tech(Computer Science)
Area of Interest	Bioinformatics,Data Communication & Networking,Computer Architecture
Research Field	Image Processing
Email id	nirajkumar@bitmesra.ac.in
Contact no	+91-8789970863

Mr. N.K Mukherjee

Designation	Associate Lecturer
Qualification	B.E.(Electrical)
Area of Interest	Electrical Machines A.C & D.C Maintenance & Repairs
Research Field	
Email id	nkmukherjee1010@gmail.com
Contact no	+ 91-9334440674,7859054433

Dr. Meena Singh

Designation	Assistant Professor (Stage II)
Qualification	Ph.D
Area of Interest	
Research Field	VLSI
Email id	meena71_singh@rediffmail.com
Contact no	+91 7004780851

Designation	Assistant Professor
Qualification	B.Sc (Eng.)
Area of Interest	
Research Field	
Email id	dkjain@bitmesra.ac.in
Contact no	+ 91 7091131415

Dr. Sumana Kumari

Designation	Assistant Professor
Qualification	Ph.D
Area of Interest	Microwave Engineering
Research Field	Antenna in wireless communication
Email id	sumana1702@gmail.com
Contact no	+91 9431169660

Mrs. Nirupam

Designation	Assistant Professor
Qualification	ME
Area of Interest	Automation,Sensors
Research Field	Instrumentation
Email id	nirupam.achievers@gmail.com
Contact no	+ 91 8757197809

Mr. Maqubool Hosain

Designation	Associate Lecturer
Qualification	ME,Persuing Ph.D
Area of Interest	Microwave Engg.
Research Field	Antenna & Filter
Email id	himaqubool@gmail.com
Contact no	+91 07079290027

Mr. Ramkesh

Designation	Assistant Professor
Qualification	M.E.,Ph.D Persuing
Area of Interest	Non Conventional Manufacturing Process
Research Field	Non Conventional Manufacturing Process
Email id	ramkesh@bitmesra.ac.in
Contact no	+91 8969778283

Mrs. Rekha Kumari

Designation	Assistant Professor
Qualification	M.Tech,Ph.D Persuing
Subject Taught	Manufacturing Process,Manufacturing Process-1,Production Management-1,Production Management-2,Quality Control, Thermal Engineering,Basics of Manufacturing Process,Operation Research
Research Field	Aluminium Metal Foam
Email id	mehta_rekha2005@rediffmail.com
Contact no	+ 91 8757885285

Mr. Ram Kishore Prasad

Designation	Technical Superitendent
Qualification	B.E (Mech.)
Area of Interest	Elements of Engg. Workshop Tech,Engg. Measurement
Research Field	Basics of Automobile Components and Heat Transfer
Email id	rk.ontherocks@gmail.com
Contact no	+91 9431103954

Mr. Rakesh

Designation	Associate Lecturer
Qualification	B.E(Mechanical), M.E(CIDM), Thesis Submitted
Area of Interest	Computer integrated Design and Manufacturing
Research Field	Computer integrated Design and Manufacturing
Email id	rak_niru@gmail.com
Contact no	+91 9470588848

Mr Manoj Kumar

Designation	Assistant Professor
Qualification	B.Tech(Mech.),M.Tech.,Ph.D Persuing,PGDMA-HR(Persuing)
Area of Interest	Fluid Mechanics & Hydraulic Machines ,Thermal Engineering & computational Fluid dynamics
Research Field	Energy conversion device & Heat and fluid power.
Email id	manoj28@bitmesra.ac.in
Contact no	+ 91 8789260871

Mr. Prabhat Ranjan Mahto

Designation	Teaching Assistant
Qualification	B.E (Mech. Engg)
Area of Interest	Fluid Power and Hydraulic Machines,
Research Field	Renewable Energy
Email id	prabhat.mahto@gmail.com
Contact no	+91 9199381862

Dr. Neeru Singh

Designation	Assistant Professor
Qualification	Ph.D.,Pharm.Sci.,M.Sc., Microbiology
Area of Interest	Morphological elucidation and anti-bacterial activities of Lipidic nanoparticles.
Research Field	Microbiology
Email id	neerumicro@yahoo.com
Contact no	+91 9234660981

Dr. Mohd Neyaz Ahsan

Designation	Assistant Professor
Qualification	M. Pharm., Pharmaceutics, Ph.D. Thesis submitted
Area of Interest	Development of Lipid Based Nanoparticles and Topical Drug Delivery System
Research Field	Lipid Based Self-Nano Emulsifying Drug Delivery System.
Email id	neyaz.rx@gmail.com
Contact no	+ 91 9471235860

Mr. Chanchal Kumar Mishra

Designation	Assistant Professor
Qualification	M.Pharm,Pharmacology, Ph.D thesis submitted
Area of Interest	Phytoconstituents and Psychopharmacology studies
Research Field	
Email id	chanchalmishra@bitmesra.ac.in
Contact no	+91 7903325987

Mr. Sanjay Jha

Designation	Teaching Assistant
Qualification	M.Pharm., Pharmacognosy
Area of Interest	Bio Chemistry, Pharmacognosy,
Research Field	Isolation & assay of chemical constituents from aromatic plants
Email id	iamsanjayjha@gmail.com
Contact no	+ 91 8051203622

Dr. Shambhu Sharan Kumar

Designation	Assistant Professor Senior Scale
Qualification	M.Tech. N.I.T. Jamshedpur, Ph.D. M.N.N.I.T. Allahabad
Area of Interest	Applied Chemistry: Nano Technology applied Surface Coatings, Paint Formulations & Electrodeposition
Research Fields	Corrosion Protection, Paint Formulations, Surface Coatings, Electrodeposition and Polymer Nano-Composite Coatings w.r.t. Environmental protection
Email	shambhu66bit@rediffmail.com
Contact	94517 31437

Dr. Rohit Kamal Chatterjee

Designation	Assistant Professor
Qualification	Ph.D
Area of Interest	Pattern recognition, machine learning, image processing
Research Fields	Partial differential equation based image processing
Email	rohitkamalc@gmail.com
Contact	9433519475

Dr. Sandhya Rani

Designation	Assistant Professor (Stage II)
Qualification	PhD(Chemistry)
Area of Interest	Physico Chemical Studies with special reference to Phytochemistry.
Research Field	Applied Chemistry including Phytochemical and Environmental Sciences.
E-mail	sandhya.rani1962@gmail.com
Contact no.	+91-651-2275604(Home) +91-9631659526

Dr. Satish Kumar

Designation	Assistant Professor (Stage II)
Qualification	M.Sc., PG Dip. in Chemical Analysis & Quality Management (Hyderabad), M.Phil.(Alagappa University),Ph.D.(BIT MESRA)
Area of Interest	Environmental Chemistry
Research Field	Aquatic Chemistry,Enviromental Monitoring & Assessments
E-mail ID	satishkumar@bitmesra.ac.in
Contact no.	+91-9431077115

Mr. N.K.Singh

Personal Details

Title:	Mr	Address Line 1:	FLAT NO. GII(2)	Date of Birth:	10/07/1969
Surname:	SINGH	Address Line 2:	YAMUNA-3 TRIVENIPURAM	PAN:	AGJP5446IN
First Name:	NARENDRA	Postal Code:	835217	STD Code:	651
Middle Name:	KUMAR	City/Village:	RANCHI	LandLine #:	2275203
Gender:	Male	State:	Jharkhand	MobilePhone #:	9431584182
Father's Name:	MR J.P.SINGH	Religion:	Hindu	Email Address:	nkssoprta@rediffmail.com
Mother's Name:	MRS R.P DEVI	Caste:	Open	Fax Phone #:	

Dr. Trilok Kumar Parashar

Designation	Assistant Professor (Stage II)
Qualification	M.Sc., PGDCP, Ph.D(Technology)
Area of Interest	Physics
Research Field	Optoelectronic Devices (Modeling & Simulation of IR Photodetector)
E-mail ID	tkparashar@bitmesra.ac.in
Contact no.	+91-8210904426

9. Fee

 Details of fee, as approved by State Fee Committee, for the Institution

Fee Structure Diploma and BMLT

Fee Structure for Diploma in Engineering and BMLT (2018 batch)

Particulars	1st Sem	2nd Sem	3rd Sem	4th Sem	5th Sem	6th Sem
Tuition Fee	25300	25300	26500	26500	27800	27800
Development Fee	1700	1700	1800	1800	1900	1900
Institute Exam Fee	1500	1500	1600	1600	1700	1700
Sub-Total (A) :	**28500**	**28500**	**29900**	**29900**	**31400**	**31400**
Hostel Seat Rent, Electricity and Transport etc.*	3500	3500	3700	3700	3880	3880
Sub-Total (B) :	**3500**	**3500**	**3700**	**3700**	**3880**	**3880**
Total (A + B):	**32000**	**32000**	**33600**	**33600**	**35280**	**35280**
Additional amount to be paid at the time of admission						
Admission Fee (One time only- Non Refundable)	3000					
Caution Money (One time only-Refundable)	5000					
Fee for Diploma / Degree Ceremony						

Approved by Executive committee

 Time schedule for payment of fee for the entire programme-

Semester wise(January & July)

 No. of Fee waivers granted with amount and name of students- NA

 Number of scholarship offered by the Institution, duration and amount-NA

 Criteria for fee waivers/scholarship-NA

 Estimated cost of Boarding and Lodging in Hostels- Boarding Rs 3500 per semester, Mess fee Rs 2000/- per month.

10. Admission

 Number of seats sanctioned with the year of approval

Name of the Course	Level of course	Approved Intake	Year Started
AUTOMOBILE ENGINEERING	DIPLOMA	60	2001
COMPUTER ENGINEERING	DIPLOMA	30	2002
ELECTRONICS ENGINEERING	DIPLOMA	30	2001
MECHANICAL ENGINEERING	DIPLOMA	60	2010
MANUFACTURING ENGINEERING	DIPLOMA	30	2002
ELECTRICAL AND ELECTRONICS ENGINEERING	DIPLOMA	30	2010
MEDICAL LAB TECHNOLOGY	UNDER GRADUATE	30	2005

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

2018-19

Name of the Course	UR (M)	UR (F)	Min o.(F)	Min o.(M)	OBC(F)	OBC(M)	PH (F)	PH (M)	SC (F)	SC (M)	ST (F)	ST (M)	Total
AUTOMOBILE	6	0	0	0	2	12	0	0	0	0	0	20	40
COMPUTER	2	3	0	1	1	4	0	0	3	2	6	4	26
ELECTRONICS	2	1	0	0	3	4	0	0	2	2	1	10	25
MECHANICAL	2	0	0	2	3	15	0	0	2	6	1	23	54
MANUFACTURING	7	0	0	4	1	8	0	0	0	1	2	1	24
ELECT. & ELECTRONICS	0	1	0	0	2	8	0	0	2	2	4	7	26
MEDICAL LAB TECH.	1	3	0	1	1	7	0	0	3	5	3	5	29

2017-18

Name of the Course	UR (M)	UR (F)	Mino.(M)	Mino.(F)	OBC(F)	OBC(M)	PH (F)	PH (M)	SC (F)	SC (M)	ST (F)	ST (M)	Total
AUTOMOBILE	2	1	0	0	1	16	0	0	1	7	4	20	52
COMPUTER	3	3	0	0	2	2	0	1	0	4	6	7	27
ELECTRONICS	2	0	0	0	2	7	0	0	0	4	5	6	26
MECHANICAL	6	0	0	0	0	6	0	0	0	3	2	10	27
MANUFACTURING	7	0	0	0	3	4	0	0	2	3	0	1	20
ELECT. & ELECTRONICS	3	0	0	0	4	5	0	0	1	3	4	8	28
MEDICAL LAB TECH.	0	1	0	0	7	11	0	0	3	2	9	4	37

2016-17

Name of the Course	UR (M)	UR (F)	Mino.(F)	Mino.(M)	OBC(F)	OBC(M)	PH (F)	PH (M)	SC (F)	SC (M)	ST (F)	ST (M)	Total
AUTOMOBILE	3	0	0	1	4	15	0	0	0	9	1	22	55
COMPUTER	3	3	0	0	3	3	1	2	2	2	6	4	26
ELECTRONICS	2	1	0	0	4	3	0	0	0	5	6	6	27
MECHANICAL	3	0	0	1	0	6	0	0	0	4	1	12	27
MANUFACTURING	1	0	0	0	2	7	0	0	0	3	0	3	16
ELECT. & ELECTRONICS	1	2	0	1	7	2	0	0	0	4	7	6	30
MEDICAL LAB TECH.	3	7	0	3	8	8	0	0	2	0	10	7	48

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

11. Admission Procedure

 Mention the admission test being followed, name and address of the Test Agency and its URL (website)- ADMISSION ON THE BASIS OF MARKS OBTAINED IN 10^{th} /12^{th}

 Number of seats allotted to different Test Qualified candidate separately (AIEEE/ CET (State conducted test/ University tests/ CMAT/ GPAT)/ Association conducted test)- NA

 Calendar for admission against Management/vacant seats:NA

 Last date of request for applications- 6^{th} July, 2018

 Last date of submission of applications-6^{th} July, 2018

 Dates for announcing final results-13^{th} July, 2018

 Release of admission list – 13^{th} July, 2018

 Date for acceptance by the candidate – 23^{rd} July, 2018

 Last date for closing of admission- August, 2018

 Starting of the Academic session- 1^{st} August, 2018

 The waiting list shall be activated only on the expiry of date of main list-YES

 The policy of refund of the fee, in case of withdrawal, shall be clearly notified-YES

12. Criteria and Weightages for Admission

 Describe each criterian with its respective weightages i.e. Admission Test, marks in qualifying examination etc.- ADMISSION ON THE BASIS OF MARKS OBTAINED IN 10^{th} (Diploma)/12^{th}(UG).

 Mention the minimum level of acceptance, if any.

Diploma- 70% for UR/OBC, 45% ST&SC

BMLT- 50% for UR/OBC, 40% ST & SC

 Mention the cut-off levels of percentage and percentile score of the candidates in the admission test for the last three years-NA

 Display marks scored in Test etc. and in aggregate for all candidates who were admitted-NA

13. List of Applicants

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

1. Shivam Sheth – 76%
2. Nameetanjali - 76%
3. Yash Vaibhav - 76%
4. Harshir Habib - 76%
5. Ayush Kumar Gupta - 75.5%
6. Bakhtyar Ali - 71%
7. Md. Shoaib Khan - 71.25
8. Chandan Seth - 73%
9. Shivam Rathore - 71.25%
10. Ayush Ranjan - 76%
11. Suraj Kumar - 66.5%(Rejected)
12. Aniket Raj - 57%(Rejected)

14. Results of Admission Under Management seats/Vacant seats- NA

 Composition of selection team for admission under Management Quota with the brief profile of members (This information be made available in the public domain after the admission process is over)-NA

 Score of the individual candidate admitted arranged in order or merit-NA

 List of candidate who have been offered admission-NA

 Waiting list of the candidate in order of merit to be operative from the last date of joining of the first list candidate.-NA

 List of the candidate who joined within the date, vacancy position in each category before operation of waiting list - NA

15. Information of Infrastructure and Other Resources Available

 Number of Class Rooms and size of each

Room No.	Room type	AREA
BCL	Classroom	186
C1	Classroom	75
C8	Classroom	75
C9	Classroom	75
CR101	Classroom	75
F001	Classroom	80
F002	Classroom	161
F003	Classroom	79.21
F008	Classroom	79.21

F009	Classroom	66.75
F010	Classroom	66.75
F011	Classroom	66.75
F013	Classroom	44
F016	Classroom	66.75
H101	Classroom	75

 Number of Tutorial rooms and size of each

Room No.	Room type	AREA
F012	Tutorial Room	44
F014	Tutorial Room	66.75
F015	Tutorial Room	66.75

 Number of Laboratories and size of each

Room No.	Room type	AREA
A008	Laboratory	54
A009	Laboratory	72
BAML	Laboratory	160
BCAM	Laboratory	17
BFML	Laboratory	54.3
BME	Laboratory	133
CDE	Laboratory	90
CEM	Laboratory	90
CMLT1	Laboratory	103.5
CMLT2	Laboratory	75
CMLT3	Laboratory	105
DMLT	Laboratory	177
F007B	Laboratory	90
G001	Laboratory	860
G002	Laboratory	43

G003	Laboratory	20
H104	Laboratory	77
HWSMS03	Laboratory	351

 Number of Drawing Halls with capacity of each

Room No.	Room type	AREA
F004	Drawing hall	79.21
F004A	Drawing hall	55
F005	Drawing hall	133

 Number of Computer Centres with capacity of each

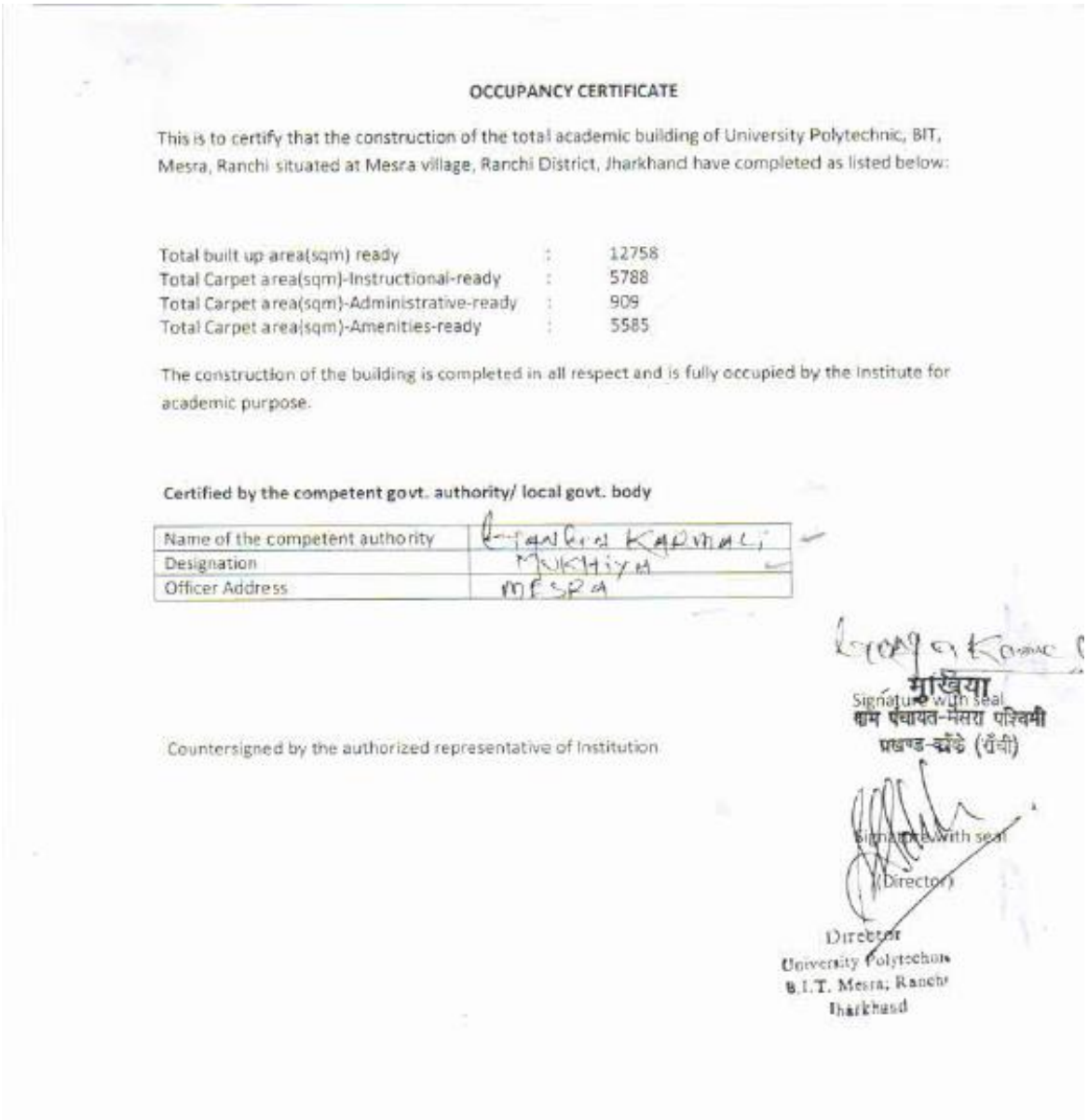
1. A007 152 sqm

 Central Examination Facility, Number of rooms and capacity of each

1. A4 99 sqm

 Barrier Free Built Environment for disabled and elderly persons- Available

 Occupancy Certificate



OCCUPANCY CERTIFICATE

This is to certify that the construction of the total academic building of University Polytechnic, BIT, Mesra, Ranchi situated at Mesra village, Ranchi District, Jharkhand have completed as listed below:

Total built up area(sqm) ready	:	12758
Total Carpet area(sqm)-Instructional-ready	:	5788
Total Carpet area(sqm)-Administrative-ready	:	909
Total Carpet area(sqm)-Amenities-ready	:	5585

The construction of the building is completed in all respect and is fully occupied by the Institute for academic purpose.

Certified by the competent govt. authority/ local govt. body

Name of the competent authority	Jagdish Kapmali
Designation	Mukhiya
Officer Address	Mesra

Signature with seal

मुखिया
ग्राम पंचायत-मेसरा पश्चिमी
प्रखण्ड-बुंडू (राँची)

Countersigned by the authorized representative of Institution

Signature with seal
(Director)

Director
University Polytechnic
B.I.T. Mesra, Ranchi
Jharkhand

 Fire and Safety Certificate- Applied for

 Hostel Facilities

Two boys hostel- 75 rooms in each hostel with 3 seating capacity, Mess, Reading room, common room.

One girls hostel – 50 rooms with 3 seating capacity, Mess, Reading room, common room.

 Library

 Number of Library books/ Titles/ Journals available (program-wise) 12500/2720/56

 No. of online National/ International Journals subscribed:56

 E- Library facilities: No. of ebooks- 6250, ebook titles-1360

 Laboratory and Workshop

 List of Major Equipment/Facilities in each Laboratory/ Workshop

Name of the Laboratory	Lab / Major Equipments
BASIC ELECTRONICS	CRO, FUNCTION GENERATOR, MULTIMETER
CAD LAB	SERVER, WORKSTATION, DESKTOP, PLOTTER, COLOR LASER PRINTER
CAM LAB	CNC VERTICAL MACHINE
CAM LAB(AT MAIN CENTRE BIT)	
CARPENTRY SHOP	TABLE, BENCHWISE, WOOD TURNING CENTRE
COMPUTER LAB	PCs ONLINE UPS SWITCHES(32 PORTS)
CONTROL SYSTEM LAB AT BIT	IXECB MODEL 505, INVERTED PENDULAM, COMPLETE Tum-KEY SYSTEM, BOUNCING BALL APPERATUS, PISTON COTRL.
DIGITAL ELECTRONICS LAB	CRO, FUNCTION GENERATOR, IC TESTER, SMPS, MICROPROCESSOR KIT, OFC KIT, COMMUNICATION KIT
ELECTRICAL MACHINE LAB	DC MOTOR, AC MOTOR TRANSFORMERS, MEASUREMENT PANELS
FIBER OPTICS COMMUNICATION LAB BIT	OPTICAL POWER METER, STABLIZED LED LIGHT SOURCES ETC.
FITTING SHOP	BENCHWISE, SCREW JACK, BENDING MACHINE, DRILLING MACHINE
FM & HM LAB	VENTURY METER DISCHARGE FLOW THROUGH PIPES
FOUNDRY SHOP	FURNACE, CORE BOX, PATTERNS
GARAGE PRACTICE LAB	Head light beam aligner, Spark plug tester and cleaner,MPFI tester and cleaner, Mig welder bravo kit
HARDWARE LAB	COMPUTER CRO FUNCTION GENERATOR FREQUENCY COUNTER MULTIMETER
HEAT TRANSFER LAB BIT	HEAT EXCHANGER, BLACK BODY RADIATION TEST FACILITY, HEAT PIPE, FOURCE CONVECTION THROUGH PIPE
HEAT TREATMENT LAB BIT	FURNACE
INSTRUMENTATION AND MEASUREMENT LAB	TRANSFORMER OIL TEST SET, LVDT KIT, STRAIN GAUAGE KIT, PHOTO TRANSDUCER KIT, OPTICAL TRANSDUCER KIT
MACHINE WORKSHOP	LATHE MILLING MACHINE SHAPER MACHINE SLOTTER PLANER DRILLING BOARING GRINDING
METALLURGY LAB BIT	MICROSCOPE
METROLOGY(AT MAIN CENTRE BIT)	
MICROBIOLOGY LAB BIT	LAMINAR FLOW CHAMBER, COLONY COUNTER, BOD SHAKER, FERMENTER, INCUBATORS
MODERN COMMUNICATION LAB.	A/D & D/A CONVERTER, AM TRANSMITTER, FM KIT, MODULATOR KIT, TDM PWM KITS, DATA FORMATION & CARRIER
MODERN MANUFACTURING LAB BIT	WIRE CAD EDM, ND:YAG LASER, WATER JET CUTTING
NON CONVENTIONAL ENERGY LAB BIT	PYRANOMETER, SOLARIMETER, TOTAL RADIATION MEASURING INSTRUMENTS, SOLAR TRACKER, WIND MEASURING DEV.
PCB LAB	CRO FUNCTION GENERATOR COMPUTER EACHING MACHINE DRIER MAGNIFIER COATING MACHINE
PHARMACEUTICAL CHEMISTRY LAB	EXTRACTION UNIT, CONDENSER WATER BATH
POWER SYSTEM LAB BIT	MICROCOMPUTER BASED NUMERICAL OVER CURRENT RELAY, STATIC COMPENSATOR
SMITHY SHOP	FURNACE, ANVIL
SOM LAB BIT	UTM, HARDNESS TESTING MACHINE, IMPACT TESTING MACHINE, TENSOMETER, CAM TESTING MACHINE, GOVERNOR
THERMAL LAB BIT	TESTRIGS PETROL & DIESEL

WELDING SHOP GAS AND ARCH WELDING MACHINE

List of Experimental Setup in each Laboratory/ Workshop

Diploma in Engineering(Semester-I)

SUBJECT: DMM 1002 ENGINEERING GRAPHICS

Objectives:

The student should be able to:-

1) Draw different engineering curves and know their applications.
2) Draw orthographic projections of different objects.
3) Visualize three dimensional objects and draw Isometric Projections.
4) Use the techniques and able to interpret the drawing in Engineering field.
5) Use computer aided drafting packages.

Details of Practical Contents:

1. Drawing Instruments and their uses:
   a) Letters and numbers (single stroke vertical)
   b) Convention of lines and their applications.
   c) Scale (reduced, enlarged & full size) plain scale and diagonal scale.
   d) Sheet layout.
   e) Introduction to AutoCAD (Basic draw and modify Command).
   f) Geometrical constructions.
2. Engineering curves & Loci of Points:
   a) To draw an ellipse by: Directrix and focus method, Arcs of circle method, Concentric circles method,
   b) To draw a parabola by: Directrix and focus method, Rectangle method.
   c) To draw a hyperbola by: Directrix and focus method, passing through given points with reference to asymptotes, Transverse Axis and focus method.
   d) To draw involutes of circle & polygon (up to octagon)
   e) To draw a cycloid, epicycloid, hypocycloid
   f) To draw Helix & spiral.
3. Loci of Points:
   a) Loci of points with given conditions and examples related to simple mechanisms.
4. Orthographic projections:
   a) Introduction to Orthographic projections.
   b) Conversion of pictorial view into Orthographic Views (First Angle Projection Method Only)
   c) Dimensioning technique as per SP-46
5. Isometric projection
   a) Isometric scale
   b) Conversion of orthographic views into isometric View / projection (Simple objects)
   c) Projection of Point, Straight Lines and Planes. (First Angle Projection Method only)
   d) Lines inclined to one reference plane only and limited to both ends in one quadrant.

e) Projection of simple planes of circular, square, rectangular,
f) Pentagonal, and hexagonal, inclined to one reference plane and perpendicular to the other.

Learning Resources:

1. N. D. Bhatt, “Engineering Drawing”, Charotar Publishing House
2. K. Venugopal, “Engineering Drawing and Graphics + AutoCAD”, New Age Publication
3. R. K. Dhawan, “Engineering Drawing”, S. Chand Co.
4. P. J. Shah, “Engineering Drawing”
5. K. R. Mohan, “Engineering Graphics”, Dhanpat Rai and Publication Co.

Diploma in Engineering(Semester-I)

SUBJECT: DAP 1002 BASIC PHYSICS LAB.

LIST OF EXPERIMENTS

1. To find the diameter and volume of a given wire using a Screw Gauge.
2. To find the side and volume of a given wooden cube using a Vernier Caliper.
3. To find the length, diameter and volume of a given wooden cylinder using a Vernier Caliper.
4. To Verify Ohm's Law by using an Ammeter & Voltmeter.
5. To determine the value of 'g' (accelerator due to gravity) by using a simple Pendulum.
6. To determine the given carbon resistance using a Multimeter and to compare it with measured value with the written in Colour Code.
7. To find the angle of minimum deviation of a given glass prism.
8. To determine the value of modulus of rigidity for the material of rod by static method.
9. To convert a Weston type Galvanometer into an Ammeter of a given range.
10. To study the relation between frequency and length of a stretch string using a Sonometer.
11. To convert a Weston type galvanometer into a Voltmeter of given range.
12. To determine the thermal conductivity of a bad conductor by Lee's method.

Diploma in Engineering(Semester-I)

SUBJECT: DAC 1002 BASIC CHEMISTRY LAB

Quantitative analysis (Volumetric)

1. To prepare the solution of N/20 sodium carbonate and find the strength of HCl using N/20 sodium carbonate solution.
2. To Estimate free chlorine in given water sample.
3. To estimate % of Fe in given Ferrous alloy by standard $KMnO_4$ solution.

Quantitative analysis (Gravimetric)

4. Estimation of Barium as Barium Sulphate by Gravimetric Analysis.
5. Estimation of strength of Ag ion in the given AgNO3 solution by gravimetric analysis.
6. To estimate the amount of Mohr's salt present in the given solution using standard $KMnO_4$ solution.

Colorimetric Method

7. To estimate pH of water sample by colorimetric method & pH meter.

Qualitative analysis (salts test), containing

Basic radical: Pb^{+2}, Cu^{+2}, Al^{+3}, Fe^{+3}, Cr^{+3}, Zn^{+2}, Ni^{+2}, Ca^{+2}, Ba^{+2}, Mg^{+2}, K^{+}, NH_4^{+}
Acid radical: Cl^{-}, Br^{-}, I^{-}, CO_3^{-2}, SO_4^{-2}, NO_3^{-}

8. Salt test for one acid and one basic radical (Salt 1).
9. Salt test for one acid and one basic radical (Salt 2).
10. Salt test for one acid and one basic radical (Salt 3).
11. Salt test for one acid and one basic radical (Salt 4).
12. Salt test for one acid and one basic radical (Salt 5).
13. Salt test for one acid and one basic radical (Salt 6).
14. Salt test for one acid and one basic radical (Salt 7).
15. To prepare a chart showing the applications of Fe, Cu, Al, Cr, Sn, Pb, Co and Ni.

Study Resources:

1. Shashi Chawla, "Essential of Experimental Engineering Chemistry"
2. S. K. Bhasin & Sudha Rani, "Laboratory Manual on Engineering Chemistry"

Diploma in Engineering(Semester-I)

SUBJECT: DCS 1002 COMPUTER LAB.

Operating system-MS-Windows

1. Create a new folder and do the following:
    1. Create a new folder
    2. Rename folder
    3. Move folder
    4. Copy folder
    5. Delete folder
2. Implement the various well known features of Windows operating system such as Notepad, WordPad, Paint, System tools, Entertainment etc.
3. Implement various display properties.
4. Explore the taskbar of Windows.
5. Set the wall paper and screen saver.
6. Set the data/time.
7. Recycle bin

Word Processing-MS Word

1. Create a document and
    a. Put Bullets and Numbers
    b. Apply various Font parameters.
    c. Apply Left, Right, and Centre alignments.
    d. Apply hyperlinks
    e. Insert pictures
    f. Insert ClipArt
    g. Show the use of WordArt
    h. Add Borders and Shading
    i. Show the use of Find and Replace.
    j. Apply header/footers
2. Create any document and show the use of File→versions.
3. Create any document and show the difference between paste and paste special.
4. Create a document to show the use of Washout/Watermark.
5. Implement the concept of mail merge.
6. Implement the concept of macros.
7. Implement the concept of importing a file/document.
8. Implement the concept of merging the documents.
9. Crate a student table and do the following:
    a. Insert new row and fill data
    b. Delete any existing row
    c. Resize rows and columns
    d. Apply border and shading
    e. Apply merging/splitting of cells
    f. Apply sort
    g. Apply various arithmetic and logical formulas.
    h. Create your resume using General Templates.

Spread sheet- MS-Excel

1. Compute the division of each and every student of a class.

2. Generation of Electricity Bill
3. Generation of Telephone Bill
4. Generation of Salary statement of an employee
5. Generation of Mark Sheet of a student.
6. To compute mean/median/mode.
7. Generate graph to show the production of goods in a company during the last five years.
8. Compare the cost, overheads and sales figures of a company for last three years through appropriate chart.
9. Create any worksheet and apply various mathematical, statistical and financial functions.
10. Generate the following worksheet

Roll No.	Marks
2050	67
2051	49
2052	40
2053	74
2054	61
2055	57

and do the following:

a. Crate chart of the marks.
b. Compute sum of marks using auto sum, auto calculate and sum function.
c. Compute average of marks.
d. Show pass or fail if marks are above 50 or less than 50
e. Put header and footer in the spread sheet.

Presentation software- MS-PowerPoint

1. Make a presentation of College Education System using
    a. Blank Presentation
    b. From Design Template
    c. From Auto Content Wizard
2. Make a presentation on "Wild Life" and apply the following:
    a. Add audio and video effects
    b. Apply various Color Schemes
    c. Apply various animation schemes.
    d. Apply Slide Show

Database Management System MS-Access

1. Create a Student database in Design View, by using Wizard, and by entering data.
2. Create a query on Student database in design view and by using wizard.
3. Create forms of Student database in design view and by using wizard.
4. Create reports of student database in design view and by using wizard.
5. Create data access pages of student database in design view and by using wizard.
6. Implement the concept of Macros in MS-Access.

Computer Network and Internet:

1. Connect the Internet; open any website of your choice and save the Web Pages.
2. Search any topic related to your syllabi using any search engine and download the relevant material.
3. Send any greeting card to your friend.
4. Create your E-Mail ID on any free E-Mail Server.

5. Login through your E-Mail ID and do the following:
    a. Read your mail
    b. Compose a new Mail
    c. Send the Mail to one person
    d. Send the same Mail to various persons
    e. Forward the Mail
    f. Delete the Mail
    g. Send file as attachment
6. Surf Internet using Google to find information about your state
7. Surf Internet using Google to find Tourism information about your state
8. Surf Internet using Yahoo to find Hotels around your state
9. Surf Internet using Google to find information about educational institutes for teaching M.S in comp science in India
10. Surf Internet using Google to find information about Indian Cricket team

Books/Referenced Books:

1. Vikas Gupta, "Comdex Computer Course Kit", First, Dreamtech
2. Henry Lucas, "Information Technology for management", 7th, TMH
3. B. Ram, "Computer Fundamentals Architecture and Organisation", 3rd, New Age International Publisher

Diploma in Engineering(Semester-I)

SUBJECT: DMA 1002 WORKSHOP PRACTICE – I

Objective:

The students will be able to

1. Read and interpret job drawing
2. Identify, select and use various measuring, holding, striking and cutting tools equipment
3. Operate and control different machines and equipment
4. Inspect and Make the job for specified dimensions
5. Adopt safety precaution while working on different machines

Details of Practical Contents:

1. CARPENTRY SHOP

- Demonstration of different wood working tools
- Demonstration of different wood working processes like planning, marking, chiselling, grooving, turning of wood etc.
- One simple joint involving any one joint like mortise and tenon dovetail, bridle, half lap etc.

2. WELDING SHOP

- Demonstration of different wood welding tools / machines
- Demonstration of Arc Welding, Gas Welding rebuilding of broken parts with welding etc.
- One simple job involving butt and lap joint

3. FITTING SHOP

Demonstration of different fitting tools and drilling machine:

- Demonstration of different operations like chipping, filing, drilling, tapping, cutting etc.
- One simple fitting job involves practice of chipping, filing, drilling, tapping, etc.

4. SHEET METAL SHOP

- Demonstration of different sheet metal tools/machines.
- Demonstration of different sheet metal operations like sheet metal operations like sheet cutting, bending, edging riveting etc.
- One simple job involving sheet metal operations and riveting.

TEXT BOOKS:

1. S.K.Hazara Choudhary, “Workshop Technology”, Media Promoters and Publishers
2. B.S.Raghuwanshi, “Workshop Technology”, Dhanpat Rai & Sons
3. R.K.Jain, “Production Technology”, Khanna Publishers
4. H.S.Bawa, “Workshop Technology”, Tata McGraw Hill Publishers
5. S.K.Garg, “Workshop Technology”, University Science press, Laxmi Publisher Pvt. Ltd.

Diploma in Engineering(Semester-I)

SUBJECT: DMM 1002 ENGINEERING GRAPHICS

Objectives:

The student should be able to:-

1) Draw different engineering curves and know their applications.
2) Draw orthographic projections of different objects.
3) Visualize three dimensional objects and draw Isometric Projections.
4) Use the techniques and able to interpret the drawing in Engineering field.
5) Use computer aided drafting packages.

Details of Practical Contents:

1. Drawing Instruments and their uses:
   a) Letters and numbers (single stroke vertical)
   b) Convention of lines and their applications.
   c) Scale (reduced, enlarged & full size) plain scale and diagonal scale.
   d) Sheet layout.
   e) Introduction to AutoCAD (Basic draw and modify Command).
   f) Geometrical constructions.
2. Engineering curves & Loci of Points:
   a) To draw an ellipse by: Directrix and focus method, Arcs of circle method, Concentric circles method,
   b) To draw a parabola by: Directrix and focus method, Rectangle method.
   c) To draw a hyperbola by: Directrix and focus method, passing through given points with reference to asymptotes, Transverse Axis and focus method.
   d) To draw involutes of circle & polygon (up to octagon)
   e) To draw a cycloid, epicycloid, hypocycloid
   f) To draw Helix & spiral.
3. Loci of Points:
   a) Loci of points with given conditions and examples related to simple mechanisms.
4. Orthographic projections:
   a) Introduction to Orthographic projections.
   b) Conversion of pictorial view into Orthographic Views (First Angle Projection Method Only)
   c) Dimensioning technique as per SP-46
5. Isometric projection
   a) Isometric scale
   b) Conversion of orthographic views into isometric View / projection (Simple objects)
   c) Projection of Point, Straight Lines and Planes. (First Angle Projection Method only)
   d) Lines inclined to one reference plane only and limited to both ends in one quadrant.
   e) Projection of simple planes of circular, square, rectangular,
   f) Pentagonal, and hexagonal, inclined to one reference plane and perpendicular to the other.

Learning Resources:

6. N. D. Bhatt, “Engineering Drawing”, Charotar Publishing House
7. K. Venugopal, “Engineering Drawing and Graphics + AutoCAD”, New Age Publication
8. R. K. Dhawan, “Engineering Drawing”, S. Chand Co.
9. P. J. Shah, “Engineering Drawing”
10. K. R. Mohan, “Engineering Graphics”, Dhanpat Rai and Publication Co.

Diploma in Engineering(Semester-I)

SUBJECT: DAP 1002 BASIC PHYSICS LAB.

LIST OF EXPERIMENTS

13. To find the diameter and volume of a given wire using a Screw Gauge.
14. To find the side and volume of a given wooden cube using a Vernier Caliper.
15. To find the length, diameter and volume of a given wooden cylinder using a Vernier Caliper.
16. To Verify Ohm's Law by using an Ammeter & Voltmeter.
17. To determine the value of 'g' (accelerator due to gravity) by using a simple Pendulum.
18. To determine the given carbon resistance using a Multimeter and to compare it with measured value with the written in Colour Code.
19. To find the angle of minimum deviation of a given glass prism.
20. To determine the value of modulus of rigidity for the material of rod by static method.
21. To convert a Weston type Galvanometer into an Ammeter of a given range.
22. To study the relation between frequency and length of a stretch string using a Sonometer.
23. To convert a Weston type galvanometer into a Voltmeter of given range.
24. To determine the thermal conductivity of a bad conductor by Lee's method.

Diploma in Engineering(Semester-I)

SUBJECT: DAC 1002 BASIC CHEMISTRY LAB

Quantitative analysis (Volumetric)

16. To prepare the solution of N/20 sodium carbonate and find the strength of HCl using N/20 sodium carbonate solution.
17. To Estimate free chlorine in given water sample.
18. To estimate % of Fe in given Ferrous alloy by standard $KMnO_4$ solution.

Quantitative analysis (Gravimetric)

19. Estimation of Barium as Barium Sulphate by Gravimetric Analysis.
20. Estimation of strength of Ag ion in the given AgNO3 solution by gravimetric analysis.
21. To estimate the amount of Mohr's salt present in the given solution using standard $KMnO_4$ solution.

Colorimetric Method

22. To estimate pH of water sample by colorimetric method & pH meter.

Qualitative analysis (salts test), containing

Basic radical: Pb^{+2}, Cu^{+2}, Al^{+3}, Fe^{+3}, Cr^{+3}, Zn^{+2}, Ni^{+2}, Ca^{+2}, Ba^{+2}, Mg^{+2}, K^{+}, NH_4^{+}
Acid radical: Cl^{-}, Br^{-}, I^{-}, CO_3^{-2}, SO_4^{-2}, NO_3^{-}

23. Salt test for one acid and one basic radical (Salt 1).
24. Salt test for one acid and one basic radical (Salt 2).
25. Salt test for one acid and one basic radical (Salt 3).
26. Salt test for one acid and one basic radical (Salt 4).
27. Salt test for one acid and one basic radical (Salt 5).
28. Salt test for one acid and one basic radical (Salt 6).
29. Salt test for one acid and one basic radical (Salt 7).
30. To prepare a chart showing the applications of Fe, Cu, Al, Cr, Sn, Pb, Co and Ni.

Study Resources:

1. Shashi Chawla, "Essential of Experimental Engineering Chemistry"
2. S. K. Bhasin & Sudha Rani, "Laboratory Manual on Engineering Chemistry"

Diploma in Engineering(Semester-I)

SUBJECT: DCS 1002 COMPUTER LAB.

Operating system-MS-Windows

8. Create a new folder and do the following:
    1. Create a new folder
    2. Rename folder
    3. Move folder
    4. Copy folder
    5. Delete folder
9. Implement the various well known features of Windows operating system such as Notepad, WordPad, Paint, System tools, Entertainment etc.
10. Implement various display properties.
11. Explore the taskbar of Windows.
12. Set the wall paper and screen saver.
13. Set the data/time.
14. Recycle bin

Word Processing-MS Word

11. Create a document and
    a. Put Bullets and Numbers
    b. Apply various Font parameters.
    c. Apply Left, Right, and Centre alignments.
    d. Apply hyperlinks
    e. Insert pictures
    f. Insert ClipArt
    g. Show the use of WordArt
    h. Add Borders and Shading
    i. Show the use of Find and Replace.
    j. Apply header/footers
12. Create any document and show the use of File→versions.
13. Create any document and show the difference between paste and paste special.
14. Create a document to show the use of Washout/Watermark.
15. Implement the concept of mail merge.
16. Implement the concept of macros.
17. Implement the concept of importing a file/document.
18. Implement the concept of merging the documents.
19. Crate a student table and do the following:
    a. Insert new row and fill data
    b. Delete any existing row
    c. Resize rows and columns
    d. Apply border and shading
    e. Apply merging/splitting of cells
    f. Apply sort
    g. Apply various arithmetic and logical formulas.
    h. Create your resume using General Templates.

Spread sheet- MS-Excel

10. Compute the division of each and every student of a class.
11. Generation of Electricity Bill

12. Generation of Telephone Bill
13. Generation of Salary statement of an employee
14. Generation of Mark Sheet of a student.
15. To compute mean/median/mode.
16. Generate graph to show the production of goods in a company during the last five years.
17. Compare the cost, overheads and sales figures of a company for last three years through appropriate chart.
18. Create any worksheet and apply various mathematical, statistical and financial functions.
20. Generate the following worksheet

Roll No.	Marks
2050	67
2051	49
2052	40
2053	74
2054	61
2055	57

and do the following:

f. Crate chart of the marks.
g. Compute sum of marks using auto sum, auto calculate and sum function.
h. Compute average of marks.
i. Show pass or fail if marks are above 50 or less than 50
j. Put header and footer in the spread sheet.

Presentation software- MS-PowerPoint

3. Make a presentation of College Education System using
    a. Blank Presentation
    b. From Design Template
    c. From Auto Content Wizard
4. Make a presentation on "Wild Life" and apply the following:
    a. Add audio and video effects
    b. Apply various Color Schemes
    c. Apply various animation schemes.
    d. Apply Slide Show

Database Management System MS-Access

7. Create a Student database in Design View, by using Wizard, and by entering data.
8. Create a query on Student database in design view and by using wizard.
9. Create forms of Student database in design view and by using wizard.
10. Create reports of student database in design view and by using wizard.
11. Create data access pages of student database in design view and by using wizard.
12. Implement the concept of Macros in MS-Access.

Computer Network and Internet:

11. Connect the Internet; open any website of your choice and save the Web Pages.
12. Search any topic related to your syllabi using any search engine and download the relevant material.
13. Send any greeting card to your friend.
14. Create your E-Mail ID on any free E-Mail Server.
15. Login through your E-Mail ID and do the following:

a. Read your mail
b. Compose a new Mail
c. Send the Mail to one person
d. Send the same Mail to various persons
e. Forward the Mail
f. Delete the Mail
g. Send file as attachment

16. Surf Internet using Google to find information about your state
17. Surf Internet using Google to find Tourism information about your state
18. Surf Internet using Yahoo to find Hotels around your state
19. Surf Internet using Google to find information about educational institutes for teaching M.S in comp science in India
20. Surf Internet using Google to find information about Indian Cricket team

Books/Referenced Books:

1. Vikas Gupta, "Comdex Computer Course Kit", First, Dreamtech
2. Henry Lucas, "Information Technology for management", 7th, TMH
3. B. Ram, "Computer Fundamentals Architecture and Organisation", 3rd, New Age International Publisher

Diploma in Engineering(Semester-I)

SUBJECT: DMA 1002 WORKSHOP PRACTICE – I

Objective:

The students will be able to

6. Read and interpret job drawing
7. Identify, select and use various measuring, holding, striking and cutting tools equipment
8. Operate and control different machines and equipment
9. Inspect and Make the job for specified dimensions
10. Adopt safety precaution while working on different machines

Details of Practical Contents:

1. CARPENTRY SHOP

- Demonstration of different wood working tools
- Demonstration of different wood working processes like planning, marking, chiselling, grooving, turning of wood etc.
- One simple joint involving any one joint like mortise and tenon dovetail, bridle, half lap etc.

2. WELDING SHOP

- Demonstration of different wood welding tools / machines
- Demonstration of Arc Welding, Gas Welding rebuilding of broken parts with welding etc.
- One simple job involving butt and lap joint

3. FITTING SHOP

Demonstration of different fitting tools and drilling machine:

- Demonstration of different operations like chipping, filing, drilling, tapping, cutting etc.
- One simple fitting job involves practice of chipping, filing, drilling, tapping, etc.

4. SHEET METAL SHOP

- Demonstration of different sheet metal tools/machines.
- Demonstration of different sheet metal operations like sheet metal operations like sheet cutting, bending, edging riveting etc.
- One simple job involving sheet metal operations and riveting.

TEXT BOOKS:

6. S.K.Hazara Choudhary, “Workshop Technology”, Media Promoters and Publishers
7. B.S.Raghuwanshi, “Workshop Technology”, Dhanpat Rai & Sons
8. R.K.Jain, “Production Technology”, Khanna Publishers
9. H.S.Bawa, “Workshop Technology”, Tata McGraw Hill Publishers
10. S.K.Garg, “Workshop Technology”, University Science press, Laxmi Publisher Pvt. Ltd.

Diploma in Engineering(Semester-II)

SUBJECT: DAS 2102 APPLIED SCIENCE LAB.

SECTION – A (APPLIED PHYSICS)

LIST OF EXPERIMENTS

1. To study the compression / Extension of helical spring and to find the stiffness and modulus of rigidity.
2. To determine the effort required to raise various loads using the Screw Jack apparatus.
3. To determine the coefficient of static friction and its range between any two given material surfaces with the help of an inclined plane.
4. To study current voltage relationship (Ohm's Law) by using an Ammeter & Voltmeter and also plot the graph between current & Voltage.
5. To use a Wheat-Stone bridge (meter-bridge) for finding an unknown resistance.
6. To determine the refractive index of material (glass) of the given prism.
7. To verify Hooke's Law by Searle's method and to calculate Young's modulus of elasticity of steel wire.
8. To determine the thermal conductivity of a bad conductor by Lee's method.

SECTION – B (APPLIED CHEMISTRY)

1. To determine the carbonate hardness of given water sample.
2. To determine the non-carbonate hardness of given water sample.
3. To determine the total hardness of given water sample by EDTA method.
4. To determine the alkalinity of given water sample.
5. To determine neutralization point of acetic acid (weak acid) and ammonium hydroxide (weak base). Calculate normality and strength of acetic acid.
6. To determine the viscosity of given oil in Redwood-1 under ambient conditions and then the absolute viscosity.
7. To determine acid value of given lubricant.
8. To determine the strength of given hydrochloric acid solution by titrating it against sodium hydroxide solution by using pH meter.
9. To determine the equivalent point of precipitation titration of $BaCl_2$ with H_2SO_4 using conductivity meter. To find the normality and strength of $BaCl_2$ solution.
10. To verify Faraday's second law of electrolysis.

Study Resources:

1. Shashi Chawla, "Essential of Experimental Engineering Chemistry"
2. S. K. Bhasin & Sudha Rani, "Laboratory Manual on Engineering Chemistry"

Diploma in Engineering(Semester-II)

SUBJECT: DEC 2002 ELECTRICAL AND ELECTRONICS LAB.

List of Experiments:

1. Study of various Passive components.
2. Measurement of resistances using multimeter and verification using color codes.
3. Measurement of resistances in series.
4. Measurement of resistances in parallel.
5. Measurement of capacitance.
6. Measurement of capacitances in series.
7. Measurement of capacitances in parallel.
8. Forward & Reverse characteristics of diode
9. Forward & Reverse characteristics of Zener diode.
10. Zener Diode Regulator.
11. Identification of Transistors.
12. Study of transistors using data sheets.

LEARNING RESOURCES:

1. Basics of Electrical, Electronics and Communication Engineering- K.A.NAVAS & T.A.Suhail , Rajath Publishers, Kochi.
2. Fundamental Electrical and Electronic Principles (Third Edition)-Christopher R Robertson, Newnes, Elsevier
3. Basic Electronics & Linear Circuits- N.N.Bhargava, D.C. Kulashreshtha, S.C. Gupta- TTTI Chandigharh, TMH.
4. Electronic Devices & Components- Allen Mottershead, PHI.

Diploma in Engineering(Semester-II)

SUBJECT: DME 2002 ENGINEERING GRAPHICS- II

Objective:

The students shall be able to:

1. Understand the basic concepts of engineering drawing.
2. Visualize the objects.
3. Draw different views in different positions of objects.
4. Draw the different views of machine elements.

Detailed Practical content:

1. **Sectional Views:**
Types of sections, Conversion of pictorial view into sectional orthographic views (First Angle Projection Method only)

2. **Missing Views:**
Draw missing view from the given Orthographic views - simple components (First Angle Projection Method only)

3. **Intersection of Solid Surfaces:**
Intersection of following solid surfaces-cylinder vs cylinder, cone vs cylinder, square prism vs square prism, square prism vs cylinder.

4. **Projections of Solids:**
Projections of Prism, Pyramid, Cone, Cylinder, Tetrahedron, Cube with their axes inclined to one reference plane and parallel to other.

5. **Sections of Solids:**
Solids: -Prism, Pyramid, Cone, Cylinder, Tetrahedron, Cube.
Cone, Pyramid and Tetrahedron resting on their base on Horizontal Plane.
Prism, Cylinder: -a)Axis parallel to both the reference plane
b) Resting on their base on HP.
Section plane inclined to one reference plane and perpendicular to other.

6. **Developments of Surfaces:**
Developments of Lateral surfaces of cube, prisms, cylinder, pyramids, cone and their applications such as tray, funnel, Chimney, pipe bends etc.

Diploma in Engineering(Semester-II)

SUBJECT: DHU 2002 DEVELOPMENT OF LIFE SKILLS-I

Objective:

The students will be able to:

1. Develop reading skills
2. Use techniques of acquisition of information from various sources
3. Draw the notes from the text for better learning.
4. Apply the techniques of enhancing the memory power.
5. Develop assertive skills.
6. Prepare report on industrial visit.
7. Apply techniques of effective time management.
8. Set the goal for personal development.
9. Enhance creativity skills.
10. Develop good habits to overcome stress.
11. Face problems with confidence

1. Importance of DLS:

Introduction to subject, importance in present context, application.

2. Information Search:

Information source –Primary, secondary, tertiary Print and non –print, documentary, Electronic Information center, Library, exhibition, Government Departments. Internet Information search

– Process of searching, collection of data –questionnaire, taking Interview, observation method.

3. Written communication:

Method of Note Taking

Report writing –Concept, types and format.

4. Self-Analysis:

Understanding self—Attitude, aptitude, assertiveness, self-esteem, Confidence buildings. Concept of motivation.

5. Self-Development:

Stress Management –Concept, causes, effects, and remedies to avoid /minimize stress.

Health Management – Importance, dietary guidelines and exercises.

Time management- Importance, Process of time planning, Urgent vs importance, Factors leading to time loss and ways to handle it, tips for effective time management.

Emotion-concept, types, controlling, emotional intelligence.

Creativity-concept, factors enhancing creativity.

Goal setting – concept, setting smart goal.

6. Study habits:

Ways to enhance memory and concentration. Developing reading skill.

Organisation of knowledge, Model and methods of learning.

Text Books:

1. Marshall Cooks Adams Time management Viva Books, E.H. McGrath , S.J. Basic Managerial Skills for All Pretice Hall of India, Pvt Ltd
2. Allen Pease Body Language Sudha Publications Pvt. Ltd.
3. Lowe and Phil Creativity and problem solving, Kogan Page (I) P Ltd
4. Adair, J Decision making &Problem Solving Orient Longman Bishop , Sue Develop Your Assertiveness, Kogan Page India, Marion E Haynes Make Every Minute Kogan page India Count, Pearson Education Asia Organizational
5. Stress Management, Through Yoga and Meditation, Sterling Publisher Pvt. Ltd.
6. Richard Hale ,Peter Whilom Target setting and Goal Achievement Kogan page India
7. Chakravarty, Ajanta Time management Rupa and Company Harding ham .A Working in Teams Orient Longman

Internet Assistance:

1) http://www.mindtools.com

2) http://www.stress.org

3) http://www.ethics.com

4) http://www.coopcomm.org/workbook.htm

5) http://www.mapfornonprofits.org/

6) http://www.learningmeditition.com http://bbc.co.uk/learning/courses/

7) http://eqi.org/

8) http://www.abacon.com/commstudies/interpersonal/indisclosure.html

9) http://www.mapnp.org/library/ethics/ethxgde.htm

10) http://www.mapnp.org/library/grp_cnfl/grp_cnfl.htm

11) http://members.aol.com/nonverbal2/diction1.htm

12) http://www.thomasarmstron.com/multiple_intelligences.htm

13) http://snow.utoronto.ca/Learn2/modules.html

14) http://www.quickmba.com/strategy/swot/

Reference books: Nil

Suggested List of Laboratory Experiments: Nil

Suggested List of Assignments/Tutorial:

The Term Work Will Consist Of Following Assignments.

1. Library search:-

Visit your Institute’s Library and enlist the books available on the topic given by your teacher. Prepare a bibliography consisting name of the author, title of the book, publication and place of publication.

2. Enlist the magazines, periodicals and journals being available in your library.

Select any one of them and write down its content. Choose a topic for presentation.

3. Attend a seminar or a guest lecture, listen it carefully and note down the important points and prepare a report of the same.

4. Visit to any one place like historical/office/farms/development sites etc. and gather information through observation, print resources and interviewing the people.

5 Prepare your individual time table for a week –

(b) List down your daily activities.

(c) Decide priorities to be given according to the urgency and importance of the activities.

(d) Find out your time wasters and mention the corrective measures.

6 Keep a diary for your individual indicating- planning of time, daily transactions, collection of good thoughts, important data, etc

7 Find out the causes of your stress that leads tension or frustration .Provide the ways to Avoid them or to reduce them.

8 Undergo the demonstration on yoga and meditation and practice it. Write your own views, feeling and experiences on it.

Diploma in Engineering(Semester-II)

SUBJECT: DHU 2004 PROFESSIONAL PRACTICES-I

Outcome:

The Student will be able to:

1. Acquire information from different sources. Prepare notes for given topic.
2. Present given topic in a seminar. Interact with peers to share thoughts.
3. Prepare a report on industrial visit, expert lecture.

Industrial Visits:

Structured industrial visits be arranged and report of the same should be submitted by the individual student, to form part of the term work.

Lectures by Professional / Industrial Expert / Student Seminars based on information search to be organized from any THREE of the following areas:

i) Pollution control.

ii) Non-destructive testing.

iii) Acoustics.

iv) Illumination / Lighting system.

v) Fire Fighting / Safety Precautions and First aids.

vi) Computer Networking and Security.

vii) Topics related to Social Awareness such as – Traffic Control System,

Career opportunities, Communication in Industry, Yoga Meditation,

Aids awareness and health awareness.

Group Discussion:

The students should discuss in a group of six to eight students and write a brief report on the same as a part of term work. Two topics for group discussions may be selected by the faculty members. Some of the suggested topics are -

Sports, Current news items, Discipline and House Keeping, Current topics related to mechanical engineering field.

Student Activities:

The students in a group of 3 to 4 will perform any one of the following activities (others similar activities may be considered

Activity:

i) Collect and study IS code for Engineering Drawing.

ii) Collecting information from Market: Nomenclatures and specifications of engineering materials.

iii) Specifications of Lubricants.

iv) Draw orthographic projections of a given simple machine element using and CAD software.

Diploma in Engineering(Semester-II)

SUBJECT: DMA2002 WORKSHOP PRACTICE – II

Objective:

The students will be able to

- Know basic workshop processes
- Read and interpret job drawing
- Identify, select and use various measuring, holding, striking and cutting tools &equipment
- Operate and control different machines and equipment
- Inspect the job for specified dimensions
- Make the job as per specified dimension
- Adopt safety precaution while working on different machines

Details of Practical Contents:

1. CARPENTRY SHOP
   - Any one composite job using different joint. Turning and planning operation. Surface finishing like making two piece pattern, duster etc.
2. SMITHY SHOP
   - Demonstration of different forging tools and equipment.
   - Demonstration of different forging processes.
   - One simple job like hook peg, semi-finished nut or any hardware item
3. MACHINE SHOP

   Demonstration of different tools and equipment used in M/c shop:
   - Demonstration of different operations like facing, turning, knurling, chamfering, drilling, cutting etc.
   - One simple job like making semi-finished nut and bolt.
4. FOUNDRY SHOP
   - Demonstration of different foundry tools and equipment.
   - Demonstration of gating system, uses of riser, runner, gates etc.
   - Making a mould using given pattern.

TEXT BOOKS:

- S.K.Hazara Choudhary, “Workshop Technology”, Media Promoters and Publishers
- B.S.Raghuwanshi, “Workshop Technology”, Dhanpat Rai & Sons
- R.K.Jain, “Production Technology”, Khanna Publishers
- H.S.Bawa, “Workshop Technology”, TMH
- S.K.Garg, “Workshop Technology”, University Science press, Laxmi Publisher Pvt. Ltd

DME 3106 MANUFACTURING PROCESS LAB.

LIST OF EXPERIMENTS

1. Identification and Specification of Lathe machine.
2. Do some lathe operations on the given job.
3. Identification and Specification of Drilling machine.
4. Do some drilling operations on the given job.
5. Identification and Specification of Shaper machine.
6. Do some shaping operations on the given job.
7. Identification and Specification of Milling machine.
8. Do some milling operations on the given job.
9. To make a job like (nut & bolt) using all the above four machines.

DMM 3102 THERMAL ENGINEERING LAB.

LIST OF EXPERIMENTS

1. Study of Lancashire boiler.
2. Study of Babcock and Wilcox boiler.
3. Study of Reverse flue gas oil fired packaged boiler.
4. Study of Rover gas turbine, its components and instrumentation provided over it.
5. Study of Steam turbine.
6. Study of Steam Power Plant.
7. Study of Single stage and multistage compressor.
8. Study of Refrigeration and Air conditioning.

DMM 3004 APPLIED MECHANICS LAB.

LIST OF EXPERIMENTS

a. To verify the Polygon Law of Forces, with the help of force polygon apparatus.

b. To verify the parallelogram law of forces.

c. To study Lami's theorem using universal force table apparatus.

d. To verify the forces in the different members of a jib crane.

e. To find out centre of gravity of regular laminas.

f. To find out centre of gravity of irregular laminas.

g. To find moment of inertia of flywheel.

h. Comparison of coefficient of friction of various pairs of surfaces & determination of angle of repose.

i. To find the mechanical advantage, velocity ratio and efficiency in the case of Screw Jack.

j. Deflections of a truss-horizontal deflections & vertical deflections of various joints of a pin-jointed truss.

k. To find the mechanical advantage, velocity ratio and efficiency in the case of Winch Crab Single Graphical Representation.

l. To study the performance of differential axle and wheel and find its velocity ratio, efficiency and law of machine.

DHU 3002 PROFESSIONAL PRACTICES-II

Module-I:

Industrial visit: Industrial visit be arrange and report of the same should be submitted by the individual student, to form a part of team work. TWO industrial visits be arranged.

Module-II:

Lectures by professional /Industrial expert be organised from any one of the following areas:

i. Use of plastics in automobiles
ii. Non-ferrous metals and alloys for engineering applications
iii. Industrial hygiene
iv. Composite materials
v. Heat treatment processes
vi. Ceramics
vii. Safety engineering and waste elimination

Module-III:

Individual assignments:

Any two from the following lists;

i. Process sequence of any two machine operations
ii. Write material specification of any two composite jobs
iii. Collections of different plastic material or cutting tools with properties, applications and specifications
iv. List the various properties and applications of following materials-
a) Ceramics, b) Thermoplastic plastics, c) thermo setting plastics and d) rubbers.

Module-IV:

Conduct any one of the following activities through active participation of the students and write report:

i. Survey for local social problems such as malnutrition, unemployment, cleanliness, illiteracy
ii. Conduct aptitude, general knowledge test, IQ test.

Module-V:

Seminar:

Seminar on any advanced technical topic to be presented by individual student in a batch of 5.

DMM 4008 STRENGTH OF MATERIALS LAB

LIST OF EXPERIMRNTS

1. Study of Rockwell Hardness Machine.
2. Study of Brinell hardness Machine.
3. Study of Tensile Strength of mild steel
4. Study of Young Modulus of bending.
5. Study of torsion test.
6. Study of Universal Testing Machine.

DAE 4012 AUTOMOTIVE ENGINE LAB.

LIST OF EXPERIMRNTS

1. Small Engine Dynamometer Experiment Manual.

2. Diesel Engine Test Bed System

3. Shock Absorber Trainer

4. Brake Test hydraulic Dual circuit Breaker system

5. Wheel Alignment Trainer

6. Petrol Engine Test Bed System

7. Hydraulic Engine Dynamometer

8. Gas Turbine

DHU 4002 PROFESSIONAL PRACTICES-III

Module-I:

Industrial visit:

Industrial visit be arranged and report of the same be submitted by the individual student, to form a part of term work. One industrial visit may be arranged in the following areas to observe material handling system, Quality control chart/ production records/ layout system/ hydraulic and pneumatic system/working of boilers and steam engineering applications.

Module –II:

Lectures by professionals/ industrial expert be organised from any one of the following areas.

- Use of plastics in automobiles
- Non-ferrous metals and alloys for engineering applications
- Industrial hygiene
- Composite materials
- Heat treatment processes
- Ceramics
- Safety engineering and waste elimination

Module –III:

Group-Discussion:

The students shall discuss in group of six to eight students and write a brief report on the same as a part of term work.

Module –IV:

Student Activities:

The students in a group of 3 or 4 will perform any two of the following activities and write a report as a part of term work.

Activity:

i. Study any one type of CNC machine centre and prepare on tooling and tool holding devices.
ii. For a given job write a sequence of operations performed by automated manufacturing system. Draw a block diagram of control system to perform above operations.
iii. For a drilling or milling operations on a simple machine component, draw a jig or fixtures showing various features like locating clamping tool.
iv. For a given job involving 3 to 4 operations suggest to prepare a report.

Module –V:

Seminar:

Seminar on any advanced technical topic to be presented by individual student.

DAE 4014 AUTOTRONICS LAB.

LIST OF EXPERIMRNTS

1. Multipoint Injection

2. Electronic injection

3. ABS4 Channel Systems

4. Engine control and sensors

5. Car Air-Conditioning

6. Suspension simulator

7. Transmission simulator

8. Safety system simulator

9. Automotive Electrical

10. Hybrid Vehicle System.

DAE 5010 DRIVING PRACTICE

1. **Driving Lab**: Lab demonstrates various systems and cut section models of vehicle and display models about various driving procedures.

2. **Testing Laboratory:** To assess vision, Illumination, Adaptation ,Action, Judgment,, Speed Anticipation, Depth Perception and Discriminative reaction.

3. **Driving Simulators Training** with their good scenario control modules can tech a range of cognitive skills deal with complex roadway and Traffic conditions and general driving techniques.

DMM 5014 THEORY OF MACHINE LAB.

LIST OF EXPERIMRNTS

1. To verify the relation of simple pendulum.

2. To verify the relation of compound pendulum and determine of the radius of Gyration.

3. To determine the radius of Gyration of given bar using bifilar suspension.

4. To study the torsional vibration single rotor system

5. To study the free vibration of two rotor system and to determine natural frequency(both theoretically and experimentally)

6. To study the gyroscopic effect of a rotating disc.

7. To study the static and dynamic balancing using rigid blocks.

8. To study the effect of whirling of shaft with:

    a. both end fixed.

    b. Both end supported

    c. Fixed supported.

9. Study of cam-follower pair and to plot X-0 curve for different cam-follower pairs.

10. Balancing of masses in Machines fault-simulator

DAE 5016 AUTOMOTIVE REPAIR AND MAINTENANCE LAB. – I

1. Introduction of tool and their uses in workshop.
2. Introduction of the different types of automobile engine parts.
3. To study of different type clutch system.
4. To study of air & water cooling system.
5. To study of ignition system.
6. To study of different type of gear box.
7. To study of Fuel system.
8. To study the differential and final drive.
9. To study the propeller shaft and universal joint.

DAE 6008 AUTOMOTIVE REPAIR MAINTENANCE LAB-II

LAB EXPERIMENTS

1. Types of steering system. Removal and refitting of steering gear box.
2. Discussion on construction and operation of rack and pinion type steering system.
3. Removal, clearing, inspecting of worm and wheel str. Gear box.
4. Removal of road spring, shock absorber, cleaning, vowing and installing, removal of torsion Bar, establisher bar.
5. Servicing of drum brake, cleaning, servicing of M/cylinder wheel cylinder.
6. Removal, dismantling inspection of dies brake.
7. Brake – bleeding procedure.
8. Removal of engine from chassis,
9. Dismantling of C.l engine and reassembly.
10. Dismantling of S.l engine and reassembly.
11. Information sharing on how to operate diagnostics equipment

DMM 6014 CAD LAB.

1. **Practice on the following commands**

   Units , limits , grid , line , poly-line , donut , polygon , chamfer , fillet , offset , text , de-text.

2. **Practice on the following commands:**

   O snap , Extension , undo , redo , oops , color , line-type , layer , save , quit , end.

   Hints: use layers, color, line-types)

3. **Practice on the following commands:**
   Erase , Copy , move , array , break , trim , mirror , pedit , pan , divide , zoom

4. **Practice on the following commands:** Hatch, batch, Hatchedit, boundary and dimensioning.

5. Draw the details of the footstep bearing and also draw plan and elevation (full sectional).

6. Draw the details of connecting Rod, Crank pin, cylinder block and also draw plan and Elevation.

7. Draw all the Automobile components by using the CAD Tools.

DME 3106 MANUFACTURING PROCESS LAB-I

LIST OF EXPERIMENTS

1. Study of different tools and equipment used in Carpentry Shop.
2. To make a wooden pattern of given dimension in Carpentry shop.
3. Study of different tools and equipment used in Foundry Shop.
4. To make a mould using given pattern made in carpentry shop.
5. Testing of permeability of given sand.
6. Testing of hardness of given sand.
7. Sieve analysis of given sand.

LIST OF EXPERIMENTS

m. To verify the Polygon Law of Forces, with the help of force polygon apparatus.

n. To verify the parallelogram law of forces.

o. To study Lami's theorem using universal force table apparatus.

p. To verify the forces in the different members of a jib crane.

q. To find out centre of gravity of regular laminas.

r. To find out centre of gravity of irregular laminas.

s. To find moment of inertia of flywheel.

t. Comparison of coefficient of friction of various pairs of surfaces & determination of angle of repose.

u. To find the mechanical advantage, velocity ratio and efficiency in the case of Screw Jack.

v. Deflections of a truss-horizontal deflections & vertical deflections of various joints of a pin-jointed truss.

w. To find the mechanical advantage, velocity ratio and efficiency in the case of Winch Crab Single Graphical Representation.

x. To study the performance of differential axle and wheel and find its velocity ratio, efficiency and law of machine.

DMM 3102 THERMAL ENGINEERING LAB

LIST OF EXPERIMENTS

1. Study of Lancashire boiler.
2. Study of Babcock and Wilcox boiler.
3. Study of Reverse flue gas oil fired packaged boiler.
4. Study of Rover gas turbine, its components and instrumentation provided over it.
5. Study of Steam turbine.
6. Study of Steam Power Plant.
7. Study of Single stage and multistage compressor.
8. Study of Refrigeration and Air conditioning.

DHU 3002 PROFESSIONAL PRACTICES-II

Module-I:

Industrial visit: Industrial visit be arrange and report of the same should be submitted by the individual student, to form a part of team work. TWO industrial visits be arranged in the following areas/industries:

i. Manufacturing organisations for observing various manufacturing processes.
ii. Material testing laboratories in industries or reputed organizations
iii. Auto workshop/Garage

Module-II:

Lectures by professional /Industrial expert be organised from any one of the following areas:

viii. Use of plastics in automobiles
ix. Non-ferrous metals and alloys for engineering applications
x. Industrial hygiene
xi. Composite materials
xii. Heat treatment processes
xiii. Ceramics
xiv. Safety engineering and waste elimination

Module-III:

Individual assignments:

Any two from the following lists;

v. Process sequence of any two machine operations
vi. Write material specification of any two composite jobs
vii. Collections of different plastic material or cutting tools with properties, applications and specifications
viii. List the various properties and applications of following materials-
b) Ceramics, b) Thermoplastic plastics, c) thermo setting plastics and d) rubbers.

Module-IV:

Conduct any one of the following activities through active participation of the students and write report:

iii. Survey for local social problems such as malnutrition, unemployment, cleanliness, illiteracy
iv. Conduct aptitude, general knowledge test, IQ test.

Module-V:

Seminar:

Seminar on any advanced technical topic to be presented by individual student in a batch of 5.

DME 4012 MANUFACTURING PROCESS LAB-II

LIST OF EXPERIMENTS

10. Identification and Specification of Lathe machine.

11. Do some lathe operations on the given job.

12. Identification and Specification of Drilling machine.

13. Do some drilling operations on the given job.

14. Identification and Specification of Shaper machine.

15. Do some shaping operations on the given job.

16. Identification and Specification of Milling machine.

17. Do some milling operations on the given job.

18. To make a job like (nut & bolt) using all the above four machines.

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DMM 4104 FLUID MECHANICS AND MACHINERY LAB

LIST OF EXPERIMENTS

1. Study of Bernoulli's theorem.
2. Study of Impulse Turbine.
3. To determine the Co-efficient of discharge of Rotameter.
4. Study of Reciprocating Pump.
5. Study of Radial flow Reaction Turbine.
6. To find the characteristics of Centrifugal Pump at different speed.

DCS 4012 COMPUTER PROGRAMMING LAB

LIST OF EXPERIMENTS

1. Write Programs in C to implement

2. Programming Exercise on Executing and Editing a C Program.

3. Programming Exercise on defining Variable and assigning values to variables.

4. Programming Exercise on arithmetic's and relational operators.

5. Programming Exercise on arithmetic expression and their evaluation.

6. Programming Exercise on formatting input/output using printf and scanf

7. Programming Exercise using if-statement.

8. Programming Exercise using if-else statement.

9. Programming Exercise on switch statement

10. Programming Exercise on do-while statement.

11. Programming Exercise on for statement.

12. Programming exercise on one-dimensional array and two-dimensional array.

13. (i) Programs for putting two strings together (ii) Programs for comparing two strings.

14. Simple programs using structures and Union.

DHU 4002 PROFESSIONAL PRACTICES-III

Module-I:

Industrial visit:

Industrial visit be arranged and report of the same be submitted by the individual student, to form a part of term work. One industrial visit may be arranged in the following areas to observe material handling system, Quality control chart/ production records/ layout system/ hydraulic and pneumatic system/working of boilers and steam engineering applications.

Module –II:

Lectures by professionals/ industrial expert be organised from any one of the following areas.

- Use of plastics in automobiles
- Non-ferrous metals and alloys for engineering applications
- Industrial hygiene
- Composite materials
- Heat treatment processes
- Ceramics
- Safety engineering and waste elimination

Module –III:

Group-Discussion:

The students shall discuss in group of six to eight students and write a brief report on the same as a part of term work.

Module –IV:

Student Activities:

The students in a group of 3 or 4 will perform any two of the following activities and write a report as a part of term work.

Activity:

- Study any one type of CNC machine centre and prepare on tooling and tool holding devices.
- For a given job write a sequence of operations performed by automated manufacturing system. Draw a block diagram of control system to perform above operations.
- For a drilling or milling operations on a simple machine component, draw a jig or fixtures showing various features like locating clamping tool.
- For a given job involving 3 to 4 operations suggest to prepare a report.

Module –V:

Seminar:

Seminar on any advanced technical topic to be presented by individual student.

DMM 5104 CAD LAB.

1. Practice on the following commands

Units , limits , grid , line , poly-line , donut , polygon , chamfer , fillet , offset , text , de-text.

2. Practice on the following commands:

O snap , Extension , undo , redo , oops , color , line-type , layer , save , quit , end.

Hints: use layers, color, line-types)

3. Practice on the following commands:

Erase , Copy , move , array , break , trim , mirror , pedit , pan , divide , zoom

4. **Practice on the following commands:** Hatch, batch, Hatchedit, boundary and dimensioning.

5. Draw the details of the footstep bearing and also draw plan and elevation (full sectional).

6. Draw the details of connecting Rod, Crank pin, cylinder block and also draw plan and Elevation.

7. Draw all the Automobile components by using the CAD Tools.

DME 5104 MEASUREMENT AND METROLOGY LAB

LIST OF EXPERIMENTS

1. To study the measurement of dimensions of given workpiece using Vernier Calliper
2. To study the measurement of dimensions of given workpiece using Outside Micrometer.
3. To study the measurement of dimensions of given workpiece using Vernier Height Gauge.
4. To study the measurement of dimensions of given workpiece using inside Micrometer.
5. To study Slip Gauges and Angle Gauges to construct different given dimensions and angles.
6. To determine the included angle of a given angle plate using sine bar and slip gauges.
7. To measure the different angle of a single point cutting tool(“V” tool) by Profile Projector.
8. To study the working of auto-collimator.
9. To study the working of optical flat and monochromatic light source.
10. To study the working of workshop microscope.
11. To study the working of Floating Carriage Diameter Measuring Machine to measure the external threads of a given workpiece.

DME 5012 TOOL AND DIE DESIGN LAB

LIST OF EXPERIMENTS

i. Study of dies and presses.

ii. Sketches of Combination Die, Progressive Die, Drawing Die and Bending Die.

iii. Sketches of Pressure die, casting die and forging die.

iv. Calculation of cutting forces and shear angle based on Merchant's circle.

v. Development of blank length for bending operation.

vi. Designation of single point tool.

vii. To draw types of cutting tools showing various angles.

viii. To design and draw drawing die for a given component.

DME 6004 CAM LAB.

OBJECTIVE:

1. Study the working principle of CNC machines
2. Study the datum points and offsets.
3. Differentiate incremental System with absolute system
4. Study the simulation software package.
5. Write program and simulate in the Lathe software and Milling software.
6. Prepare a part program, edit and execute in CNC Turning centre.
7. Prepare a part program, edit and execute in CNC Machining centre.
8. Produce components in the CNC Turning centre and CNC Machining centre.

1. Introductions

1. Study of CNC lathe and CNC Vertical Machining centre (milling)

2. Study of international standard G-Codes and M-Codes

3. Program writing – Turning simulator, Milling simulator, IS practice, commands, menus

4. Editing the program in the CNC machines.

5. Execute the program in the CNC machines

2. CNC Turning Simulation

1. Create a part program for step turning and simulate in the software - Using Linear interpolation.

2. Create a part program for taper turning and simulate in the software

3. CNC Milling Simulation

1. Create a part program for grooving and simulate in the software –

Using Linear interpolation and Circular interpolation.

2. Create a part program for drilling and counter sinking and simulate in the software -

Using canned cycle.

3. Create a part program for rectangular and circular pocketing and simulate in the software

- Using canned cycle.

DME 6014 ADVANCED MANUFACTURING PROCESS LAB.

LIST OF EXPERIMENTS

1. Study of wire EDM machine.
2. Study of process parameters on EDM.
3. Programming of different shapes on EDM machining.
4. Study of Abrasive Jet machining.
5. Study of process parameters on Abrasive Jet machining.
6. Programming of different shapes cut on Abrasive Jet machining.
7. Study of EDM machine.
8. Study of process parameters on EDM machine.
9. Programming of different shapes on EDM machining.
10. Study of micro EDM machine.
11. Study of process parameters on micro EDM machine.
12. Programming of different micro shapes cut on MICRO EDM machining.

    A) Circular shapes of given diameter.

    B) Polygon of different diamete

DME 3106 MANUFACTURING PROCESS LAB.

LIST OF EXPERIMENTS

19. Identification and Specification of Lathe machine.

20. Do some lathe operations on the given job.

21. Identification and Specification of Drilling machine.

22. Do some drilling operations on the given job.

23. Identification and Specification of Shaper machine.

24. Do some shaping operations on the given job.

25. Identification and Specification of Milling machine.

26. Do some milling operations on the given job.

27. To make a job like (nut & bolt) using all the above four machines.

DMM 3004 APPLIED MECHANICS LAB.

LIST OF EXPERIMENTS

a. To verify the Polygon Law of Forces, with the help of force polygon apparatus.
b. To verify the parallelogram law of forces.
c. To study Lami's theorem using universal force table apparatus.
d. To verify the forces in the different members of a jib crane.
e. To find out centre of gravity of regular laminas.
f. To find out centre of gravity of irregular laminas.
g. To find moment of inertia of flywheel.
h. Comparison of coefficient of friction of various pairs of surfaces & determination of angle of repose.
i. To find the mechanical advantage, velocity ratio and efficiency in the case of Screw Jack.
j. Deflections of a truss-horizontal deflections & vertical deflections of various joints of a pin-jointed truss.
k. To find the mechanical advantage, velocity ratio and efficiency in the case of Winch Crab Single Graphical Representation.
l. To study the performance of differential axle and wheel and find its velocity ratio, efficiency and law of machine.

DMM 3102 THERMAL ENGINEERING LAB.

LIST OF EXPERIMENTS

1. Study of Lancashire boiler.
2. Study of Babcock and Wilcox boiler.
3. Study of Reverse flue gas oil fired packaged boiler.
4. Study of Rover gas turbine, its components and instrumentation provided over it.
5. Study of Steam turbine.
6. Study of Steam Power Plant.
7. Study of Single stage and multistage compressor.
8. Study of Refrigeration and Air conditioning.

DHU 3002 PROFESSIONAL PRACTICES-II

Module-I:

Industrial visit: Industrial visit be arrange and report of the same should be submitted by the individual student, to form a part of team work. TWO industrial visits be arranged.

Module-II:

Lectures by professional /Industrial expert be organised from any one of the following areas:

- Use of plastics in automobiles
- Non-ferrous metals and alloys for engineering applications
- Industrial hygiene
- Composite materials
- Heat treatment processes
- Ceramics
- Safety engineering and waste elimination

Module-III:

Individual assignments:

Any two from the following lists;

- Process sequence of any two machine operations
- Write material specification of any two composite jobs
- Collections of different plastic material or cutting tools with properties, applications and specifications
- List the various properties and applications of following materials-
  c) Ceramics, b) Thermoplastic plastics, c) thermo setting plastics and d) rubbers.

Module-IV:

Conduct any one of the following activities through active participation of the students and write report:

- Survey for local social problems such as malnutrition, unemployment, cleanliness, illiteracy
- Conduct aptitude, general knowledge test, IQ test.

Module-V:

Seminar:

Seminar on any advanced technical topic to be presented by individual student in a batch of 5.

DMM 4008 STRENGTH OF MATERIALS LAB.

LIST OF EXPERIMRNTS

1. Study of Rockwell Hardness Machine.
2. Study of Brinell Hardness Machine.
3. Study of Tensile Strength of mild steel
4. Study of Young Modulus of bending.
5. Study of torsion test.
6. Study of Universal Testing Machine.

DMM 4010 ENGINEERING MEASUREMENT LAB.

LIST OF EXPERIMENTS

1. To study the measurement of dimensions of given work-piece using Vernier Calliper
2. To study the measurement of dimensions of given work-piece using Outside Micrometer.
3. To study the measurement of dimensions of given work-piece using Vernier Height Gauge.
4. To study the measurement of dimensions of given work-piece using inside Micrometer.
5. To study Slip Gauges and Angle Gauges to construct different given dimensions and angles.
6. To determine the included angle of a given angle plate using sine bar and slip gauges.
7. To measure the different angle of a single point cutting tool("V" tool) by Profile Projector.
8. To study the working of auto-collimator.
9. To study the working of optical flat and monochromatic light source.
10. To study the working of workshop microscope.
11. To study the working of Floating Carriage Diameter Measuring Machine to measure the external threads of a given work piece.

DMM 4104 FLUID MECHANICS LAB.

LIST OF EXPERIMENTS

1. Study of Bernoulli's theorem.
2. Study of Impulse Turbine.
3. To determine the Co-efficient of discharge of Rotameter.
4. Study of Reciprocating Pump.
5. Study of Radial flow Reaction Turbine.
6. To find the characteristics of Centrifugal Pump at different speed.

DHU 4002 PROFESSIONAL PRACTICES-III

Module-I:

Industrial visit:

Industrial visit be arranged and report of the same be submitted by the individual student, to form a part of term work. One industrial visit may be arranged in the following areas to observe material handling system, Quality control chart/ production records/ layout system/ hydraulic and pneumatic system/working of boilers and steam engineering applications.

Module –II:

Lectures by professionals/ industrial expert be organised from any one of the following areas.

- Use of plastics in automobiles
- Non-ferrous metals and alloys for engineering applications
- Industrial hygiene
- Composite materials
- Heat treatment processes
- Ceramics
- Safety engineering and waste elimination

Module –III:

Group-Discussion:

The students shall discuss in group of six to eight students and write a brief report on the same as a part of term work.

Module –IV:

Student Activities:

The students in a group of 3 or 4 will perform any two of the following activities and write a report as a part of term work.

Activity:

- Study any one type of CNC machine centre and prepare on tooling and tool holding devices.
- For a given job write a sequence of operations performed by automated manufacturing system. Draw a block diagram of control system to perform above operations.
- For a drilling or milling operations on a simple machine component, draw a jig or fixtures showing various features like locating clamping tool.
- For a given job involving 3 to 4 operations suggest to prepare a report.

Module –V:

Seminar:

Seminar on any advanced technical topic to be presented by individual student.

DMM 5108 HEAT TRANSFER LAB.

LIST OF EXPERIMRNTS

1. To determine the overall heat transfer coefficient of shell and Tube type heat Exchanger.
2. To determine the heat transfer coefficient of the inner surface of pipe for different heat or voltage.
3. To determine the Emissivity of Gray body.
4. To determine the Thermal conductivity of Insulating powder
5. To study the temperature distribution along the length of pin under natural convection Heat transfer.
6. To find the heat transfer coefficient of vertical cylinder under Natural convection.
7. To determine the thermal conductivity of Liquid.
8. To find the heat transfer coefficient of vertical cylinder ion natural convection and find the percentage deviation from the theoretical value.
9. To determine the Efficiency and Effectiveness of a pin-fin under a natural convection of Heat Transfer.
10. To determine the Efficiency and Effectiveness of a pin-fin under a forcedl convection of Heat Transfer.

DMM 5104 CAD LAB.

1. Practice on the following commands

Units , limits , grid , line , poly-line , donut , polygon , chamfer , fillet , offset , text , de-text.

2. Practice on the following commands:

O snap , Extension , undo , redo , oops , color , line-type , layer , save , quit , end.

Hints: use layers, color, line-types)

3. Practice on the following commands:

Erase , Copy , move , array , break , trim , mirror , pedit , pan , divide , zoom

4. **Practice on the following commands:** Hatch, batch, Hatchedit, boundary and dimensioning.

5. Draw the details of the footstep bearing and also draw plan and elevation (full sectional).

6. Draw the details of connecting Rod, Crank pin, cylinder block and also draw plan and Elevation.

7. Draw all the Automobile components by using the CAD Tools.

DMM 5106 I.C ENGINE AND GAS TURBINE LAB.

LIST OF EXPERIMRNTS

1. Performance study of Morse test on MPFI Petrol Engine.
2. Heat Blance test on a Diesel Engine.
3. Energy Auditing of a Maruti ZEN Petrol Engine.
4. Study of different types of carburetors.
5. Study of MPFI/SPFI system.
6. Study of blower and Compressor.
7. Study OF Wankel Rotary Engine.
8. Economic Load test on Diesel Engine.

DMM 5016 HYDRAULIC MACHINERIES LAB.

LIST OF EXPERIMRNTS

1. Impact of jets on vane apparatus
2. Pelton wheel apparatus
3. Francis Turbine apparatus
4. Kaplan Turbine apparatus
5. Friction factor for given pipe line apparatus
6. Single stage centrifugal pump apparatus
7. Multi stage centrifugal pump apparatus
8. Reciprocating Pump apparatus
9. Loss of Head due to sudden contraction in pipeline apparatus.
10. To determine the heat transfer coefficient for drop-wise and film-wise condensation process.

DMM 5014 THEORY OF MACHINE LAB.

LIST OF EXPERIMRNTS

1. To verify the relation of simple pendulum.
2. To verify the relation of compound pendulum and determine of the radius of Gyration.
3. To determine the radius of Gyration of given bar using bifilar suspension.
4. To study the torsional vibration single rotor system
5. To study the free vibration of two rotor system and to determine natural frequency(both theoretically and experimentally)
6. To study the gyroscopic effect of a rotating disc.
7. To study the static and dynamic balancing using rigid blocks.
8. To study the effect of whirling of shaft with:
    a. both end fixed.
    b. Both end supported
    c. Fixed supported.
9. Study of cam-follower pair and to plot X-0 curve for different cam-follower pairs.
10. Balancing of masses in Machines fault-simulator.

DMM 6108 REFRIGERATION AND AIR-CONDITIONING LAB.

LIST OF EXPERIMRNTS

1. To study different types of tool used in Refrigeration and air Conditioning.
2. Study of House hold/Domestic Refrigerator.
3. Study of Leak Detection and charging Procedure for refrigerant.
4. Study of Refrigeration controls used in refrigeration and air conditioning.
5. To study Heat Pump and calculate it's COP.
6. To study ice Manufacturing plant and calculate its COP.
7. To demonstrate vapour compression cycle and to calculate theoretical and actual COP.
8. To study Air conditioning system and calculate COP Of air conditioning system with the help of P-H Chart.
9. To study and calculate and capacity and COP of vapour absorption Refrigeration (VAR) system.
10. **To study and calculate capacity and COP of vapour compression refrigeration (VCR) systems.**

DCS 3002 C PROGRAMMING LAB.

LIST OF EXPERIMENTS

1. Write Programs in C to implement.
2. Programming Exercise on Executing and Editing a C Program.
3. Programming Exercise on defining Variable and assigning values to variables.
4. Programming Exercise on arithmetic's and relational operators.
5. Programming Exercise on arithmetic expression and their evaluation.
6. Programming Exercise on formatting input/output using printf and scanf
7. Programming Exercise using if-statement.
8. Programming Exercise using if-else statement.
9. Programming Exercise on switch statement
10. Programming Exercise on do-while statement.
11. Programming Exercise on for statement.
12. Programming exercise on one-dimensional array and two-dimensional array.
13. (i) Programs for putting two strings together (ii) Programs for comparing two strings.
14. Simple programs using structures and Union.

DCS 3004 DBMS LAB

LIST OF EXPERIMENTS

1. DDL, DML – Their Scope and usage. SQL as DDL and DML.
2. Write SQL queries using logical operations (=,<,>,etc)
3. Write SQL queries using SQL operators
4. Write SQL query using character, number, date and group functions
5. Write SQL queries for relational algebra
6. Write SQL queries for extracting data from more than one table
7. Write SQL queries for sub queries, nested queries
8. Database Maintenance Activities
9. Concepts for ROLL BACK & COMMIT
10. Working with Ms-Access

    i) Create database
    ii) Create table
    iii) Create relationship between tables.
    iv) Queries on single table.
    v) Queries on multiple tables

DCS 3006 COMPUTERORGANIZATION LAB.

LIST OF EXPERIMENTS

1. Verification of basic Logic gates
2. Verification of Universal logic gates and realization of basic gates
3. Design and implementation of code converters using logic gates
   (i) BCD to excess-3 code and vice versa (ii) Binary to gray and vice-versa
4. Prove DE – Morgan's 1st theorem.
5. Prove DE – Morgan's 2nd theorem.
6. Design and realization of S.R. flip-flop using IC 7400.
7. Design and realization of J.K. flip-flop using IC 7400.
8. Design and realization of a 4-bit magnitude comparator using IC 7485.
9. Design and realization of a parity bit checker using IC 7486.
10. Design and realization of parity bit generator using IC 7486.
11. Design and implementation of 4 bit binary Adder/ Subtractor and BCD adder using IC 7483.
12. Design and implementation of Multiplexer and De-multiplexer using logic gates
13. Design and implementation of encoder and decoder using logic gates
14. Construction of Half Adder and Full Adder.
15. Verification of De Morgan's First and Second laws.
16. Simplification and Realization of Boolean Functions, using NAND gates only.

DCS 3008 WEB DESIGN LAB.

LIST OF EXPERIMENTS

1. Design a 5-page website of your choice using following HTML elements.

- List
- Table
- Hyperlinks
- Images
- Hotspots
- Frames

2. Add a feedback form to the above website.

3. Embed JavaScript into html pages and display (alert, confirm, prompt) boxes.

4. Programming exercises based on if, if-else, switch-case, while loop, for loop in JavaScript.

5. Write JavaScript related to Onclick, onsubmit, onmouseover, onmouseout evnts.

6. Apply form validations using JavaScript.

7. Programming exercises based on PHP basics.

- Include file
- Require
- Echo
- Working with functions
- Comments

8. Programming exercise based on if statement, if-else, else if, while loop, for loop, for each, do while, switch in PHP

9. String handling in PHP: strops, str_replace, substr_replace, capitalization, explode, implode

10. File handling in PHP: creating, deletion, open, write, append, close, read, write

11. Write a program in PHP to create sessions

12. Write a program in PHP to create cookies

DHU3002 PROFESSIONAL PRACTICES-II

OBJECTIVE:

1. Acquire information from different sources.
2. Prepare notes for given topic.
3. Present given topic in a seminar.
4. Interact with peers to share thoughts.
5. Prepare a report on industrial visit, expert lecture

Fault detection and adopting proper troubleshooting procedure for repair and maintenance.

Module-I:

Field Visits:

Structuredfieldvisits(minimumthree)bearrangedandreportofthesameshouldbesubmittedbyth eindividualstudent,toforma part of the term work.

Module-II:

Lectures by Professional/Industrial Expert:(any four fields)

Cyber laws, Fiber optics communication system, Disaster management, Use of signals for Telephone, internet, Industrial Safety, Computer security systems, any other suitable topic.

Module-III:

InformationSearch: Informationsearchcanbedonethroughmanufacturers,catalogue,internet, magazines; book set and submit a report.

Module-IV:

Seminar: Seminar topic should be related to the subjects of fourth semester. Each student shall submit are port of at least10 pages and deliver a seminar (Presentation time–10 minutes)

Module-V:

Troubleshooting: Reliability Factors of equipment, Maintenance Management, Troubleshooting Procedures, Troubleshooting Aids.

DCS 4002 C++ LAB

LIST OF EXPERIMENTS

1. Examples on Function Overloading, Reference Variables, Basic Console I/O
2. Examples on Dynamic Memory Allocation
3. Examples on Classes and Objects
4. Examples on Constructors and Destructors
5. Programs with more than one object
6. Programs with array of objects
7. Examples on Operator Overloading
8. Programs with more than one class
9. Examples on Single Inheritance
10. Examples on Hierarchical and Multi-level Inheritance
11. Examples on Multiple-level Inheritance
12. Examples on Polymorphism
13. Examples on Data File Processing

DCS 4004 ORACLE LAB.

LIST OF EXPERIMENTS

1. Creating and Managing Tables, Manipulating Data, Writing Basic SQL SELECT Statements, Restricting and Sorting Data

2. Single-Row Functions, Displaying Data from Multiple Tables, Aggregating Data Using Group Functions. Database Transaction, Controlling User Access.

3 Sub queries**,** Including Constraints, Creating Views, Joins, Sequences, Indexes.

4. Analyzing given system and preparing E R model and converting it to relational schema.

5. PL/SQL BASICS

6. Cursors

7. Exception handling

8. Triggers

9. Procedures, Functions, Packages

10. Interfacing DB with VB.NET

11. Implementation

DCS 4006 DATA STRUCTURES LAB

LIST OF EXPERIMENTS

Lab1: Revision exercises on arrays

Lab2: Revision exercises on functions and recursion

Lab3: Revision exercises on pointers

Lab4: Exercises on contiguous list

Lab5: Exercises on sorting and searching

Lab6: Exercises on stacks

Lab7: Exercises on applications of stacks

Lab8: Exercises on Queue

Lab9: Exercises on circular queue

Lab10: Exercises on linked-list

Lab11: Exercises on linked-list

Lab12: Demo on BST creation and traversal

DCS 4008 .NET LAB.

LIST OF EXPERIMENTS

1. Create simple application using web controls
    a) Finding factorial Value
    b) Money Conversion
    c) Quadratic Equation
    d) Temperature Conversion
    e) Login control
2. States of ASP.NET Pages
3. Adrotator Control
4. Calendar control
    a) Display messages in a calendar control
    b) Display vacation in a calendar control
    c) Selected day in a calendar control using style
    d) Difference between two calendar dates
5. Treeview control

a) Treeview control and datalist

b) Treeview operations

6. Validation controls
7. Query textbox and Displaying records
8. Display records by using database
9. Datalist link control
10. Databinding using dropdownlist control
11. Inserting record into a database
12. Deleting record into a database
13. Databinding using datalist control
14. Datalist control templates
15. Databinding using datagrid
16. Datagrid control template
17. Datagrid hyperlink
18. Datagrid button column
19. Datalist event
20. Datagrid paging
21. Creating own table format using datagrid

DCS 4010 LINUX LAB.

LIST OF EXPERIMENTS

1. General Linux Commands
2. Files and Directory Management Commands
3. Text Search and Regular Expressions
4. Filters and Redirection
5. User-to-User Communication
6. System Administration Commands
7. Shell Scripts:
    i) Variables and values
    ii) Conditional statements
    iii) Iterative statements
    iv) Command-line arguments

DHU 4002 PROFESSIONAL PRACTICES-III

OBJECTIVE : Student will be able to:

1. Acquire information from different sources.
2. Prepare notes for given topic.
3. Present given topic in a seminar.
4. Interact with peers to share thoughts.
5. Prepare a report on industrial visit, expert lecture

Fault detection and adopting proper troubleshooting procedure for repair and maintenance.

Module-I:

Field Visits:

Structuredfieldvisits(minimumthree)bearrangedandreportofthesameshouldbesubmittedbyth eindividualstudent,toforma part of the term work.

Module-II:

Lectures by Professional/Industrial Expert:(any four fields)

Disaster management, Industrial Safety, any other suitable topic.

Module-III:

Information Search: Information search can be done through manufacturers, catalogue, internet, magazines; books etc. and submit a report.

Module-IV:

Seminar: Seminar topic should be related to the subjects of fourth semester. Each student shall submit a report of at least 10 pages and deliver a seminar (Presentation time–10 minutes)

Module-V:

Troubleshooting : Reliability Factors of equipment, Maintenance Management, Troubleshooting Procedures, Troubleshooting Aids.

DCS 5002 JAVA PROGRAMMING LAB.-I

LIST OF EXPERIMENTS

1. To write a Java application program which clarify the following points:

- How to compile and run
- How to set path and class path,Single and Multi-line comments, and,Command line arguments.

Data Types, Variables Operators & Arrays:

1. To write a Java program which defines and initialized different data types: byte, short, int, long, float & double.

2. Problems related to Character and Boolean data type.

3. Problems related to one and two dimensional array.

4. Problems related to Arithmetic, bit wise and relational operators.

Control Statements & Looping Structure:

1. Problems related to: IF-ELSE, IF-ELSE-IF, SWITCH statements.

2. Problems related to the following looping statements — WHILE, DO-WHILE &FOR.

3. Problems related to nested looping and jump statements (BREAK, CONTINUE & RETURN) **Classes, Objects & Methods:**

1. To write a Java program to clarify the following points: (a) how to declare a class, (b) how to create an object, (c) how methods are defining in a class, (d) access variables and methods.

2.To construct a Java program which defines: (a) how arguments values are passed to a method, (b) use of new operator, constructor and finalize method, (c) passing objects to a method, (d) declaration of static keyword.

3. To practice problems related to: (a) Method overloading, (b) Multiple constructor, (c)Calling constructor from a constructor.

Exception Handling:

1. To write a Java program which is constructed using TRY, CATCH and FINALLY blocks .

Inheritance & Extending Classes (Interface):

1.To write Java programs which clarify the following: (a) super class, (b) sub- class/derive class, (c) understanding abstract and final class, (d) polymorphism.

2. To practice problems related to:

(a) Multiple Inheritance, (b) Interface, (c) Extending Interfaces, (d) Thread & Multi-Thread.

DCS 5004 COMPUTER NETWORKING LAB.

LIST OF EXPERIMENTS

1. Identification of various network components/devices e.g. Connectors, Hub, Switch, Modem
2. Preparation of cross and parallel cable.
3. Setting IP address.
4. Using command line diagnostics: ipconfig and ping.
5. Setting-up of small home/office network:
    a. Connecting PCs in a network.
    b. Configuring PCs in a network.
    c. Creating workgroup.
6. File and print sharing
    a. Setting-up file sharing options (read/write/full control).
    b. Setting-up print sharing options.
    c. Installation of network printer.
7. Configuring and managing computer security
    a. Account lockout
    b. Password policy
    c. Audit policy
    d. User Rights Assignment
    e. Security Options
8. Setting-up of Remote desktop services
9. Net meeting:
    a. Installation of Net meeting
    b. Sharing of files on Net meeting
    c. Desktop sharing
    d. Shared white board
10. Setting-up remote assistance.
11. Installation of server Operating system.
12. Installation of Active directory.
13. Configuring access permissions.
14. Installation & configuration of TCS(Terminal Client Services)
15. Managing user accounts
    a. Creating user accounts
    b. Making a user account member of Administrative group.
    c. Assigning permissions

DCS 5008 MULTIMEDIA AND ANIMATION LAB.

LIST OF EXPERIMENTS

Basics
Overview of the Adobe Photoshop. Image modes. Image size and resolution. Image color concepts.

Basic tools and color
Overview of the Photoshop toolset. Brushes and brush types. Choosing colors by eye. Numerical color. Pantone color. Canvas color. Review and assignment.

Selections and masks
Marquee selection tools. Lasso & Wand selection tools. Selection tool. Select menu commands. Transforming selections. Quick mask mode. Alpha channels and channel palette. Mask/selection practice exercise.

Layers and blend modes
Intro to layers. Move, copy and transform layers. Advanced layer features. Applying layer effects. Layers review. Review and assignment.

Painting tools
Intro, paint bucket and fill command. Gradient, pattern and line tools. Brushes and fade command. Pencil, Paintbrush and Airbrush tools. Eraser tools.

Retouching tools
Retouching tools intro and tips. Blur, sharpen, and smudge. Dodge, burn, sponge. Clone stamp, history brush, art history brush. Practice exercises. Review and assignment.

Adobe image ready
Introduction to Image Ready. Opening and importing files. Image Reader workspace. Toolbox. Animation.

DCS 5010 VISUAL BASIC LAB

LIST OF EXPERIMENTS

OBJECTIVE

1. Develop acquaintance with standard VB controls.
2. Developing understanding of various controls and mathematical functions.
3. Understanding various inbuilt functions.
4. Using control statements in VB.
5. Database connectivity and report generation.

1. **Visual basic building blocks:**
   - Object, properties, events, forms, controls, modules, methods, input box and message box.
   - Form: Creating adding and removing forms in project: Add, remove, hide, show, load statement, unload statement, me keyword, Referring to objects on a different forms.
   - Data types, Variable, constant
2. **Working with Controls:**
   - Text box, label, command button, frame, list box, check box, radio button, file list box, drive list box, directory list box, timer, scroll bar control, picture box, image box, Menu editor.
3. **Inbuilt functions:**

   Mathematical function: Rnd, Sqr, Int, Abs, Exp, Log, Sin, Cos, Tan , Atn, Fix and Round.

   Format function and String: Tab, Space, and Format, String comparison: equals, compareto.
4. **Control statements:**

   if ……then, if…….then……else, if…….then……elseif…end if

   Looping: for….next, while…wend, do….while, do….until.

   Compound conditions: and, or, not; select case
5. **Database connecting tools:**

   ADODC, ADODB, Creating the database files for use by visual basic(using MS-Access), Data control and their properties, Adding a New Record, searching record, Updating a record, Deleting a record, Data grid.

   Report generation: Data environment, creating query, preparing a report.
6. Mini Project

DCS 6002 JAVA PROGRAMMING LAB.- II

LIST OF EXPERIMENTS

1. Review examples on Java Classes and Objects
2. Review examples on Inheritance
3. Examples on Socket Programming
4. Examples on AWT components
5. Examples on Applets
6. Examples on Event Handling in Applets
7. Examples on Programming using Database
8. Examples on Database in Applets

DCS 6004COMPUTER HARDWARE LAB.

LIST OF EXPERIMENTS

1. Study of motherboard:
    a. XT form factor.
    b. AT form factor.
    c. LPX form factor.
    d. ATX form factor.
2. Disassembling of PC:
    a. PC- XT
    b. PC- AT
    c. PC- ATX
3. Assembling of PC:
    a. PC-XT
    b. PC-AT
    c. PC-ATX
4. Study of BIOS Setup.
5. Installation of Windows-XP operating system.
6. Repairing corrupted operating system.
7. Installation of display diver, sound driver, network driver.
8. Managing disk and file system:
    a. Installing two hard disk
    b. Creating primary, extended, logical partition
    c. Formatting a partition
    d. Converting a Basic Disk to a Dynamic Disk
    e.
    f. Understanding simple, spanned, striped, Mirrored volume
        i. Creating Simple volume
        ii. Creating spanned volume
        iii. Creating striped volume
        iv. Extending volume size
        v. Deleting simple, striped, spanned volume
9. Preventive maintenance tools**:**
    a. System restore
        i. Creating restore point
        ii. Restore system to earlier date and time.
    b. Disk defragmentation
    c. Scandisk
    d. Installation and configuration of Anti-virus
10. Installation and configuration of VM Ware.

DCS 6008 SOFTWARE TESTING LAB

LIST OF EXPERIMENTS

1. Design and develop a program in a language of your choice to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that the upper limit for the size of any side is 10. Derive test cases for your program based on boundary value analysis, execute the test cases and discuss the results.

2. Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of boundary value testing, derive different test cases, execute these test cases and discuss the test results.

3.Design, develop, code and run the program in any suitable language to implement the NextDate function. Analyze it from the perspective of boundary value testing, derive different test cases, execute these test cases and discuss the test results.

4.Design and develop a program in a language of your choice to solve the triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that the upper limit for the size of any side is 10. Derive test cases for your program based on equivalence class partitioning, execute the test cases and discuss the results.

5.Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of equivalence class testing, derive different test cases, execute these test cases and discuss the test results.

6. Design, develop, code and run the program in any suitable language to implement the NextDate function. Analyze it from the perspective of equivalence class value testing, derive different test cases, execute these test cases and discuss the test results.

7. Design and develop a program in a language of your choice to solve the Triangle problem defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Derive test cases for your program based on decision-table approach, execute the test cases and discuss the results.

8. Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of decision table-based testing, derive different test cases, execute these test cases and discuss the test results.

9. Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of dataflow testing, derive different test cases, execute these test cases and discuss the test results.

10. Design, develop, code and run the program in any suitable language to implement the binary search algorithm. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results.

11. Design, develop, code and run the program in any suitable language to implement the quicksort algorithm. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results. discuss the test results.

12. Design, develop, code and run the program in any suitable language to implement an absolute letter grading procedure, making suitable assumptions. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results.

Diploma in Electrical & Electronics Engineering (Semester-III)

DCS 3002 C PROGRAMMING LAB.

LIST OF EXPERIMENTS

1. Write Programs in C to implement.
2. Programming Exercise on Executing and Editing a C Program.
3. Programming Exercise on defining Variable and assigning values to variables.
4. Programming Exercise on arithmetic's and relational operators.
5. Programming Exercise on arithmetic expression and their evaluation.
6. Programming Exercise on formatting input/output using printf and scanf
7. Programming Exercise using if-statement.
8. Programming Exercise using if-else statement.
9. Programming Exercise on switch statement
10. Programming Exercise on do-while statement.
11. Programming Exercise on for statement.
12. Programming exercise on one-dimensional array and two-dimensional array.
13. (i) Programs for putting two strings together (ii) Programs for comparing two strings.
14. Simple programs using structures and Union.

Diploma in Electrical & Electronics Engineering (Semester-III)

DEE 3006 ANALOG ELECTRONICS LAB.

LIST OF EXPERIMENTS

1. Observe the wave shape of following rectifier circuit
   a. Half wave rectifier b. Full wave rectifier c. Bridge rectifier
2. Plot the wave shape of full wave rectifier with
   a. Shunt capacitor filter b. Series inductor filter c. RC filter
3. Plot input and output characteristics and calculate parameters of transistors in CE configuration.
4. Plot input and output characteristics and calculate of parameters of transistors in CB configuration.
5. Plot V-I characteristics of FET amplifier.
6. Measure the Q-Point and note the variation of Q-Point.
   a. By increasing the base resistance in fixed bias circuit.
   b. By changing out of bias resistance in potential divider circuit.
7. Measure the Voltage Gain, input, output impedance in single state CE amplifier circuit
8. Plot the frequency response of two stage RC coupled amplifier and calculate the bandwidth and compare it with single stage amplifier
9. To measure the gain of push-pull amplifier at 1KHz
10. To measure the voltage gain of emitter follower circuit and plot its frequency response
11. Plot the frequency response curve of Hartley and Colpitts Oscillator
12. Plot the frequency response curve of phase shift and Wein bridge Oscillator
13. To study of Op-Amp as

    i) differential circuit ii)adder circuit iii)integrator circuit.

14. To determine voltage gain of inverting and Non-Inverting amplifier.

Diploma in Electrical & Electronics Engineering(Semester-III)

DEE 3004 TRANSFORMER AND DC MACHINE LAB.

LIST OF EXPERIMENTS

1. Open circuit and load characteristics of DC exciter machine.
2. Open circuit and load characteristics of DC compound generator.
3. Performance Characteristics of constant speed DC motor.
4. Speed control of constant speed DC motor.
5. Load test on dc traction motor.
6. Predetermination of performance characteristics of dc machine.
7. Back to back test on identical DC exciter machines.
8. Predetermination of performance characteristics of ac dynamic machine.
9. Load test on single phase transformer.
10. Load test on DC compound motor.
11. Parallel operation of single phase transformers.
12. Connections of three phase transformer.

Diploma in Electrical & Electronics Engineering(Semester-III)

DEC 3004 DIGITAL ELECTRONICS LAB

LIST OF EXPERIMENTS

1. Verification of basic Logic gates
2. Verification of Universal logic gates and realization of basic gates
3. Design and implementation of code converters using logic gates
   (i) BCD to excess-3 code and vice versa (ii) Binary to gray and vice-versa
4. Prove DE – Morgan's 1st theorem.
5. Prove DE – Morgan's 2nd theorem.
6. Design and realization of S.R. flip-flop using IC 7400.
7. Design and realization of J.K. flip-flop using IC 7400.
8. Design and realization of a 4-bit magnitude comparator using IC 7485.
9. Design and realization of a parity bit checker using IC 7486.
10. Design and realization of parity bit generator using IC 7486.
11. Design and implementation of 4 bit binary Adder/ Subtractor and BCD adder using IC 7483
12. Design and implementation of Multiplexer and De-multiplexer using logic gates
13. Design and implementation of encoder and decoder using logic gates
14. Construction and verification of 4 bit ripple counter and Mod-10 / Mod-12 Ripple counters
15. Design and implementation of 3-bit synchronous up/down counter
16. Implementation of SISO, SIPO, PISO and PIPO shift registers using Flip- flops.
17. Construction of Half Adder and Full Adder.
18. Simplification and Realization of Boolean Functions, using NAND gates only.

Diploma in Electrical & Electronics Engineering (Semester-III)

DHU3002 PROFESSIONAL PRACTICES-II

OBJECTIVE

Student will be able to:

1. Acquire information from different sources.
2. Prepare notes for given topic.
3. Present given topic in a seminar.
4. Interact with peers to share thoughts.
5. Prepare a report on industrial visit, expert lecture
6. Fault detection and basic repair of lab. equipment like Multimeter, CRO, UPS.

Module-I:

Field Visits: Structured field visits (minimum three) be arranged and report of the same should be submitted by the individual student, to form a part of the term work. The field visits may be arranged in the following areas / industries:
Power supply/UPS/SMPS/Inverter manufacturing unit, Electronics Instruments calibration laboratories, Residential building for Electronic security systems, Small hydro power station, wind mill.

Module-II:

Lectures by Professional / Industrial Expert:(any four fields)
Non-conventional energy sources, Energy audit, Water pollution control, Software for P.C.B. layout, Mobile communication, Various government schemes, Industrial hygiene, Hydro power generation.

Module-III:

Seminar : Students (Group of 4 to 5 students) have to search /collect information about the topic through literature survey, visits and discussions with experts/concerned persons:
Students will have to submit a report of about 10 pages and deliver a seminar for 10 minutes on Any one of the topics: Water supply schemes/Problems of drinking water in rural area, Problems related to traffic control, Electronic rolling display, Electronic systems used in Multiplex, Any other suitable topic.

Module-IV:

Repair and maintenance of the following Items: CRO, Multimeter, UPS, Power supply.

Module-V:

Market Survey: A group of four students is expected to collect information from the market regarding specifications and cost of any four items: CRO, Multimeter, UPS, Power supply for brand name, specifications, cost and applications.

Diploma in Electrical & Electronics Engineering(Semester-IV)

DEE 4020 APPLIED COMMUNICATION LAB.

LIST OF EXPERIMENT

1. Observation of signals for double side band AM generation
2. Determination of modulation index from DSB AM wave.
3. Observation of signals for demodulation of AM wave using envelope detector.
4. Observation of signals for demodulation of AM wave using linear diode detector.
5. Observation of signals for modulation of SSB signal.
6. Observation of signals for demodulation of SSB signal.
7. Observation of signals for FM wave using Varactor Modulator.
8. To measure the frequency deviation and modulation index using FM wave.
9. Observation of signals for the demodulation of FM wave using PLL
10. Voice transmission with DSB/SSB AM transmission/reception
11. Observe the effect on reconstructed wave form using sample / hold circuit.
12. To compare the frequency response of 2^{nd} order and 4^{th} order of LPF.
13. Observe waveforms of Pulse Amplitude modulation and demodulation.
14. Observe waveforms of Pulse width modulation (using natural sampling & flat top sampling)

Optional

1. Observe waveforms of Pulse Position modulation (using natural sampling).
2. Observe waveforms of Pulse code modulation and demodulation.
3. Observe waveforms of Delta modulation.
4. Observe waveforms of Adaptive delta Modulation.
5. Observe waveforms of ASK/FSK/PSK modulation & demodulation.

Diploma in Electrical & Electronics Engineering(Semester-IV)

DEE 4012 ELECTRICAL & ELECTRONICS MEASUREMENT LAB.

LIST OF EXPERIMENTS

1. Study front panel controls of specification of typical CRO.
2. Measure frequency & voltage of the different o/p waveforms of function generator.
3. Measure frequency, voltage, phase difference (by time measurement) using CRO.
4. Using Lissajous pattern find frequency & phase difference of unknown signal.
5. Measurement of Resistance by Kelvin double bridge
6. Measurement of Inductance by using Maxwell's bridge
7. Measurement of Capacitance by Wien's Bridge
8. Measurement of Displacement using LVDT
9. Measurement of weight using strain gauge
10. Characteristics of Photovoltaic cell
11. Characteristics of photoconductive cell
12. Measurement of displacement using LVDT
13. To determine characteristics of PIN Photodiode
14. To determine characteristics of Phototransistor
15. To determine characteristics of Platinum RTD
16. To determine characteristics of NTC Thermistor
17. To determine characteristics of K type Thermocouple

Diploma in Electrical & Electronics Engineering(Semester-IV)

DEE 4014 AC DYNAMIC MACHINE LAB.

1. To perform no load test on induction motor.
2. To perform blocked rotor test on induction motor.
3. Reversal and Speed control of an Induction motor.
4. To Study of Induction motor starters.
5. To find regulation of a 3 phase alternator by O.C. test.
6. To find regulation of a 3 phase alternator by S.C. test.
7. Determination of 'Regulation' of 3 phase alternator by direct loading.
8. To Study the Synchronization of a alternator with Infinite Bus.
9. To Study the Starting and Reversal of Synchronous motor.
10. Speed control of single phase capacitor (spilt phase) motor.
11. To Study of universal motor.
12. To study shaded pole motor.

Diploma in Electrical & Electronics Engineering(Semester-IV)

DEE 4016 ELECTRICAL DRAWING(CAD) LAB.

1. (A) Draw a sheet for symbolic representation of various electrical equipment's/machines

   (B) Read the given circuits identify the components & trace the path of flow of current.

2. Draw a sheet of wires & wiring accessories

3. Prepare a drawing sheet showing details of domestic appliances such as Electric iron, electric
   Geyser, Electric Bell, Hot plate.

4. Draw a sheet of electrical symbols for various electrical devices using CAD.

5. Draw circuit diagrams for Staircase & Godown wiring using CAD.

6. Draw (a) circuit diagram (b) Vector diagram for conducting direct loading test on transformer using CAD.

7. Draw control and power circuit diagrams for DOL and Star/Delta Starter.

Mini Project:

1. Visit electrical Machine lab/workshop & trace the electrical installation. Draw Layout diagram
   & single line diagram.

Diploma in Electrical & Electronics Engineering(Semester IV)

DEC4018 MICROPROCESSOR LAB.

LIST OF EXPERIMENTS

1. (a) Write an ALP to add two 8-bit numbers; sum being of 8 Bits. (b) Write an ALP to add two 8-bit numbers; sum may be of 16 Bits.

2. Write an ALP to subtract two unsigned numbers, store the result in memory location XX90H. How would you determine the result obtained is straight binary number or 2's complement? Verify with examples.

3. Write an ALP to multiply two 8-bit numbers, product being of 16 bits.

4. Write an ALP to arrange a data array in ascending order.

5. Write an ALP to arrange a data array in descending order.

6. Write an ALP for 2-bit BCD to BINARY conversion.

7. Write an ALP for BINARY to BCD conversion.

8. Write an ALP for block transfer of data.

9. Write an ALP for addition of two 16-bit numbers, sum may be of 16 bits or more.

10. Write an ALP to find the largest number in a data array.

11. Six bytes of data are stored in memory locations starting at 2050H. Add all the data bytes. Use register B to save any carries generated, while adding the data bytes. Store the sum at two consecutive memory locations 2070H & 2071H. Write an ALP for the above mentioned problem statement.

12. Register BC contains 2793H, and registers DE contain 3182H. Write an ALP to add these two 16-bit numbers, and place the sum in memory locations 2050H & 2051H.

Diploma in Electrical & Electronics Engineering (Semester-IV)

DHU 4002 PROFESSIONAL PRACTICES-III

OBJECTIVE

Student will be able to:

1. Acquire information from different sources.
2. Prepare notes for given topic.
3. Present given topic in a seminar.
4. Interact with peers to share thoughts.
5. Prepare a report on industrial visit, expert lecture

Fault detection and adopting proper troubleshooting procedure for repair and maintenance.

Module-I:

Field Visits: Structured field visits (minimum three) be arranged and report of the same should be submitted by the individual student, to form a part of the term work.

Module-II:

Lectures by Professional/Industrial Expert:(any four fields)

Disaster management, Industrial Safety, any other suitable topic.

Module-III:

Information Search: Information search can be done through manufacturers, catalogue, internet, magazines; books etc. and submit a report.

Module-IV:

Seminar: Seminar topic should be related to the subjects of fourth semester. Each student shall submit a report of at least 10 pages and deliver a seminar (Presentation time–10 minutes)

Module-V:

Troubleshooting: Reliability Factors of equipment, Maintenance Management, Troubleshooting Procedures, Troubleshooting Aids.

Diploma in Electrical & Electronics Engineering (Semester-V)

DEE 5008 CONTROL SYSTEMS LAB.

LIST OF EXPERIMENTS

1. To determine Speed- Torque characteristics of DC Servo Motor.
2. To determine Speed- Torque characteristics of AC Servo Motor.
3. Analog PID control response for I and II order system as process.
4. Study and demonstration of Linear System Simulator
5. To demonstrate Potentiometer as error detector.
6. Study and demonstration of AC Synchro: Transmitter and Receiver
7. Stepper Motor Demonstration
8. DC motor speed control
9. DC Position Servo system demonstration
10. Ac Position Servo system demonstration
11. To study Ac Motor
12. Study of Relay control system

Diploma in Electrical & Electronics Engineering (Semester-V)

DEE 5104 POWER SYSTEM LAB.

1. Determination of IDMT characteristics for an IDMT overcurrent relay for different values of pluck setting multiplier using relay test kit.
2. Power system fault analysis using DC network analyser.
3. Determination of ABCD parameters and voltage profile for an artificial transmission line of 600 Km.
4. To control the receiving end voltage in the transmission line by a micro-computer controlled SVC.
5. Study of various types of meters (power factor, frequency meter, phase sequence meter, wattmeter, ammeter, voltmeter).
6. Connection of transformer winding (star-star & delta-delta).
7. Power factor control of an Inductive load.
8. Determination of phase sequence by 2 bulb and R-C method.
9. To perform Ferro Resonance Phenomenon for a transformer at no load .
10. Earth resistance measurement by earth tester.
11. Measurement of 1-$_{\varphi}$ power by wattmeter method.
12. Measurement of 1- $_{\varphi}$ power by energy meter.
13. Study of various Insulators.
14. Power system Line to ground fault analysis using DC network analyser.
15. Power system Line to line fault analysis using DC network analyser.
16. Determination of ABCD parameter and voltage profile for an artificial transmission line of 600 km(using nominal T method).
17. Study of overcurrent relay.

Diploma in Electrical & Electronics Engineering (Semester-V)

DEE 5010 POWER CONVERTER LAB.

LIST OF EXPERIMENT

1. To study the V-I characteristics of S.C.R. and determine the Break over voltage, on state resistance Holding current & Latching current.
2. To study the v-1 characteristics of a TRIAC in both directions and also in different (1, 2, 3 & 4) modes of operation and determine break over voltages, holding current, latching current and comment on sensitivities.
3. To study the characteristics of MOSFET
4. To study the performance & waveforms of HWR & FWR by using RC triggering Circuit
5. To study the performance & waveforms of U.J.T triggering of S.C.R.
6. To study the AC voltage control by using TRIAC-DIAC combination
7. To study the performance and waveforms of full wave controlled rectifier with Resistance load and Inductive load
8. To study the performance of voltage commutated chopper for constant frequency operations.
9. To study speed control of Induction motor and plot speed v/s α.
10. To study speed control of Universal motor and plot speed v/s α.
11. To obtain variable AC from DC ripple input.
12. To obtain variable AC from DC ripple input.

Diploma in Electrical & Electronics Engineering (Semester-V)

DEC 5014 EMBEDDED SYSTEM LAB.

LIST OF EXPERIMENTS

1. Development and execution of the program for sending data on port lines.
2. Development and execution of the program for arithmetic operation and time delay.
3. Development and execution of the program for input and output operation.
4. Development and execution of the program for interface LEDs to particular port.
5. Development and execution of the program to generate a square wave on port.
6. Development and execution of the program for logical operators and data conversion.
7. Development and execution of the program PWM waveform generation.
8. Development and execution of the program to display "UNIVPOLY" message on LCD (16x2).
9. To write 8051 C program to send "WELCOME" on serial port continuously.
10. Interface Stepper Motor to Microcontroller 8051 and development and execution of the program to run stepper motor.
11. Interface ADC to Microcontroller 8051 and development and execution of the program to display digital equivalent of analog input
12. Interface DAC to Microcontroller 8051 and development and execution of the program to generate specified voltage.

Diploma in Electrical & Electronics Engineering (Semester-VI)

DCS 6006 COMPUTER HARDWARE LAB.

LIST OF EXPERIMENTS

1. Study of motherboard:
    a. XT form factor.
    b. AT form factor.
    c. LPX form factor.
    d. ATX form factor.
2. Disassembling of PC:
    a. PC- XT
    b. PC- AT
    c. PC- ATX
3. Assembling of PC:
    a. PC-XT
    b. PC-AT
    c. PC-ATX
4. Study of BIOS Setup.
5. Installation of Windows-XP operating system.
6. Repairing corrupted operating system.
7. Installation of display diver, sound driver, network driver.
8. Managing disk and file system:
    a. Installing two hard disk
    b. Creating primary, extended, logical partition
    c. Formatting a partition
    d. Converting a Basic Disk to a Dynamic Disk
    e. Understanding simple, spanned, striped, Mirrored volume
        i. Creating Simple volume
        ii. Creating spanned volume
        iii. Creating striped volume
        iv. Extending volume size
        v. Deleting simple, striped, spanned volume
9. Preventive maintenance tools**:**
    a. System restore
        i. Creating restore point
        ii. Restore system to earlier date and time.
    b. Disk defragmentation
    c. Scandisk
    d. Installation and configuration of Anti-virus
10. Installation and configuration of VM Ware.

Diploma in Electrical & Electronics Engineering (Semester-VI)

DEE 6016 PLC LAB

LIST OF EXPERIMENT

1. Components/sub-components of a PLC, Learning functions of different modules of a PLC system

2. Practical steps in programming a PLC (a) using a Hand held programmer (b) using computer
   interface.
3. Introduction to step 5 programming language, ladder diagram concept.
   - Introduction to ladder programming & to implement basic logic gates
   - Develop, Simulate and Test Ladder diagram for Door Bell Operation
   - Develop, Simulate and Test Ladder diagram for Bottle Filling system
   - Develop, Simulate and Test Ladder diagram for Traffic Light Control System
   - Develop, Simulate and Test Ladder diagram for Car Parking System
   - Develop, Simulate and Test Ladder diagram for an alarm annunciator system
   - Develop, Simulate and Test Ladder diagram for Batch Mixer
   - Develop, Simulate and Test Ladder diagram for Drink Dispenser System
   - Develop and test PLC program for three phase motor in both direction
   - Develop, Simulate and Test Ladder Diagram for stepper motor control in forward and reverse direction
4. Develop, Simulate and Test Ladder diagram for an Elevator systeLogic control systems with time response as applied to clamping operation
5. Sequence control system e.g. in lifting a device for packaging and counting
6. Draw a Ladder logic diagram for two different examples.
7. Perform Stepper motor /Temperature control using PLC/traffic.
8. Identify the parts of hydraulic/Pneumatic Servomotor from Cut-Section/Model
9. Introduction to ladder programming & to implement basic logic gates
10. Develop, Simulate and Test Ladder diagram for Door Bell Operation
11. Develop, Simulate and Test Ladder diagram for Bottle Filling system
12. Develop, Simulate and Test Ladder diagram for Traffic Light Control System
13. Develop, Simulate and Test Ladder diagram for Car Parking System
14. Develop, Simulate and Test Ladder diagram for an alarm annunciator system
15. Develop, Simulate and Test Ladder diagram for Batch Mixer
16. Develop, Simulate and Test Ladder diagram for Drink Dispenser System
17. Develop and test PLC program for three phase motor in both direction
18. Develop simulate and Test Ladder Diagram for stepper motor control in forward and reverse direction.
19. Develop, Simulate and Test Ladder diagram for an Elevator system.

Diploma in Electrical & Electronics Engineering (Semester-VI)

DEE 6110 ELECTRICAL WORKSHOP

OBJECTIVE

Students will be able to:
1. Know safety measures and state safety precautions.
2. Test single phase, three phase transformer, DC& AC machine as per IS.
3 .Identify/ locate common troubles in electrical machines and switch gear.
4. Plan& carry out routine & preventive maintenance.
5. Install LV switchgear and maintain it.

1. Introduction to Safety precautions, Elementary first aid and treatment of Electrical shocks.

2. Introduction to Tools, Measuring instruments and symbols used in electrical workshops.

3. Introduction to Indian electricity rules (IER) pertaining to domestic and industrial electrification.

4. Various types of wires and cables used for electrical wiring.

5. Various types of wires and cable joint practices.

6. To identify and give connections of wiring accessories.

7. A.C. and D.C. wiring practice for house and workshops.

8. Connection of 1-phase and 3-phase energy meter.

9. To install the overhead service line for building.

10. Visit of substation.

11. Practice for maintenance/repair of house hold appliances (Fans, Washing machines, Kitchen refrigerator, coolers etc).

Diploma in Electrical & Electronics Engineering (Semester-VI)

DEE 6014 SWITCH GEAR AND PROTECTION LAB.

LIST OF EXPERIMENT

1. To demonstrate HRC fuse, MCB & ELCB and explain the functions of various components.
2. To Identify the components of following types of circuit breakers with their specifications (through visits , video or model).: I) Low tension air circuit breaker.(including protective devices) II) Minimum oil circuit breaker (M O C B) III) Air Blast circuit breaker (ABCB) IV) Sulpher - Hexa fluoride circuit breaker (S F 6) V) Vacuum circuit breaker.
3. To Plot the inverse characteristics of Induction type/ Micrprocessor Based – (i) O/C relay, (ii) E/F relay using Relay Testing Kit.
4. To test percentage Differential Protection of Transformer Using Transformer Differential Relay (Electromagnetic/Microprocessor based).
5. To demonstrate the operation of single phasing preventer by creating single phasing fault for a given 3-ph induction motor with D.O.L. starter.
6. To test Directional Over Current Relay (DOCR) by Relay Testing Kit.
7. To simulate Alternator Protection using any simulator
8. To simulate the operation of Distance Relay using any simulator.
9. To prepare a report on specifications of lightning arresters of different manufacturers through Brochures / Literature.

Diploma in Electronics Engineering (Semester-III)

DEC3102 BASIC ELECTRONICS LAB.

List of Experiments:

1. Observe the wave shape of following rectifier circuit
   a. Half wave rectifier b. Full wave rectifier c. Bridge rectifier
2. Plot the wave shape of full wave rectifier with
   a. Shunt capacitor filter b. Series inductor filter c. RC filter
3. Plot input and output characteristics and calculate parameters of transistors in CE configuration.
4. Plot input and output characteristics and calculate of parameters of transistors in CB configuration.
5. Plot V-I characteristics of FET amplifier.
6. Measure the Q-Point and note the variation of Q-Point.
   a. By increasing the base resistance in fixed bias circuit.
   b. By changing out of bias resistance in potential divider circuit.
7. Measure the Voltage Gain, input, output impedance in single state CE amplifier circuit
8. Plot the frequency response of two stage RC coupled amplifier and calculate the bandwidth and compare it with single stage amplifier
9. To measure the gain of push-pull amplifier at 1KHz
10. To measure the voltage gain of emitter follower circuit and plot its frequency response
11. Plot the frequency response curve of Hartley and Colpitts Oscillator
12. Plot the frequency response curve of phase shift and Wein bridge Oscillator

Diploma in Electronics Engineering (Semester-III)

DMM 3004 APPLIED MECHANICS LAB.

List of Experiments:

1. To verify the Polygon Law of Forces, with the help of force polygon apparatus.
2. To verify the parallelogram law of forces.
3. To study Lami's theorem using universal force table apparatus.
4. To verify the forces in the different members of a jib crane.
5. To find out centre of gravity of regular laminas.
6. To find out centre of gravity of irregular laminas.
7. To find moment of inertia of flywheel.
8. Comparison of coefficient of friction of various pairs of surfaces & determination of angle of repose.
9. To find the mechanical advantage, velocity ratio and efficiency in the case of Screw Jack.
10. Deflections of a truss-horizontal deflections & vertical deflections of various joints of a pin-jointed truss.
11. To find the mechanical advantage, velocity ratio and efficiency in the case of Winch Crab Single Graphical Representation.
12. To study the performance of differential axle and wheel and find its velocity ratio, efficiency and law of machine.

Diploma in Electronics Engineering (Semester-III)

DEC3004 DIGITAL ELECTRONICS LAB

List of experiments:

1. Verification of basic Logic gates
2. Verification of Universal logic gates and realization of basic gates
3. Design and implementation of code converters using logic gates
   (i) BCD to excess-3 code and vice versa (ii) Binary to gray and vice-versa
4. Prove DE – Morgan's 1st theorem.
5. Prove DE – Morgan's 2nd theorem.
6. Design and realization of S.R. flip-flop using IC 7400.
7. Design and realization of J.K. flip-flop using IC 7400.
8. Design and realization of a 4-bit magnitude comparator using IC 7485.
9. Design and realization of a parity bit checker using IC 7486.
10. Design and realization of parity bit generator using IC 7486.
11. Design and implementation of 4 bit binary Adder/ Subtractor and BCD adder using IC 7483
12. Design and implementation of Multiplexer and De-multiplexer using logic gates
13. Design and implementation of encoder and decoder using logic gates
14. Construction and verification of 4 bit ripple counter and Mod-10 / Mod-12 Ripple counters
15. Design and implementation of 3-bit synchronous up/down counter
16. Implementation of SISO, SIPO, PISO and PIPO shift registers using Flip- flops.
17. Construction of Half Adder and Full Adder.
18. Simplification and Realization of Boolean Functions, using NAND gates only.

Diploma in Electronics Engineering (Semester-III)

DCS 3002 C PROGRAMMING LAB.

List of Experiments

1. Write Programs in C to implement.

2. Programming Exercise on Executing and Editing a C Program.

3. Programming Exercise on defining Variable and assigning values to variables.

4. Programming Exercise on arithmetic's and relational operators.

5. Programming Exercise on arithmetic expression and their evaluation.

6. Programming Exercise on formatting input/output using printf and scanf.

7. Programming Exercise using if-statement.

8. Programming Exercise using if-else statement.

9. Programming Exercise on switch statement.

10. Programming Exercise on do-while statement.

11. Programming Exercise on for statement.

12. Programming exercise on one-dimensional array and two-dimensional array.

13. (i) Programs for putting two strings together (ii) Programs for comparing two strings.

14. Simple programs using structures and Union.

Diploma in Electronics Engineering (Semester-III)

DHU3002 PROFESSIONAL PRACTICES-II

OBJECTIVE: Student will be able to:

1. Acquire information from different sources.
2. Prepare notes for given topic.
3. Present given topic in a seminar.
4. Interact with peers to share thoughts.
5. Prepare a report on industrial visit, expert lecture
6. Fault detection and basic repair of lab. equipments like Multimeter, CRO, UPS.

Module-I:

Field Visits: Structured field visits (minimum three) be arranged and report of the same should be submitted by the individual student, to form a part of the term work. The field visits may be arranged in the following areas / industries:
Power supply/UPS/SMPS/Inverter manufacturing unit, Electronics Instruments calibration laboratories, Residential building for Electronic security systems, Small hydro power station, Wind mill.

Module-II:

Lectures by Professional / Industrial Expert:(any four fields)
Non-conventional energy sources, Energy audit, Water pollution control, Software for P.C.B. layout, Mobile communication, Various government schemes, Industrial hygiene, Hydro power generation.

Module-III:

Seminar: Students (Group of 4 to 5 students) have to search /collect information about the topic through literature survey, visits and discussions with experts/concerned persons:
Students will have to submit a report of about 10 pages and deliver a seminar for 10 minutes on Any one of the topics: Water supply schemes/Problems of drinking water in rural area, Problems related to traffic control, Electronic rolling display, Electronic systems used in Multiplex, Any other suitable topic.

Module-IV:

Repair and maintenance of the following Items: CRO, Multimeter, UPS, Power supply.

Module-V:

Market Survey: A group of four students is expected to collect information from the market regarding specifications and cost of any four items: CRO, Multimeter, UPS, Power supply for brand name, specifications, cost and applications.

Diploma in Electronics Engineering (Semester-IV)

DEC4012 ELECTRONIC INSTRUMENT AND MEASUREMENT LAB.

List of experiments:

1. Study of CRO
2. Study of Function Generator
3. Measurement of Voltage and Frequency using CRO
4. Measurement of R, L and C using LCRQ meter
5. Measurement of resistance using Wheatstone Bridge
6. Measurement of low value resistance using Kelvin Bridge
7. To determine characteristics of Photovoltaic cell
8. To determine characteristics of Photoconductive cell
9. To determine characteristics of IC temperature sensor
10. To determine characteristics of Platinum RTD
11. Measurement of Capacitance using Wien's Bridge
12. Measurement of Inductance using Maxwell's Bridge

Diploma in Electronics Engineering (Semester-IV)

DEC4014 ANALOG COMMUNICATIONS LAB.

List of experiments:

1. Observation of signals for double side band AM generation
2. Determination of modulation index from DSB AM wave.
3. Observation of signals for demodulation of AM wave using envelope detector.
4. Observation of signals for demodulation of AM wave using linear diode detector.
5. Observation of signals for modulation of SSB signal.
6. Observation of signals for demodulation of SSB signal.
7. Observation of signals for FM wave using Varactor Modulator.
8. To measure the frequency deviation and modulation index using FM wave.
9. Observation of signals for the demodulation of FM wave using PLL
10. Voice transmission with DSB/SSB AM transmission/reception

Diploma in Electronics Engineering (Semester-IV)

DEC4016 LINEAR INTEGRATED CIRCUIT LAB.

List of experiments

1. Measurement of parameters of IC 741 (such as CMRR , SVRR, offset adjustment)
2. To assemble inverting and non-inverting amplifier and draw input output wave forms.
3. To assemble addition and subtraction of analog signal using OPAMP.
4. Observe output of active integrator for different types of input (sine and square)
5. Observe output of active differentiator for different types of input (sine and square)
6. Plot the graph of input and output for V to I converter and I to V converter
7. To assemble logarithmic and antilogarithmic amplifier and verify its output.
8. To assemble zero crossing detector and active peak detector.
9. To assemble and plot the output waveform for astable multivibrator, voltage control oscillator using IC 555.
10. To assemble and plot the output waveform for bistable multivibrator and schmitt trigger using IC 555.
11. Design monostable multivibrator using IC 555 and troublshoot.
12. Plot the frequency response of second order butterworth low pass filter.
13. Plot the frequency response of second order butterworth high pass filter.
14. Plot the frequency response of first order butterworth band pass filter/ band reject filter.

Diploma in Electronics Engineering (Semester-IV)

DEC4018 MICROPROCESSOR LAB.

List of experiments

1. (a) Write an ALP to add two 8-bit numbers; sum being of 8 Bits. (b) Write an ALP to add two 8-bit numbers; sum may be of 16 Bits.

2. Write an ALP to subtract two unsigned numbers, store the result in memory location XX90H. How would you determine the result obtained is straight binary number or 2's complement ? Verify with examples.

3. Write an ALP to multiply two 8-bit numbers, product being of 16 bits.

4. Write an ALP to arrange a data array in ascending order.

5. Write an ALP to arrange a data array in descending order.

6. Write an ALP for 2-bit BCD to BINARY conversion.

7. Write an ALP for BINARY to BCD conversion.

8. Write an ALP for block transfer of data.

9. Write an ALP for addition of two 16-bit numbers, sum may be of 16 bits or more.

10. Write an ALP to find the largest number in a data array.

11. Six bytes of data are stored in memory locations starting at 2050H. Add all the data bytes. Use register B to save any carries generated, while adding the data bytes. Store the sum at two consecutive memory locations 2070H & 2071H. Write an ALP for the above mentioned problem statement.

12. Register BC contains 2793H, and registers DE contain 3182H. Write an ALP to add these two 16-bit numbers, and place the sum in memory locations 2050H & 2051H.

Diploma in Electronics Engineering (Semester-IV)

DCS 4012 VISUAL BASIC LAB.

OBJECTIVE:

1. Develop acquaintance with standard VB controls.
2. Developing understanding of various controls and mathematical functions.
3. Understanding various inbuilt functions.
4. Using control statements in VB.
5. Database connectivity and report generation.

1. **Visual basic building blocks:**
   - Object, properties, events, forms, controls, modules, methods, input box and message box.
   - Form: Creating adding and removing forms in project: Add, remove, hide, show, load statement, unload statement, me keyword, Referring to objects on a different forms.
   - Data types, Variable, constant
2. **Working with Controls:**
   - Text box, label, command button, frame, list box, check box, radio button, file list box, drive list box, directory list box, timer, scroll bar control, picture box, image box, Menu editor.
3. **Inbuilt functions:**

   Mathematical function: Rnd, Sqr, Int, Abs, Exp, Log, Sin, Cos, Tan , Atn, Fix and Round.

   Format function and String: Tab, Space, and Format, String comparison: equals, compareto.
4. **Control statements:**

   If ……then, If…….then……else, If…….then……elseif…end if

   Looping: for….next, while…wend, do….while, do….until.

   Compound conditions: And , Or, Not; Select Case
5. **Database connecting tools:**

   ADODC, ADODB, Creating the database files for use by visual basic(using MS-Access), Data control and their properties, Adding a New Record, searching record, Updating a record, Deleting a record, Data grid

   Report generation: Data environment, creating query, preparing a report.

Diploma in Electronics Engineering (Semester-IV)

DHU 4002 PROFESSIONAL PRACTICES-III

OBJECTIVE: Student will be able to:

1. Acquire information from different sources.
2. Prepare notes for given topic.
3. Present given topic in a seminar.
4. Interact with peers to share thoughts.
5. Prepare a report on industrial visit, expert lecture

Fault detection and adopting proper troubleshooting procedure for repair and maintenance.

Module-I:

Field Visits: Structured field visits (minimum three) be arranged and report of the same should be submitted by the individual student, to form a part of the term work. The field visits may be arranged in the following areas / industries:
Electronic Equipment Manufacturing unit, Resistance Welding unit, Industrial Automation unit.

Module-II:

Lectures by Professional / Industrial Expert:(any four fields)
Cyber laws, Fiber optics communication system, Disaster management,Use of signals for Telephone, television, internet, Industrial Safety, Computer security systems, any other suitable topic.

Module-III:

Information Search : Information search can be done through manufacturers, catalogue, internet, magazines; books etc. and submit a report. Following topics are suggested: Collection of information about tools used in electronic workshop, Market survey for motors used in electronic application, Non-Conventional Energy Sources with focus on solar energy, Elevators installation and maintenance, any other suitable areas.

Module-IV:

Seminar: Seminar topic should be related to the subjects of fourth semester. Each student shall submit a report of at least 10 pages and deliver a seminar (Presentation time – 10 minutes)

Module-V:

Maintenance of Electronic Equipment: Reliability Factors of equipments, Maintenance Management, Troubleshooting Procedures, Troubleshooting Aids.

Text and Reference books:

1. Electronic Instruments & System by R.G. Gupta, Tata MacGraw Hill.
2. Trouble Shooting Electronic Equipment by R.S. Khandpar, Tata MacGraw Hill.

Diploma in Electronics Engineering (Semester-V)

DEC 5010 DIGITAL COMMUNICATIONS LAB.

List of experiments:

1. Observe the signal sampling and reconstruct techniques
2. Observe the effect on reconstructed wave form using sample / hold circuit.
3. To compare the frequency response of 2^{nd} order and 4^{th} order of LPF.
4. Observe waveforms of Pulse Amplitude modulation and demodulation.
5. Observe waveforms of Pulse width modulation (using natural sampling & flat top sampling)
6. Observe waveforms of Pulse Position modulation (using natural sampling.
7. Observe waveforms of Pulse code modulation and demodulation.
8. Observe waveforms of Delta modulation.
9. Observe waveforms of Adaptive delta Modulation.
10. Observe waveforms of ASK modulation & demodulation.
11. Observe waveforms of FSK modulation & demodulation.
12. Observe waveforms of PSK modulation & demodulation.

Optional

1. Observe waveforms of QPSK modulation & demodulation.
2. Observe waveforms of QAM modulation & demodulation.
3. Error detection & correction using parity bits.
4. Error detection & correction using hamming codes
5. To generate following different line codes and decode them.

    a. NRZ (Unipolar) b. Bipolar NRZ c. RZ (Unipolar) d. Bipolar RZ

6. Time division multiplexing/ de multiplexing system.
7. Frequency division multiplexing/ de multiplexing system.

Diploma in Electronics Engineering (Semester-V)

DEC 5014 EMBEDDED SYSTEM LAB.

List of experiments:

1. Development and execution of the program for sending data on port lines.
2. Development and execution of the program for arithmetic operation and time delay.
3. Development and execution of the program for input and output operation.
4. Development and execution of the program for interface LEDs to particular port.
5. Development and execution of the program to generate a square wave on port.
6. Development and execution of the program for logical operators and data conversion.
7. Development and execution of the program PWM waveform generation.
8. Development and execution of the program to display "UNIVPOLY" message on LCD (16x2).
9. To write 8051 C program to send "WELCOME" on serial port continuously.
10. Interface Stepper Motor to Microcontroller 8051 and development and execution of the program to run stepper motor.
11. Interface ADC to Microcontroller 8051 and development and execution of the program to display digital equivalent of analog input
12. Interface DAC to Microcontroller 8051 and development and execution of the program to generate specified voltage.

Diploma in Electronics Engineering (Semester-V)

DEC 5016 ADVANCE COMMUNICATION SYSTEMS LAB.

List of experiments:

1. Verify the characteristics of Reflex Klystron.
2. Verification of characteristics E Plane Tee.
3. Verification of characteristics of Isolator.
4. Verification of characteristics of Circulator.
5. Indirect measurement of frequency using cavity resonator.
6. Measure the coupling factor of MHD Coupler.
7. Verification of the square law characteristics of a VHF crystal oscillator
8. V-I Characteristics of a Gunn Diode.
9. Determination of gain of a pyramidal Horn Antenna.
10. Determination of waveguide characteristics of X-Band Rectangular Waveguide.
11. Determination of Transmission Line Parameters.

Diploma in Electronics Engineering (Semester-V)

DEC 5018 CONTROL SYSTEMS LAB.

List of Experiments

1. To determine Speed- Torque characteristics of DC Servo Motor.
2. To determine Speed- Torque characteristics of AC Servo Motor.
3. Analog PID control response for I and II order system as process.
4. Study and demonstration of Linear System Simulator
5. To demonstrate Potentiometer as error detector.
6. Study and demonstration of AC Synchro: Transmitter and Receiver
7. Stepper Motor Demonstration
8. DC motor speed control
9. DC Position Servo system demonstration
10. AC Position Servo system demonstration
11. To study AC Motor
12. Study of Relay control system

Diploma in Electronics Engineering (Semester-VI)

DEC6014 INDUSTRIAL INSTRUMENTATION LAB.

List of experiments:

1. Measurement of displacement using LVDT
2. Measurement of weight using Strain gauge trainer
3. To determine characteristics of PIN Photodiode
4. To determine characteristics of Phototransistor
5. To determine characteristics of Platinum RTD
6. To determine characteristics of NTC Thermistor
7. To determine characteristics of K type Thermocouple
8. Introduction to ladder programming & to implement basic logic gates
9. Develop, Simulate and Test Ladder diagram for Door Bell Operation
10. Develop, Simulate and Test Ladder diagram for Bottle Filling system
11. Develop, Simulate and Test Ladder diagram for Traffic Light Control System
12. Develop, Simulate and Test Ladder diagram for Car Parking System
13. Develop, Simulate and Test Ladder diagram for an alarm enunciator system
14. Develop, Simulate and Test Ladder diagram for Batch Mixer
15. Develop, Simulate and Test Ladder diagram for Drink Dispenser System
16. Develop and test PLC program for three phase motor in both direction
17. Develop, Simulate and Test Ladder Diagram for stepper motor control in forward and reverse direction.
18. Develop, Simulate and Test Ladder diagram for an Elevator system.

Diploma in Electronics Engineering (Semester-VI)

DCS 6004 COMPUTER HARDWARE LAB.

List of Experiments

1. Study of motherboard:
    a. XT form factor.
    b. AT form factor.
    c. LPX form factor.
    d. ATX form factor.
3. Disassembling of PC:
    a. PC- XT
    b. PC- AT
    c. PC- ATX
4. Assembling of PC:
    a. PC-XT
    b. PC-AT
    c. PC-ATX
5. Study of BIOS Setup.
6. Installation of Windows-XP operating system.
7. Repairing corrupted operating system.
8. Installation of display diver, sound driver, network driver.
9. Managing disk and file system:
    a. Installing two hard disk
    b. Creating primary, extended, logical partition
    c. Formatting a partition
    d. Converting a Basic Disk to a Dynamic Disk
    e. Understanding simple, spanned, striped, Mirrored volume
        i. Creating Simple volume
        ii. Creating spanned volume
        iii. Creating striped volume
        iv. Extending volume size
        v. Deleting simple, striped, spanned volume
10. Preventive maintenance tools**:**
    a. System restore
        i. Creating restore point
        ii. Restore system to earlier date and time.
    b. Disk defragmentation
    c. Scandisk
    d. Installation and configuration of Anti-virus
11. Installation and configuration of VM Ware.

Diploma in Electronics Engineering (Semester-VI)

DCS 6008 COMPUTER NETWORKING & SECURITY LAB.

List of Experiments

1. Identification of various network components/devices e.g. Connectors, Hub, Switch, Modem
2. Preparation of cross and parallel cable.
3. Setting IP address.
4. Using command line diagnostics: ipconfig and ping.
5. Setting-up of small home/office network:
    a. Connecting PCs in a network.
    b. Configuring PCs in a network.
    c. Creating workgroup.
6. File and print sharing
    a. Setting-up file sharing options (read/write/full control).
    b. Setting-up print sharing options.
    c. Installation of network printer.
7. Configuring and managing computer security
    a. Account lockout
    b. Password policy
    c. Audit policy
    d. User Rights Assignment
    e. Security Options
8. Setting-up of Remote desktop services
9. Netmeeting:
    a. Installation of Netmeeting
    b. Sharing of files on Netmeeting
    c. Desktop sharing
    d. Shared white board
10. Setting-up remote assistance.
11. Installation of server Operating system.
12. Installation of Active directory.
13. Configuring access permissions.
14. Installation & configuration of TCS(Terminal Client Services)
15. Quota Management
16. Managing user accounts
    a. Creating user accounts
    b. Making a user account member of Administrative group.
    c. Assigning permissions

BMLT (Semester-I)

SUBJECT: BMT 1102 HUMAN ANATOMY AND PHYSIOLOGY LAB-I

Objective:

The student will be able to:

- Describe the body plan and organization and homeostasis.
- Explain basic principles of body chemistry.
- Identify and relate basic concepts of structures and functions of various organs.

List of Experiments:

1. To study the microscope and its related accessories.
2. To measure the own blood pressure by using sphygmomanometer.
3. To study the Human Skelton systems by using chart and models.
4. Demonstration of different bones of the Human Skelton systems.
5. Determination of Hemoglobin by Sahli's method.
6. Estimation of bleeding time of own blood sample.
7. Estimation of clotting time of own blood sample
8. Estimation of Salivary Amylase on different temperature.
9. To study and draw the structure of Respiratory system by using charts and model.
10. To study and draw the structure of Cardiovascular system by using charts and model.
11. To study and draw the structure of Digestive system by using charts and model.
12. Estimation of permanent slide of liver, kidney and pancreas.

References:

1. Kevin Patton, David Hill, "Essentials of Anatomy and Physiology Laboratory Manual",1st Edition.
2. N. Marieb, Laboratory manual for Anatomy & Physiology, 5th Edition.
3. Ian Patel and Muralitharan Nair, Fundamentals of Anatomy & Physiology.
4. Gerard J. Torotra, Robert J. Amitrano, Anatomy and Physiology: A Lab Manual.

BMLT (Semester-I)

SUBJECT: BMT 1104 CHEMISTRY LAB.

LIST OF EXPERIMENTS

1. Standardize the given HCl solution with the help of N/20 sodium carbonate solution.
2. To determine the carbonate hardness of given water sample.
3. To determine the non-carbonate hardness of given water sample.
4. To determine the total hardness of given water sample by EDTA method.
5. To estimate pH of water sample by colorimetric method & pH meter.
6. To Estimate free chlorine in given water sample.
7. To estimate the amount of Mohr's salt present in the given solution using standard $KMnO_4$ solution.
8. To determine the alkalinity of given water sample.
9. Estimation of Barium as Barium Sulphate by Gravimetric Analysis.
10. Estimation of strength of Ag ion in the given $AgNO_3$ solution by gravimetric analysis.
11. To separate the various pigments in the extract of green grass by TLC.
12. To determine the value of rate constant (K) for the hydrolysis of ethyl acetate catalyzed by hydrochloric acid.
13. To determine the λ max for the given solution using colorimeter.
14. To determine the concentration of the given unknown solution of $KMnO_4$ by colorimeter.
15. To determine the Fe^{3+} concentration in the given water sample by colorimeter.
16. Qualitative analysis of unknown organic compounds for detection of elements and functional group.
17. Salt analysis for one acid and one basic radical (Salt 1).
18. Salt analysis for one acid and one basic radical (Salt 2).
19. Salt analysis for two acid and two basic radical (Mixture 1).
20. Salt analysis for two acid and two basic radical (Mixture 2).

References:

1. Shashi Chawla, Essential of Experimental Engineering Chemistry.
2. S. K. Bhasin & Sudha Rani, Laboratory Manual on Engineering Chemistry.

BMLT (Semester-I)

SUBJECT: BMT 1106 BASICS OF ELECTRICAL & ELECTRONICS LAB.

LIST OF EXPERIMENTS

1. Study and Identification of electrical tools, electrical symbols, electrical instruments and safety precautions.

2. Identification of various electrical safety devices and components (Fuse, Circuit breaker, Relay & Connectors).

3. To construct and verify the (a) KCL (b) KVL.

4. Identification of various types of wires and cables.

5. Connection and running of single phase (1-ϕ) A.C motor.

6. To identify the various types of transformers and D.C machines.

7. Measurement of voltage and frequency of an input signal using CRO and Function generator

8. Construct and plot the V-I characteristics of PN Junction diode and find the cut-in voltage.
9. Construct and plot the V-I characteristics of Zener diode and find the breakdown voltage.
10. Construct the rectifier circuit with or without filter and find the ripple factor and efficiency.

11. Identify and testing of different types of transistor.

12. To plot the V-I characteristics of transistor in common Emitter configuration and to find its current gain (β_{dc}).

13. Construct the circuit for inverting amplifier and determine its voltage gain (A_v).

References:
1. Shashi Chawla, Essential of Experimental Engineering Chemistry.
2. S.K Bhasin & Sudha Rani.Laboratory Manual on Engineering Chemistry.

BMLT (Semester-I)

SUBJECT: BMT 1012 BASIC WORKSHOP I (HEALTH CARE)

- Introduction to Common Laboratory Glass Wares
- Introduction to basic Laboratory Equipments
- Basic Laboratory Safety
- Code of Conduct for Medical Laboratory Personnel
- Labelling of Hazardous Reagents or Chemicals
- Recording of Physiological Parameters - body temperature, pulse and respiration etc.
- Auscultation for Heart Sounds
- Artificial Respiration
- Determination of respiratory Parameters- Vital capacity, Tidal Volume etc.
- Introduction to techniques of Phlebotomy (Specimen Collection)
- Separation of Serum & Plasma

References:

1. Ramnik Sood, "Medical Laboratory Technology: Methods and Interpretations", Jaypee Publishers.
2. Kanai L Mukherjee, "Medical Laboratory Technology: A Procedure Manual for Routine Diagnostic Tests" Tata McGraw-Hill Publishing Company Limited.
3. David T Plummer, "An Introduction to Practical Biochemistry", Tata McGraw-Hill Publishing Company Limited.

BMLT (Semester-II)

SUBJECT: BMT 2102 HUMAN ANATOMY & PHYSIOLOGY LAB– II

List of Experiments:

1 To determine the pH, Specific gravity and general characteristics of urine.
2 Microscopic examination of urine sample (Calcium oxalate and Ammonium urate crystals).
3 To study and draw the structure of Nervous system by using charts and model.
4 To study and draw the structure of various glands by using charts and model.
5 To study and draw the structure of Reproductive system by using charts and model.
6 To study and draw the structure of Lymphatic system by using charts and model.
7 To study and draw the structure of Skin and its various layers by using charts and model.
8 To study and draw the structure of Eye by using charts and model.
9 To study and draw the structure of Ear by using charts and model.
10 To prepare the health Chart schedule for Adults and geriatric person.
11 To calculate the values of Carbohydrates, proteins and fats for adults.

References:

1. Essentials of Anatomy and Physiology Laboratory Manual 1st Edition, Kevin Patton, David Hill.
2. Laboratory manual for Anatomy & Physiology, 5th Edition N. Marieb.
3. Fundamentals of Anatomy & Physiology, Ian Patel and Muralitharan Nair.
4. Anatomy and Physiology: A Lab Manual by Gerard J. Torotra, Robert J. Amitrano.

BMLT (Semester-II)

SUBJECT: BMT 2104 HEMATOLOGY LABORATORY I

List of Experiments

1. Estimation of Hb by various methods.
2. Standardization of instruments for adaptation for Hb estimation.
3. Estimation of cell counts by both visual as well as electronic method
4. Estimation of white blood cells (leukocytes) counts
5. Estimation of red blood cells (erythroocytes) counts
6. Estimation of platelets (thrombocytes) counts\
7. Experiments based on study of morphology of normal blood cells and their identification
8. Estimation of erythrocytes sedimentation rate (ESR) by Westergren's method.
9. Estimation of erythrocytes sedimentation rate (ESR) by Wintrobe's method.
10. Estimation of erythrocytes sedimentation rate (ESR) by Micro ESR method.
11. Experiment based on routine examination of biological fluids such as CSF
12. Determination of bleeding time by various methods
13. Determination of clotting time by various methods

References:

1. Baker et al: An introduction to medical laboratory technology.
2. Charles F. Seiverd: Hematology for medical technologists
3. Arthur Simmons: Technical hematology
4. Harsh Mohan,Pathology Practical Book,Third Edition, Jaypee Brothers

BMLT (Semester-II)

SUBJECT: BMT 2106 CLINICAL PATHOLOGY LAB.

List of Experiments:

1. Physical examination of Urine.
2. Chemical examination of Urine for Proteinuria
3. Chemical examination of Urine for Ketonuria
4. Chemical examination of Urine for Glucosuria
5. Chemical examination of Urine for Bile Salts
6. Chemical examination of Urine for Urobilinogen
7. Physical examination of stool
8. Chemical examination of stool
9. Microscopic examination of stool
10. Physical examination of Semen
11. Chemical examination of Semen
12. Determination of urea in Blood.
13. Estimation of chloride in Urine.
14. Estimation of Total Nitrogen in Urine.
15. Estimation of Ammonium salts of Urine.
16. Determination of Microscopic structures of Urine.

References:

1. Practical Biochemistry for Medical Students - B. Raghu
2. Manaul of Practical Biochemistry – K.P Sinha
3. Practical Clinical Biochemistry
4. Practical Pathology - NC Dey, D.Sinha
5. Harsh Mohan, Pathology Practical Book, Third Edition, Jaypee Brothers

BMLT (Semester-II)

SUBJECT: BMT 2108 FUNDAMENTALS OF COMPUTER LAB

Operating system -Windows

1. Create a new folder and do the following:
    - Create a new folder
    - Rename folder
    - Move folder
    - Copy folder.
    - Delete folder
2. Implement the various well known features of Windows operating system such as Notepad, WordPad, Paint, System tools, Entertainment etc.
3. Implement various display properties.
4. Explore the taskbar of Windows.
5. Set the wall paper and screen saver.
6. Set the data/time.
7. Recycle bin

Word Processing -MS-Word

8. Create a document and
    - Put Bullets and Numbers
    - Apply various Font parameters.
    - Apply Left, Right, and Centre alignments.
    - Apply hyperlinks
    - Insert pictures
    - Insert ClipArt
    - Show the use of WordArt
    - Add Borders and Shading
    - Show the use of Find and Replace.
    - Apply header/footers
9. Create any document and show the use of File versions.
10. Create any document and show the difference between paste and paste special.
11. Create a document to show the use of Washout/Watermark.
12. Implement the concept of mail merge.
13. Implement the concept of macros.
14. Implement the concept of importing a file/document.
15. Implement the concept of merging the documents.
16. Crate a student table and do the following:
    - Insert new row and fill data
    - Delete any existing row
    - Resize rows and columns
    - Apply border and shading
    - Apply merging/splitting of cells
    - Apply sort
    - Apply various arithmetic and logical formulas.

Create your resume using General Templates.

Spreadsheet-MS-Excel

19. Compute the division of each and every student of a class.

20. Generation of Electricity Bill
21. Generation of Telephone Bill
22. Generation of Salary statement of an employee
23. Generation of Mark Sheet of a student.
24. To compute mean/median/mode.
25. Generate graph to show the production of goods in a company during the last five years.
26. Compare the cost, overheads and sales figures of a company for last three years through appropriate chart.
27. Create any worksheet and apply various mathematical, statistical and financial functions.
17. Generate the following worksheet

Roll No.	Marks
2050	67
2051	49
2052	40
2053	74
2054	61
2055	57

and do the following:

k. Crate chart of the marks.
l. Compute sum of marks using autosum, autocalculate and sum function.
m. Compute average of marks.
n. Show pass or fail if marks are above 50 or less than 50
o. Put header and footer in the spread sheet.

Presentation software- MS-PowerPoint

5. Make a presentation of College Education System using
    a. Blank Presentation
    b. From Design Template
    c. From Auto Content Wizard
6. Make a presentation on "Wild Life" and apply the following:
    a. Add audio and video effects
    b. Apply various Color Schemes
    c. Apply various animation schemes.
    d. Apply Slide Show

Computer communication related practical

21. Connect the Internet; open any website of your choice and save the WebPages.
22. Search any topic related to your syllabi using any search engine and download the relevant material.
23. Send any greeting card to your friend.
24. Create your E-Mail ID on any free E-Mail Server.
25. Login through your E-Mail ID and do the following:
    a. Read your mail
    b. Compose a new Mail
    c. Send the Mail to one person
    d. Send the same Mail to various persons
    e. Forward the Mail
    f. Delete the Mail
    g. Send file as attachment
26. Surf Internet using Google to find information about your state
27. Surf Internet using Google to find Tourism information about your state

28. Surf Internet using Yahoo to find Hotels around your state
29. Surf Internet using Google to find information about educational institutes for teaching M.S in comp science in India
30. Surf Internet using Google to find information about Indian Cricket team

References:

1. Vikas Gupta, "Comdex Computer Course Kit", First, Dreamtech
2. Henry Lucas, "Information Technology for management", 7^{th}, Tata Mc-Graw Hills
3. B.Ram, "Computer Fundamentals, Architecture and Organisation", 3^{rd} Edition, New Age International Publisher

BMLT (Semester-II)

SUBJECT: BMT 2010 BASIC WORKSHOP II (HEALTHCARE)

- Good Laboratory Practices (GLP)
- Safety Regulations, First Aid and Clinical Laboratory Records
- Quality Assurance in Medical Laboratory Techniques
- Measures to be taken in Various Emergencies
- Introduction to Ambulance Services
- Introduction to Various Chromatographic Techniques
- Basic concept of operating Procedure of Spectrophotometer- UV & IR-Spectrophotometers
- Biomedical Waste Management Guidelines 2018
- Basic concept of Hospital management and administration.

References:

1. Ramnik Sood, "Medical Laboratory Technology: Methods and Interpretations", Jaypee Publishers.
2. Kanai L Mukherjee, "Medical Laboratory Technology: A Procedure Manual for Routine Diagnostic Tests" Tata McGraw-Hill Publishing Company Limited.
3. David T Plummer, "An Introduction to Practical Biochemistry", Tata McGraw-Hill Publishing Company Limited.

BMLT (Semester III)

BMT3102 CLINICAL CHEMISTRYLAB I

List of Experiments

1. To determine the Titrable acidity of Urine.
2. To determine Glucose content in Urine.
3. To determine Calcium content in Urine.
4. To determine Chloride content in Urine.
5. To determine Creatinine content in Urine.
6. To determine Glucose in Blood.
7. To determine Cholesterol in Blood.
8. To determine Calcium content in Blood.
9. To determine Urea content in Blood.
10. To determine Uric acid in Blood.
11. Estimation of Protein by Lowrys method.
12. Estimation of Serum Albumin

References:

1. Plummer D.T , "Introduction to Practical Biochemistry" TATA Mc Graw Hill Publishing House
2. E.J Silva & Maryne, "Clinical Chemistry in Diagnosis & Treatment"
3. B. Raghu, "Practical Biochemistry for Medical Students"
4. G. Rajagopal & BD Toora,"Practical Biochemistry"
5. U. Satyanaryana, "A Book of Clinical Chemistry".

BMLT (Semester III)

BMT3104INSTRUMENTATIONLAB

List of Experiments

1. Study of DSO
2. Study of Function Generator
3. Measurement of Voltage and Frequency using CRO
4. Measurement of R, L and C using LCRQ meter
5. Measurement of resistance using Wheatstone Bridge
6. Measurement of low value resistance using Kelvin Bridge
7. To determine characteristics of Photovoltaic cell
8. To determine characteristics of Photoconductive cell
9. To determine characteristics of IC temperature sensor
10. To determine characteristics of Platinum RTD
11. Measurement of Capacitance using Wien's Bridge
12. Measurement of Inductance using Maxwell's Bridge
13. Measurement of displacement using LVDT
14. Measurement of weight using Strain gauge trainer
15. To determine characteristics of PIN Photodiode
16. To determine characteristics of Phototransistor
17. To determine characteristics of Platinum RTD
18. To determine characteristics of NTC Thermistor
19. To determine characteristics of K type Thermocouple

BMLT (Semester III)

BMT 3106 DIGITALELECTRONICS LAB.

List of Experiments

1. Verification of basic Logic gates
2. Verification of Universal logic gates and realization of basic gates
3. Design and implementation of code converters using logic gates
   (i) BCD to excess-3 code and vice versa (ii) Binary to gray and vice-versa
4. Prove DE – Morgan's 1st theorem.
5. Prove DE – Morgan's 2nd theorem.
6. Design and realization of S.R. flip-flop using IC 7400.
7. Design and realization of J.K. flip-flop using IC 7400.
8. Design and realization of a 4-bit magnitude comparator using IC 7485.
9. Design and realization of a parity bit checker using IC 7486.
10. Design and realization of parity bit generator using IC 7486.
11. Design and implementation of 4 bit binary Adder/ Subtractor and BCD adder using IC 7483
12. Design and implementation of Multiplexer and De-multiplexer using logic gates
13. Design and implementation of encoder and decoder using logic gates
14. Construction and verification of 4 bit ripple counter and Mod-10 / Mod-12 Ripple counters
15. Design and implementation of 3-bit synchronous up/down counter
16. Implementation of SISO, SIPO, PISO and PIPO shift registers using Flip- flops.

BMLT (Semester III)

BMT 3108MICROBIOLOGY LAB-I

OBJECTIVE:

- To demonstrate basic microbiology laboratory techniques that will allow students to investigate the structure and physiology of microorganism

List of Experiments

1. Introduction to the use of laboratory instruments and safety precautions.
2. Physical agents of control by moist heat and dry heat.
3. Mechanical agents of control UV radiation.
4. To prepare basic liquid media (broth) for routine cultivation of bacteria.
5. Preparation of basic solid media, Agar slants and Agar deep tubes for routine cultivation of microorganism.
6. To obtain pure culture of bacteria by streak plate method.
7. To obtain pureculture of bacteria by spread plate method.
8. To obtain pure culture of bacteria by pour plate method.
9. To obtain pure culture of microrganism by subculturing techniques.
10. Preparation of bacterial smears.
11. To perform gram staining of bacteria.
12. Counting bacterial colonies by coulter colony counter.

References:

1. Mackie and McCartney,"Practical medical microbiology", Elsevier publication.
2. P. Gunasekaran, "Laboratory manual in microbiology", New age publication
3. K.R. Aneja, "Experiments in microbiology and Biotechnology", New age publication.

BMLT (Semester IV)

BMT4102 MICROBIOLOGY LAB II

OBJECTIVE:

To demonstrate essential microbiological techniques and to show students the impact of microbes on our daily life and their central role in nature.

List of Experiments:

1. Preparation of pure culture of various gram positive and gram negative bacteria.
2. To differentiate gram positive and gram negative bacteria by differential staining.
3. Isolation of microorganism from various sources like Air, water and soil.
4. Identification of unknown fungus by lacto phenol cotton blue staining methods.
5. Scotch tape preparation for studying morphology of fungi
6. Effect of different PH on microbial growth.
7. Effect of different incubation temperature on microbial growth.
8. Effect of different salt concentration on microbial growth.
9. Effect of dyes on gram positive bacteria.
10. Isolation of microorganism from Rhizosphere and phyllosphere.
11. Evaluation of Alcohol effectiveness as an antiseptic.
12. Evaluation of antiseptic by Filter paper disc method.

References:

1. Mackie and McCartney, “Practical medical microbiology”, Elsevier publication.
2. P. Gunasekaran, “Laboratory manual in microbiology”, New age publication
3. K.R. Aneja, “Experiments in microbiology and Biotechnology”, New age publication.

BMLT (Semester IV)

BMT 4104 HEMATOLOGY LAB II

List of Experiments

1. Staining of bone marrow smear and preparation of histopathological sections.
2. Experiments on identification and estimation of abnormal hemoglobin.
3. Quantitative assay of coagulation factors.
4. Various methods of demonstration of LE cell phenomenon.
5. Measurement of hemoglobin pigments by Sahlis method
6. Measurement of hemoglobin pigments by Cyanmethemoglobin method
7. Estimation of prothrombin time
8. Estimation of activated partial thromboplastin (APTT) time
9. Investigations of G6PD deficiency
10. Sickling test
11. Osmotic fragility test
12. Demonstration of hemosiderin urine
13. Blood smear preparation and staining
14. Calculation of red cell indices

References:

1. Baker et al: An introduction to medical laboratory technology,Elsevier.
2. Charles F. Seiverd: Hematology for medical technologists, Lea & Febiger
3. Arthur Simmons: Technical hematology, Lippincott,
4. Thomson J: Blood coagulation and homeostasis,CBS Publisher,
5. Harsh Mohan, Pathology Practical Book, Jaypee Brothers.

BMLT (Semester IV)

BMT 4106 HISTOPATHOLOGY LAB- I

List of Experiments

1. To study and draw the structure of various Histopathological apparatus.
2. To demonstrate the working principle of various microtome in histopathology laboratories.
3. To demonstrate the method of sacrificing of Wistar rat and specimen accessioning.
4. Demonstration of gross histopathological examination and fixation of given tissue sample.
5. To perform the dehydration of the given tissue sample.
6. To perform the process of clearing on the given tissue sample.
7. To perform the impregnation process of given tissue sample.
8. To perform embedding process of the given tissue sample.
9. To perform the sectioning of given tissues by using microtome.
10. To perform routine staining of the given tissue sample by using hematoxylene & eosin stain.
11. To perform routine staining of the given tissue sample by using Congo red & silver nitrate or other stains.
12. To perform the Microscopical studies by using microscope and LICA

References

1. Harsh Mohan, “Pathology Practical Book”, IInd Edition, Jaypee Brothers Medical Publishers (P) Ltd., 2007.
2. Bancroft and Stevens, “Theory and practice of histological techniques”,Churchill Livingstone
3. Cullings, “Cellular Pathology Techniques”,Butterworth-Heinemann

BMT 4108 PARASITOLOGY LAB (ELECTIVE LAB)

List of Experiments

1. Introduction to Laboratory Instruments & Safety precautions.
2. Macroscopic examination of Adult worms, Cysts, Tissues for Routine examination.
3. Saline and Iodine preparations for Protozoal cysts &Tropozoite
4. Concentration procedures for Protozoal cyst &Tropozoite.
5. Concentration procedures of Helminthic Ova & Cysts.
6. Examination, Identification of Ova & Cysts of Medical importance.
7. Processing for preparation of Antigens for Casons test.
8. Examination & Processing of Cysticerosis cysts.
9. Serological & Immunological tests used in Parasitology.
10. Differentiation of various Mosquitoes , Flies and Worms.
11. Experiments based on Electrophoretic techniques & Gel diffusion.
12. Preparation& Standardization of various parasitic antigens, antisera.

References :

1. Mackie & McCartney, “Practical Microbiology”
2. Gunasekharan, “Laboratory Manual of Microbiology”
3. Fleck & Moody, “Diagnostic Techniques of Medical Parasitology”
4. Halls & Sohantz, “Immuno diagnosis of Parasitic diseases”

BMLT (Semester IV)

BMT 4016 MICROPROCESSORS AND MICROCONTROLLERS LAB

(ELECTIVE LAB)

List of experiments

1. (a) Write an ALP to add two 8-bit numbers; sum being of 8 Bits. (b) Write an ALP to add two 8-bit numbers; sum may be of 16 Bits.
2. Write an ALP to subtract two unsigned numbers, store the result in memory location XX90H. How would you determine the result obtained is straight binary number or 2's complement? Verify with examples.
3. Write an ALP to multiply two 8-bit numbers, product being of 16 bits.
4. Write an ALP to arrange a data array in ascending and descending order.
5. Write an ALP for 2-bit BCD to BINARY conversion and BINARY to BCD conversion.
6. Write an ALP for block transfer of data.
7. Write an ALP for addition of two 16-bit numbers, sum may be of 16 bits or more.
8. Write an ALP to find the largest number in a data array.
9. Six bytes of data are stored in memory locations starting at 2050H. Add all the data bytes. Use register B to save any carries generated, while adding the data bytes. Store the sum at two consecutive memory locations 2070H & 2071H. Write an ALP for the above mentioned problem statement.
10. Register BC contains 2793H, and registers DE contain 3182H. Write an ALP to add these two 16-bit numbers, and place the sum in memory locations 2050H & 2051H.
11. Development and execution of the program for sending data on port lines.
12. Development and execution of the program for arithmetic operation and time delay.
13. Development and execution of the program for input and output operation.
14. Development and execution of the program for interface LEDs to particular port.
15. Development and execution of the program to generate a square wave on port.
16. Development and execution of the program for logical operators and data conversion.

BMLT (Semester V)

BMT-5102 CLINICALCHEMISTRY LAB II

List of Experiments

1. Estimation of Alkaline Phosphatase.
2. Estimation of Acid Phosphatase.
3. Estimation of Serum Amylase.
4. Estimation of SGOT.
5. Estimation of SGPT.
6. Estimation of Malate Dehydrogenase.
7. Estimation of Catalase Enzymes.
8. Estimation of Ascorbic acid oxidase.
9. Estimation of Lactate Dehyrogenase
10. Analysis of Gastric Secretion.
11. Estimation of Serum Uric acid
12. Estimation of Peroxidase.

References:

1. Dr. Rajagopal & Dr. B.D Toora , “Practical Biochemistry” Ahuja Publishing House
2. K.P Sinha , “Manual of Practical Biochemistry”,Scientific Book Company.
3. E.J Silva & Maryne ,”Clinical Chemistry in Diagnosis”CRC Press,
4. Wooton I.D.P & Freeman , H “Microanalysis in Medical Biochemistry”, Churchill Livingston London
5. S.P Singh, “Practical Manual of Biochemistry”,CBS Publishers & Distributors Pvt. Ltd.

BMLT (Semester V)

BMT 5014 BACTERIOLOGY AND SEROLOGY LAB

OBJECTIVE:

- Students will become proficient at laboratory skills and safety procedures
- Students will be able to isolate and identify unknown microorganism from clinical samples

List of Experiments

1. Identification of bacteria by staining and biochemical test.
2. To perform catalase test.
3. Bacteriological examination of sputum specimen.
4. To perform IMViC test- Indole production test.
5. Methyl red and Voges- prosekauer test.
6. Citrate utilization test.
7. Fermentation of Carbohydrates.
8. Antibiotic sensitivity assay
9. To perform phenol-coefficient test (Rideal Walker test).
10. Preparation of buffer for serological tests.
11. To perform Widal test to diagnose Typhoid.
12. Rapid detection of HbsAg.
13. Rapid detection of Malaria.
14. Determination of ABO blood group and Rh factor..

References:

1. Mackie and McCartney: Practical medical microbiology, Elsevier publication.

2. P. Gunasekaran, Laboratory manual in microbiology, New age publication

3. K.R. Aneja, Experiments in microbiology and Biotechnology, New age publication.

BMLT (Semester V)

BMT 5106 HISTOPATHOLOGY LAB- II

List of Experiments

1. To study the various chemicals and reagent applying in histopathology laboratories.
2. To demonstrate the method of sacrificing of Wistar rat and specimen accessioning.
3. Demonstration of gross histopathological examination and fixation of the specimen (Wister rat/chicken/guinea pig) .
4. To perform the dehydration of the given specimen.
5. To perform the process of clearing on the given specimen.
6. To perform the impregnation process of given specimen.
7. To perform embedding process of the given specimen.
8. To perform the sectioning of given specimen by using microtome.
9. To perform routine staining of the given specimen sample by using hematoxylene & eosin stain.
10. To perform routine staining of the given specimen sample by using congo red & silver nitrate or other stains.
11. To perform the Microscopical studies by using microscope and LICA
12. Demonstration of ferrous iron in tissue by Turnn blue reactions.

References

1. Harsh Mohan, “Pathology Practical Book”, IInd Edition, Jaypee Brothers Medical Publishers (P) Ltd., 2007.
2. Bancroft and Stevens, “Theory and practice of histological techniques”,Churchill Livingstone
3. Cullings, “Cellular Pathology Techniques”,Butterworth-Heinemann

BMLT (Semester V)

BMT 5016 HEMATOLOGY AND BLOOD BANKING LAB (ELECTIVE LAB)

List of Experiments

1. Laboratory investigation procedures of megaloblastic anemia
2. Laboratory investigation procedures of iron deficiency anemia (IDA)
3. Laboratory investigation of hemolytic anemia
4. Laboratory techniques for assessing bleeding disorders
5. Laboratory investigation of disseminated intravascular coagulation
6. Experiment based on laboratory techniques available for cytogenetic studies
7. Experiment based on test for fibrinolysis.
8. Experiment based on Cytochemical staining process
9. Estimation of platelets in blood
10. Estimation of Reticulocyte count
11. Estimation of absolute eosinophil count (AEC)
12. Morphological identification of red blood cells.
13. Determination of blood groups and Rh factors by various methods
14. Laboratory investigation of transfusion reaction
15. Coomb's test

References:

1. Baker et al: An introduction to medical laboratory technology, Elsevier.
2. Charles F. Seiverd: Hematology for medical technologists, Lea & Febiger
3. Arthur Simmons: Technical hematology,Lippincott,
4. Thomson J: Blood coagulation and homeostasis,CBS Publisher,
5. Harsh Mohan, Pathology Practical Book , Jaypee Publishers

BMLT (Semester V)

BMT 5112 CLINICAL INSTRUMENTATION LAB II
(ELECTIVE LAB)

List of Experiment

1. To study and calculate body mass index and its correlation with human health.
2. To study different types of electrodes and sensors used in bio-potential recordings.
3. To study and measure non-invasive blood pressure using sphygmomanometer.
4. To analyse the characteristics of different types of electrolytic medium between electrode and body.
5. To record and analyse bipolar electrocardiogram.
6. To record and analyse surface electromyogram.
7. To record and analyse vertical and horizontal eye ball activity.
8. To study and analyse electrical and mechanical cardiac activities using phonocardiography.
9. To record biopolar and monopolar electroencephalogram and analyse delta, theta, alpha and beta bands.
10. To study and analyse haemodynamic activity using pulse plethysmography.
11. To record and analyse electrodermal activity or galvanic skin response.
12. To study and perform lie detector test.

References:

1. J.J. Karr & J.M. Brown ,“Introduction to Biomedical Technology”,Prentice Hall
2. R. S. Khandpur, “Handbook of Biomedical Instrumentation”,Tata McGraw-Hill
3. L. Crownwell, “Biomedical Instrumentation and Measurement”,Prentice-Hall
4. W. J. Tompkins, “Biomedical Digital Signal Processing”,Prentice Hall .
5. D C Reddy, “Biomedical Signal Processing: Principles and Techniques,MCGRAW-HILL”.

 Computing Facilities

 Internet Bandwidth- 100 Mbps

 Number and configuration of System 200, Processor- i3 & P-IV

 Total number of system connected by LAN-110

 Total number of system connected by WAN- 110

 Major software packages available- Windows XP, Windows 7, LINUX, MATLAB, AUTOCAD, WAMP, XAMP, MySQL, Ms-Office 365, TURBOC, Dev C++, BlueJ, JDK, WINRAR, Virtual Box, Antivirus, NASAM, Tally, Web browsers(Google Chrome, Mozilla, Internet Explorer), Visual Studio, Scilab, Maxima, BRL-CAD

 Special purpose facilities available-YAS

 Innovation Cell-Yes

 Social Media Cell-NA

 Compliance of the National Academic Depository (NAD), applicable to PGCM/ PGDM Institutions and University Departments-Yes

 List of facilities available

 Games and Sports Facilities-YES

 Extra-Curricular Activities -YES

 Soft Skill Development Facilities-YES

 Teaching Learning Process

 Curricula and syllabus for each of the programmes as approved by the University-YES

 Academic Calendar of the University

BIRLA INSTITUTE OF TECHNOLOGY

A Deemed University u/s 3 of UGC Act, 1956
MESRA - 835215, RANCHI

Ref. No. Dean (AP)/2018-19/120 **Date:31-01-2019**

REVISED ACADEMIC SCHEDULE (SPRING-2019)

Spring - 2019 Session for all UG,PG and Ph.D. Programmes

Sl. No.	Items	Date of Registration and Submission of Registration Form at Semester Office in Person	Registration and Submission of Registration Form with late fine	
			Date	Amount
1	***Registration***			
	1st and 2nd Year UG Students (including Integrated Courses upto 2nd Year)	2nd – 3rd Jan, 2019, (Wednesday-Thursday)	4th - 8th Jan, 2019 (Friday-Tuesday)	Rs. 1000/- per working day.
	3rd , 4th and 5th Year UG Students (including Integrated Courses upto 3rd Year)	4th - 7th Jan, 2019 (Friday-Monday)	8th - 10th Jan, 2019 (Tuesday-Thursday)	
	All PG and Ph.D. Students	8th - 9th Jan, 2019 (Tuesday-Wednesday)	10th - 14th Jan, 2019 (Thursday-Monday)	
2	***Commencement of Classes***			
	1st and 2nd Year UG Students		04.01.2019 (Friday)	
	3rd , 4th and 5th Year UG Students		08.01.2019 (Tuesday)	
	All PG and Ph.D. Students		10.01.2019 (Thursday)	
3	Allotment of Course work by DAC (for Ph.D. Students admitted in Spring 2019 session)		09.01.2019 - 11.01.2019 (Wednesday-Friday)	
4	Allotment of Assignment to all PG Students		25.01.2019 (Friday)	
5	First Quiz for UG 1st Year Students including Integrated Courses 1st Year (2018 Batch)		08.02.2019 to 14.02.2019 (Friday- Thursday)	
6	First Quiz for PG and Ph.D. Students		12.02.2019 to 15.02.2019 (Tuesday-Friday)	
7	Commencement of Mid Semester Examination for UG Students		25.02.2019 (Monday)	
8	Second Quiz for UG 1st Year Students including Integrated Courses 1st Year (2018 Batch)		29.03.2019 to 05.04.2019 (Friday - Friday)	
9	Second Quiz for PG and Ph.D. Students		05.03.2019 to 08.03.2019 (Tuesday-Friday)	
10	Third Quiz for PG and Ph.D. Students		02.04.2019 to 05.04.2019 (Tuesday-Friday)	
11	Submission of Assignment by PG and Ph.D. Students		12.04.2019 (Friday)	

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12	Last Day of Classes	16.04.2019 (Tuesday)
13	Display of Shortage of Attendance	18.04.2019 (Thursday)
14	Submission of Marks by Departments	18.04.2019 (Thursday)
15	Commencement of End Semester Examinations	22.04.2019 (Monday)
16	Submission of End Semester Exam marks	22.04.2019 (Monday)
17	Submission of Thesis/Project/Dissertation by PG Students	08.05.2019 (Wednesday)

Note:

1 If the date of commencement of any academic activity is a holiday, the same will commence from next working day.
2 The marks of Quiz should be displayed within five days from the date of respective examination.
3 Students' activity at BIT Mesra (Main Campus)

a) Annual Athletic Meet - 01.02.2019 to 03.02.2019 (Friday-Sunday)
b) BITOTSAV - 15.02.2019 to 17.02.2019 (Friday-Sunday)

31/1/19

(Dr. P.Padmanabhan)
Dean (Academic Programmes)

Copy to:

1 Institute Notice Boards
2 All Hostel Notice Boards
3 All Deans
4 All Head of the Departments
5 All Directors/ Incharge Off Campuses/Offshore Campuses
6 Director, IRIMEE, Jamalpur
7 Controller of Examination
8 In-charge, NCC/ NSS/ PT and Games/ C. Arts
9 Deputy Comptroller / Deputy Finance Officer
10 In-charge, Students Mess Accounts
11 Administrative Computer Service Support Centre (ACSSC)
12 Webmaster
13 Registrar
14 P.S. to Vice-Chancellor

 Academic Time Table with the name of the Faculty members handling the Course

UNIVERSITY POLYTECHNIC, B.I.T., MESRA, RANCHI

SECOND- Section: A (All Classes in NB1; otherwise mentioned in the Time Table slot) w.e.f. – 10.01.2019

PERIOD	1	2	3	4	5	6	7	8	9
TIME/ DAY	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00 - 12.00	12.00 -1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON	Engg.Chem S. RANI	Engg.Phy. TKP	Engg.Maths RKC			Comm. Skill Sonal Bharti		Workshop Practices Section:A2 RK;RO	
TUE	Engg.Mathematics RKC		Workshop Practices Section:A1 RKP;RO			Applied Science Lab Section:A1; S. SARAN/TKP;Ranti		Professional Practices-I	
WED	Engg.Phy TKP	Engg.Chem S. RANI	Fund Of Elecl.& Elect. Rakesh Kr. Chandan			Electrical & Electronics Lab Section: A2; (BE Lab.) Sumit Kr. Jha		PT & Games ;NKS NSS;CKM	
THU		Engg.Phy TKP	Fund. Of Elecl.& Elect. Rakesh Kr. Chandan			Development Of Life Skills-I S.RANI C2		Applied Science Lab. Section:A2; S. SARAN/TKP;Ranti	
FRI		Engg.Chem S. RANI	Electrical & Electronics Lab Section:A1; (BE Lab.) Sumit Kr. Jha			Comm. Skill Sonal Bharti	Engg.Graphics RAKESH+PRM		

SECOND- Section: B (All Classes in NB1; otherwise mentioned in the Time Table slot) w.e.f. – 10.01.2019

PERIOD	1	2	3	4	5	6	7	8	9
TIME/DAY	8.00 – 9.00	9.00 - 10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON	Development Of Life Skills-I S.KUMAR		Workshop Practices Section:B1 RAMKESH;RO			Applied Science Lab Section:B1; S.KUMAR/TKP; Ranti		Engg.Phy TKP	
TUE	Fund Of Elec.& Elect Rakesh Kr. Chandan		Engg.Phy. TKP	Professional Practices-I			Engg.Chem S.KUMAR	.PT& Games; NKS NSS;AK	
WED	Fund Of Elec.& Elect. Rakesh Kr. Chandan	Engg .Graphics MKJ+SUJIT KUMAR				Comm. Skill Sonal Bharti		Engg.Mathematics RKC	
THU	Electrical & Electronics Lab Section:B1; (BE Lab.) Sumit Kr. Jha		Applied Science Lab Section:B2; S.KUMAR/TKP; Ranti			Engg.Phy TKP	Engg.Mathematics RKC		Engg.Chem S.KUMAR
FRI	Electrical & Electronics Lab Section:B2;(BE Lab.);MS;DM		Workshop Practices Section:B2 RAMKESH;RO				Comm. Skill Sonal Bharti	Engg.Chem S.KUMAR	

TKP-Dr. T.K.Parasher; RKC-Dr.R.K.Chatterjee; AK- Mr.Abahy Kumar; RK-Mrs. Rekha Kumari; RKP-R.K.Prasad; PRM-Mr. P.R. Mahto

NKS- Mr. N.K.Singh; CKM-Dr. Chanchal Kumar Mishra; S.Rani-Dr. Sandhay Rani;S.Saran-Dr. Shmbhu Sharan Kumar; S. Kumar-Dr. Satish Kumar; MKJ-Mr. Manoj Kumar Jha

UNIVERSITY POLYTECHNIC, B.I.T., MESRA, RANCHI

SECOND- Section: C (All Classes in NB4; otherwise mentioned in the Time Table slot)

w.e.f. - 10.01.2019

PERIOD	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
TIME/ DAY	**8.00 – 9.00**	**9.00-10.00**	**10.00-11.00**	**11.00-12.00**	**12.00-1.00**	**1.00-2.00**	**2.00-3.00**	**3.00-4.00**	**4.00-5.00**
MON	Fund Of Ele.& Elect. Rakesh Kr. Chandan		Applied Science Lab Section C1 S.Rani;/TKP;Ranti				Engg.Graphics PT+PRM		
TUE		Engg.Phy TKP	Engg.Chem S.SHARAN.			Professional Practices-I		Applied Science Lab Section C2 S.Rani;/TKP;Ranti	
WED	Engg.Chem S.SHARAN.	Engg.Mathematics RKC		Engg.Phy. TKP		Workshop Practices Section:C2 RK:RO		Electrical & Electronics Lab. Section C1; (BE Lab.);MS	
THU	Fund Of Ele.& Elect. Rakesh Kr. Chandan	Development Of Life Skills-I S.SHARAN C2		Engg.Chem S.SHARAN.		Comm.Skill Sonal Bharti		Workshop Practices Section:C1 RKP;RO	
FRI	Engg.Mathematics RKC		Engg.Phy TKP		Comm. Skill Sonal Bharti	Electrical & Electronics Lab Section C2; (BE Lab.) Sumit Kr. Jha		PT& Games; NKS NSS;NS	

BMLT-II (All Classes in SH1; otherwise mentioned in the Time-Table slot) w.e.f. - 10.01.2019

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00-3:00)	VIII (3:00- 4:00)	IX (4:00-5:00)
MONDAY		Histology NA	HAP –II Lab. (At BIT R.No.:237)CKM					HAP-II CKM	Cl. Chem. NS
TUESDAY	ICS; RM	HAP-II CKM	FOC Lab. (Computer Lab);RM;Rishi			Comm. Skill Sonal Bharti		Cl. Chem.,NS	Histology NA
WEDNESDAY	ICS; RM	Hematology I NA	Basic Workshop-II (At BIT R.No.:237);NA&SJ				Hematology I NA		Histology NA
THURSDAY	ICS; RM	HAP-II CKM	Clinical Pathology Lab. (At BIT; R. No.:238)SJ				Hematology I NA	Cl. Chem. NS	HAP-II CKM
FRIDAY	Cl. Chem. NS	Histology NA	Hematology Lab.-I (At BIT R.No.:238)SJ				Hematology I NA	PT & Games; NKS	NSS;NS

MS-Dr. Meena Singh; NS-Dr. Neeru Singh;

NA-Dr. Neyaz Ahsan; RM-Mr. Rajendra Mahto; SJ-Mr. Sanjay Jha

UNIVERSITY POLYTECHNIC, B.I.T., MESRA, RANCHI

Branch: Manufacturing (All Classes in NB6 else indicated) **Semester: Sixth With effect from: 10/01/19**

Period	1	2	3	4	5	6	7	8	9
Time/ Day	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON		MMP RAMKESH	TECH OF CAD/CAM RAKESH	QUALITY CONTROL RK NB2	LUNCH		NCMP Lab		
TUE	QUALITY CONTROL RK	CAD/CAM LAB RAKESH			LUNCH	OPERATION RESEARCH RKC (C1)			
WED	TECH OF CAD/CAM RAKESH	QUALITY CONTROL RK	MMP RAMKESH		LUNCH				
THU	OPERATION RESEARCH RKC B BLOCK		TQM B BLOCK Savita Sodhi		LUNCH	TECH OF CAD/CAM RAKESH	MMP RAMKESH	TECH OF CAD/CAM RAKESH	
FRI	QUALITY CONTROL RK B BLOCK		TQM B BLOCK Savita Sodhi		LUNCH	MMP RAMKESH	PROJECT		

Branch: Manufacturing (All Classes in NB6 else indicated) **Semester :Fourth**

With effect from: 10/01/19

Period	1	2	3	4	5	6	7	8	9
Time/Day	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON		THERMAL ENGG LAB S.M.M.Hosnain AT BIT			LUNCH	FMHM PT NB5	PT & GAMES NSS		
TUE	FMHM PT NB5	MP2 RAMKESH	PM I RK	MP2 RAMKESH	LUNCH		PRODUCTION PROCESS LAB RAMKESH		
WED	THERMAL ENGG SUJIT KUMAR B BLOCK		FMHM PT NB5	PM1 RK B BLOCK	THERMAL ENGG SUJIT KUMAR B BLOCK	LUNCH	MP2 RAMKESH	PM1 RK	SOM PRM NB2
THU	SOM PRM NB2	PMI RK	MP2 RAMKESH	SOM PRM NB2	LUNCH		SOM LAB ATIQUR REHMAN AT BIT		
FRI	THERMAL ENGG SUJIT KMAR B BLOCK		FMHM PT NB5	SOM PRM NB2	LUNCH		FMHM LAB PT		

PT-Mr. Pradeep Toppo;

UNIVERSITY POLYTECHNIC, B.I.T., MESRA, RANCHI

Branch: Mechanical (All Classes in NB2 else indicated) **Semester: Sixth** **With effect from: 10/01/19**

Period	1	2	3	4	5	6	7	8	9
Time/Day	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON	HYDRAULIC & PNEU CONTROL MKJ	POWER PLANT ENGG RAKESH	M/C DESIGN MKJ		NCES MS B BLOCK		PROJECT		
TUE		HYDRAULIC & PNEUMATIC CONTROL LAB MKJ			NCES MS B BLOCK		HYDRAULIC & PNEU. CONTROL MKJ	POWER PLANT ENGG RAKESH	
WED		NCES LAB ASIM AHMAD AT BIT					HYDRAULIC & PNEU. CONTROL MKJ NB4		M/C DESIGN MKJ NB4
THU		POWER PLANT ENGG RAKESH NB3	TQM B BLOCK Savita Sodhi			NCES MS B BLOCK	M/C DESIGN MKJ	HYDRAULIC & PNEU. CONTROL MKJ	
FRI	M/C DESIGN MKJ	POWER PLANT ENGG RAKESH	TQM B BLOCK Savita Sodhi		NCES MS B BLOCK		PROJECT		

Branch: Mechanical (All Classes in NB2 else indicated) **Semester: Fourth** **With effect from: 10/01/19**

Period	1	2	3	4	5	6	7	8	9
Time/Day	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON		THERMAL ENGG LAB S.M.M.Hosnain AT BIT			LUNCH	FMM PRM		THEORY OF M/C RAKESH	ADV ENGG.MEASUREMENT RKP
TUE	FMM PRM	ADV.ENGG.MEASUREMENT LAB ASIM AHMAD AT BIT			LUNCH	THEORY OF M/C RAKESH	PT &GAMES NKS NSS		
WED	THERMAL ENGG SUJIT KUMAR B BLOCK		ADV ENGG.MEASUREMENT RKP	FMM PRM	THERMAL ENGG SUJIT KUMAR B BLOCK	LUNCH	THEORY OF M/C RAKESH NB3		SOM PRM
THU	SOM PRM	ADV ENGG.MEASUREMENT RKP	FMM PRM	SOM PRM	LUNCH		SOM LAB ATIQUR REHMAN AT BIT		
FRI	THERMAL ENGG SUJIT B BLOCK		ADV ENGG.MEASUREMENT RKP	SOM PRM	LUNCH	SOM	FLUID MACHINERIES LAB ATIQUR REHMAN AT BIT		

UNIVERSITY POLYTECHNIC, B.I.T., MESRA, RANCHI

Branch: Automobile (All Classes in NB5 else indicated) **Semester: Sixth** **With effect from: 10/01/19**

Period	1	2	3	4	5	6	7	8	9
Time/Day	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON	GARAGE PRACTICE SK+RKP			QUALITY CONTROL RK NB2	LUNCH	PROJECT			MOTOR VEHICLE ACT REGU.& STD. NKM
TUE	QUALITY CONTROL RK B BLOCK	MOTOR VEH MAINT. & REPAIR SK	MOTOR VEHICLE ACT REGU.& STD. NKM	MVT-II SK	LUNCH	MOTOR VEHICLE ACT REGU.& STD. NKM NB4	MVT-II SK		
WED	MOTOR VEH MAINT. & REPAIR SK	QUALITY CONTROL RK			LUNCH		MOTOR VEHICLE ACT REGU.& STD. NKM	MOTOR VEH MAINT. & REPAIR SK	
THU		MVT-II SK	TQM B BLOCK Savita Sodhi		LUNCH	MVT-II SK NB4	PROJECT		
FRI	QUALITY CONTROL RK B BLOCK		TQM B BLOCK Savita Sodhi		LUNCH	MOTOR VEH MAINT. & REPAIR SK NB4	GARAGE PRACTICE SK+RKP		

Branch: Automobile (All Classes in NB5 else indicated) **Semester: Fourth** **With effect from:10/01/19**

Period	1	2	3	4	5	6	7	8	9
Time/Day	8.00 – 9.00	9.00-10.00	10.00-11.00	11.00-12.00	12.00-1.00	1.00-2.00	2.00-3.00	3.00-4.00	4.00-5.00
MON	SOM PRM	AUTO ENGINE-I PT	SOM PRM	BASICS OF AUTO COMPONENT RKP	LUNCH	FMHM PT	BASICS OF AUTO COMPONENT RKP		
TUE	FMHM PT	THERMAL ENGG LAB S.M.M.Hosnain AT BIT			LUNCH	SOM PRM	PT &GAMES NKS NSS		
WED	THERMAL ENGG SUJIT B BLOCK	AUTO ENGINE – I PT NB2	FMHM PT	BASICS OF AUTO COMPONENT RKP	THERMAL ENGG SUJIT KUMAR B BLOCK		SOM LAB ATIQUR REHMAN AT BIT		
THU	AUTO ENGINE –I PT	AUTOMOBILE ENGINE –I LAB S.M.M.Hosnain AT BIT			LUNCH	BASICS OF AUTO COMPONENT RKP	FMHM LAB PT+RK		
FRI	THERMAL ENGG SUJIT KUMAR		FMHM PT	AUTO ENGINE –I PT	LUNCH	SOM PRM	FMHM LAB PT		

SK-Mr. Shankar Kumar; NKM-Mr. N.K.Mukherjee

UNIVERSITY POLYTECHNIC B.I.T. MESRA

COMPUTERS-VI (All Classes in C1; otherwise mentioned in the Time-Table slot) w.e.f. – 10.01.2019

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00-3:00)	VIII (3:00-4:00)	IX (4:00-5:00)
MONDAY	Project		TQM (B-BLOCK); Savita Sodhi			Web Tech. &E.Com; RS	SAD; RM	CompH/W; (C9); NK	Project
TUESDAY			TQM (B-BLOCK); Savita Sodhi		CompH/W; (C9); NK			SAD; RM	Soft Engg.; GMA
WEDNESDAY	E. Commerce Lab; RS;RISHI					Soft Engg.; GMA	Web Tech. &E.Com; RS		SAD; RM
THURSDAY		Computer Hardware Lab. (CH Lab./Computer Lab)NK; SM			Soft Engg.; GMA		SAD; RM	CompH/W; (C9); NK	Web Tech. &E.Com; RS
FRIDAY		Web Tech. &E.Com; RS	Project		Soft Engg.; GMA			CompH/W; (C9); NK	Project

COMPUTERS-IV (All Classes in C1; otherwise mentioned in the Time-Table slot) w.e.f. – 10.01.2019

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00- 3:00)	VIII (3:00- 4:00)	IX (4:00-5:00)
MONDAY	RDBMS; GMA	OOP in C++ ; RS	E. Ckts; (C9)MH	D S; NK			NSS; GMA		
							P.T. &Games;NKS		
TUESDAY	E. Ckts; (C9)MH	RDBMS; GMA	Comp.Org.; AK	OOP in C++ ; RS		D S; NK	Electronic Circuits Lab. (BE Lab.);M.H.;D.M		
WEDNESDAY	E. Ckts; (C9)MH	RDBMS; GMA	D S; NK	Comp.Org.; AK			Data Structures Lab.: AK; RISHI		
THURSDAY		RDBMS; GMA	Comp.Org.; AK	OOP in C++ ; RS		D S; NK	RDBMS Lab; GMA; RISHI		
FRIDAY	Comp.Org.; AK	E. Ckts; (C9)MH	OOP in C++ ; RS				C++ Lab.; AK; RISHI		

GMA-Dr. G.M.Ansari;RS-Mr. Ramnish Sinha;NK-Mr. Niraj Kumar;MH-Mr. Maqubool Hosain;

UNIVERSITY POLYTECHNIC B.I.T. MESRA

EEE-VI (All Classes in C8; Otherwise Indicated in the Time Table slot)w.e.f. – 10.01.2019

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00- 3:00)	VIII (3:00- 4:00)	IX (4:00-5:00)
MONDAY	Project		TQM (B-BLOCK); Savita Sodhi		NCES (B-BLOCK)MS		EICM; NKM	Project	Control System; NIR
TUESDAY	Control System; (C1)NIR		TQM (B-BLOCK); Savita Sodhi		NCES (B-BLOCK)MS		Control System Lab. At BIT; NIR		
WEDNESDAY		Electrical Workshop-II; (Electrical Lab.);NKM; Leela			EICM; NKM			EICM; NKM	
THURSDAY		Non Conventional Energy Sources Lab. At BIT				NCES (B-BLOCK)MS	Control System; NIR	EICM; NKM	
FRIDAY	Control System; NIR	Electrical Drawings & CAD Lab. SK Automation Lab			NCES (B-BLOCK)MS.		Project		

NIR-Mrs. Nirupam;

EEE-IV (All Classes in C8; Otherwise Indicated in the Time Table slot)w.e.f. – 10.01.2019

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00- 3:00)	VIII (3:00- 4:00)	IX (4:00-5:00)
MONDAY	Digital Electronics; (C9)DKJ	Electrical Measurement ; MS	Power Systems-I Shilpee	El. Energy Gen. Avanish Kr.			Electrical Measurement Lab.; (DE Lab); MS;Leela		
TUESDAY	Electrical Measurement ; MS	Electrical Machines-II ; NKM	Power Systems-I Shilpee	El. Energy Gen. Avanish Kr.			Electrical Workshop-I; (Electrical Lab.);NKM;		
WEDNESDAY	Electrical Machines-II ; NKM	Electrical Measurement ; MS	Digital Electronics; (C9)DKJ	El. Energy Gen. Avanish Kr.			Digital Electronics Lab. (DE Lab.); DKJ,; Leela		
THURSDAY	Electrical Measurement ; MS	Digital Electronics; (C9)DKJ	Electrical Machines-II ; NKM	Power Systems-I Shilpee			Electrical Machine-II Lab.; Avanish Kr. At BIT		
FRIDAY	Digital Electronics; (C9)DKJ	Electrical Machines-II ; NKM	Power Systems-I Shilpee	El. Energy Gen. Avanish Kr.			PT& Games; NKS		
							NSS;NS		
							NSS;NS		

DKJ-Mr. D.K.Jain;

UNIVERSITY POLYTECHNIC B.I.T. MESRA

ELECTRONICS –VI (All Classes in C9; Otherwise Indicated in the Time Table slot) **w.e.f. - 10.01.2019**

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00-3:00)	VIII (3:00-4:00)	IX (4:00-5:00)
MONDAY	Project (CHLab.)		TQM (B-BLOCK);APS		Con. Elect; SK		OFC; SK	Comp. H/W; NK	Project (CHLab.)
TUESDAY	Project (CH Lab.)		TQM (B-BLOCK);APS		Comp. H/W; NK		TV ENGG LAB. at B.I.T; SK		
WEDNESDAY		Consumer Electronics Lab.; (CH Lab)SK			OFC; SK		OFC Lab. At BIT; NIR		
THURSDAY					Con. Elect; SK		Project (CHLab)	Comp. H/W; NK	OFC; SK
FRIDAY	Computer Hardware Lab. (CH Lab./Comp. Lab)NK;SM				Con. Elect; SK		OFC; SK	Comp. H/W; NK	Con. Elect; SK

ELECTRONICS –IV (All Classes in C9; Otherwise Indicated in the Time Table slot) **w.e.f. - 10.01.2019**

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00- 3:00)	VIII (3:00-4:00)	IX (4:00-5:00)
MONDAY	D.E; DKJ	S D; SK	EC; MH	E Msmt; NIR			Electronic Circuits Lab. (BE Lab.); MH; DM		
TUESDAY	EC; MH	Com.Prin; MH	S D; SK	E Msmt; NIR			Digital Electronics Lab. (DE Lab.); DKJ,; Leela		
WEDNESDAY	EC; MH	E Msmt; NIR	D.E; DKJ	Com.Prin; MH			NSS ;CKM P.T. & Games; NKS		
THURSDAY	S D; SK	D.E; DKJ	E Msmt; NIR	Com.Prin; MH			Communication Principle Lab. (DE Lab.);MH; Leela		
FRIDAY	D.E; DKJ	EC; MH	S D; SK	Com.Prin; MH			Electronic Measurement Lab. (DE Lab.); NIR; Leela		

SK-Dr. Sumana Kumari;

UNIVERSITY POLYTECHNIC B.I.T. MESRA

BMLT-IV (All Classes in SH2; otherwise mentioned in the Time-Table slot) **w.e.f. - 10.01.2019**

Day/Period	I (8:00-9:00)	II (9:00-10:00)	III (10:00-11:00)	IV (11:00-12:00)	V (12:00-1:00)	VI (1:00-2:00)	VII (2:00-3:00)	VIII (3:00-4:00)	IX (4:00-5:00)
MONDAY	Immuno CKM	App. Microbio NS	Intro to µP;(C1)DKJ Para&Cyto;NS	Hematology II NA	BSA ;RKS		Hematology Lab.-II (At BIT R.No.:238)NA		
TUESDAY	Histopath. CKM	Microprocessor Lab. (DE Lab.)DKJ;Leela Paras+Cytology Lab. (At BIT: R. No.: 238)SJ					Histopathology Lab.I (At BIT; R. No.:237)SJ		
WEDNESDAY	Intro to µP;(C1)DKJ Para&Cyto;NS	BSA ;RKS Immuno (C2): CKM	App. Microbio NS	Histopath CKM			Microbiology Lab.-II (At BIT;R.No.:239)NS		
THURSDAY	Intro to µP;(C1)DKJ Para&Cyto;NS	Hematology II NA	App. Microbio NS	Immuno CKM	BSA ;RKS		PT& Games; NKS		
FRIDAY	Histopath. CKM	App. Microbio NS	BSA (SH2);RKS Immuno(SH1) ;CKM	Intro to µP;(C1)DKJ Para&Cyto ;NS	Hematology II NA			Histopath CKM	Hematology II NA

 Teaching Load of each Faculty

ELECTRONICS ENGINEERING
UNIVERSITY POLYTECHNIC
B.I.T. MESRA

Date: 28.11.2018

TEACHING ASSIGNMENT FOR SP/19

1. Mr. D.K. Jain

Sl. No.	Subject	Class -Semester	Classes/Week
1.	Digital Electronics (1 Theory + 2 Sections Lab.)	Diploma-IV	4+6= 10
2.	Introduction to Microprocessors (1Theory +1 Lab.)	BMLT-IV	4+3= 7
3.	Project	Diploma-VI	3= 3
	TOTAL		**20**

2. Dr. Sumana Kumari

Sl. No.	Subject	Class -Semester	Classes/Week
1.	Optical Fiber Communication (1 Theory)	Diploma-VI	4= 4
2.	Consumer Electronics (1Theory +1 Lab.)	Diploma-VI	4+3= 7
3.	Semiconductor Devices (1 Theory)	Diploma- IV	4= 4
4.	T.V. Engg Lab. (1 Lab.)	Diploma-VI	3= 3
5.	Project	Diploma-VI	3= 3
	TOTAL		**21**

3. Mrs. Nirupam

Sl. No.	Subject	Class -Semester	Classes/Week
1.	Control Systems (1 Theory + 1 Lab.)	Diploma-VI	4+3= 7
2.	Electronic Measurement (1Theory +1 Lab.)	Diploma-IV	4+3= 7
3.	Optical Fiber Communication (1 Lab.)	Diploma-VI	3= 3
4.	Project	Diploma-VI	3= 3
	TOTAL		**20**

4. Md. Maqubool Hosain

Sl. No.	Subject	Class -Semester	Classes/Week
1.	Communication Principle (1 Theory + 1 Lab.)	Diploma-IV	4+3= 7
2.	Electronic Circuits (1Theory +2 Sections Lab.)	Diploma-IV	4+6= 10
3.	Project	Diploma-VI	3= 3
	TOTAL		**20**

5. Mr. Rakesh Kumar Chandan

Sl. No.	Subject	Class -Semester	Classes/Week
1.	Fundamental of Electrical & Electronics (3 sections Theory)	Diploma-II	3+3+3= 9
	TOTAL		**09**

Course Coordinator

Copy to:

1. Director, University Polytechnic
2. Coordinator, Time-Table Committee
3. Coordinator, Semester and Registration Committee
4. Coordinator, Examination Section
5. Concerned Faculty Members

UNIVERSITY POLYTECHNIC
B.I.T MESRA : RANCHI

Electrical and Electronics

TEACHING LOAD SESSION : SP/19 29/11/2018

1. Mr.N.K Mukherjee

S.No	Course No	Subject	Semester	Class/Week
1.	DEE 4007	Electrical Machines-II	IV	4
2.	DEE 4004	Electrical Workshop-I	IV	3
3	DEE 6003	Electrical Installation Commissioning and Maintenance.	VI	4
4.	DEE 6010	Electrical Workshop-II	VI	3
5.		M.V Act, regulation & Commissioning	VI(Automobile)	4
		Project	VI	3
		Total		**21**

2. Dr. Meena Singh

S.No	Course No	Subject	Semester	Class/Week
1.	DEE 4001	Electrical Measurement	IV	4
2.	DEE 4002	Electrical Measurement Lab	IV	3
3.	DEE 6007	Non-Conventional Energy Sources	VI	4
4.	DEE 6008	Non-Conventional Energy Sources Lab	VI	3
5.	DEC2002	Fundamental of Electrical and Electronics Lab (2 sections Lab.)	II	2 x2 = 4
6.		Project	VI	3
		Total		**21**

3. Avanish Kunar

S.No	Course No	Subject	Semester	Class/Week
1.	DEE 4008	Electrical Machines-II Lab	IV	3
2.	DEE 4003	Electrical Energy Generation	IV	4
3.		**Total**		**7**

4. Mr. Sumit Kumar Jha

S.No	Course No	Subject	Semester	Class/Week
1.	DEC2002	Fundamental of Electrical & Electronics (4 sections Lab.)	Diploma-II	4 x 2= 8
		Total		**8**

5. Ms Shilpee

S.No	Course No	Subject	Semester	Class/Week
1.	DEE 4009	Power System- I	IV	4
		Total		**4**

Course Coordinator

BRANCH: COMPUTER

Dr. G M ANSARI

S.NO	SUBJECT	SEMESTER	CLASSES/WEEK
1	SOFTWARE ENGINEERING	VI	4
2	RDBMS	IV	4
3	PROJECT	VI	3
4	RDBMS LAB	IV	3
6	NSS	IV	3
		TOTAL	17

Mr. ABHAY KUMAR

S.NO	SUBJECT	SEMESTER	CLASSES/WEEK
1	COMPUTER ORGANIZATION	IV	4
2	C++ LAB	IV	3
3	PROJECT	VI	3
4	DATA STRUCTURE LAB	IV	3
5	NSS	II & IV	3
		TOTAL	16

Mr. RAMNISH SINHA

S.NO	SUBJECT	SEMESTER	CLASSES/WEEK
1	WEB TECHNOLOGY & E-COM	VI	4
2	PROJECT	VI	3
3	OOP IN C++	VI	4
4	E-COMMERCE LAB	VI	3
		TOTAL	14

Mr. RAJENDRA MAHTO

S.NO	SUBJECT	SEMESTER	CLASSES/WEEK
1	System Analysis & Design	VI	4
2	ICS(BMLT)	II	4
3	PROJECT	VI	3
4	ICS LAB(BMLT)	II	3
		TOTAL	14

Mr. NIRAJ KUMAR

S.NO	SUBJECT	SEMESTER	CLASSES/WEEK
1	COMPUTER HARDWARE	VI	4
2	DATA STRUCTURES	IV	4
3	PROJECT	VI	3
4	HARDWARE LAB	VI	6
		TOTAL	17

UNIVERSITY POLYECHNIC
BIT, MESRA, RANCHI

DEPARTMENT-HUMANITIES
TEACHING LOAD

COURSE: DIPLOMA **Session-SP/2019**

DR. SANDHYA RANI(CHEMISTRY)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	ENGG. CHEMISTRY	DAC2001	II	3
2.	APPLIED SCIENCE LAB	DAC1102	II	2
3.	DEVELOPMENT OF LIFE SKILLS-I	DHU 2002	II	2
			TOTAL	**07**
DR. SHAMBHU SHARAN KUMAR(CHEMISTRY)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	ENGG. CHEMISTRY	DAC2001	II	3
2.	APPLIED SCIENCE LAB	DAC1102	II	2
3.	DEVELOPMENT OF LIFE SKILLS-I	DHU 2002	II	2
			TOTAL	**07**
DR. SATISH KUMAR(CHEMISTRY)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	ENGG. CHEMISTRY	DAC2001	II	3
2.	APPLIED SCIENCE LAB	DAC1102	II	2
3.	DEVELOPMENT OF LIFE SKILLS-I	DHU 2002	II	2
			TOTAL	**07**
DR. ROHIT KAMAL CHATTERJEE(MATHEMATICS)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	ENGG. MATHEMATICS	DMA2001	II	4 x 3= 12
2.	OPERATION RESEARCH	DME6007	VI	4 = 04
			TOTAL	**16**
DR. T.K.PARASHER (PHYSICS)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	ENGG. PHYSICS	DAP2001	II	3 x 3 = 09
2.	APPLIED SCIENCE LAB	DAC1102	II	2 x 3 = 06
			TOTAL	**15**
Ms. SONAL BHARTI (ENGLISH)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	COMMUNICATION SKILL	DHE2001	II	3 x 3 = 09
2.	COMMUNICATION SKILL	BMT2011	BMLT-II	2 = 02
			TOTAL	**11**
Ms. SAVITA SODHI(MANAGEMENT)				
S. No.	Subject	S. Code	Semester	Classes/ Week
1.	TOTAL QUALITY MANAGEMENT	MBA6003	VI	4 x 2 = 8
			TOTAL	**08**

Course Coordinator

UNIVERSITY POLYTECHNIC
B.I.T MESRA : RANCHI

B.Sc. MEDICAL LAB. TECHNOLOGY

TEACHING LOAD SESSION : SP/19 29/11/2018

Dr. Neeru Singh				
S.No	**Course No**	**Subject**	**Semester**	**Class/Week**
1.	BMT 2105	Clinical Chemistry I	II	4
2.	BMT 4101	Applied Microbiology	IV	4
3	BMT 4102	Microbiology Lab.-II	IV	3
4.	BMT 4107	Parasitology & Cytology	IV	4
5.	BGA 2004	NSS	II	
6.	BGA 4004	NSS	IV	3
		Total		**18**

Dr. Mohd Neyaz Ahsan				
S.No	**Course No**	**Subject**	**Semester**	**Class/Week**
7.	BMT 2103	Hematology I	II	4
8.	BMT 2109	Histology	IV	4
9.	BMT 4103	Hematology – II	IV	4
10.	BMT 4104	Hematology Lab.-II	IV	3
11.	BMT 2010	Basic Workshop II (Health care)	II	3
		Total		**18**

Dr. Chanchal Kumar Mishra				
S.No	**Course No**	**Subject**	**Semester**	**Class/Week**
1.	BMT 2101	Human Anatomy & Physiology – II	II	4
2.	BMT 2102	Human Anatomy & Physiology Lab.-II	II	3
3.	BMT 4105	Histopathology	IV	4
4	BMT 4109	Immunopathology	IV	4
5.	BGA 2004	NSS	II	
6.	BGA 4004	NSS	IV	3
		Total		**18**

Mr. Sanjay Jha				
S.No	**Course No**	**Subject**	**Semester**	**Class/Week**
1.	BMT 2106	Clinical Pathology Lab	II	3
2.	BMT 2104	Hematology Lab I	II	3
3.	BMT 4106	Histopathology Lab I	IV	3
4.	BMT 4108	Parasitology Lab	IV	3
5.	BMT 2010	Basic Workshop II (Health care)	II	3
		Total		**15**

Course Coordinator

UNIVERSITY POLYTECHNIC				
BIT,MESRA,RANCHI				
SESSION-SP/19				
BRANCH: Automobile, Manufacturing & Mechanical				
Mr. RAMKESH				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Modern Manufacturing Proc.(Manu)	VI		4
2	Manufacturing Process II (Manu)	IV		4
3	Production Process Lab	IV		3
4	Workshop Practice II	II	2X3	6
	TOTAL		**17**	
Mr. RAKESH				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Technology of CAD/CAM	VI		4
2	CAD/CAM LAB	VI		3
3	Power Plant Engineering			4
4	Engineering Graphics-II	VI		3
5	Theory of Machine	IV		4
	TOTAL		**18**	
Mr. PRADEEP TOPPO				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Automobile Engine -I(AUTO)	VI		4
2	Fluid Mechanics & Hydraulic Machines			4
3	Fluid Mechanics & Hydraulic Machines Lab	IV		6
4	Engineering Graphics-II			3
	TOTAL		**17**	
Mrs. REKHA KUMARI				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Production Management I (Manu)	IV		4
2	Quality control(Auto+Manu)	VI		4
3	Fluid Mechanics & Hydraulic Machines Lab	IV	1x3	3
4	Workshop Practice II	II	2X3	6
	TOTAL		**17**	
Mr. MANOJ KR. JHA				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Machine Design	Vl		4
2	Hydraulic & Pneumatic Controls(Mech)	VI		4
3	Non conventional machining Process	VI		3

4	Hydraulic & Pneumatic Controls Lab(Mech)	II		3
5	Engineering Graphics-II	II		3
	Total		**17**	
Mr. PRABHAT KUMAR				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Engineering Graphics-II	II	3X2	6
2	Strength of Materials	IV	2X4	8
3	Fluid Mechanics & Machinery	IV	1X2	4
	TOTAL		**18**	
Mr. SHANKAR KUMAR				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Motor Vehicle Technology -II	VI	2x2	4
2	Electrical Drawing and CAD	VI	1X3	3
3	Motor Vehicle Maintenance and Repair	VI	2x2	4
4	Garage Practice II(Auto)	VI	2X3	6
	TOTAL		**17**	
Mr. RAMKISHOR PRASAD				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Advanced Engineering Measurement	IV	1X2	4
2	Basic of Automobile Components	IV	1X2	4
3	Workshop Practice	Ii	2X3	6
4	Garage Practice	VI	2X3	6
	TOTAL		**20**	
Mr.Sujit Kumar				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Thermal Engineering	IV	1X4	4
2	Engineering Graphics-II	II	1X3	3
TOTAL			**7**	
Mr Atquir Rahman				
S.No.	SUBJECT	SEMESTER	CLASSES/WEEK	
1	Strength of Materials Lab	IV	2X3	6
2	Fluid Machinery lab	IV	1X3	3
TOTAL			**9**	

(Manoj Kumar)
Coordinator,
Automobile & Mechanical

(Rekha Kumari)
Coordinator,
Manufacturing

 Internal Continuous Evaluation System and place: Mid Term Examination, Assignment, Attendance & End Semester Examination.

 Student’s assessment of Faculty, System in place: Feedback from student’s are taken after end of each semester.

 For each Post Graduate Courses give the following: NA

 Title of the Course- NA

 List of the candidate who joined within the date, vacancy position in each category before operation of waiting list- NA

16. Enrollment of students in the last 3 years

2018-19 - Diploma in Engineering- 195, BMLT- 29
2017-18 - Diploma in Engineering- 180, BMLT- 37
2016-17 - Diploma in Engineering- 181, BMLT- 48

17. List of Research Projects/ Consultancy Works

 Number of Projects carried out, funding agency, Grant received- NA

 Publications (if any) out of research in last three years out of masters projects-NA

 Industry Linkage- Students are sent to various Industries(almost 30 companies) every year for summer training. Persons from industries are member of Board of studies. Students take up industrial project as well.

 MoUs with Industries (minimum 3) -NA

18. LoA and subsequent EoA till the current Academic Year

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)
Nelson Mandela Marg,Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org

APPROVAL PROCESS 2018-19

Extension of Approval (EoA)

F.No. Eastern/1-3508974253/2018/EOA Date: 04-Apr-2018

To,

The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of Approval for the Academic Year 2018-19

Ref: Application of the Institution for Extension of approval for the Academic Year 2018-19

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2016 notified by the Council vide notification number F.No.AB/AICTE/REG/2016 dated 30/11/2016 and amended on December 5, 2017 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-461324461	**Application Id**	1-3508974253
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	**Name of the Society/Trust**	BIRLA INSTITUTE OF TECHNOLOGY
Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215	**Society/Trust Address**	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided	**Region**	Eastern

Opted for Change from Women to Co-Ed and vice versa	No	**Change from Women to Co-Ed and vice versa Approved or Not**	NA
Opted for Change of Name	No	**Change of Name Approved or Not**	NA
Opted for Change of Site	No	**Change of Site Approved or Not**	NA
Opted for Conversion from Degree to Diploma or vice versa	No	**Conversion for Degree to Diploma or vice versa Approved or Not**	NA
Opted for Organization Name Change	No	**Change of Organization Name Approved or Not**	NA

To conduct following Courses with the Intake indicated below for the Academic Year 2018-19

Program	Shift	Level	Course	FT/PT+	Affiliating Body (Univ/Body)	Intake Approved for 2018-19	NRI Approval Status	PIO / FN / Gulf quota/ OCI/ Approval Status	Foreign Collaboration / Twining Program Approval Status*
ENGINEERING AND TECHNOLOGY	1st	DIPLOMA	AUTOMOBILE ENGINEERING	FT	Birla Institute of Technology, Ranchi	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st	DIPLOMA	COMPUTER ENGINEERING	FT	Birla Institute of Technology, Ranchi	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st	DIPLOMA	ELECTRONICS ENGINEERING	FT	Birla Institute of Technology, Ranchi	30	NA	NA	NA
ENGINEERING AND	1st	DIPLOMA	MECHANICAL ENGINEERING	FT	Birla Institute of Technology, Ranchi	60	NA	NA	NA

TECHNOLOGY									
ENGINEERING AND TECHNOLOGY	1st	DIPLOMA	MANUFACTURING ENGINEERING	FT	Birla Institute of Technology, Ranchi	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FT	Birla Institute of Technology, Ranchi	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FT	Birla Institute of Technology, Ranchi	30	NA	NA	NA

+FT –Full Time,PT-Part Time

Deficiencies Noted based on Self Disclosure

Particulars	Deficiency
Faculty Deficiency	Yes

*Please refer Deficiency Report for details

UNIVERSITY POLYTECHNIC, BIT, MESRA is hereby informed to submit the compliance of the deficiencies mentioned above to the Regional Office within a period of **6 months** from the date of issuance of this letter failing which the council shall initiate strict action as defined in Approval Process Handbook 2018-19 during the subsequent Academic Year.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation: - Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Prof. A.P Mittal
Member Secretary, AICTE

Copy to:

1. The Regional Officer,
   All India Council for Technical Education
   College of Leather Technology Campus
   Block LB, Sector III, Salt Lake City
   Kolkata - 700 098, West Bengal
2. The Director Of Technical Education**,
   Jharkhand
3. The Registrar**,
   Birla Institute of Technology, Ranchi
4. The Principal / Director,
   UNIVERSITY POLYTECHNIC, BIT, MESRA
   OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
5. The Secretary / Chairman,
   BIRLA INSTITUTE OF TECHNOLOGY
   BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
6. Guard File(AICTE)

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

Nelson Mandela MargVasant Kunj, New Delhi-110067
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-3324334190/2017/EOA Date: 30-Mar-2017

To,

The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2017-18

Ref: Application of the Institution for Extension of approval for the academic year 2017-18

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2016 notified by the Council vide notification number F.No.AB/AICTE/REG/2016 dated 30/11/2016 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Permanent Id	1-461324461	Application Id	1-3324334190
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided	Region	Eastern

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable
Opted for Conversion from degree to diploma	No	Opted for Conversion from diploma to degree	No	Conversion (degree to diploma or vice-a-versa) Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2017-18

Application Id: 1-3324334190			Course	Full/Part Time	Affiliating Body	Intake Approved for 2016-17	Intake Approved for 2017-18	NRI Approval status	PIO / FN / Gulf quota/ OCI/ Approval status	Foreign Collaboration/Twining Program Approval status*
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	AUTOMOBILE ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA
	1st	DIPL	COMPUTER	FULL	Birla Institute	30	30	NA	NA	NA

ENGINEERING AND TECHNOLOGY	Shift	OMA	ENGINEERING	TIME	of Technology, Ranchi					
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MANUFACTURING ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA

The above mentioned approval is subject to the condition that
UNIVERSITY POLYTECHNIC, BIT, MESRA
shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Prof. A.P Mittal

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-2811735322/2016/EOA

Date: 05-Apr-2016

To,

The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2016-17

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-2811735322
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Permanent Id	1-461324461
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Institute Type	Govt aided	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1-2811735322			Course	Full/Part Time	Affiliating Body	Intake 2015-16	Intake Approved for 2016-17	NRI Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaboration/Twining Program Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPL OMA	AUTOMOBILE ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA

All India Council for Technical Education
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ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	COMPUTER ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MANUFACTURING ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA

The above mentioned approval is subject to the condition that UNIVERSITY POLYTECHNIC, BIT, MESRA shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Dr. Avinash S Pant
Vice - Chairman, AICTE

Copy to:
1. **The Regional Officer,**

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-2451703120/2015/EOA Date: 24-Apr-2015

To,
The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2015-16

Ref: Application of the Institution for Extension of approval for the academic year 2015-16

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-2451703120
		Permanent Id	1-661324461
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2015-16

Note: This is a Computer generated Letter of Approval.No signature is required. Letter Printed On:27 July 2015

Printed By : aic003256

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Application Id: 1-2451703120			Course	Full/Part Time	Affiliating Body	Intake 2014-15	Intake Approved for 15-16	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	AUTOMOBILE ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	COMPUTER ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MANUFACTURING ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA

Note: Validity of the course details may be verified at www.aicte-india.org>departments>approvals

The above mentioned approval is subject to the condition that UNIVERSITY POLYTECHNIC, BIT, MESRA shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

Note: This is a Computer generated Letter of Approval.No signature is required. Letter Printed On:27 July 2015

Printed By : ali0003298

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PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

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Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Dr. Avinash S Pant
Actg Chairman, AICTE

Copy to:

1. **The Regional Officer,**
   All India Council for Technical Education
   College of Leather Technology Campus
   Block LB, Sector III, Salt Lake City
   Kolkata - 700 098, West Bengal
2. **The Director Of Technical Education,**
   Jharkhand
3. **The Registrar,**
   Birla Institute of Technology, Ranchi
4. **The Principal / Director,**
   UNIVERSITY POLYTECHNIC, BIT, MESRA
   OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
5. **The Secretary / Chairman,**
   BIRLA INSTITUTE OF TECHNOLOGY
   BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
6. **Guard File(AICTE)**

All India Council for Technical Education
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7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-2013077820/2014/EOA

Date: 04-Jun-2014

To,
The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2014-15

Ref: Application of the Institution for Extension of approval for the academic year 2014-15

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-2013077820
		Permanent Id	1-461324461
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

to conduct following courses with the intake indicated below for the academic year 2014-15

Note: This is a Computer generated Letter of Approval.No signature is required.

Letter Printed On:10 June 2014

Printed By : AIC003298

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-2013077820/2014/EOA

Date: 04-Jun-2014

To,
The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2014-15

Ref: Application of the Institution for Extension of approval for the academic year 2014-15

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-2013077820
		Permanent Id	1-461324461
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

to conduct following courses with the intake indicated below for the academic year 2014-15

Note: This is a Computer generated Letter of Approval.No signature is required.

Letter Printed On:10 June 2014

Printed By : AIC003298

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandraiok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

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Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

(Dr. Kuncheria P. Isaac)
Member Secretary, AICTE

Copy to:

1. **The Regional Officer,**
   All India Council for Technical Education
   College of Leather Technology Campus
   Block LB, Sector III, Salt Lake City
   Kolkata - 700 098, West Bengal

2. **The Director Of Technical Education,**
   Jharkhand

3. **The Registrar,**
   Birla Institute of Technology, Ranchi

4. **The Principal / Director,**
   UNIVERSITY POLYTECHNIC, BIT, MESRA
   OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215

5. **The Secretary / Chairman,**
   BIRLA INSTITUTE OF TECHNOLOGY
   BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215

6. **Guard File(AICTE)**

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-1471238852/2013/EOA

Date: 19-Mar-2013

To,
The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2013-14

Ref: Application of the Institution for Extension of approval for the academic year 2013-14

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-1471238852
		Permanent Id	1-461324461
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Name of the Society/Trust	BIHLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIHLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

to conduct following courses with the intake indicated below for the academic year 2013-14

Application Id: 1-1471238852			Course	Full/Part Time	Affiliating Body	Intake 2012-13	Intake Approved for 13-14	NRI	PIO	Foreign Collaboration
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	AUTOMOBILE ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA

Note: This is a Computer generated Extension of Approval Letter. No signature is required.

Letter Printed On:5 June 2014.

Printed By : aic003296

Application Id: 1-1471238852			Course	Full/Part Time	Affiliating Body	Intake 2012-13	Intake Approved for 13-14	NRI	PIO	Foreign Collaboration
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	COMPUTER ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MANUFACTURING ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FULL TIME	Birla Institute of Technology, Ranchi	60	60	NA	NA	NA

- Validity of the course details may be verified at www.aicte-india.org>departments>approvals

The above mentioned approval is subject to the condition that UNIVERSITY POLYTECHNIC, BIT, MESRA shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

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All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

(Dr. Kuncheria P. Isaac)
Member Secretary, AICTE

Copy to:

1. **The Regional Officer,**
   All India Council for Technical Education
   College of Leather Technology Campus
   Block LB, Sector III, Salt Lake City
   Kolkata - 700 098, West Bengal
2. **The Director Of Technical Education,**
   Jharkhand
3. **The Registrar,**
   Birla Institute of Technology, Ranchi
4. **The Principal / Director,**
   UNIVERSITY POLYTECHNIC, BIT, MESRA
   OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
5. **The Secretary / Chairman,**
   BIRLA INSTITUTE OF TECHNOLOGY
   BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
6. **Guard File(AICTE)**

23.

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-697141991/2012/EOA Date: 10/05/2012

To,
The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2012-13

Ref: Application of the Institution for Extension of approval for the academic year 2012-13

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2010 notified by the Council vide notification number F-No.37-3/Legal/2010 dated 10/12/2010 and amendment vide notification number F-No.37-3/Legal/2011 dated 30/09/2011 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	Eastern	Application Id	1-697141991
		Permanent Id	1-461324461
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OFFSITE INDUSTRIAL ESTATE BIT-STEP, MESRA, RANCHI, RANCHI, Jharkhand, 835215
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

to conduct following courses with the intake indicated below for the academic year 2012-13

Note: This is a Computer generated Extension of Approval Letter. No signature is required. Letter Printed On:17 October 2012.

Printed By : AIC0003598

25.

Application Id: 1-697141991			Course		Affiliating Body					
Program	Shift	Level		Full/Part Time		Intake 2011-12	Intake Approved for 12-13	NRI	PIO	Foreign Collaboration
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	AUTOMOBILE ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	60	60	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	COMPUTER ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MANUFACTURING ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FULL TIME	Birla Institute of Technology, Ranchi	60	60	No	No	No

The above mentioned approval is subject to the condition that UNIVERSITY POLYTECHNIC, BIT, MESRA shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

27.

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

(Dr. K. P. Isaac)

Member Secretary, AICTE

Copy to:

1. **The Regional Officer,**
   All India Council for Technical Education
   College of Leather Technology Campus
   Block LB, Sector III, Salt Lake City
   Kolkata - 700 098, West Bengal
2. **The Director Of Technical Education,**
   Jharkhand
3. **The Registrar,**
   Birla Institute of Technology, Ranchi
4. **The Principal / Director,**
   UNIVERSITY POLYTECHNIC, BIT, MESRA
   OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
5. **The Secretary / Chairman,**
   BIRLA INSTITUTE OF TECHNOLOGY
   BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,
   RANCHI,RANCHI,
   Jharkhand,835215
6. **Guard File(AICTE)**

Note: This is a Computer generated Extension of Approval Letter. No signature is required. Letter Printed On:17 October 2012.

Printed By : AIC003298

29.

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. Eastern/1-461324461/2011/EOA

Date: 01-09-2011

To,
The Principal Secretary (Science & Tech. Deptt.)
Govt. of Jharkhand Nepal House,
Dhurwa, Ranchi-834002

Sub: Extension of approval for the academic year 2011-12.
Ref : Application of the Institution for Extension of Approval for the Year 2011-12

Sir/Madam,

In terms of the Regulations notified by the Council vide F.No. 37-3/Legal/2011 dated 10/12/2010 and norms, standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the extension of approval of the Council to

Regional Office	Eastern	Application Id	1-461324461
		Permanent Id	
Name of the Institute	UNIVERSITY POLYTECHNIC, BIT, MESRA	Institute Address	OPPOSITE INDUSTRIAL ESTATE BIT-STEP, MESRA,RANCHI,RANCHI,Jharkhand,835215
Name of the Society/Trust	BIRLA INSTITUTE OF TECHNOLOGY	Society/Trust Address	BIRLA INSTITUTE OF TECHNOLOGY, P.O-MESRA,RANCHI,RANCHI,Jharkhand,835215
Institute Type	Govt aided		

to conduct following courses with the intake indicated below for the academic year 2011-12

Application Id: 1-461324461			Course		Affiliating Body	Intake 2010-11	Intake Approved for 11-12	NRI	PIO	Foreign Collaboration
Program	Shift	Level		Full/Part Time						
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	AUTOMOBILE ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	60	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	COMPUTER ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No

Note: This is a Computer generated Extension of Approval Letter. No signature is required.
Printed By : AIC003298

Date of printing: 27-07-2015

31.

Application Id: 1-461324461			Course	Full/Part Time	Affiliating Body	Intake 2010-11	Intake Approved for 11-12	NRI	PIO	Foreign Collaboration
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MANUFACTURING ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Birla Institute of Technology, Ranchi	30	30	No	No	No
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MEDICAL LAB TECHNOLOGY	FULL TIME	Birla Institute of Technology, Ranchi	50	60	No	No	No

The above mentioned approval is subject to the condition that UNIVERSITY POLYTECHNIC, BIT, MESRA shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Copy to:

1. **The Regional Officer,**
   All India Council for Technical Education
   College of Leather Technology Campus

Note: This is a Computer generated Extension of Approval Letter. No signature is required. Date of printing: 27-07-2015
Printed By: AIC003298

अखिल भारतीय तकनीकी शिक्षा परिषद

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

(भारत सरकार का एक सांविधिक निकाय) (A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

EASTERN REGIONAL OFFICE

13/07/04

F.no:761/GEN/E&T(PG) /2000 /1937

The Secretary
Department of Science & Technology
Govt. of Jharkhand
Nepal House Secretariat
Doranda, Ranchi 834 002

Sub: Extension of approval to University Polytechnic, B.I.T., Mesra, Ranchi 835 215 for conduct of Diploma Level Courses.

Sir,

I am directed to state that on recommendations of the State Level Committee, All India Council for Technical Education (AICTE) is pleased to accord extension of approval to **University Polytechnic, B.I.T., Mesra**, Ranchi 835 215, Jharkhand for conduct of Diploma Level Course(s) in Engineering & Technology with intake capacity as given below:

Sl.no.	Existing/New Course(s)	Level	Entry Level	Duration (year)	Existing Intake	Approved Intake	Period of Approval
1	Automobile Engineering	Diploma	10+	3	20	30	2004-2005
2	Electronics Engineering	Diploma	10+	3	20	30	2004-2005
3	Computer Engineering	Diploma	10+	3		30	2004-2005
4	Manufacturing Engineering	Diploma	10+	3		30	2004-2005
5	Medical Lab Technology	Diploma	10+	3		50	2004-2005
				Total Intake	40	170	

This approval has been accorded subject to fulfillment of norms and standards of the Council for the course(s) and intake approved above.

Thanking you.

Yours faithfully,

(Dr. N.K. Kole)
Regional Officer

अखिल भारतीय तकनीकी शिक्षा परिषद्

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

(भारत सरकार का एक सांविधिक संस्थान) (A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

EASTERN REGIONAL OFFICE

18th July, 2006

F.No.:761/GEN/E&T(PG)/2000/1285-89

The Secretary
Department of Science & Technology
Govt. of Jharkhand
Nepal House Secretariat
Doranda, Ranchi - 834 002.

Subject: Extension of approval to **University Polytechnic, B.I.T., Mesra, Ranchi - 835 215** for conducting Diploma Level Courses for the academic year(s) 2005-2006.

Sir,

I am directed to state that on consideration and recommendation of the State Level Committee the All India Council for Technical Education (AICTE) is pleased to accord extension of approval to **University Polytechnic, B.I.T., Mesra, Ranchi - 835 215** for conducting Diploma Level course(s) and intake capacity as given below with the specific conditions that admission shall be made through the Central Counseling by the Govt. of Jharkhand.

Existing Course(s)	Level	Approved Intake		Period of Approval
		Existing	New	
Automobile Engineering	Diploma	30	30	2005-2006
Electronic Engineering	Diploma	30	30	2005-2006
Computer Engineering	Diploma	30	30	2005-2006
Manufacturing Engineering	Diploma	30	30	2005-2006
Medical Lab Technology	Diploma	50	50	2005-2006
	Total	170	170	

This approval has been accorded subject to fulfillment of norms & standards of the Council for the Course(s) and intake approved above.

Further, in the event of infringement/contravention or non-compliance of the norms and standards prescribed at AICTE during the last approved academic year, the Council shall take further action to withdraw approval to this case or admission during subsequent academic year and the liability arising out of such withdrawal of approval will be solely that of Management / Trust / Society and / or Institutions.

REGIONAL OFFICER

Cont.....2/-

अखिल भारतीय तकनीकी शिक्षा परिषद्

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

(भारत सरकार का एक सांविधिक संस्थान) (A Statutory Body of the Govt. of India)

EASTERN REGIONAL OFFICE, KOLKATA

ADDITIONAL COURSES/VARIATION IN INTAKE/EOA

Dated: 15.06.2010

F. No. 720-73-02/RO/94 / 4712 – 17

To

The Principal Secretary

Dept. of Science & Technology

Govt. of Jharkhand,

Nepal House Secretariat,

Doranda, Ranchi – 834 002

Sub: Extension/introduction of additional Course(s)/Variation in Intake of AICTE approval to **University Polytechnic (B.I.T.), Mesra, Ranchi 835 215, Jharkhand** for conduct of Diploma Course(s) in Diploma Engineering & Technology

Based on recommendations of the State Level Committee vide letter no. 10-1244, dated – 14.06.2010, All India Council for Technical Education (AICTE), is pleased to accord approval to **University Polytechnic (B.I.T.), Mesra, Ranchi Jharkhand, JharkhandJharkhand** for Extension of approval / Introduction of new course(s) / Variation in intake, as applicable for Diploma Engineering & Technology with annual intake of each course(s) as given below

Approved Existing Course(s)	Level	Approved Intake		Period of approval
		Existing	New	
Auto Mobile Engineering	Diploma	30	30	2010-2011
Electronics Engineering	Diploma	30	30	2010-2011
Computer Engineering	Diploma	30	30	2010-2011
Manufacturing Engineering	Diploma	30	30	2010-2011
Medical Lab Technology	Diploma	50	50	2010-2011
Electrical & Electronics Engineering	Diploma	0	30	2010-2011
Mechanical Engineering	Diploma	0	30	2010-2011
Total		170	230	

This approval has been accorded subject to fulfilment of Norms & Standards of the Council for the Course(s) and Intake approved above.

Further, the observation and specific conditions (if any) of the Expert Committee are enclosed in this letter. The institution shall fulfill all the conditions without any delay. Non-fulfilment shall lead to withdrawal of approval.

The approval accorded above is subject to fulfilment of the following conditions:

1. All full time faculty members as per AICTE norms must be recruited before making admissions. Admissions shall be made through the Central Counseling by the State/Central Govt. only.
2. All the required Laboratories/Workshops/Machineries/Equipment, as per approved syllabi of the concerned Technical Education Board, must be operational before making admissions.
3. If this letter of approval is received by you after the closing date of State/National Level Central Counseling for admissions in the concerned State/Union Territory, this letter of approval will not be valid for making any admission during the above specified academic year.
4. No excess admission shall be made by the institution during any academic year.
5. The approval is valid only for the academic year [illegible] approval is received beyond the academic year the approval letter [illegible] subsequent years.

ब्लाक - एल.बि., सैक्टर-III, राजकीय अभियांत्रिकी एवं चर्म प्रौद्योगिकी महाविद्यालय परिसर, साल्ट लेक सिटी, कोलकाता-700098 [illegible]
LB-Block, Sector-III, Govt. College of Engg. & Leather Tech. Campus, Salt Lake City, Kolkata 700098 [illegible]

[illegible]

अखिल भारतीय तकनीकी शिक्षा परिषद
ALL INDIA COUNCIL FOR TECHNICAL EDUCATION
(A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

Prof. S.G. Sangameshwaru,
Adviser (T&T)

22/12/98

No.F.720-73-02/RC/94

The Secretary,
Deptt. of Science & Technology,
Govt. of Bihar, Vikas Bhawan, Bailey Road,
PATNA - 800 001.

SUB EXTENSION OF AICTE APPROVAL TO THE EXISTING BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI FOR CONDUCTING DIPLOMA / POST DIPLOMA COURSES IN ENGG. & TECH.

Sir,

I am directed to state that on consideration of the compliance submitted by the institute and its recommendation made by the Northern Regional Office, the All India Council for Technical Education (AICTE) is hereby extending its earlier approval accorded untill 1997-98 to BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI for conducting following course(s) with an annual intake and duration as given below upto 1999-2000.

COURSE	LEVEL	INTAKE
Automobile Engg.	Diploma	20 (Twenty)
Electronics Engg.	Diploma	20 (Twenty)
CAD/CAM Engg.	P.D.	20 (Twenty)
Computer Science	P.D.	20 (Twenty)
Non Conventional Energy Engg.	P.D.	20 (Twenty)
Ref. & Air Conditioning	P.D.	20 (Twenty)
T.V. & Video Engg.	P.D.	20 (Twenty)

This approval is subject to fulfilment of specific conditions as mentioned in earlier approval letter. The Council shall inspect the premises for verification of compliance & facilities during last approved academic session.

The Management / Institute / Trust or Society shall not announce admissions directly under any circumstances and shall lawfully avoid by the admissions regulations notified by the AICTE vide GSR 476 (E) dated 20.05.1994 based on the Hon'ble Supreme Court Judgement dated 04.02.1993 with regard to WP (C) No. [illegible] of 1992 in the case of Unni Krishnan JP and others etc. V/s State Government of Andhara Pradesh and other etc. and later judgements.

In the event of infringement / contravention or non-compliance of any of the conditions, norms, norms and regulations prescribed by the AICTE from time to time, the AICTE or a body or person(s) authorised by it shall be free to take measures for withdrawal of the approval or recognition without consideration of any related issues and the liabilities arising out of such withdrawal would be solely that of the Management / Trust/ Society and/or institution. The AICTE may inspect the institution at any time it may deem fit to note progress.

You are requested to kindly take appropriate action [illegible] the Council and communicate the progress made in this regard to the Northern Regional [illegible]

Yours faithfully,

[illegible]

इंदिरा गांधी खेल परिसर, इन्द्रप्रस्थ एक्टेंशन, नई दिल्ली - 110 002
Indira Gandhi Sports Complex, I.P. Extension, New Delhi - 110 002

19. Accounted audited statement for the last three years

Phone : (EPBX) 0651-2275444/2275896, 2276002/2276006 FAX . 0651-2275401 / 2275351 Website . www.bitmesra.ac.in

University Polytechnic

financial Details for the period from 01.04.2015to 31.01.16

Income:

	2015-2016 (Rs.in Lacs.)		(Rs.in Lacs.)
Income from Central Govt:	0	Income from UGC:	0
Income from State Govt:	143	Income from Other Bodies:	0
Income from Student Fees:	117	Income from Other/Internal Revenue:	6.15
Income from Donations:	0	Total Income:	266.6

Expenditure:

Salary Teaching Staff:	111.31
Remuneration to Visiting/Guest:	6.96
Salary Non-teaching Staff:	98.13
Library:	

Equipment:	1.1
Building Maintenance:	2.51
Other Expenditure:	48.88
Total Expenditure:	268.89
Surplus/Deficit:	2.29

BIRLA INSTITUTE OF TECHNOLOGY

A Deemed University u/s 3 of UGC Act, 1956
MESRA : RANCHI – 835 215 (INDIA)

Phone : (EPBX) 0651-2275444/2275896, 2276002/2276006 FAX: 0651-2275401/2276052 Website: www.bitmesra.ac.in

University Polytechnic

Financial Details for the period from 01.04.2017 to 18.1.18

Income : (Rs.in Lacs.)

			(Rs.in Lacs.)
Income from Central Govt:	0	Income from UGC:	0
Income from State Govt:	0	Income from Other Bodies:	0
Income from Student Fees:	242.52	Income from Other/Internal Revenue:	31.56
Income from Donations:	0	Total Income:	274.08

Expenditure:

Salary Teaching Staff:	132.35	Repairin&maint(Equipment)	2.24
Remuneration to Visiting/Guest:	5.13	Building Maintenance:	6.22
Salary Non-teaching Staff:	109.72	Other Expenditure:	65.47
Library:	0	Total Expenditure:	321.13 321.13
		Surplus/Deficit:	47.05

Abhishek Kumar

31.1.2018
Accountofficer

INSTITUTE OF TECHNOLOGY

Audited Statement of Account of last Year(Income & Expenditure Statement for complete year)

Income			Expenditure		
Sl. No.	Details	Amount	Sl. No.	Details	Amount
1	Tuition Fees	35439878.00	1	Salary	39991484.00
2	Other fee/amount collected from students	348802.00	2	Administrative expenses	4563192.38
3	Grants from Govt. / Private agencies		3	Training and Development	
4	Grants / Contribution from other sources (Management)		4	Laboratory consumables	76034.00
5	Scholarships received		5	Library	14000.00
6	Other income	505060.00	6	Travel	159380.00
			7	Fees Paid to University/ Board/ Government/AICTE/UGC	
			8	Repairs and Maintenance	1317504.92
			9	Scholarships/ Concessions/ Fellowships/Honorarium etc., awarded/incurred(other than Govt. grants)	609500.00
			10	Expenditure of grants received from Govt. / Private agencies	
			11	Depreciation	
			12	Any other expenditure	455797.30
	Total	36293740.00		Total	47186893.20

Principal

Auditor

ANNUAL ACCOUNTS

2017-2018
(ENDING MARCH 31ST, 2018)

BIRLA INSTITUTE OF TECHNOLOGY
MESRA: RANCHI- 835215
JHARKHAND

K. N. GUTGUTIA & CO.
CHARTERED ACCOUNTANTS
KOLKATA • NEW DELHI

PHONE : 2287-3735/56
FAX : 91-033-22873756
E-mail : kng_kol@vsnl.net
cakng_kol@hotmail.com
6C, MIDDLETON STREET
FLAT NO. 23 (2ND FLOOR)
KOLKATA-700071

INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF GOVERNING BODY OF BIRLA INSTITUTE OF TECHNOLOGY

Report on the Financial Statements

We have audited the accompanying financial statement **Birla Institute of Technology ("the INSTITUTE")**, which comprises the Balance sheet as at March 31, 2018, and the Income and Expenditure Account for the year ended on that date, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true and fair view of the financial position and financial performance of the INSTITUTE in accordance with the Accounting Standards prescribed by The Institute of Chartered Accountants of India ("the ICAI").This responsibility also includes maintenance of adequate accounting records for safeguarding of the assets of the INSTITUTE and for preventing and detecting the frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the Standards on Auditing as specified by the ICAI. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the INSTITUTE's preparation of the financial statements that a give true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by Management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified audit opinion on the financial statements.

K. N. GUTGUTIA & CO. Chartered Accountants

K. N. GUTGUTIA & CO.
CHARTERED ACCOUNTANTS
KOLKATA • NEW DELHI

PHONE : 2287-3735/56
FAX : 91-033-22873756
E-mail : kng_kol@vsnl.net
cakng_kol@hotmail.com
6C, MIDDLETON STREET
FLAT NO. 23 (2ND FLOOR)
KOLKATA-700071

Basis for Qualified Opinion

Refer to note no. (A)(6)(a) of Schedule "C", the Institute has not provided the Leave Liability (amount unascertained). Accordingly impact of the same on Surplus and General Fund could not be ascertained.

Qualified Opinion

In our opinion and to the best of our information and according to the explanations given to us, except for the effects of the matter described in the Basis for Qualified Opinion paragraph above, the aforesaid financial statements give the information in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India; of the state of affairs of the INSTITUTE as at 31st March, 2018 and its surplus for the year ended on that date.

Kolkata
21st April, 2018

For K. N. Gutgutia & Co.
Chartered Accountants
Firm Registration Number 304153E

K. C. Sharma
Partner
Membership No.050819

(Rs. in Lacs)

Liabilities	As at 31st March, 2018	As at 31st March, 2017	Assets	As at 31st March, 2018	As at 31st March, 2017
General Fund			Fixed Assets		
As per last account:	21060.12	17804.79	As Per Schedule "A" Annexed	25509.87	22651.48
Addition during the year:					
Interest	1391.51	1349.64	Current Assets, Advances,		
Development Fund	471.52	659.35	& Deposits:		
Transferred from Accumulation Fund	-	1167.00	(A) Current Assets		
	22923.15	20980.78	Stores & Building Materials	28.45	72.82
Add: Excess of Income over					
Expenditure Transferred from			Sundry Debtors:		
Income & Expenditure A/c	2497.17	79.34	Government Account	460.48	585.56
	25420.32	21060.12	Others	670.92	556.63
				1131.40	1142.19
Accumulation Fund					
As per last account:	-	1167.00			
Less:Utilised during the year	-	1167.00	Cash & Bank Balances:		
	-	-	Cash in hand	5.41	12.40
Add: Transferred during the year as per			In Current Account	183.10	293.40
Income & Expenditure Account	365.00	-	In Savings Account	457.49	244.36
	365.00	-	In EEFC Account	705.68	947.56
Depreciation Fund	10.00	10.00	DD in Hand	0.63	-
Staff Development Fund	15.00	15.00		1352.31	1497.72
Maintenance Fund					
As per last account:	15.00	15.00	In Fixed Deposits Account	23555.84	19949.73
Less:Utilised during the year	15.00	0.00	Add : Accrued Interest	586.34	396.04
	-	15.00		24142.18	20345.77
Corpus Fund					
As per last account:	485.89	422.96	(B) Advance & Deposits:	1016.36	959.61
Addition during the year	69.95	62.93			
	555.84	485.89			
Alumni Fund					
As per last account:	226.41	205.62			
Addition during the year	4.27	20.79			
	230.68	226.41			
TEQIP Funds (Phase II) As Per Schedule "B" Annexed					
As per last account:	572.06	369.41			
Addition during the year	64.75	202.65			
	636.81	572.06			
Current Liabilities & Provisions					
Sundry Creditors and Provisions					
Government Account	1573.10	1833.48			
Others	9620.85	9598.04			
	11193.95	11431.52			
Advance & Deposits:	230.99	178.57			
Provision for Depreciation					
As per last account:	12675.02	11026.71			
Addition during the year	2028.91	1651.49			
	14703.93	12678.20			
Less: Depreciation on Sale of Assets	181.95	3.18			
	14521.98	12675.02			
Total	**53180.57**	**46669.59**	**Total**	**53180.57**	**46669.59**

As per our Report of even date on the Balance Sheet annexed herewith

Place : Kolkata

Date : 21st April, 2018

For K.N. Gutgutia & Co.
Chartered Accountants
Firm Registration Number 304153E

K.N. GUTGUTIA & CO. Chartered Accountants

(K.C. Sharma)
Partner
Membership No.50819

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

Consolidated Income & Expenditure Account including for Scientific Research Expenses as on 31st March, 2018

(Rs. In Lacs)

EXPENDITURE	Year ended March 31, 2018	Year ended March 31, 2017	INCOME	Year ended March 31, 2018	Year ended March 31, 2017
To Establishment			By Fees	18108.38	17419.34
Salaries, Allowances and			By Sales & Registration of Application forms	153.96	155.00
P.F Contribution etc.	13037.40	13739.15	By Miscellaneous Receipts	222.46	289.92
To Laboratory & Workshop	141.87	191.67	By Rent of Quarters and others	202.27	221.38
To Research & Professional Development	88.74	56.64	By Surplus on Sale of Fixed Assets	38.94	17.47
To Admission Expenses	198.38	178.23	By Excess Liability Written Back	15.72	353.51
To Institute Examination Expenses	132.97	101.64	By Sundry Balances Written Back	10.09	0.47
To Library Expenses	128.63	123.41	By Planning & Implementation Charges	100.00	378.40
To Expenses On P.G. Courses	439.67	413.79	By Contribution from Jharkhand Govt. for		
To Staff Training & Upgradation	1.02	0.32	revision of Pay & DA/ADA	2600.00	-
To Students Activities	73.35	100.85			
To Electricity & Water Supply	711.59	617.45	By Govt. Grant against Projects	362.72	209.04
To Repair & Maintenance			Less : Expenditure	362.72	209.04
Building & Others	312.58	393.67		-	-
To Insurance	23.91	21.59			
To Rates & Taxes	20.43	11.51	By Grant against Tequip World Bank Project II & III	342.80	190.93
To Auditor's Remuneration			Less : Expenditure	342.80	190.93
Audit Fee	2.36	2.30		-	-
To Travelling & Conveyance	119.51	114.42			
To Postage & Telephone	26.76	36.63			
To Miscellaneous Expenses	859.02	841.00			
To G.P. Birla Scholarship	219.87	160.28			
To Sundry Balances Written off	22.67	0.11			
To Loss on Sale of Fixed Assets	0.01	-			
To Depreciation	2028.91	1651.49			
To Transferred to Accumulation Fund	365.00	0.00			
To Excess of Income over Expenditure					
transferred to Balance Sheet	2497.17	79.34			
	21451.82	**18835.49**		**21451.82**	**18835.49**

Place : Kolkata

Date : 21st April, 2018

As per our Report of even date on the Balance Sheet annexed herewith

For K.N. Gutgutia & Co.

Chartered Accountants

Firm Registration Number 304153E

(K.C. Sharma)
Partner
Membership No.50819

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

(Annexure-A)

Schedule of Fixed Assets Annexed to & forming part of the Balance Sheet as at 31st March, 2018

Rs. (in lac)

	Particulars	As on 4/1/2017	Additions During the year	Total As on 3/31/2018	Deduct/Adjst During the year	Net Amount as on 3/31/2018
A	**INSTITUTE'S ASSETS:-**					
	BIT					
	Land & Building at Greater Noida	3,782.89	67.99	3,850.88	-	3,850.88
	Land and Building	4,643.13	511.67	5,154.80	-	5,154.80
	Plant,Machineries & Equipments	4,807.17	1,619.98	6,427.15	-	6,427.15
	Computer Software (ERP)	810.34	65.99	876.33	-	876.33
	Library Books	403.83	0.25	404.08	-	404.08
	Furniture and Fixtures	715.20	140.03	855.23	-	855.23
	Vehicles	338.26	-	338.26	17.43	320.83
	Capital work in progress	11.53	-	11.53	11.53	-
	Total	15,512.35	2,405.91	17,918.26	28.96	17,889.30
	DEC Lalpur					
	Land and Building	84.87	61.67	146.54	-	146.54
	Plant,Machineries & Equipments	164.26	12.44	176.70	-	176.70
	Library Books	26.85	0.87	27.72	-	27.72
	Furniture and Fixtures	31.78	-	31.78	-	31.78
	Vehicles	-	-	-	-	-
	Capital work in progress	19.31	-	19.31	19.31	-
	Total	327.07	74.98	402.05	19.31	382.74
	DEC Kolkata					
	Land and Building	544.78	-	544.78	-	544.78
	Plant,Machineries & Equipments	233.71	-	233.71	-	233.71
	Library Books	55.28	-	55.28	0.03	55.25
	Furniture and Fixtures	42.91	-	42.91	-	42.91
	Vehicles	-	-	-	-	-
	Capital work in progress	-	-	-	-	-
	Total	876.68	-	876.68	0.03	876.65
	DEC Allahabad					
	Land and Building	33.31	-	33.31	-	33.31
	Plant,Machineries & Equipments	185.14	-	185.14	-	185.14
	Library Books	13.96	-	13.96	0.01	13.95
	Furniture and Fixtures	39.07	-	39.07	-	39.07
	Vehicles	39.46	-	39.46	17.00	22.46
	Capital work in progress	-	-	-	-	-
	Total	310.94	-	310.94	17.01	293.93
	DEC Noida					
	Land and Building	189.95	76.97	266.92	-	266.92
	Plant,Machineries & Equipments	420.84	4.19	425.03	133.65	291.38
	Library Books	34.52	2.02	36.54	0.12	36.42
	Furniture and Fixtures	51.58	-	51.58	-	51.58
	Vehicles	15.59	-	15.59	-	15.59
	Capital work in progress	30.97	-	30.97	30.97	-
	Total	743.45	83.18	826.63	164.74	661.89
	DEC Jaipur					
	Land and Building	197.28	3.50	200.78	-	200.78
	Plant,Machineries & Equipments	646.44	114.96	761.40	9.35	752.05
	Library Books	63.24	0.96	64.20	0.02	64.18
	Furniture and Fixtures	65.97	3.32	69.29	0.44	68.85
	Vehicles	28.49	-	28.49	11.00	17.49
	Capital work in progress	8.84	-	8.84	-	8.84
	Total	1,010.26	122.74	1,133.00	20.81	1,112.19
	DEC Patna					
	Land and Building	-	1,246.15	1,246.15		1,246.15
	Plant,Machineries & Equipments	8.57	394.85	403.42	3.99	399.43
	Library Books	-	38.29	38.29		38.29
	Furniture and Fixtures	-	101.27	101.27		101.27
	Vehicles	25.02	25.77	50.79	-	50.79
	Total	33.59	1,806.33	1,839.92	3.99	1,835.93
	DEC Deoghar					
	Land and Building	-	49.28	49.28		49.28
	Plant,Machineries & Equipments	23.12	283.96	307.08	5.91	301.17
	Library Books	-	23.85	23.85		23.85
	Furniture and Fixtures	-	74.06	74.06		74.06
	Vehicles	12.47	0.08	12.55	-	12.55
	Total	35.59	431.23	466.82	5.91	460.91
	TOTAL 'A'	18,849.93	4,924.37	23,774.30	260.76	23,513.54

K.N. GUTGUTIA & CO. Chartered Accountants

	Particulars	As on 4/1/2017	Additions During the year	Total As on 3/31/2018	Deduct/Adjst During the year	Net Amount as on 3/31/2018
B	ASSETS UNDER GOVT. & UGC GRANT (ON 100% BASIS)					
	1. Central Government:					
	Buildings	231.71	-	231.71	-	231.71
	Equipments	4,141.63	173.80	4,315.43	-	4,315.43
	Furniture and Fixtures	4.98	-	4.98	-	4.98
	Library Books	158.57	0.01	158.58	-	158.58
	Total Central Govt.	4,536.89	173.81	4,710.70	-	4,710.70
	2. Bihar / Jharkhand Govt.					
	Equipment, Building,Furniture and Library Books For Computer Science	347.28	26.52	373.80	-	373.80
	Grant For Enterpreneurship Development Programme	3.64	-	3.64	-	3.64
	Grant For Modernisation Of Science Laboratory	8.06	-	8.06	-	8.06
	TOTAL	358.98	26.52	385.50	-	385.50
	TOTAL 'B'	4,895.87	200.33	5,096.20	-	5,096.20
C	ASSETS UNDER GOVERNMENT GRANT (Share Basis)					
	1. Central Government:					
	Equipment	163.42	-	163.42	-	163.42
		163.42	-	163.42	-	163.42
	2 Institute Account :					
	Equipment	287.78	7.71	295.49	-	295.49
		287.78	7.71	295.49	-	295.49
	TOTAL 'C'	451.20	7.71	458.91	-	458.91
D	ASSETS UNDER GOVERNMENT GRANT					
	Buildings	2.76	-	2.76	-	2.76
	Equipments	21.43	-	21.43	-	21.43
	Library Books	-	-	-	-	-
		24.19	-	24.19	-	24.19
	Institute Account					
	Buildings	2.76	-	2.76	-	2.76
	Equipments	4.76	-	4.76	-	4.76
		7.52	-	7.52	-	7.52
	TOTAL 'D'	31.71	-	31.71	-	31.71
E	ASSETS UNDER GOVT. OF BIHAR :					
	Equipments	4.81	-	4.81	-	4.81
	Library	0.10	-	0.10	-	0.10
	AIU Grant for Choir & Orchestra Unit	0.13	-	0.13	-	0.13
		5.04	-	5.04	-	5.04
	Institute Account					
	Equipments	4.82	-	4.82	-	4.82
	Library	0.11	-	0.11	-	0.11
	AIU Grant for Choir & Orchestra Unit	0.14	-	0.14	-	0.14
		5.07	-	5.07	-	5.07
	Total 'E'	10.11	-	10.11	-	10.11
F	ASSETS UNDER GOVT. OF JHARKHAND					
	Grant for increase Intake					
	Buildings	1,397.00	-	1,397.00	-	1,397.00
	Equipments	435.32	-	435.32	-	435.32
	Furniture & Fixture	119.35	-	119.35	-	119.35
	Library Books	50.00	-	50.00	-	50.00
		2,001.67	-	2,001.67	-	2,001.67
	Institute Account					
	Buildings	1,099.90	-	1,099.90	-	1,099.90
	Library Books	15.66	-	15.66	-	15.66
		1,115.56	-	1,115.56	-	1,115.56
	Total	3,117.23	-	3,117.23	-	3,117.23
	Grant for university polytechnic					
	Buildings	243.19	-	243.19	-	243.19
	Equipments	79.13	8.21	87.34	-	87.34
	Furniture & Fixture	13.07	-	13.07	-	13.07
	Library Books	15.00	-	15.00	-	15.00
		350.39	8.21	358.60	-	358.60
	Institute Account					
	Buildings	358.91	-	358.91	-	358.91
	Equipments	-	-	-	-	-
	Furniture & Fixture	17.11	-	17.11	-	17.11
	Library Books	5.42	-	5.42	-	5.42
		381.44	-	381.44	-	381.44
	Total	731.83	8.21	740.04	-	740.04

	Particulars	As on 4/1/2017	Additions During the year	Total As on 3/31/2018	Deduct/Adjst During the year	Net Amount as on 3/31/2018
	Grant for Bio-Technology					
	Buildings	81.00	-	81.00	-	81.00
	Equipments	557.83	-	557.83	-	557.83
	Furniture & Fixture	39.16	-	39.16	-	39.16
		677.99	-	677.99	-	677.99
	Institute Account					
	Buildings	91.88	-	91.88	-	91.88
	Total	769.87	-	769.87	-	769.87
	Grant for Medical Lab Technology					
	Buildings	113.12	-	113.12	-	113.12
	Equipments	11.58	-	11.58	-	11.58
	Furniture & Fixture	8.36	-	8.36	-	8.36
	Total	133.06	-	133.06	-	133.06
	Grant for IT Enable services					
	Equipments	54.11	-	54.11	-	54.11
	Furniture & Fixture	-	-	-	-	-
	Library Books	0.02	-	0.02	-	0.02
	Total	54.13	-	54.13	-	54.13
	Grant for HMCT & Bio-Technology					
	Buildings	655.35	-	655.35	-	655.35
	Equipments	292.45	-	292.45	-	292.45
	Furniture & Fixture	103.66	-	103.66	-	103.66
	Total	1,051.46	-	1,051.46	-	1,051.46
	Grant for Ambulance					
	Vehicle	4.99	-	4.99	-	4.99
	Total	4.99	-	4.99	-	4.99
	Grant for Plastic Engineering					
	Equipments	102.85	-	102.85	-	102.85
	Total	102.85	-	102.85	-	102.85
	Grant for Deoghar Project					
	Buildings	3,204.15	24.88	3,229.03	3,229.03	-
	Equipments	657.21	-	657.21	657.21	-
	Furniture & Fixture	164.92	-	164.92	164.92	-
	Library Books	73.32	-	73.32	73.32	-
	Vehicles	22.67	-	22.67	22.67	-
		4,122.27	24.88	4,147.15	4,147.15	-
	Institute Account					
	Buildings	36.20		36.20	36.20	-
	Equipments	105.14		105.14	105.14	-
	Furniture & Fixture	22.48		22.48	22.48	-
	Library Books	15.23		15.23	15.23	-
		179.05	-	179.05	179.05	-
	Total	4,301.32	24.88	4,326.20	4,326.20	-
	TOTAL 'F'	10,266.74	33.09	10,299.83	4,326.20	5,973.63
G	**Asset under Tequip World Bank Project**					
	Buildings	126.93	-	126.93	-	126.93
	Equipments	1,975.71		1,975.71	-	1,975.71
	Furniture & Fixture	28.93	-	28.93	-	28.93
	Library Books	340.95	-	340.95	-	340.95
	Total	2,472.52	-	2,472.52	-	2,472.52
	Institute Account					
	Buildings	58.11	-	58.11	-	58.11
	Equipments	22.39	-	22.39	-	22.39
	Furniture & Fixture	14.29	-	14.29	-	14.29
	Library Books	4.58	-	4.58	-	4.58
	Total	99.37	-	99.37	-	99.37
	TOTAL 'G'	2,571.89	-	2,571.89	-	2,571.89
H	**BIHAR GOVERNMENT**					
	Patna Project					
	Buildings	4,108.01	-	4,108.01	4,108.01	-
	Equipments	900.82	-	900.82	900.82	-
	Furniture & Fixture	291.11	-	291.11	291.11	-
	Library Books	81.35	-	81.35	81.35	-
	Vehicles	14.31	-	14.31	14.31	-
	Total	5,395.60	-	5,395.60	5,395.60	-
	Institute Account					
	Buildings	1,246.15	-	1,246.15	1,246.15	-
	Equipments	263.78	-	263.78	263.78	-
	Furniture & Fixture	91.28	-	91.28	91.28	-
	Library Books	32.67	-	32.67	32.67	-
	Total	1,633.88	-	1,633.88	1,633.88	-
	TOTAL 'H'	7,029.48	-	7,029.48	7,029.48	-
	GRAND TOTAL	44,106.93	5,165.50	49,272.43	11,616.44	37,655.99
	Less: Grants from Central Govt. & State Govt.	21,455.45				12,146.12
	Total Assets	22,651.48				25,509.87

Note : Fixed Assets related to Patna & Deoghar Project have been transferred to respective centres.

K.N. GUTGUTIA & CO. Chartered Accountants

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

Details of TEQIP Funds (Phase II) as on 31st March, 2018

(Annexure-B)

(Rs. In lacs)

Particulars	As on 01.04.2017	Addition during the year	Total as on 31.03.2018
Corpus Fund	143.01	16.19	159.20
Faculty Development Fund	143.01	16.19	159.20
Equipment Replacement Fund	143.02	16.19	159.21
Maintenance Fund	143.02	16.18	159.20
Total	**572.06**	**64.75**	**636.81**

K. N. GUTGUTIA & CO. Chartered Accountants

Birla Institute of Technology
Mesra : Ranchi

Schedule 'C'

(Annexed to and forming part of Financial Statements)

A) ACCOUNTING POLICIES:

1. These financial statements have been prepared on historical cost basis convention.

2. All items of Income & Expenditure are accounted for on accrual basis except otherwise stated.

3. (a) All fixed Assets are stated at cost of acquisition or construction. Fixed Assets acquired through Government Grants, have been shown separately.
(b)Depreciation on Institute fixed assets is being provided on straight-line method based on useful life as determined by the management.

4. (a) Foreign currency transactions are converted into Indian currency at the rate prevailing on the date of the transaction.
(b) Current Assets and Current Liabilities i.e. items to be paid /received in foreign currencies are converted into Indian currency at the exchange rate prevailing at the close of accounting year and any exchange difference arising there on is charged to the Income & Expenditure Account.

5. Inventories are valued at cost on first in first out basis.

6. Retirement Benefits:

   (a) Accrued Liability on account of accumulative leave is neither accounted for nor ascertained.
   (b) Gratuity is a defined benefit scheme and the Institute made adequate contribution to a recognized Gratuity Fund as per the actuarial valuation carried out by the actuary.

7. Contingent Liabilities:

   Contingent Liabilities, if any, are not provided but are disclosed by way of notes.

B. **NOTES ON ACCOUNTS:**

1. Depreciation was not provided from 1988-99. However, the same is provided from 1999-2000 onwards as per rate arrived at based on useful life of the respective assets as determined by the management for building 10 years and for other assets 5 years.

2. As the MOU between Institute and Government of Jharkhand is under consideration, an amount of Rs. 8086.30 Lacs (including Rs. 2064.62 Lacs for the current financial year) for the period from 2011-12 to 2017-18 towards D.A., additional D.A. and revision of pay scale has not been considered in the accounts, the same will be accounted for as and when received.

3. The gratuity liability (net) outstanding as on 31.03.2018 is Rs. 887.38 lacs.

   The actuary has made following valuation assumption to estimate the Gratuity liability –

Valuation Method	**Projected Unit Credit Method**
Discount rate	**8.06%**
Salary growth rate	**8.00%**
Attrition rate	**3.00% p.a. for all service groups**
Mortality basis	**Indian Assured Lives Mortality (2006-08) Ultimate**
G.Sec Rates	**15.03.2018**

Signature of schedule 'A' to 'C'

For K.N. Gutgutia & Co
Chartered Accountants
Firm Regn. No. 304153E

K.C.SHARMA
(Partner)
M.No. 050819

Date: 21st April, 2018
Place: Kolkata