SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
(An Autonomous Institution under UGC, New Delhi)
Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956.
(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)
Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana –501 510
https://siiet.ac.in/

Annexure 15

AICTE Mandatory Disclosures

Mandatory Disclosure	:	**Updated on 20.12.2025**
1 Name of the Institution	:	**Sri Indu Institute of Engineering and Technology**
and Address of the Institution		Khalsa Ibrahimpatnam, Sheriguda Village, Ibrahimpatnam Mandal, Ranga Reddy Dist.
City & Pin Code	:	Hyderabad & 501 510
State / UT	:	Telangana State
Longitude	:	78, 35, 47
Latitude	:	17, 12, 36
Phone number with STD code	:	91-9640590999
FAX number with STD code	:	040-24020175
Office hours at the Institution	:	9:00 am. To 5:00 pm.
Academic hours at the Institution	:	9:00 am. To 4:00 pm.
Email	:	principalsiiet@gmail.com
Website	:	www.siiet.ac.in
Nearest Railway Station(dist in Km)	:	Nampally (25 km)
Nearest Airport (dist in Km)	:	Rajiv Gandhi International Airport (Shamshabad 20 KM.)
Type of Institution	:	Private – Self Financed
2 Name of the organization running the Institution	:	**Global Trendset Educational Society, Hyderabad.**
Type of the organization	:	Society
Address of the organization	:	Plot No: 468, Prashanth Nagar, Vanasthalipuram, Hyderabad - 500 070
Registered with	:	122/2006, Registrar of Societies, Ranga Reddy District.
Registration date	:	24-01-2006
Website of the Organization	:	www.siiet.ac.in

3	Name of the affiliating	:	**Jawaharlal Nehru Technological University Hyderabad**
	Website	:	www.jutuh.ac.in
4	Name of Principal / Director	:	**Dr. K.S. Sadasiva Rao**
	Exact Designation	:	Principal
	Phone number with STD code	:	9347187999
	Email	:	principalsiiet@gmail.com
	Highest Degree	:	Ph.D.
	Field of specialization	:	Computer Science & Engineering.

5 Governance

5.1 Members of the Board and their brief background

Sri Indu Institute of Engineering and Technology was established by Global Trendset Educational Society - 2006, Vanastalipuram, Hyderabad under the chairmanship of Sri. R. Venkat Rao. The society is having proven rich experience in the field of education for more than 16 years with an intension and commitment to impart school education and Technical education of highest quality.

Sri. R. Venkat Rao., M.A., B.Ed.

CHAIRMAN, GLOBAL TRENDSET EDUCATIONAL SOCIETY

➢ Dynamic and dedicated person to the cause of education since1979.

➢ Pioneer in introducing novel, Scholastic methods in the institutions of thegroup.

➢ A Visionary striving to impart quality education.

➢ "Best Teacher" awardee by the Govt. of Andhra Pradesh in 1992.

➢ Recipient of "Bharath Jyothi "Award from his Excellency, the President of India, Sri. Gyani Zail Singh in 1994.

➢ Chairman of V. V. Info Business Service (India) Ltd., Hyderabad.

➢ Chairman of Loyola International School, Doha, Qatar.

Prof. J. Devi Prasad., M.S. (Beirut)

President, GLOBAL TRENDSET EDUCATIONAL SOCIETY

- ➢ Member, Board of Management, A.P., Horticultural University
- ➢ Director, Phyto Technologies (a Consortium Company)
- ➢ Team Leader, Agriculture Finance Corporation – APCBTMP.
- ➢ Developed E-Governance and ICT in agriculture and E-Governance –
- ➢ Instrumental in Innovative ICT and e-government models for good governance to improve extension services delivery, ensures transparency and enhances citizen participation; Builds ICT capacity in agriculture sector. Designs Application of ICT portals for agriculture and livelihoods development.

Sri. R. Anup Chakravarthy., M.S. (UK).

SECRETARY & CORRESPONDENT, GLOBAL TRENDSET EDUCATIONAL SOCIETY

- ➢ Young and energetic personality making expeditions into the field of education.
- ➢ *Obtained his Masters in Electrical & Electronics Engineering from U.K.*
- ➢ Learnt financial and managerial skills from his father Sri. R.Venkat Rao
- ➢ Secretary & Correspondent of Loyola International School, Doha, Qa-tar.

Mrs. R. Indumathi

Treasurer., GLOBAL TRENDSET EDUCATIONAL SOCIETY

- ➢ The most dynamic and practical treasurer of the Society.
- ➢ She devotes her time for the upliftment of the poor and downtrod-den.
- ➢ She has Three decades of experience in running the academic institutions.

- **Dr. K. S. Sadasiva Rao**

- M.TECH(CSE).,Ph.D.,FIETE.,MISTE.,MISHMT.

- Principal, Sri Indu Institute of Engineering and Technology

- Dr. K. S. Sadasiva Rao is currently working as the Principal of Sri Indu Institute of Engineering and Technology, Sheriguda(V), Ibrahimpatnam(M), Hyderabad, Ranga Reddy district, Telangana. He pursued M.Tech in the field of Computer Science and Engineering. He was awarded with a Ph.D. degree from the prestigious university JNTUH, Hyderabad in the year 2018. He is a Fellow Member of IETE, ISRD and Life Member of professional bodies such as CSI, ISTE, IACSIT, etc. He has published over 30 research papers in national and international journals, attended around 10 International conferences and was awarded with 2 patents. He has 24 years of teaching experience. During this tenure he worked in several administrative positions like the Head of the Department, I/c Principal for Sri Indu PG College, Dean Academics (CSE & Allied Branches), Dean R & D cell for Sri Indu College of Engineering and Technology. He organized several workshops, seminars and conferences for both students and faculty. He was the Convener for the National Symposium MANTECH-2010, MANTECH-2011 and the Convener for the International Conference, ICICSET. He took the responsibility of being as the session chair for national and international conferences.

RESEARCH ACTIVITIES

Journal Publications	28
Conferences	08
Books Published	01
Patents Filed	02

ADDITIONAL ACTIVIES/ROLES PLAYED
R&D Coordinator
Organizer/Convener International Conference
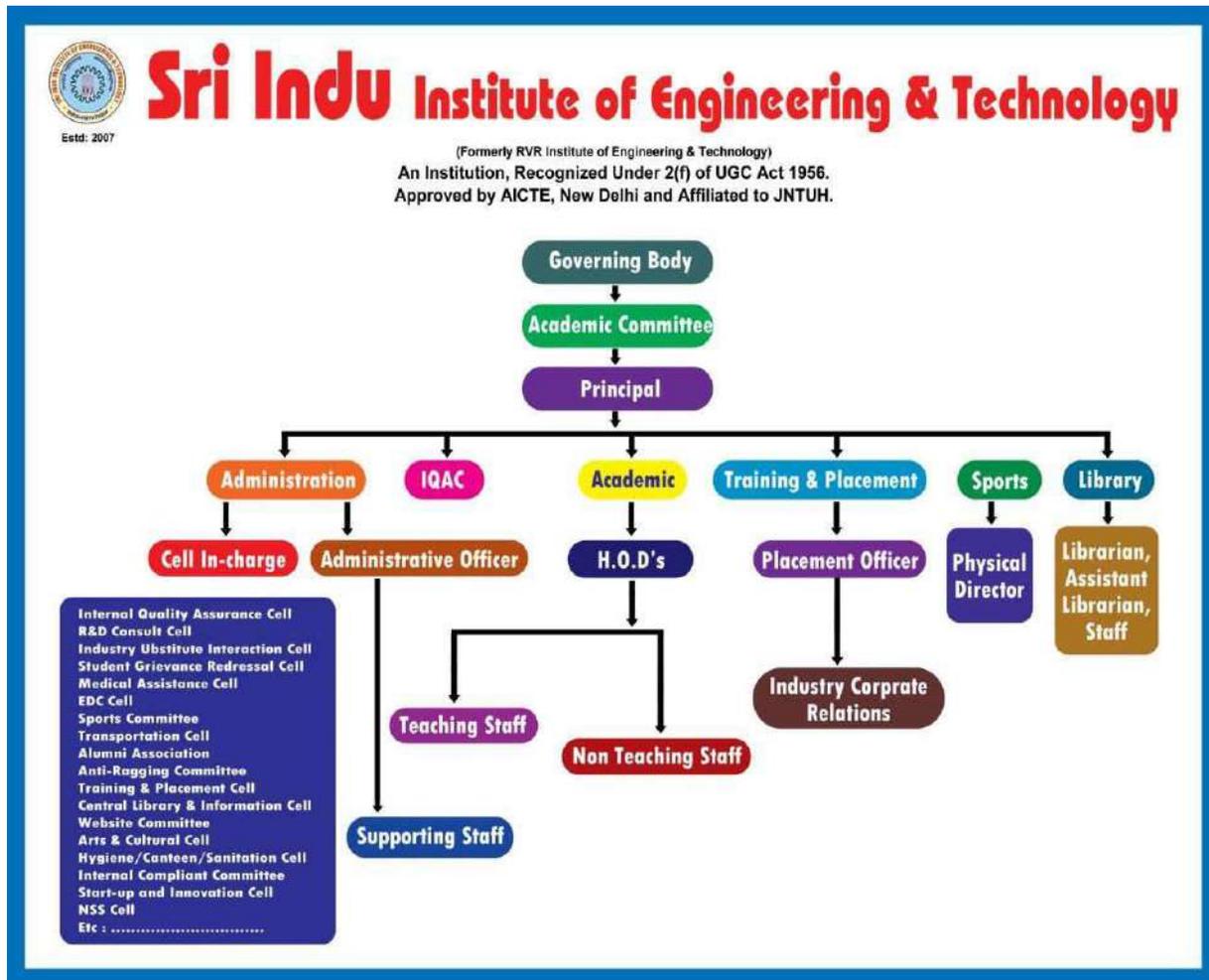National Conferences Coordinator

5.2 Members of Academic Advisory Body

S.No	Name of the Governing Body Member	Governing Body Member Designation	Parent Organization where working	Designation of the member where working at parent Organization
1	Sri. R. Venkat Rao	Chairman	Global Trendset Educational Society	Chairman, Global Trendset Educational Society
2	Sri. R. Anup Chakravarthy	Member to be nominated by Registered Society / Trust	Global Trendset Educational Society	Secretary & Correspondent, Global Trendset Educational Society
3	Smt. J. Divya	Member to be nominated by Registered Society / Trust	Global Trendset Educational Society	Joint Secretary, Global Trendset Educational Society
4	Smt. R. Indumathi	Member to be nominated by Registered Society / Trust	Global Trendset Educational Society	Treasurer, Global Trendset Educational Society
5	Sri. J. Srikar	Member to be nominated by Registered Society / Trust	Global Trendset Educational Society	Executive Member, Global Trendset Educational Society
6	Prof. J. Devi Prasad	Eminent Professional	Agriculture, Human Development and Monitoring & Evaluation Groups	Director - Agriculture, Human Development and Monitoring & Evaluation Groups
7	Dr. R. J. Rao	Eminent Professional	Pfizer Limited, Hyderabad	Senior Scientist, Pfizer Limited, Hyderabad
9	Dr. I. Satyanarayana	Member	SRI INDU Institute of Engineering and Technology	Professor & HOD, CSE Dept., SRI INDU Institute of Engg. and Tech.
10	Dr. K. Sadasiva Rao	Member Secretary [Principal(ex-officio)]	SRI INDU Institute of Engineering and Technology	Principal & Professor, CSE Dept., SRI INDU Institute of Engg. and Tech.

5.3 Frequently of the Board Meeting and Academic Advisory Body

Two Times per year

5.4 Organizational chart and processes

Sri Indu Institute of Engineering & Technology

Estd: 2007

(Formerly RVR Institute of Engineering & Technology)
An Institution, Recognized Under 2(f) of UGC Act 1956.
Approved by AICTE, New Delhi and Affiliated to JNTUH.

Governing Body → Academic Committee → Principal

Principal branches to:
- Administration
  - Cell In-charge
  - Administrative Officer → Supporting Staff
- IQAC
- Academic
  - H.O.D's → Teaching Staff, Non Teaching Staff
- Training & Placement
  - Placement Officer → Industry Corprate Relations
- Sports
  - Physical Director
- Library
  - Librarian, Assistant Librarian, Staff

Internal Quality Assurance Cell
R&D Consult Cell
Industry Ubstitute Interaction Cell
Student Grievance Redressal Cell
Medical Assistance Cell
EDC Cell
Sports Committee
Transportation Cell
Alumni Association
Anti-Ragging Committee
Training & Placement Cell
Central Library & Information Cell
Website Committee
Arts & Cultural Cell
Hygiene/Canteen/Sanitation Cell
Internal Compliant Committee
Start-up and Innovation Cell
NSS Cell
Etc : ....

Governing Body, Academic Council, College Development Committee, Internal Quality Assurance Cell, Central Discipline Committee have faculty students involvement in academic affairs /improvements.

College Academic Committee:

The Academic Committee is a vital link between the student body and the faculty. The significant function of this committee is to act as a medium of communication between the students and the faculty. The agenda of this committee is to keep the students aware of their academic standing and reducing blind-spots. It takes up the responsibility of imbibing best practices so that future student's community can have better system in place. It also arranges regular interaction between faculty and students. It also holds responsibility for conducting practices like academic award functions to honour students for their academic excellence.

Functions of Academic Committee

- Arranging teaching requirements for successful completion of academic programs of the college and supervising the same   periodically.
- Facilitating Controller of Examinations for making arrangements for conducting examinations, as per the norms of JNTUH.
- Recommending the Governing Body for providing the necessary infrastructural, human resources and other requirements for progressing towards achievement of the vision of the college.
- Facilitating supervision of the functioning of computing and IT infrastructure, central library and other learning resources of the college.
- Facilitating promotion of research culture in the college through collaboration and corroboration among faculty.
- Encouraging collaboration with other academic institutes and industry.
- Creating a conducive environment for development of entrepreneurship.
- Ensuring discipline among students.
- Facilitating and supervising the co-curricular activities of the students.

- Recommending the Management for encouraging students with awards, stipends, scholarships, medals and prizes and so on.

- Inspiring students to be creative and innovative and recommending management to encourage them with financial support towards the same.

- Appointing committees from amongst the college teaching faculty and experts from outside, in order to sort out and advise on specific academic issues and consequently acting on the recommendations of such committees after due consideration.

- Planning and executing the overall academic growth of the college by making recommendations to the Governing Body, wherever necessary

Internal Quality Assurance Cell:

The Principal of SIIET, Dr. K.S.Sadasiva Rao is the Chairperson of IQAC and Prof. Dr. Lingaiah , Professor of Electronics and Communication Engineering Department is the Coordinator of the IQAC. The Internal Quality Assurance Cell (IQAC) was established at the Sri Indu Institute of Engineering & Technology, Sheriguda, Ibrahimpatnam, Hyderabad.

The IQAC Committee includes all stakeholders of the Institute, i.e. students, alumni, all Department and Section Heads also including the Library, Sports, Students Hostel, Examination & Evaluation, co-curricular and extra-curricular activities, members of the Management and Administration, and members of local community and industry experts.

Objectives
- To develop a system for conscious, consistent, and catalytic action to improve the academic and administrative performance of the institution.

- To create a good quality culture.

- To channelize the efforts and measures of the institution towards academic Excellence.

- Facilitating the creation of student centric learning environment.

Strategies
- Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks.

- Ensuring the adequacy, maintenance and functioning of the support structure and services.
- Optimization and integration of modern methods of teaching and learning.
- The relevance and quality of academic and research programs.
- To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.
- The credibility of evaluation procedures.
- The relevance and quality of academic and research programmes.

Functions

- Development of quality benchmarks/parameters for various academic and administrative activities of the institution and carry out the gap analysis for SIIET.
- Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process carrying out periodic check of course outcome attainment and action taken from each faculty and its mapping on to POs, PEOs.
- Monitor the action taken by departments on feedback response from students, parents and other stakeholders on quality-related institutional processes
- Dissemination of information on various quality parameters of higher education
- Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles
- Documentation of the various programmes/ activities leading to quality improvement.
- Acting as a nodal agency of the Institution for coordinating quality-related activities, including adoption and dissemination of best practices
- Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality
- Development of Quality Culture in the institution Preparation of the Annual Quality Assurance Report (AQAR) and submit to NAAC

Benefits

- To a heightened level of clarity and focus in institutional functioning towards quality enhancement and facilitate internalization of the quality culture.

- To the enhancement and integration among the various activities of the institution and institutionalize many good practices.
- To provide a sound basis for decision making to improve institutional functioning.
- To act as a change agent in the institution.
- To Build an organizedmethodology of documentation and better internal communication.
- Act as a dynamic system for quality changes in HEIs.

Disciplinary Committee:

- The college Disciplinary Committee will function under the direct control of the Principal and will have the following functions.
- All the members of the committee will function as a team and not as independent entities and they also will not take any decision which may against the interests of either party.
- The committee will ensure disciplined behavior by all the students as well as the other staff members.
- The member secretary i.e Mrs. Saritha, H&S-HOD, SIIET will take care of the disciplinary aspects of the students belonging to the 1st year B Tech course., and he will at all times be on the lookout for any happenings involving these students amongst themselves or with the other students.
- The heads of the respective Departments will be responsible for the overall discipline of the staff members.
- Cases of / any incidents of indiscipline of what so ever nature will be initially subjected to a preliminary enquiry by the committee members and immediately after that at the first opportunity be brought to the notice of the Principal and as per his advise will either be referred to the Civil police or parents of the students.
- Depending upon the gravity of the act of indiscipline, matter may be investigated by further by the committee and suggest the type of Punishment to be awarded to the students.
- As far as the staff members are concerned , immediately an incident of indiscipline comes to light , the HOD shall ask for the written explanation from the staff member concerned and with his remarks put up to the Principal.

- If the staff member's explanation is convincing and prima facie it is proved that the staff is innocent, then the committee issue with the chairman's remarks On the contrary if the staff member is trying to disown his fault, then the committee may subject the issue for further enquiry, findings and recommendations.
- Based on the findings and recommendations of the committee, the staff member may be meted out with the suggested punishment after obtaining the chairman's approval
- In respect of minor incidents of indiscipline such as non wearing of Identity cards, coming late to the college, early departure without permission, absence from the class room, etc, the rules as applicable will be put in to effect and the staff is penalized accordingly.
- The disciplinary committee will act with discretion while enquiring in to the incidents involving girl students and female members of the staff.

5.6 Mechanism / Norms and Procedure for democratic/ good Governance

Chairman :

- To look into the overall administration, decision making and the development of the Institute.

Governing Body :
- Frame directive principles and policies,
- Amend and approve policies from time to time approve budgets.

Director :

- To look into the overall development of the Institute
- Mobilize External Resources to strengthen the Institute
- Plan & provide for necessary facilities / equipment for development
- Instill confidence and devotion in every member of the Institute

Principal :

- Design & define organization structure
- Delegate responsibilities of various positions in the organization
- Ensure periodic monitoring & evaluation of various processes & sub- processes

- Ensure effective purchase procedure
- Define quality policy and objectives
- Prepare annual budget
- Conduct periodic meeting of various bodies such as Governing Body, Academic Committee, and Grievances Redressal Committee etc.
- Resource Provision
- Public relations
- Resource Generation
- Execute academic Calendar
- Oversee the teaching-learning process
- Employee recruitment process
- Employee recruitment & development
- Conduct meeting with the HODs for up to date information about the department activities.
- Convene regular faculty meeting to assess and review the progress of the Institution
- Review of faculty performance
- Maintain over-all discipline in the Institute
- Resolve difficulties faced by the students, faculty, academic and nonacademic and staff.

Administrative Officer :

- Co-ordinate day to day activities of office
- Maintain up-to-date master documents with history of revision
- Oversee employee Attendance System & Maintain the monthly attendance report
- Manage accounts and finance
- Employee recruitment Process
- Employee recruitment & development
- Preparing Budget
- Office Administration
- Annual College Budget
- Faculty Personal Files
- Service Books
- Transport
- Collective Attendance of Students
- Publicity of events

Examination Cell :

- To conduct and monitor the Sessional (Internal) Exams
- To prepare Sessional Invigilation duties, seating arrangement etc., for sessional exams
- To collect the question papers from the faculty concerned in a sealed cover signed by them
- To form an internal sub-committee for the distribution of question papers in the examination halls and the answer scripts after the examinations to the faculty concerned
- To maintain records of the conduct of the examinations like attendance particulars, invigilation duties, supporting staff etc.,
- To prepare invigilation duties, seating arrangements etc for the External examinations
- To maintain records regarding the External examinations like attendance particulars, invigilation duties supporting staff etc.,
- Individual department examination cell in-charges will assist the controller of examination for the conducting the examinations.

HODs :

- Responsible for efficient functioning of the Department with reference to its goals and objectives – conduct the department in a professional manner
- Develop and schedule the activities of the department for the academic year preparation of departmental calendar
- Ensure judicious class job allocation to the faculty members
- Ensure that all faculty members complete their role responsibilities in a timely manner
- Ensure leave management of teaching and non-teaching staff of the department, in such a way that no prescribed class hours are lost.
- Ensure harmonious working environment in the department
- Periodic independent review of faculty performance individually and suggest remedial tips
- Initiate opportunities and avenues for developing faculty knowledge and capability. Ensure that each faculty member take turn to present a recent article from a leading international journal to his fellow colleagues in the department at least once in a month.

- Encourage regular academic discussions for subject exposure among the relevant faculties in and outside the department, to facilitate knowledge sharing and updating.
- Identify and arrange specialist lectures for different subjects in consultation with the concerned faculty Inspect concerned department classes at least once in a semester.
- Maintain overall student discipline in the department as per college policy and guideline, with due coordination with the Class Teachers, with regard to attendance, uniform, attitude, conduct, assignment completion etc.
- Resolve difficulties faced by the students, academic and nonacademic, in due consultation with the class teacher and referring essential cases to the Counselor, with a discrete note of reference.
- Take all efforts from the department side for enhancing employability and placement readiness of the students in the department.
- Convene regular faculty meetings to assess and review the progress of planned activities.
- Convene class committee meeting to get students feedback on teaching.
- Conduct pre examination and post examination reviews with the Faculty members concerned with regard to quality of questions, answers, rectification measures etc to improve the student performance / results.
- Finalization of the work load/allotment and timetable for the next semester immediately on completion of the current semester.
- Develop proposals for improved, teaching methods, curriculum enhancement, new academic programs of Practical significance etc.
- Prepare and monitor the time and cost budgets for the department.
- Inspect concerned classrooms at least once in a semester.
- Explore the avenues for enhancing the placement readiness of converting the department into a value centre
- Prepare and submit half yearly feedback about the staff members to Principal
- Submit teaching staff self appraisal.

Feedback analysis and corrective measures taken, if any: HOD given guidelines to improve quality of teaching and easy methods to convey the subjects.

Feedback collected for all courses: YES

Specify the feedback collection process:

A standard online feedback questionnaire is collected from the students every mid semester course wise.

1. Feedback mechanism is a well organized system in the college.

2. The system of feedback collection is online

3. Collected feedback is scrutinized by the head of department.

4. The feedback is quantified

5. All the parameters mentioned in the feedback form will be analyzed. Ability of teaching with respect to each item and comprehensive ability of the teachers will be analyzed All the comments written by the students in the online feedback system will be communicated to the respective faculty members their feedback levels to know their strengths and weaknesses and to enhance their teaching skills.

The Principal, Directors and the Heads of the Department (HOD) concerned take decisions in all academic matters. The HODs conduct periodic meetings with the faculty and students and offer them suggestions. They also discuss with the Principal, Directors, and Chairman of the Board of Management on important matters related to the college functioning, and decision is taken by them through consensus. Most rules and regulations are circulated among staff, and decision is taken only after a thorough discussion with the stakeholders. The final decisions taken are circulated among all stakeholders for adoption. The discussions normally emanate from the faculty, at the faculty meetings with the HODs and then in the

HODs meeting with the Principal. Most of the information like organizing conferences, permitting a faculty to travel overseas for presenting a paper, etc. travel from bottom to top for approval by the Management. If there is a common rule governing all concerned, it comes from top to bottom, that too after initiating a talk with the faculty or HODs.

5.9 Establishment of Anti Ragging Committee

Anti-Ragging Committee and Anti Ragging Squads:

S. No.	Name	Designation & Department	Position of the Member
1	Dr. K.S.Sadasiva Rao	Principal	Chairman
2	Dr.B. Ratnakanth	HOD-CSE, Professor	Member
3	Prof. Ch. Saritha	HOD-H & S, Assoc. Professor	Member
4	Mr.D.Ananda Rao	Associate Professor, H&S	Member
5	Mr.K.Anoop Kumar	AIML, Assistant Professor	Member
6	Ms.Ch.Kavya	ECE, Assistant Professor	Member
7	Mr.A.Vamshi	HOD, CIVIL, Assoc. Professor	Member
8	Mrs.Nischala	EEE, Assistant Professor	Member
9	Mr. Sreenu	MECH, Assistant Professor	Member
10	Mr. D.Nagaraju	CSE, Assistant Professor	Member
11	K.Pavan Kumar	ECE	Student Member
12	K.Niharika	ECE	Student Member
13	Nagaraju	CSE	Student Member
14	Tejaswini	CSE(AI&L)	Student Member
15	Yashaswi	CSE(CS)	Student Member
16	Mahesh	CSE(IOT)	Student Member
17	Naga Charan	AI&DS	Student Member

Functions of Committee

- Ensures that at least one faculty member will be present at any particular time at all the locations to avoid ragging activities.

- Takes precautions to avoid ragging activities at other locations like bus stops and gives instructions to the student volunteers and secret informers at various boarding points.

- Canvases about anti-ragging in the forms of Flexes, Posters and Boards in college premises and surrounding areas where there is a chance of ragging.

- Arranges counseling and guidance programs arranged for the fresher's and parents regarding ragging. Takes affidavits from the students and parents regarding Ragging during the Admission.
- Arranges counseling and guidance programs arranged for the fresher's and parents regarding ragging. Takes affidavits from the students and parents regarding Ragging during the Admission.
- Resolves the complaint received from the victim
- Verifies the facts through enquiry
- Awards disciplinary action against culprit.

5.10 Establishment of Online Grievance Redressal Mechanism

https://siiet.ac.in/student-services/student-grievance-redressal-cell-committee/
For Students : grievances.student@siiet.ac.in
For Staff : grievances.staff@siiet.ac.in

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

GRIEVANCE REDRESSAL COMMITTEE:

Staff Grievance Redressal Cell :

Committee Members

S. No.	Name	Designation & Department	Position of the Member
1	Dr. K.S.Sadasiva Rao	Principal	Chairman
2	Dr.U.Nageswara Rao	Assoc. Professor	Convener
3	Prof. Ch. Saritha	HOD-H & S, Assoc. Professor	Member
4	Dr. D. Premalatha	Professor, H&S	Member
5	Mr. K.Srikanth	AIML, Assistant Professor	Member
6	Ms.MD.Reshma	ECE, Assistant Professor	Member
7	Mr.A.Vamshi	HOD, CIVIL, Assoc. Professor	Member
8	Mr. Syed Umar Sayeed	EEE, Assistant Professor	Member
9	Mr. M.Somesh	MECH, Assistant Professor	Member
10	Mr. D.Nagaraju	CSE, Assistant Professor	Member

Student Committee Members:

S.No	Name of the Member	Designation of the Member	Position of the Member
1	G.Sushmitha (23X31A04517)	Student,ECE	Member
2	V.Madhu (23X31A0458)	Student,ECE	Member
3	G.Vinayvardhan (23X31A0573)	Student,CSE	Member
4	G.Sindhuja (23X31A0581)	Student,CSE	Member
5	K.Ajay Kumar (23X35A0105)	Student,CIVIL	Member
6	M.Pushanjali (23X35A0110)	Student,CIVIL	Member

Functions of the Committee

- The aggrieved employee represents his/her grievance either in person or in writing to any member of the grievance cell.

- Post receiving the grievance, Principal will constitute a committee to look into the grievance. The committee will thoroughly investigate the issue and recommendations will be submitted to the Principal. The recommendations of the committee shall be communicated to the concerned employee by the Principal.

Women Grievance & Redressal Committee

Committee Members

S.No	Name of the Member	Designation of the Member	Status
1	Dr.D.Premalatha	Professor,H&S	Convener
2	Ms. S. Nischala	Assistant Proffesor, EEE	Co-Convener
3	Ms. B. Ramadevi	Assistant Professor,H&S	Member
4	Ms. B. Saritha	Assistant Professor ,AIML	Member
5	Ms.Ch. Anitha	Assistant Professor, CSE	Member
6	Ms. E. Rupa	Assistant Professor, CSE	Member
7	Ms. Aruna Kumari	Assistant Professor ,ECE	Member

Functions of the Committee

- The committee's important and main function will be to look in to the grievances put forward by the women employees of the college. Irrespective of the fact as whether such a complaint is against a Male Employee or Women employee.
- The committee shall receive all the complaints in writing under the proper and correct signature of the complainant The complaints may range from use of un- parliamentary language, passing unwanted comments, making indecent
- statements, passing remarks about one's character / behavior, making indecent gestures , passing and making jokes about one's efficiency in public, and trying to befriend a lady / female member with a malafide intentions, being harsh to a female member after knowing about her weaknesses / drawbacks and trying to take undue advantage of the situation etc and may many more which could be brought under the Heading HARASSMENT (Physically and Mentally)
- They shall initially go through the complaint.
- Call for the compliant and have a clear dialogue about the complaint, it's source, time of happening of the incidents, details of the witnesses around and further consequences if any.

- They shall carry out an impartial analysis of the complaint complainant's own behavioral pattern in and outside the college, her background, her peer group members, others, her performance in the college her antecedents.
- After coming to the conclusion that prima facie the compliant has some substance and deserves to be redressed, as a next step they shall summon the person against whom the complaint has been made whether Male or Female.
- Inform her/him about the existence complaint against her/him
- Try to know full details of the case from him /her.
- Obtain a written report / explanation
- Reduce all the deliberations to writing.
- Call for any other person / witnesses to gain further insight in to the incident
- Listen to them also about the complainant and the person against whom the complaint has been made.
- Reduce every bit of deliberation to writing.
- And after a patient hearing and after taking in to consideration all the facts arrive at a conclusion as to whether prima facie a case exists and the complaint stands.
- Write findings and recommend action to be taken.
- If the issue can be sorted out by counseling both the parties the committee shall be wise enough to do so rather than blowing the issue out of proportion.
- In all these deliberations and proceedings, the members shall maintain a calm and quiet composure and behave in an unbiased and impartial manner.
- It may be ensured that at no stage the particulars of the persons involved are made public which may amount to further humiliation of the parties involved.

Functions of the Committee

- Upholding the dignity of the College by ensuring strife free atmosphere in the College through promoting cordial Student-Student relationship and Student teacher relationship etc.
- Encouraging the Students to express their grievances / problems freely and frankly, without any fear of being victimized.
- Suggestion / complaint Box have been installed in front of the Administrative Block in which the Students, who want to remain anonymous, put in writing their grievances and their suggestions for improving the Academics / Administration in the College.

- Advising All the Students to refrain from inciting Students against other Students, teachers and College administration Advising all staffs to be affectionate to the Students and not behave in a vindictive manner towards any of them for any reason.

- Ragging in any form is strictly prohibited in and outside the institution. Any violation of ragging and disciplinary rules should be urgently brought to the notice of the Principal.

Facilities of the cell
- The person is unwilling to appear in self, grievances may be dropped in writing at the letterbox/ suggestion box of the Grievance Cell across the institute.
- Grievances may also be sent through e-mail to the officer in-charge of Students'
- Grievance Cell.

The details of the OMBUDSPERSON nominated by the University **Name**

: Dr. R Sayanna

Designation: Former Vice-Chancellor Kakatiya University,

Warangal & Fromer Professor & Head, Depart of

Physics, Osmania University, Hyderabad

E-mail : ombudsperson@jntuh.ac.in

5.12 Establishment of Internal Complaint Committee (ICC)

    Yes

5.13 Establishment of Committee for SC/ ST

    Yes

5.14 Internal Quality Assurance Cell

Internal Quality Assurance Cell (IQAC)

    The Principal of SIIET, Dr. K.S.Sadasiva Rao is the Chairperson of IQAC and Prof. Dr. Lingamaiah, Professor of Electronics and Communication Engineering Department is the Coordinator of the IQAC. The Internal Quality Assurance Cell (IQAC) was Established at the Sri Indu Institute of Engineering & Technology, Sheriguda, Ibrahimpatnam, Hyderabad.

    The IQAC Committee includes all stakeholders of the Institute, i.e. students, alumni, all Department and Section Heads also including the Library, Sports, Students Hostel, Examination & Evaluation, co-curricular and extra-curricular activities, members of the Management and Administration, and members of local community and industry experts.

Objectives

- To develop a system for conscious, consistent, and catalytic action to improve the academic and administrative performance of the institution.
- To create a good quality culture.
- To channelize the efforts and measures of the institution towards academic Excellence.
- Facilitating the creation of student centric learning environment.

Strategies

- Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks.
- Ensuring the adequacy, maintenance and functioning of the support structure and services.
- Optimization and integration of modern methods of teaching and learning.
- The relevance and quality of academic and research programs.
- To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.
- The credibility of evaluation procedures.
- The relevance and quality of academic and research programmes.

Functions

- Development of quality benchmarks/parameters for various academic and administrative activities of the institution and carry out the gap analysis for SIIET.
- Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process carrying out periodic check of course outcome attainment and action taken from each faculty and its mapping on to POs, PEOs.
- Monitor the action taken by departments on feedback response from students, parents and other stakeholders on quality-related institutional processes
- Dissemination of information on various quality parameters of higher education

- Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles
- Documentation of the various programmes /activities leading to quality improvement.
- Acting as a nodal agency of the Institution for coordinating quality-related activities, including adoption and dissemination of best practices
- Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality
- Development of Quality Culture in the institution
- Preparation of the Annual Quality Assurance Report (AQAR) and submit to NAAC

Benefits
- To a heightened level of clarity and focus in institutional functioning towards quality enhancement and facilitate internalization of the quality culture.
- To the enhancement and integration among the various activities of the institution and institutionalize many good practices.
- To provide a sound basis for decision making to improve institutional functioning.
- To act as a change agent in the institution.
- To Build an organized methodology of documentation and better internal communication.
- Act as a dynamic system for quality changes in HEIs.

Outcomes of IQAC Activities

- To improve internal communication.
- Accreditation – NAAC, NBA
- National Ranking – NIRF
- International Ranking
- AICTE Approval for professional courses
- UGC Graded autonomy
- Media Rankings
- MHRD All India Survey for Higher Education
- Swachh Bharat Summer Internship Program

- Swachhta Ranking

- Feedback from stakeholders

- Curriculum for Applied Learning

- Promoting Technology Enhanced Learning – MOOC

- Annual Quality Assurance Report

Contact Information

Dr.K.S.Sadasiva Rao,
Chairperson, Internal Quality Assurance Cell

Sri Indu Institute of Engineering & Technology, Khalsa Ibrahimpatnam, Sheriguda Village, Ibrahimpatnam Mandal, Ranga Reddy Dist., Hyderabad, Telangana - 501510

6 Programmes

6.1 Name of Programmes approved by AICTE - A.Y. 2025-26

Program	Level	Course	Intake Approved for 2025-26
ENGINEERING ANDTECHNOLOGY	UG	CIVIL ENGINEERING	30
ENGINEERING ANDTECHNOLOGY	UG	ELECTRONICS AND COMMUNICATION ENGINEERING	120
ENGINEERING ANDTECHNOLOGY	UG	COMPUTER SCIENCE AND ENGINEERING	300
ENGINEERING ANDTECHNOLOGY	UG	COMPUTER SCIENCE ANDENGINEERING (ARTIFICIALINTELLIGENCE AND MACHINE LEARNING)	180
ENGINEERING ANDTECHNOLOGY	UG	COMPUTER SCIENCE ANDENGINEERING (IoT)	30
ENGINEERING ANDTECHNOLOGY	UG	COMPUTER SCIENCE ANDENGINEERING (CYBER SECURITY)	60
ENGINEERING ANDTECHNOLOGY	UG	ARTIFICIAL INTELLIGENCE AND DATA SCIENCE	60
ENGINEERING ANDTECHNOLOGY	UG	COMPUTER SCIENCE ANDENGINEERING (Data Science)	120

6.2 Accreditation Status

NAAC Accreditation Status		
1	**Accredited**	**3.38 (A+)**

NBA Accreditation Status		
1	Programmes / Courses Accredited	NBA SAR Submitted for Electronics and Communication Engineering & Computer Science and Engineering. Waiting for NBA Inspection Date.
2	Applied for Accreditation	
	A. Applied but Visit not happened	
	B. Visit happened but result awaited	

6.3 For each Programme the following details are to be given:

Name	: **Civil Engineering**
Number of seats	: 30
Duration	: 04 Years
Cut off marks/rank of admission	: 98096-151344
Fee	: 95000/-
Name	: **Electronics and Communication Engineering**
Number of seats	120
Duration	: 04 Years
Cut off marks/rank of admission	: 36383 - 151149
Fee	: 95000/-
Name	: **Computer Science and Engineering**
Number of seats	300
Duration	: 04 Years
Cut off marks/rank of admission-	: 25151 - 150784
Fee	: 95000/-
Name	: **Computer Science and Engineering (Artificial Intelligence and Machine Learning)**
Number of seats	180
Duration	: 04 Years
Cut off marks/rank of admission-	: 23232 - 139283
Fee	: 95000/-
Name	: **Computer Science and Engineering (IoT)**
Number of seats	30
Duration	: 04 Years
Cut off marks/rank of admission-	: 39726 - 149173
Fee	: 95000/-

Name : **Computer Science and Engineering (CYBER SECURITY)**

Number of seats 60

Duration : 04 Years

Cut off marks/rank of admission- : 35088 - 149764

Fee : 95000/-

Name : **Artificial Intelligence and Data Science**

Number of seats 60

Duration : 04 Years

Cut off marks/rank of admission- : 24275 - 145351

Fee : 95000/-

Name : **Computer Science and Engineering (Data Science)**

Number of seats 120

Duration : 04 Years

Cut off marks/rank of admission- : 34056 - 147721

Fee : 95000/-

Placement and Internships

Name of the Course	Approved Intake	Number Of Companies Visited	Number Of Students Passed	Number Of Eligible Students	Number Of Students Placed in IT	Number Of Students Placed in Non IT	Total Student Placed (IT+ Non IT)	Lowest Package(In Lakhs)	Highest Package(In Lakhs)
CIVIL ENGINEERING	30	10	10	10	0	4	4	2	3
ELECTRONICS & COMMUNICATION ENGG	120	28	74	74	17	31	48	2	9
COMPUTER SCIENCE AND ENGINEERING	300	30	163	163	84	38	122	2	9
COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)	180	30	50	50	23	16	39	3	10
COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)	60	29	51	51	12	15	27	2	6
COMPUTER SCIENCE AND ENGINEERING (IOT)	30	17	34	34	9	15	24	2	6
ARTIFICIAL INTELLIGENCE (AI) AND DATA SCIENCE	60	27	48	48	16	18	34	2	9

SNO	ROLL NUMBER	NAMEOFTHE STUDENT	GENDER	BRANCH	INTERNS HIP	INTERNSHIP SOURCE	INTERNSHIP TITTLE
1	23X35A6702	M. SHIVARAM	MALE	DS	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
2	22X31A7217	G.VAISHNAVI	FEMALE	CSE	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
3	22X31A05F2	P MANOJ CHARY	MALE	CSE	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
4	22X31A6764	Y.BHARGAV SAI	MALE	DS	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
5	22X31A7221	DILEEP. G	MALE	AIDS	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
6	22X31A6686	SNEHA JADHAV	FEMALE	AIML	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
7	23X35A0509	K.SUPRIYA	FEMALE	CSE	01.05.2025	ELAVATE LABS	WEBDEVELOPMEN TTRAINING
8	23X35A0519	SUNKI NARESH	MALE	CSE	01.05.2025	SMARTBRIDGE	WEBDEVELOPMEN TTRAINING
9	22X31A05B4	L .ANUNAI SAI GOUD	MALE	CSE	01.05.2025	SMARTBRIDGE	WEBDEVELOPMEN TTRAINING
10	22X31A6630	G. SRI KARTHIK	MALE	AIML	01.05.2025	INTERSHALA	WEBDEVELOPMEN TTRAINING
11	22X31A6627	GADDAM MAITHRI	FEMALE	AIML	01.05.2025	INTERSHALA	WEBDEVELOPMEN TTRAINING
12	22X31A0549	CH.CHARITHA	FEMALE	CSE	01.05.2024	INTERSHALA	WEBDEVELOPMEN TTRAINING
13	22x31a7222	I.SHIVA	MALE	AIDS	29.01.2025	KALYANIRAFAEL ADVANCEDSYST EMS	MEDICALSYSTE MSDESIGN AND DEVELOPEDBYD RDO
14	22X31A6223	J.AKHILA	FEMALE	CYBER SECURITY	29.01.2025	KALYANIRAF AELADVANC ED SYSTEMS	MEDICALSYSTE MSDESIGN ANDDEVELOPED BY DRDO
15	22X31A05F5	P.SALOMI	FEMALE	CSE	29.01.2024	KALYANIRA FAEL ADVANCED SYSTEMS	MEDICALSYSTE MSDESIGN AND DEVELOPEDBY DRDO
16	22X31A6913	DEPA MANASA	FEMALE	IOT	29.01.2024	KALYANIRA FAELADVA NCED SYSTEMS	MEDICALSYSTE MSDESIGN ANDDEVELOPED BY DRDO
17	22X31A6743	M.PRIYA	FEMALE	DS	01.02.2025	INTERSHAL A	PYTHON
18	23X35A0504	BOTTE SHIVA	MALE	CSE	01.02.2025	INTERSHAL A	PYTHON
19	22X31A6247	P.SWETHA	FEMALE	CYBER SECURITY	01.02.2024	INTERSHAL A	PYTHON
20	23X35A6609	P.NIKHILESHWAR REDDY	MALE	AIML	01.02.2024	SMARTBRI DGE	PYTHON
21	22X31A6938	KEERTHANA MIDIDODDI	FEMALE	IOT	01.02.2024	INTERSHAL A	PYTHON
22	22X31A6677	RONGALA ANJI BABU	MALE	AIML	01.02.2024	SMARTBRI DGE	PYTHON
23	22X31A6258	TEKULA AKSHITHA	FEMALE	CYBER SECURITY	01.02.2024	INTERSHAL A	PYTHON

24	22X31A7229	KOLIPAKA SAI KIRAN	MALE	AIDS	01.02.2024	INTELRSHA A	PYTHON
25	22X31A6602	ALAMPALLY NAMITHA	FEMALE	AIML	01.02.2024	INTERSHAL A	PYTHON
26	22X31A6647	M. PAVAN KUMAR	MALE	AIML	01.02.2024	INTERSHAL A	PYTHON
27	23X35A0513	N. MAHESH	MALE	CSE	01.02.2025	INTERSHAL A	PYTHON
28	22X31A7203	B.BHAVANA	FEMALE	AIDS	01.02.2025	INTERSHAL A	PYTHON
29	22X31A6203	ANKAM VEENAMADHU RI	FEMALE	CYBER SECURITY	01.02.2025	INTERSHAL A	PYTHON
30	22X31A6639	KALLEM MAYUK REDDY	MALE	AIML	01.02.2024	INTERSHAL A	PYTHON
31	22X31A6912	DASARI ARAVIND KUMAR	FEMALE	IOT	01.02.2024	INTERSHAL A	PYTHON
32	22X31A05A9	KOSIDIGE NEHA	FEMALE	CSE	01.02.2024	INTERSHAL A	PYTHON
33	23X35A0501	ALLAMPALLY PRAVALIKA	FEMALE	AIML	MAY-JULY2024	MALLIKARJ UNAINFOS YS	PYTHONDEVELO PERINTERNSHIP
34	22X31A05F1	P.SUREKHA	FEMALE	CSE	MAY-JULY2024	MALLIKARJ UNAINFOS YS	PYTHONDEVELO PERINTERNSHIP
35	22X31A6626	G SIVA SAI	MALE	AIML	MAY-JULY2024	MALLIKARJ UNAINFOS YS	PYTHONDEVELO PERINTERNSHIP
36	22X31A6650	MD FAIZAN	MALE	AIML	MAY-JULY2024	MALLIKARJ UNAINFOS YS	PYTHONDEVELO PERINTERNSHIP
37	22X31A05A3	K.ANJALI	FEMALE	CSE	MAY-JULY2024	MALLIKARJ UNAINFOS YS	PYTHONDEVELOP ERINTERNSHIP
38	22X31A0545	CHATRI RAMYA	FEMALE	CSE	MAY-JULY2024	MALLIKARJ UNAINFOS YS	PYTHONDEVELO PERINTERNSHIP
39	22X31A0460	VATTIKUTI AJAY	MALE	ECE	MAY-JULY2024	MALLIKARJ UNAINFOS YS	VLSIDESIGN
40	23X35A0405	K.CHANDRA SHEKAR	MALE	ECE	MAY-JULY2024	MALLIKARJ UNAINFOS YS	VLSIDESIGN
41	20X35A0501	ANUMULASANDEE PKUMAR	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
42	20X35A0503	GANJI SAISIDDHARTH A	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
43	20X35A0505	JANJIRALAMAHES HKRISHNA	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
44	20X35A0507	LAKAVATHTHARU NNAYAK	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
45	20X35A0510	MADDENAPELLYD URGAGANESH	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
46	20X35A0511	MADUPUGANGA	FEMALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
47	20X35A0512	NAGABABU	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE

48	20X35A0514	POTHURAJUKARTHIK	MALE	CSE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
49	20X35A0515	SRIRAMOJUSAIPRASAD	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
50	20X35A0516	VANTAKUVENKATESH	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
51	20X35A0517	TNIKHIL	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
52	20X35A0422	SRIPADASAIKUMAR	MALE	ECE	29.01.2022	KALYANIRAFAELADVANCED SYSTEMS	MEDICALSYSTEMSDESIGN ANDDEVELOPED BY DRDO
53	20X35A0511	MADUPUGANGA	FEMALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
54	20X35A0512	NAGABABU	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
55	20X35A0507	LAKAVATHTHARUNNAYAK	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
56	20X35A0515	SRIRAMOJUSAIPRASAD	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
57	20X35A0405	BANTUPURNACHANDRA	MALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
58	20X35A0407	BODASAIKRISHNA	MALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
59	19X31A04A3	PANASASHIVA	MALE	ECE	29.01.2022	KALYANIRAFAELADVANCED SYSTEMS	MEDICALSYSTEMSDESIGN ANDDEVELOPED BY DRDO
60	20X35A0408	SANA	FEMALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
61	20X35A0409	CHINTHALAJYOTHI	FEMALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
62	20X35A0410	DUDAMRUSHIKESH	MALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
63	20X35A0411	EEPURIBHAVANA	FEMALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
64	20X35A0412	KADEMKALYAN	FEMALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
65	20X35A0413	KETHAVATHGANESH	MALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
66	20X35A0414	KOTHAPALLYNISHANTH	MALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE
67	20X35A0415	LAVUDIYANARESH	MALE	ECE	07.05.2023	OASISINFO BYTE	DATA SCIENCE

6.4 Name and duration of Programme(s) having Twinning and Collaboration with Foreign University(s) and being run in the same Campus along with status of their AICTE approval. If there is Foreign Collaboration, give the following details: Details of the Foreign University

Name of the University   :

Address   :

Website   :

Accreditation status of the University in its Home Country:

Ranking of the University in the Home Country   :

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 Conditions of Collaboration Complete

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

 of Collaboration   :   **Not Applicable**

6.5 For each Programme Collaborated provide the following:

Programme Focus   :

Number of seats   :

Admission Procedure   :

Fee   :   **Not Applicable**

Placement Facility   :

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

6.6 Whether the Collaboration Programme is approved by AICTE? If not whether the Domestic/Foreign University has applied to AICTE for approval

          Not Applicable

7 Faculty

7.1 Name of the Branch   : **Civil Engineering**

Branch wise list Faculty members   09

Permanent Faculty   09

Adjunct Faculty   : --

Permanent Faculty: Student Ratio   : 1:15

7.1.1 Number of Faculty employed   7
and left during the last three years

7.2 Name of the Branch   : **Electronics and Communication Engineering**

Branch wise list Faculty members   37

Permanent Faculty   37

Adjunct Faculty   : --

Permanent Faculty: Student Ratio   : 1:13

7.2.1 Number of Faculty employed   12
and left during the last three years

7.3 Name of the Branch   : **Computer Science and Engineering**

Branch wise list Faculty members   41

Permanent Faculty   41

Adjunct Faculty   : --

Permanent Faculty: Student Ratio   : 1:13

7.3.1 Number of Faculty employed   23
and left during the last three years

7.4 Name of the Branch   : **Computer Science and Engineering (Artificial Intelligence and Machine Learning)**

Branch wise list Faculty members   17

Permanent Faculty   17

Adjunct Faculty   : --

Permanent Faculty: Student Ratio   : 1:11

7.4.1 Number of Faculty employed
and left during the last three years   0

7.5 Name of the Branch : **Computer Science and Engineering (IoT)**

Branch wise list Faculty members   13

Permanent Faculty   13

Adjunct Faculty : --

Permanent Faculty: Student Ratio : 1:14

7.5.1 Number of Faculty employed

and left during the last three years   0

7.6 Name of the Branch : **Computer Science and Engineering (CYBER SECURITY)**

Branch wise list Faculty members   13

Permanent Faculty   13

Adjunct Faculty : --

Permanent Faculty: Student Ratio : 1:14

7.6.1 Number of Faculty employed   0

and left during the last three years

7.7 Name of the Branch : **Artificial Intelligence and Data Science**

Branch wise list Faculty members   9

Permanent Faculty   9

Adjunct Faculty : --

Permanent Faculty: Student Ratio : 1:13

7.7.1 Number of Faculty employed

and left during the last three years   0

7.8 Name of the Branch : **Computer Science and Engineering (Data Science)**

Branch wise list Faculty members   4

Permanent Faculty   4

Adjunct Faculty : --

Permanent Faculty: Student Ratio : 1:15

7.8.1 Number of Faculty employed

and left during the last three years   0

8. Profile of Principal

Name	**:**	Dr. K.S.Sadasiva Rao

Date of Birth   **:** 15/8/1969

Education Qualifications   **:** M.C.A,M.Tech,Ph.D

Work Experience

Teaching   **: 24**

Research   **: 14**

Industry   **:** -

others   **:** -

Area of Specialization   **:** Computer Science & Engineering

Courses taught at Diploma/ Post   **:** Under Graduate/ Post Graduate Level

Diploma/ Under Graduate/ Post

Graduate/ Post Graduate Diploma Level

Research guidance
No. of papers published in National/ International Journals/ Conferences

Journals Publications   -   : 28
Conferences   : 16
Projects Carried out   : 97
Research Publications   : 16
No. of Books published   : 1

8   Profile of Faculty

For each Faculty give a page covering with Passport size photograph

Name of the Faculty   :

Date of Birth   :

Unique id   :

Education Qualifications   :

Work Experience   :

Teaching   :

Research   :

Industry   :

Others   :

Area of Specialization   :

Courses taught at Diploma/Post Diploma/ Under Graduate/

Post Graduate/ Post Graduate Diploma Level Research guidance

• No. of papers published in National/ International   :

  Journals/ Conferences

• Master   :

• Ph.D.   :

Projects Carried out   :

Patents Technology Transfer   :

Research Publications   :

No. of Books published with details   : **Enclosed : Annexure - I**

9.   Fee

9.1 Details of Fee, as approved by State Fee   **B.Tech. – 95,000/-**
    Committee, for the Institution

9.2 Time schedule for payment of Fee for the   **July – Auguest**
    entire Programme

9.3 Criteria for Fee waivers/scholarship

Financially Poor on having merit

9.4   Estimated cost of Boarding and Lodging in Hostels   **Rs. 75,000**

10   Admission

10.1 Number of seats sanctioned with the year of approval   **900– A.Y. 2025-26**

11   Admission Procedure

Mention the admission test being followed, name and address of the Test Agency and its URL (website)

Following the guidelines of State Governing of Higher Education, T.S. Government

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

EAMCET – 70% Seats

Calendar for admission against Management/vacant seats:

- Last date of request for applications   **As per the Notification**

- Last date of submission of applications   **framed by State Council of Higher Education, T.S. Govt.**

- Dates for announcing final results   **11-05-2025**
- Release of admission list (main list   **30-08-2025**

  and waiting list shall be announced on the same day)
- Date for acceptance by the candidate

  (time given shall in no case be less than 15 days)

- Last date for closing of admission   **13-08-2025**
- Starting of the Academic session
- The waiting list shall be activated only   **14-08.2025**

  on the expiry of date of main list
- The policy of refund of the Fee, in   **Ten Working Days are given for**

  case of withdrawal, shall be clearly notified   **the candidate for cancellation of**

        admission after closure of admission

        date

12   Criteria and Weightages for Admission

12.1 Describe each criterion with its   **As per the guidelines of TSCHE**

    respective weightages i.e.   **50% marks in qualifying exams**

    Admission Test, marks in   **i.e., 10+2 / Intermediate**

    qualifying examination etc.

12.2 Mention the minimum Level   **OC categories : 45% in qualifying**

    of acceptance, if any   **exams All other categories : 40% in**

      Qualifying exams

12.3   Mention the cut-off Levels of   **Not Applicable**

    percentage and percentile

    score of the candidates in the admission

    test for the last three years

12.4   Display marks scored in Test etc. and   **Not Applicable**

    in aggregate for all candidates who

    were admitted

13   List of Applicants

13.1 List of candidate whose applications   **List**

have been received along with percentile/percentage score for each of the qualifying examination in separate categories for open seats. List of candidate who have applied along with percentage and percentile score for Management quota seats

14.1 Composition of selection team for   **1. Secretary & Correspondent**
    Admission under Management Quota   **2. Principal**
    with the brief profile of members   **3. Administrative Officer**
    (This information be made available
    in the public domain after the admission
    process is over)

14.2 Score of the individual candidate   **List**
    Admitted arranged in order or merit

14.3 List of candidate who have been   **List**
     offered admission

14.4 Waiting list of the candidate in order   **Nil**
    of merit to be operative from the last
    date of joining of the first list candidate

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

15   Information of Infrastructure and Other Resources Available

15.1   Number of Class Rooms and   **44 Class Rooms and Av. Area each: 77**
    size of each Number of Tutorial   **18 Tutorial Rooms Av. Area : 40**
    rooms and size of each
    • Number of Laboratories and   **UG : 56 Av. Area each : 77**
      size of each
    • Number of Drawing Halls   **03 Nos. Av. Area each : 150**
      with capacity of each
    • Number of Computer Centers   **01 No. Av. Area each : 150**
      with capacity of each
    • Central Examination Facility,   **40 Nos.**

Number of rooms and capacity of each	**Capacity of Each: 24**

- Barrier Free Built Environment for disabled and elderly persons **Yes**
- Occupancy Certificate **Yes**
- Fire and Safety Certificate **Yes**
- Hostel Facilities **Yes**

15.2 Library

Number of Library books/ Titles/Journals Available (program wise)	: Yes
No. of Titles	: 4685
No. of Volumes	: 26105
No. of Journals Published in India	:114
No. of Journals Published in Abroad	: 57
List of Online National/ International Journals subscribed	:Yes
Name of the E –Journal subscription	: J-Gate, Delnet
E – Library facilities	:Yes

List of E-Resources available:

- RemotLog – Remote access

- Wonder slate – e-Books

- Delnet – Database

- J-Gate – e-Journals

- Delnet – e-Journals

List of Major Equipment / Facilities in each Laboratory / Workshop

DEPARTMENT OF CIVIL ENGINEERING LABORATORIES

CONCRETE TECHNOLOGY LAB

Major facilities/equipments

1. Compression Testing Machine.
2. Flexure test
3. Compaction Factor Apparatus
4. Compressometer
5. Sieve Shaker
6. Le-Chatelier Apparatus
7. Vicat Apparatus
8. Bulk Density Apparatus
9. Slump Cone
10. Flow Table Test (L-Box, J-Ring, V-Funnel)

GEOTECHNICAL ENGINEERING LAB

Major facilities/equipments

1. Triaxial Shear Apparatus
2. Direct Shear Apparatus
3. Automatic Compactor
4. Consolidation Apparatus
5. C.B.R. Apparatus
6. Permeability Apparatus
7. Proctor Compaction Apparatus
8. Field Density Apparatus
9. Hydrometer Analysis Apparatus
10. Specific Gravity of Soil
11. Atterberg Limits Apparatus
12. Sieve Shaker
13. Ovens

SURVEYING LAB

Major facilities/equipments

1. Total Stations
2. Theodolites
3. Plane Tables
4. Tachometers
5. Auto Levels
6. Chains
7. Compasses (Trough, Prismatic & Surveyor)
8. Digital Plan meter
9. Optical Squares

STRENGTH OF MATERIALS LAB

Major facilities/equipments

10. Universal Testing Machine
11. Compression Testing Machine
12. Torsion Testing Machine
13. Impact Testing Machine
14. Brinell & Rockwell Hardness Testing Machine
15. Spring Testing Machine
16. Deflection of Beams Apparatus
17. Electrical Resistance Strain gauges

ENGINEERING GEOLOGY LAB

Major facilities/equipments

1. Minerals
2. Rocks
3. Geological Models
4. Geological Maps

HYDRAULICS & HYDRAULIC MACHINERY LAB

Major facilities/equipments

1. Pelton wheel.
2. Francis turbine.
3. Kaplan turbine.
4. Single stage centrifugal pump.
5. Multi sage centrifugal pump.
6. Venturimeter.
7. Orifice meter.
8. Impact of jets
9. Bernoulli's theorem.
10. Friction factor for a given pipe line.

ENVIRONMENTAL ENGINEERING LAB

Major facilities/equipments

1. UV- Visible Spectrophotometer
2. Turbidity Meter
3. Jar Test Apparatus
4. pH Meters
5. Distilled water still
6. BOD Incubator
7. Hot Air Oven
8. COD Digester

Computer Aided Design LAB

Major facilities/equipments

Systems   30
Configuration   : Windows 7 OS
Processor   : Intel®core (TM)2 Duo
CPU E700@2.93GHZ
Installed Memory   : 1 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Auto CAD &
                          Bentley STAAD.Pro

Computer Aided Design Lab, India
Sri Indu Institute of Engineering and Technology
Lat 17.209753° Long 78.612875°

Department of ECE Laboratories & Workshops

Elements of Electronics & Communication Engineering Lab

Major facilities / equipments:

1. Regulated power supply (0-30 v)
2. Millimeters
3. Voltmeters(0-50 v)
4. Voltmeters(0-100 v)
5. Ammeters(0-100 µA)
6. Ammeters(0-10 mA)
7. CROs (0-20 Mhz) dual channel
8. Function generators (0-1 Mhz)
9. Decade Resistance Boxes
10. Dacade capacitance Boxes
11. Dacade inductance Boxes
12. Ammeter (0-1 mA)
13. Ammeter (0-200 µA)
14. Bread Boards
15. Electronic components as per the design of the circuit- Resistors, capacitors, BJTS, SCRS, UJTs,
16. FETs, Diodes (Si/Ge), Zener diodes

Elements of Electronics and Communication Engineering Lab (A-113),A BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510 17/02/23 11:30 AM GMT +05:30

Basic Simulation Laboratory (BS)

Major facilities / equipments:

1. MATLAB or equivalent software (With OS)
2. Computer system with latest specification (license or open source)

Basic Simulation Lab-1(C-002),C BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510 17/02/23 11:45 AM GMT +05:30
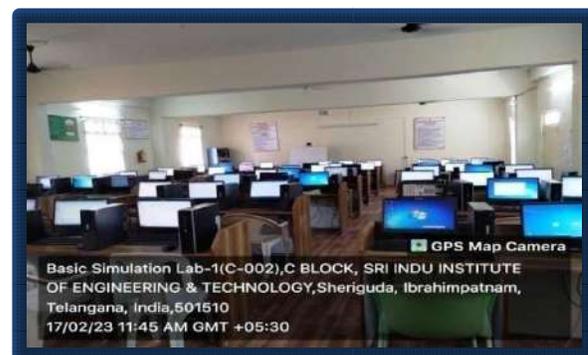
Digital logic Design Laboratory (DLD) / Digital Electronics Lab(DE)

Major facilities / equipments:

1. 0-5 v Regulated power supply
2. 0-12 v Regulated power supply
3. CROs (0-20 MHz) dual channel
4. Bread Boards / General Purpose IC Trainee Kits
5. 74xx Digital ICS
6. Multi meter

Digital System Design Lab(A-313),A-BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 12:37 PM GMT +05:30
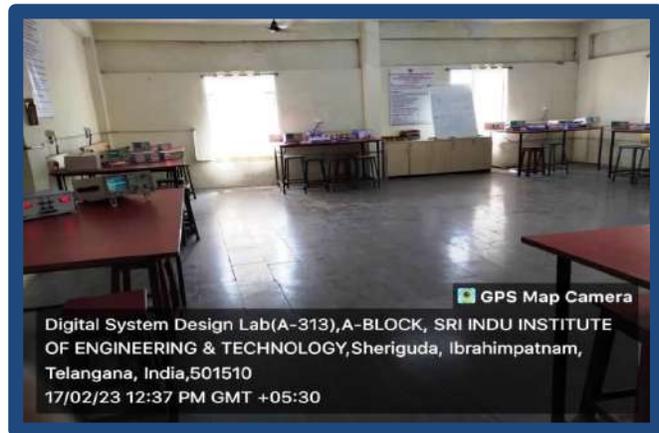
Electronic Devices and Circuits Laboratory (EDC)

Major facilities / equipments:

1. Regulated power supply (0-30 v)
2. Millimeters
3. Voltmeters(0-50 v)
4. Voltmeters(0-100 v)
5. Ammeters(0-100 µA)
6. Ammeters(0-10 mA)
7. CROs (0-20 Mhz) dual channel
8. Function generators (0-1 Mhz)
9. Decade Resistance Boxes
10. Decade capacitance Boxes
11. Decade inductance Boxes
12. Ammeter (0-1 mA)
13. Ammeter (0-200 µA)
14. Bread Boards
15. Electronic components as per the design of the circuit- Resistors, capacitors, BJTS, SCRS, UJTs,
16. FETs, Diodes (Si/Ge), Zener diodes

Electronic Devices and Circuits Laboratory(A-113),A BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 11:31 AM GMT +05:30

Electronic Circuit Analysis Laboratory (ECA Lab)

Major facilities / equipments:

1. Regulated power supplies (0-30v)
2. CROs (0-20 Mhz) channel dual
3. Function generators (0-1 Mhz)
4. Bread Boards
5. Power Amplifier kit(class A &Class B Complementary symmetry kits)

6. Tuned Amplifier kit
7. computer system with latest specification (licence or open source)
8. Analog Circuit Simulation Software / P- Spice / multisim/ equivalent Software
9. Hartley and Colpitt's Oscillators Circuit kit
10. Millar sweep Circuit kit
11. Components - BJTs, FETs, Diodes, Resisters , Capacitors

Electronic Circuit Analysis Lab(A-113),A BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 11:33 AM GMT +05:30
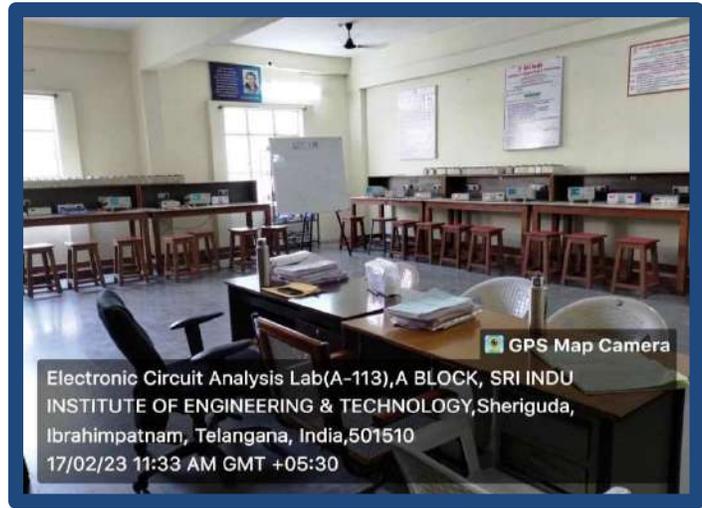
Analog and Digital Communications Lab

Major facilities / equipments:

1. CROs (0-20 Mhz) dual channel
2. Function generators (0-2 Mhz)
3. Spectrum Analyzer 3Mhz
4. Regulated power supply(0-30v)
5. Amplitude modulation & demodulator kit
6. Frequency modulation & demodulation kit
7. DSB - SC modulation & demodulation kit
8. SSB - SC modulation & demodulation kit

Analog and Digital Communications Lab-1(A-314),A-BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 12:49 PM GMT +05:30

9. Frequency division multiplexing kit & demultiplexing kit
10. Pulse Amplitude modulation & demodulation Kit
11. Pulse width modulation & demodulation Kit
12. Pulse position modulation & demodulation Kit
13. PCM Generation and detection kit
14. Delta modulation kit
15. FSK generation & detection kit
16. BPSK generation & detection kit
17. DPSK generation & detection kit
18. QPSK generation & detection kit
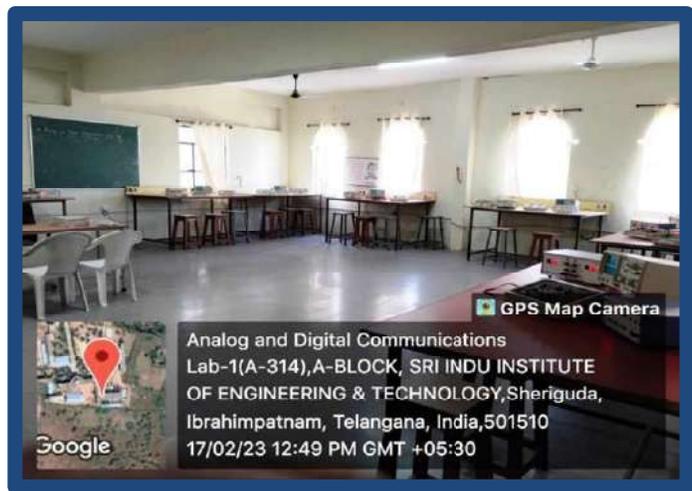
Linear and Digital IC Applications Lab

Major facilities/equipments:

1. 0-5 v Regulated power supply
2. CROs (0-20 MHz) dual channel
3. Bread Boards / General purpose IC Trainee Kits
4. Millimeter
5. 741-Op-Amp IC,555 lines IC, 565 PLL IC
6. 723-Voltage regulated IC7805-7809-7912 ICS

IC Applications Lab-1(B-301),B-BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 12:54 PM GMT +05:30
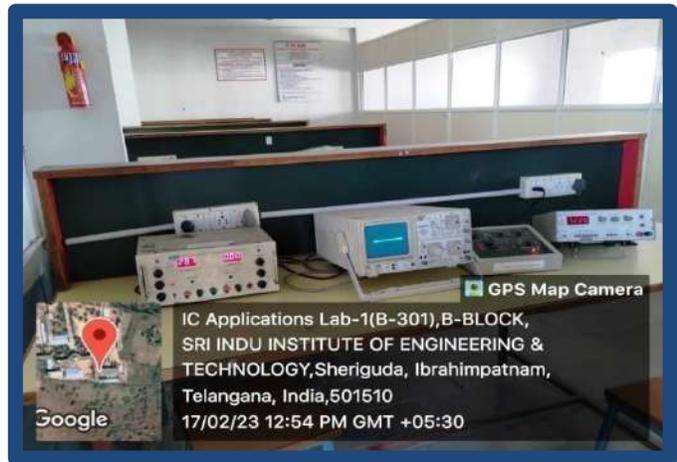
Gender Sensitization Lab

Major f a c i l i t i e s /equipments:

1. Digital Board
2. Projector
3. PA System

Gender Sensitization Lab(C-003),C-BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 11:53 AM GMT +05:30

Microprocessors and Microcontrollers Laboratory(MPMC)

Major facilities/equipments:

1. 8086 kit
2. 8051 kit
3. Interfacing 7 segment display to 8051
4. Interfacing Matrix keypad to 8051
5. bit ADC interface 8051
6. DAC interface to 8051
7. CRO's 0-20 MHZ

Microprocessors & Microcontrollers Lab-1(A-119),A-BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
17/02/23 12:12 PM GMT +05:30

Advanced Communication Skills Lab

Major facilities/equipments:

1. Systems   60

2. Configuration   : Windows 7 OS

3. Processor   :Intel Core I3 @3.60 GHZ

4. Installed Memory: 2 GB RAM, 500 HDD

5. System Type   : 64 bit OS

6. Installed Software: k-Van

Digital Signal Processing Laboratory (DSP Lab)

Majorfacilities/equipments:

1. Computers
2. MATLAB/ Lab view/ Equivalent
3. CRO's 0-20MHZ
4. Function generator 0-1MHZ
5. CCS Studio/ Equivalent Processor Simulation
6. DSP Processors (TI / Analog devices/ equivalent)
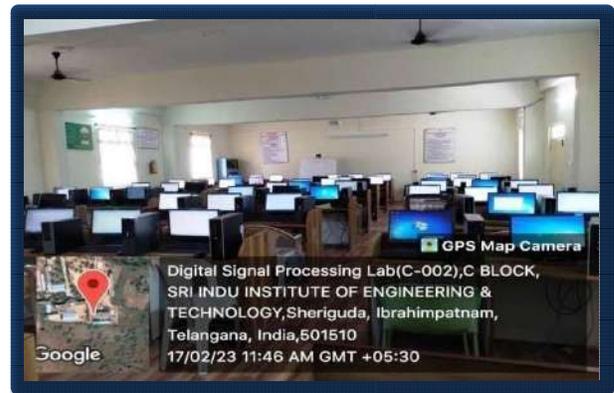
Microwave and Optical Communications Laboratory

Majorfacilities/equipments:

1. Klystron/ gunn diode based Microwave

2. bench setup including corresponding
3. Power Supply
4. Gunn diode based microwave bench
5. setup including Gunn Power Supply
6. Klystron based Microwave bench
7. setup including Klystron Power Supply
8. Micro Ammeter(0-500μA)
9. VSWR meter
10. Microwave Components:
11. Slotted Section
12. Magic T Junction
13. Circulator
14. Directional Couplers for 2 directivities
15. Attenuators for 2 different attenuations
16. Matched termination
17. E- Plane T junction
18. H- Plane T junction
19. PN detector mounts
20. Fiber Optical analog Transmitter kit
21. Fiber Optical analog Receiver kit
22. Laser diode kit
23. Laser diode transmitter kit
24. Fiber Optical Digital Transmitter kits
25. Fiber Optical Digital Receiver kits
26. Optical Fiber cables
27. Signal Generators 0-1 MHZ
28. CRO's (20MHZ)

MICROWAVE and OPTICAL COMMUNICATIONS LAB(A-116),A BLOCK, SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India,501510
Lat 17.209628°
Long 78.612616°
15/02/23 11:11 AM GMT +05:30

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Programming for Problem Solving Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS
Processor   :Inter®core™i3-3220
CPU@3.30GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : GCC compiler

Python Programming Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS, WINDOWS OS
Processor   :Inter®core™i3-3220
CPU@3.30GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Python IDE & pycharm

IT Workshop Lab

Major facilities/equipments:

Systems   70
Configuration   : Windows 7 OS
Processor   : INTEL® PENTIUM ®CPU
300GHZ
Installed Memory   : 512MB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software   : Ms Office 2010/ Hardware
Components for demo

Data Structures Lab

Major facilities/equipments:
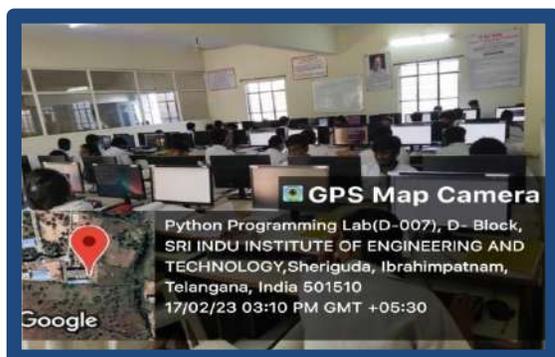
```
Systems            31
Configuration    : Windows  OS, Linux OS
Processor        : Intel Core I3 @3.60 GHZ
Installed Memory : 2GB RAM, 500 HDD
System Type      : 64 bit OS
Installed Software : C compiler
```


IT Workshop Lab

Major facilities/equipments:

```
Systems            70
Configuration    : Windows 7 OS
Processor        : INTEL® PENTIUM ®CPU
300GHZ
Installed Memory : 512MB RAM, 320 HDD
System Type      : 64 bit OS
Installed Software : Ms Office 2010/ Hardware
Components for demo
```


Operating Systems Lab

Major facilities/equipments:
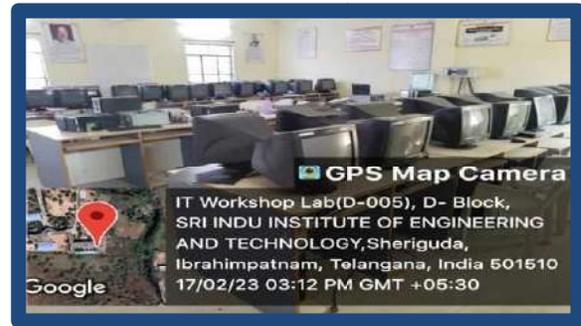
```
Systems            30
Configuration    : Linux  & Windows OS
Processor        :  Intel  Core  I3
                    @3.60  GHZ
Installed Memory : 2 GB RAM, 500 HDD
System Type      : 64 bit OS
Installed Software : C Compiler
```
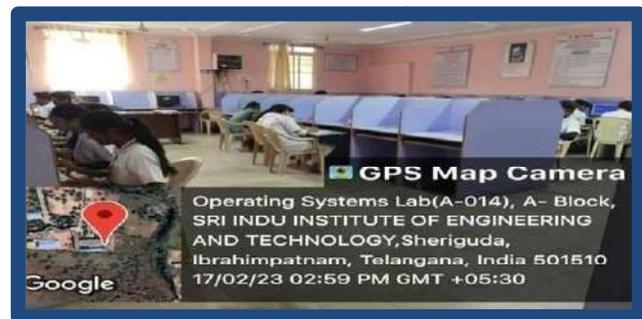
Database Management Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : My SQL
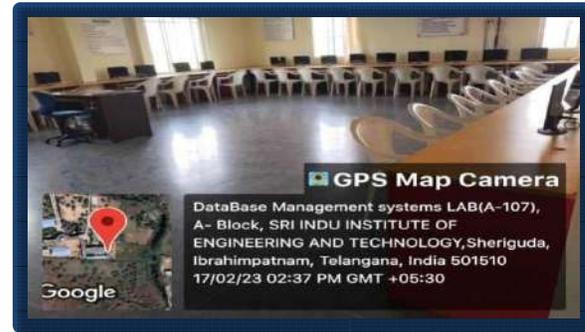
Node JS / React JS /Django Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS
Processor   : Intel®core (TM)2 Duo
CPU E7500@2.94GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : My SQL, Eclipse and JDK

UI design-Flutter Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS
Processor   : Intel$^{(R)}$ core ™ Dual CPU
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS

Computer Networks & Web Technologies Lab

Major facilities/equipments:

Systems : 31
Configuration : Windows OS
Processor : Intel Pentium Dual Core @3.60 GHZ
Installed Memory : 2 GB RAM, 250 HDD
System Type : 64 bit OS
Installed Software : C Compiler, NS2 , XAMPP, JDK & JSP
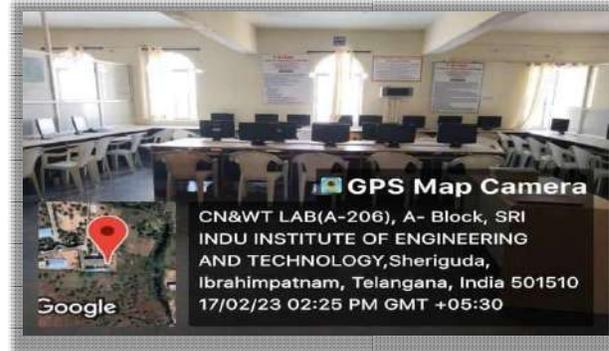
Advanced Communication Skills Lab

Major facilities/equipments:

Systems : 60
Configuration : Windows 7 OS
Processor : Intel Core I3 @3.60 GHZ
Installed Memory : 2 GB RAM, 500 HDD
System Type : 64 bit OS
Installed Software : k-Van

Machine Learning Lab

Major facilities/equipments:

Systems : 60
Configuration : Windows OS
Processor : Intel®core™ i5 9400 CPU @2.90GHZ
Installed Memory : 8 GB RAM, 1 TB HDD
System Type : 64 bit OS
Installed Software : Python IDE & pycharm

Compiler Design Lab

Major facilities/equipments:

Systems : 31
Configuration : Linux OS, WINDOWS OS
Processor : Intel(R) Core Dual CPU E2160@1.80GHZ
Installed Memory : 2 GB RAM, 250 HDD
System Type : 64 bit OS
Installed Software : C Compiler, Lex and Yacc
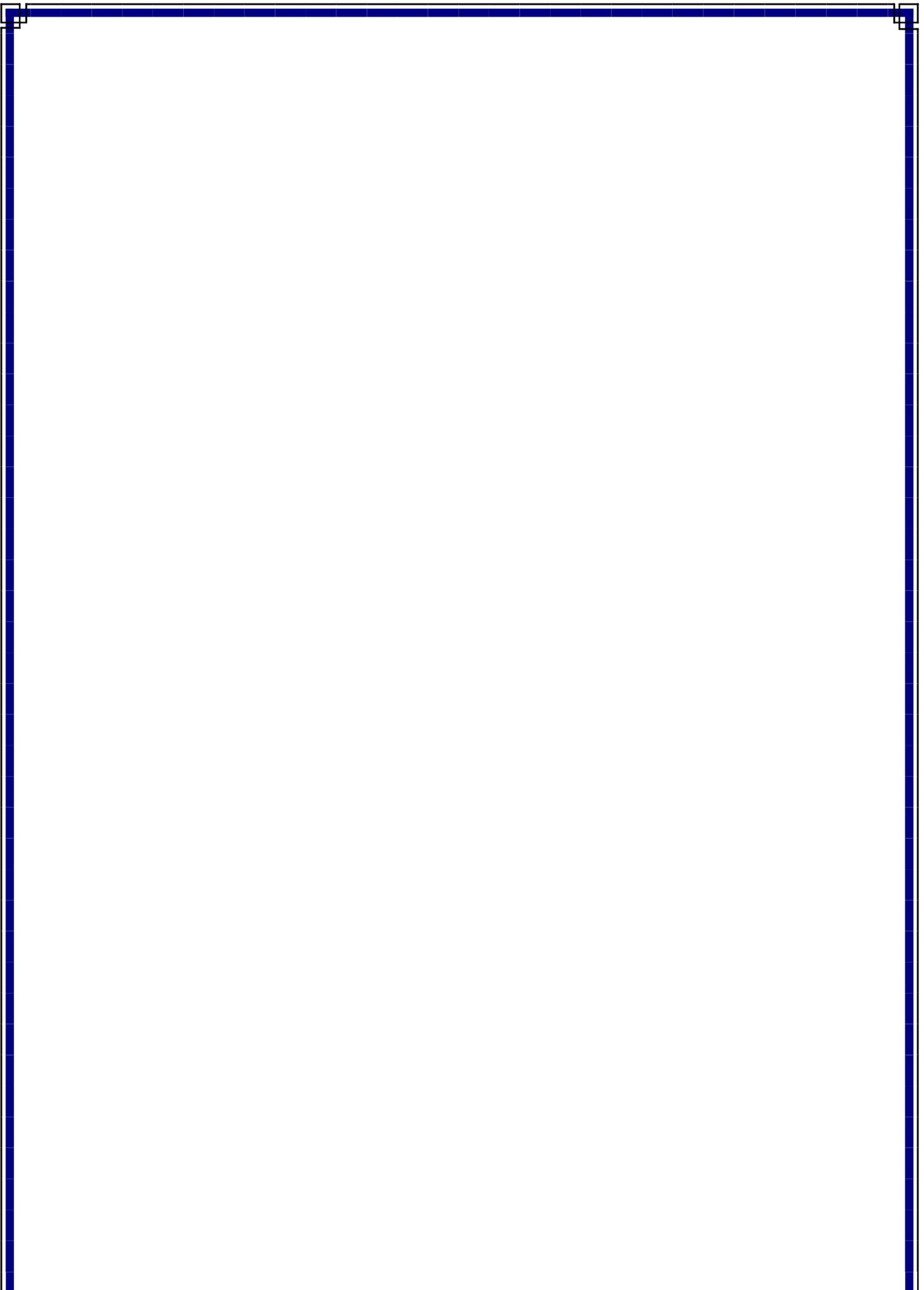
Professional Elective – III Concurrent Programming/ Network Programming/ Scripting Language Mobile Application Development/Software Testing Methodologies

Major facilities/equipments:

Systems	31
Configuration	: Windows OS
Processor	: Intel® Core™ 2DUO CPU E7500 @2.94GHz
Installed Memory	: 2 GB RAM, 320 HDD
System Type	: 64 bit OS
Installed Software	: Win Runner

Cryptography & Network Security Lab

Major facilities/equipments:

Systems	60
Configuration	: Windows OS , Linux OS
Processor	: Intel Core I3 @3.60 GHZ
Installed Memory	: 2 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: JDK, C Compiler, NS2 Tool

DEPARTMENT OF CSE (Artificial Intelligence & Machine Learning)

Programming for Problem Solving Lab

Major facilities/equipments:

Systems	60
Configuration	: Linux OS
Processor	:Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory	: 4 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: GCC compiler

Python Programming Lab

Major facilities/equipments:

Systems	60
Configuration	: Linux OS, WINDOWS OS
Processor	:Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory	: 4 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: Python IDE & pycharm

IT Workshop Lab

Major facilities/equipments:

Systems   70
Configuration   : Windows 7 OS
Processor   : INTEL® PENTIUM ®CPU 300GHZ
Installed Memory   : 512MB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software   : Ms Office 2010/ Hardware Components for demo

Interduction to Data Structures Lab

Major facilities/equipments:
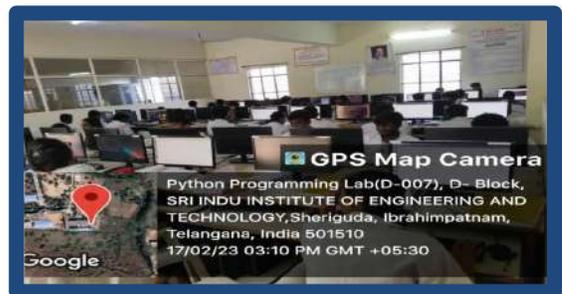
Systems   30
Configuration   : Windows OS, Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C compiler

Object Oriented Programming through Java Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400 CPU @2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software   : Java

Operating Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Linux OS & Windows 10 OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler

Database Management Systems Lab

Major facilities/equipments:

```
Systems              31
Configuration      : Windows 7 OS
Processor          : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type        : 64 bit OS
Installed Software : MySQL
```


DataBase Management systems LAB(A-107), A- Block, SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India 501510
17/02/23 02:37 PM GMT +05:30

Java Programming Lab

Major facilities/equipments:

```
Systems              31
Configuration      : Windows OS
Processor          : Intel Pentium Dual Core
@3.60 GHZ
Installed Memory   : 2 GB RAM, 250 HDD
System Type        : 64 bit OS
Installed Software : C Compiler,  XAMPP,
JDK, Eclipse & JSP
```


JAVA PROGRAMMING LAB(A-206),A-BLOCK, SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY,Sheriguda,Ibrahimpatnam, Telangana , India,501510
17/02/23 02:21 PM GMT +05:30

Computer Network Lab

Major facilities/equipments:

```
Systems              60
Configuration      : Windows,Linux  O$
Processor          : Intel Core I3 @3.60
GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type        : 64 bit OS
Installed Software : C Compiler, NS2 Tool
```
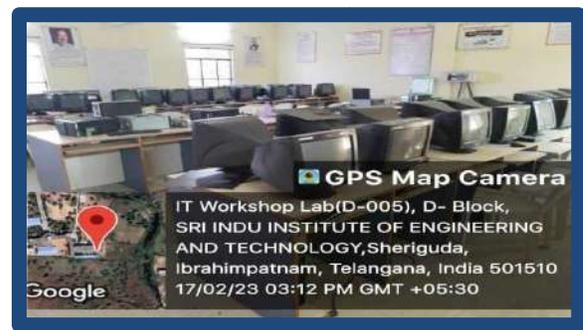

COMPUTER NETWORK LAB (A-015) A-Block SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY, Sheriguda, Ibrahimpatnam Telangana, India, 501510
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Machine Learning Lab

Major facilities/equipments:
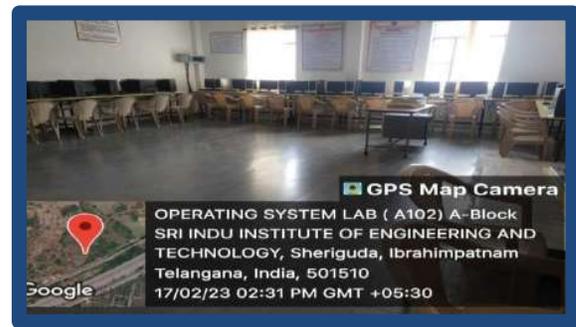
```
Systems              60
Configuration      : Windows  OS
Processor          : Intel®core™ i5 9400
CPU @2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type        : 64 bit OS
Installed Software : Python IDE & pycharm
```


Machine Learning Lab (A018) A-Block SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY, Sheriguda, Ibrahimpatnam Telangana, India, 501510
17/02/23 02:41 PM GMT +05:30

Advanced Communication Skills Lab

Major facilities/equipments:

Systems	60
Configuration	: Windows OS
Processor	: Intel Core I3 @3.60 GHZ
Installed Memory	: 2 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: k-Van

DevOps Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows,Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Git Bash, Docker, Jenking,
Selenium, GitHub, Uber neties, Chef Tools

Artificial Intelligence & Natural Language Processing Lab

Major facilities/equipments:

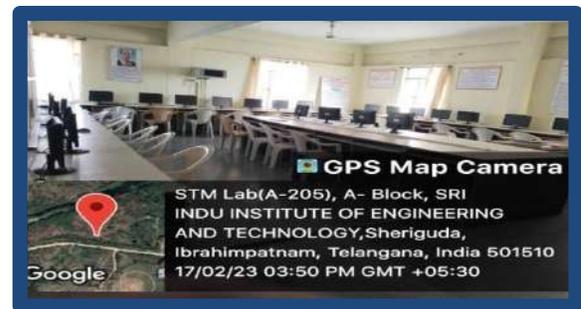
Systems   60
Configuration   : Windows OS
Processor   :Inter®core™i3-4160
CPU@3.60GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : SWI Prolog

Professional Elective – III Internet of Things/ Data Mining/ Scripting Languages/ Mobile Application Development/Cryptography & Network Security Lab

Major facilities/equipments:

Systems	60
Configuration	: Windows,Linux OS
Processor	: Intel Core I3 @3.60 GHZ
Installed Memory	: 2 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: C Compiler, NS2 Tool

DEPARTMENT OF CSE (Internet of Things)

Programming for Problem Solving Lab

Major facilities/equipments:

Systems	60
Configuration	: Linux OS
Processor	:Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory	: 4 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: GCC compiler

Python Programming Lab

Major facilities/equipments:

Systems	60
Configuration	: Linux OS, WINDOWS OS
Processor	:Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory	: 4 GB RAM, 500 HDD
System Type	: 64 bit OS
Installed Software	: Python IDE & pycharm

IT Workshop Lab

Major facilities/equipments:

Systems	70
Configuration	: Windows 7 OS
Processor	: INTEL® PENTIUM ®CPU 300GHZ
Installed Memory	: 512MB RAM, 320 HDD
System Type	: 64 bit OS
Installed Software	: Ms Office 2010/ Hardware Components for demo

Data Structures Lab

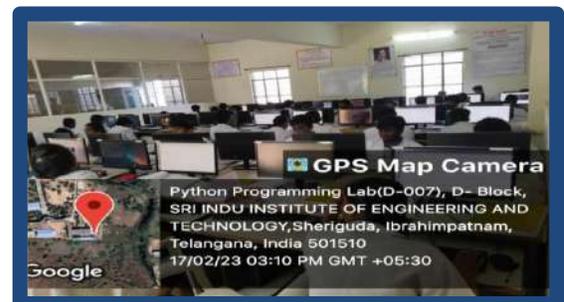**Major facilities/equipments:**

Systems   30
Configuration   : Windows OS, Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : C compiler

IT Workshop Lab

Major facilities/equipments:
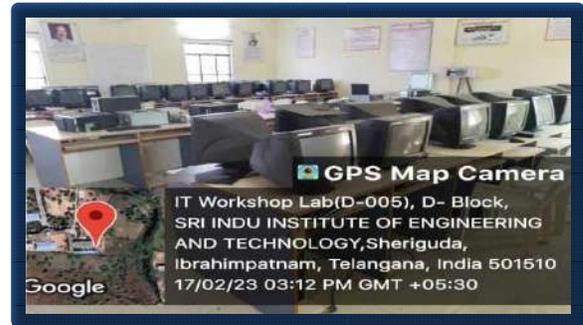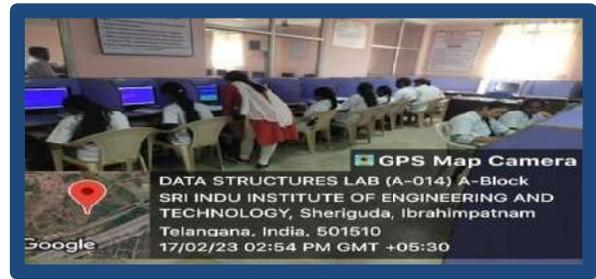
Systems   70
Configuration   : Windows OS
Processor   : INTEL® PENTIUM ®CPU 300GHZ
Installed Memory   : 512MB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software : Ms Office 2010/ Hardware Components for demo

Python Programming Lab

Major facilities/equipments:
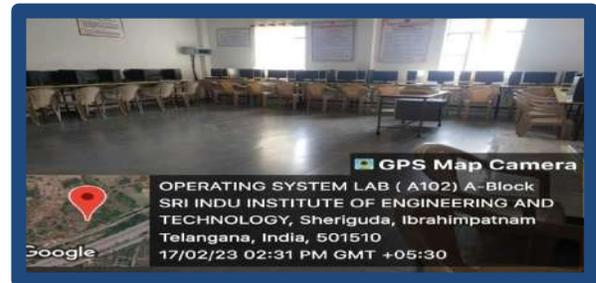
Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400
CPU @2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software   : Python IDE & pycharm

Operating Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Linux OS & Windows OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler

Sensors and Devices Lab

Major facilities/equipments:

Systems   30
Configuration   : WINDOWS OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Arduino IDE & Pycham

Java Programming Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel Pentium Dual Core
@3.60 GHZ
Installed Memory   : 2 GB RAM, 250 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler, XAMPP,
JDK, Eclipse & JSP

Database Management Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : MySQL

Microprocessors &Microcontrollers Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS
Processor   : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Keil, MASM

Advanced Communication Skills Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : k-Van

Computer Vision Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS
Processor   : Intel Core I5 @3.10
GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   :   SCI   Lab,   R
Programming

Internet of Things Lab
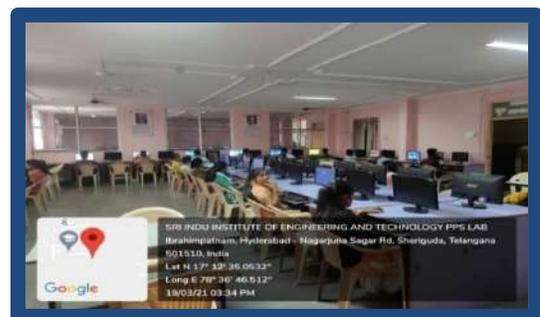
Major facilities/equipments:

Systems
Configuration   : Windows OS
Processor   : Intel Core I5 @3.10 GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : ARDUINO IDE, Pycham

Professional Elective – III Mobile Application Development for IoT/Cloud Computing and Virtualization/Artificial Intelligence/Lightweight Cryptography/ Software Testing methodology Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel® Core™ 2DUO CPU E7500 @2.94GHz
Installed Memory   : 2 GB RAM, 320 HDD
System Type
Installed Software   : Win Runner

DEPARTMENT OF CSE (Cyber Security)

Programming for Problem Solving Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS
Processor   :Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : GCC compiler

Python Programming Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS, WINDOWS OS
Processor   :Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Python IDE & pycharm

IT Workshop Lab

Major facilities/equipments:

Systems   70
Configuration   : Windows 7 OS
Processor   : INTEL® PENTIUM ®CPU
300GHZ
Installed Memory   : 512MB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software   : Ms Office 2010/ Hardware
Components for demo

Data Structures Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS, Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C compiler

Python Programming Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400
CPU @2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software : Python IDE & pycharm

GPS Map Camera
Python Programming Lab(A-018), A- Block,
SRI INDU INSTITUTE OF ENGINEERING
AND TECHNOLOGY,Sheriguda,
Ibrahimpatnam, Telangana, India 501510
17/02/23 02:49 PM GMT +05:30

Operating Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Linux OS & Windows OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : C Compiler

GPS Map Camera
OPERATING SYSTEM LAB (A102) A-Block
SRI INDU INSTITUTE OF ENGINEERING AND
TECHNOLOGY, Sheriguda, Ibrahimpatnam
Telangana, India, 501510
17/02/23 02:31 PM GMT +05:30

Computer Networks Lab

Major facilities/equipments:
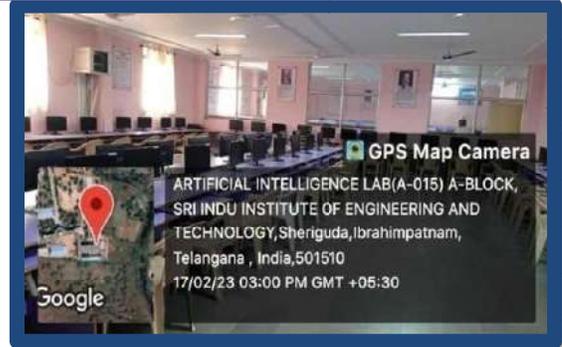
Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400 CPU
@2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software : C Compiler, NS2 Tool

GPS Map Camera
COMPUTER NETWORK LAB A-018 A-Block
SRI INDU INSTITUTE OF ENGINEERING AND
TECHNOLOGY, Sheriguda, Ibrahimpatnam
Telangana, India, 501510
17/02/23 02:52 PM GMT +05:30

Java Programming Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel Pentium Dual Core
@3.60 GHZ
Installed Memory   : 2 GB RAM, 250 HDD
System Type   : 64 bit OS
Installed Software : C Compiler, XAMPP,
JDK, Eclipse & JSP

GPS Map Camera
JAVA PROGRAMMING LAB(A-206),A-BLOCK,
SRI INDU INSTITUTE OF ENGINEERING AND
TECHNOLOGY,Sheriguda,Ibrahimpatnam,
Telangana , India,501510
17/02/23 02:21 PM GMT +05:30

Cryptography & Network Security Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel® Core™ 2DUO
CPU E7500 @2.94GHz
Installed Memory   : 2 GB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler, NS2 Tool

Advanced Communication Skills Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : k-Van

Database Management Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : My SQL

Professional Elective - III Mobile Application Security/ Machine Learning/ Mobile Application Development/ Blockchain Technology/DevOps Lab

Major facilities/equipments:
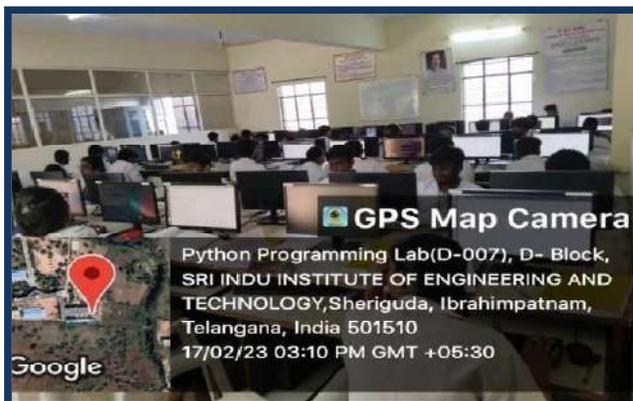
Systems   60
Configuration   : Windows,Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : Git Bash, Docker, Jenking, Selenium, GitHub, Uber neties, Chef Tools

Cyber Security Lab

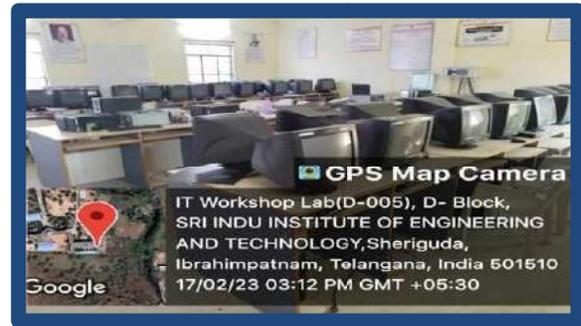**Major facilities/equipments:**

Systems   60
Configuration   : Windows 7 OS
Processor   :Inter®core™i3-4160 CPU@3.60GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : Jscript Cryptool, Dmitry-Dmagic, UAtester, Wireshark, Autopsy tool, monitor tool, FTK imager tool, Network Miner tool.

GPS Map Camera
Cyber Security Lab (A-207), A- Block, SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India 501510
17/02/23 03:44 PM GMT +05:30

Cyber Crime Investigation &Digital Forensics Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows 7 OS
Processor   :Inter®core™i3-4160 CPU@3.60GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : EDB viewer, MBOX viewer, Forensics tool, process monitor tool, X-way Forensics tools, Lastview activity tool, Network Miner tool, crowd Response tool, Autopsy tool.

GPS Map Camera
CCI&DF Lab(A-205), A- Block, SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India 501510
17/02/23 03:53 PM GMT +05:30

DEPARTMENT OF Artificial Intelligence & Data Science

Programming for Problem Solving Lab

Major facilities/equipments:
Systems   60
Configuration   : Linux OS
Processor   :Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory   : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : GCC compiler

GPS Map Camera
PROGRAMMING FOR PROBLEM SOLVING (D-007) D-Block SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY, Sheriguda, Ibrahimpatnam Telangana, India, 501510
17/02/23 03:11 PM GMT +05:30

Python Programming Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS, WINDOWS OS
Processor   :Inter®core™i3-3220 CPU@3.30GHZ
Installed Memory   : 4 GB RAM, 500 HDD

GPS Map Camera
Python Programming Lab(D-007), D- Block, SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY,Sheriguda, Ibrahimpatnam, Telangana, India 501510
17/02/23 03:10 PM GMT +05:30

System Type   : 64 bit OS
Installed Software   : Python IDE & pycharm

IT Workshop Lab

Major facilities/equipments:
Systems   70
Configuration   : Windows 7 OS
Processor   : INTEL® PENTIUM ®CPU
300GHZ
Installed Memory   : 512MB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software   : Ms Office 2010/ Hardware
Components for demo

Data Structures Lab

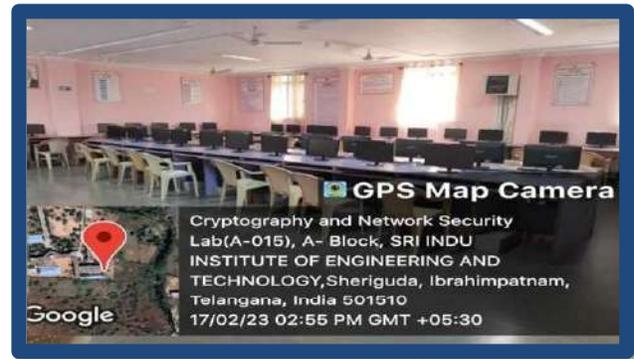**Major facilities/equipments:**
Systems   30
Configuration   : Windows 10 OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C compiler

Python Programming Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400 CPU
@2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software   : Python IDE & pycharm

Operating Systems Lab

Major facilities/equipments:

Systems   30
Configuration   : Linux & Windows OS
Processor   : Intel Core I3 @3.60
GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler

Artificial Intelligence Lab

Systems   60
Configuration   : Windows OS
Processor   :Inter®core™i3-4160
CPU@3.60GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : SWI Prolog

Database Management Systems Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS
Processor   : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : MySQL

Java Programming Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel Pentium Dual Core
@3.60 GHZ
Installed Memory   : 2 GB RAM, 250 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler, XAMPP, JDK, Eclipse & JSP

DEPARTMENT OF CSE (Data Science)

Programming for Problem Solving Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS
Processor   :Inter®core™i3-3220
CPU@3.30GHZ
Installed Memory : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : GCC compiler

Python Programming Lab

Major facilities/equipments:

Systems   60
Configuration   : Linux OS, WINDOWS
OS Processor   :Inter®core™i3-3220
CPU@3.30GHZ
Installed Memory : 4 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : Python IDE & pycharm

IT Workshop Lab

Major facilities/equipments:

Systems   70
Configuration   : Windows 7 OS
Processor   : INTEL® PENTIUM ®CPU
300GHZ
Installed Memory   : 512MB RAM, 320 HDD
System Type   : 64 bit OS
Installed Software   : Ms Office 2010/ Hardware
Components for demo

Data Structures Lab

Major facilities/equipments:

Systems   30
Configuration   : Windows OS, Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C compiler

Object Oriented Programming through Java Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400
CPU @2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software   : Java

Operating Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Linux OS & Windows 10 OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software   : C Compiler

Database Management Systems Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows 7 OS
Processor   : Intel®core(™)2Duo
CPUE7500@2.9Ghz
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : MySQL

R Programming Lab

Major facilities/equipments:

Systems   31
Configuration   : Windows OS
Processor   : Intel Pentium Dual Core
@3.60 GHZ
Installed Memory   : 2 GB RAM, 250 HDD
System Type   : 64 bit OS
Installed Software : C Compiler, XAMPP,
JDK, Eclipse & JSP

Computer Network Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows,Linux O$
Processor   : Intel Core I3 @3.60
GHZ
Installed Memory   : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : C Compiler, NS2 Tool

Machine Learning Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel®core™ i5 9400
CPU @2.90GHZ
Installed Memory   : 8 GB RAM, 1 TB HDD
System Type   : 64 bit OS
Installed Software : Python IDE & pycharm

Advanced Communication Skills Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : k-Van

UI Design Flutter Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows,Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory : 2 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : Git Bash, Docker, Jenking,
Selenium, GitHub, Uber neties, Chef Tools

Professional Elective – III Internet of Things/ Data Mining/ Scripting Languages/ Mobile Application Development/Cryptography & Network Security Lab

Major facilities/equipments:

Systems   60
Configuration   : Windows,Linux OS
Processor   : Intel Core I3 @3.60 GHZ
Installed Memory   : 2 GB RAM, 500
HDD System Type   : 64 bit OS
Installed Software   : C Compiler, NS2 Tool

Department of H& S - Laboratories

ENGINEERING WORKSHOP LABORATORY

Major facilities/equipments

1. Bench Drilling Mach
2. Power Hacksaw
3. Bench Grinding Machine
4. Welding Machine
5. Surface plate
6. Bench shear machine
7. Wood Working

BASIC ELECTRICAL ENGINEERING LABORATORY

Major facilities/equipments :

1. KVL and KCL Trainer Kits

2. Thevenin's and Norton's theorem kits

3. DC Shunt Motor

4. Three-phase Induction Motor

5. Three-phase Alternator

6. Rectifier Unit

7. Multi-meters

8. Function Generators

9. Regulated Power Supplies

10. CRO's

BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LAB

Major facilities/equipments :

1. PN junction Diodes
2. KVL and KCL Trainer Kits
3. Zener Diodes
4. Single-Phase Transformers
5. DC Shunt Motor
6. Three-phase Induction Motor

APPLIED PHYSICS LAB

Major facilities/equipments

1. Energy gap of semiconductor
2. Two Probe Method
3. B-H curve
4. LCR circuit
5. Hall effect
6. Photo electric effect
7. Divergence of Laser Beam
8. Dielectric constant

ENGINEERING CHEMISTRY LAB

Major facilities/equipments

1. Conductivity Meter
2. Potentiometer
3. Water Distillation Set
4. Water With 6 holes
5. Water With 12 holes
6. PH meter

ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB

Major facilities/equipments

1. Master console
2. Student consoles
3. Multimedia computers
4. Headphones
5. Platform software
6. Learning software
7. Public address system
8. TV
9. Projector
10. Digital stereo-Audio and video system
11. Camcorder

Computer Aided Design LAB

Major facilities/equipments

Systems   30
Configuration   : Windows 7 OS
Processor   : Intel®core (TM)2 Duo
CPU E700@2.93GHZ
Installed Memory   : 1 GB RAM, 500 HDD
System Type   : 64 bit OS
Installed Software : Auto CAD &
                      Bentley STAAD.Pro

Department of Civil Engineering – Lab Experiments

CONCRETE TECHNOLOGY LAB

List of Experiments:

I. Test on Cement

1. Normal Consistency and fineness of cement.
2. Initial setting time and final setting time of cement.
3. Specific gravity of cement
4. Soundness of cement
5. Compressive strength of cement
6. Workability test on concrete by compaction factor, slump and Vee-bee.

II. Test on Aggregates (Coarse and Fine)

1. Specific gravity (Pycnometer and wire basket), water absorption
2. Shape (Flakiness and elongation indices)
3. Impact and abrasion value tests
4. Crushing resistance and durability tests
5. Sieve Analysis and gradation charts (Job mix formula using Rothfuch's charts)
6. Bulking of sand, Bulk and compact densities of fine and coarse aggregates

III. Test on Fresh Concrete

1. Slump test
2. CF (compact factor stress)
3. Vee-bee Test
4. Flow Table Test

IV. Test on hardened concrete

1. Compression test on cubes & Cylinders
2. Flexure test
3. Split Tension Test
4. Modulus of Elasticity

GEOTECHNICAL ENGINEERING LAB

List of Experiments:

1. Atterberg Limits (Liquid Limit, Plastic Limit, and shrinkage limit)
2. a) Field density by core cutter method and
   b) Field density by sand replacement method
3. Determination of Specific gravity of soil Grain size distribution by sieve analysis

4. Permeability of soil by constant and variable head test methods

5. Standard Proctor's Compaction Test

6. Determination of Coefficient of consolidation (square root time fitting method)

7. Unconfined compression test

8. Direct shear test

9. Vane shear test

10. Differential free swell index (DFSI) test

SURVEYINGLAB

List of Experiments:

1. Surveying of an area by chain, and compass survey (closed traverse) & plotting.

2. Determine of distance between two inaccessible points with compass

3. Radiation method, intersection methods by plane table survey.

4. Levelling – Longitudinal and cross-section and plotting

5. Measurement of Horizontal and vertical angle by theodolite

6. Trigonometric leveling using theodolite

7. Height and distances using principles of tachometric surveying

8. Determination of height, remote elevation, distance between inaccessible points using total station

9. Determination of Area using total station and drawing map

10. Traversing using total station for drawing contour map

11. Stake out using total station

12. Setting out Curve using total station

STRENGTH OF MATERIALS LAB

List of Experiments:

1. Tension test

2. Bending test on (Steel / Wood) Cantilever beam.

3. Bending test on simple support beam.

4. Torsion test

5. Hardness test

6. Spring test

7. Compression test on wood or concrete

8. Impact test

9. Shear test

10. Verification of Maxwell's Reciprocal theorem on beams.

11. Use of electrical resistance strain gauges

12. Continuous beam – deflection test.

ENGINEERING GEOLOGY LAB

List of Experiments:

1. Study of physical properties of minerals.
2. Study of different group of minerals.
3. Study of Crystal and Crystal system.
4. Identification of minerals: Silica group: Quartz, Amethyst, Opal; Feldspar group: Orthoclase, Plagioclase; Cryptocrystalline group: Jasper; Carbonate group: Calcite; Element group: Graphite; Pyroxene group: Talc; Mica group: Muscovite; Amphibole group: Asbestos, Olivine, Hornblende, Magnetite, Hematite, Corundum, Kyanite, Garnet, Galena, Gypsum.
5. Identification of rocks (Igneous Petrology): Acidic Igneous rock: Granite and its varieties, Syenite, Rhyolite, Pumice, Obsidian, Scoria, Pegmatite, Volcanic Tuff. Basic rock: Gabbro, Dolerite, Basalt and its varieties, Trachyte.
6. Identification of rocks (Sedimentary Petrology): Conglomerate, Breccia, Sandstone and its varieties, Laterite, Limestone and its varieties, Shales and its varieties.
7. Identification of rocks (Metamorphic Petrolody): Marble, slate, Gneiss and its varieties, Schist and its varieties. Quartzite, Phyllite.
8. Study of topographical features from Geological maps. Identification of symbols in maps.
9. Simple structural Geology Problems (Folds, Faults & Unconformities)

HYDRAULICS & HYDRAULIC MACHINERY LAB

List of Experiments:

1. Verification of Bernoulli's equation
2. Determination of Coefficient of discharge for a small orifice by a constant head method
3. Calibration of Venturimeter / Orifice Meter
4. Calibration of Triangular / Rectangular/Trapezoidal Notch
5. Determination of Minor losses in pipe flow
6. Determination of Friction factor of a pipe line
7. Determination of Energy loss in Hydraulic jump
8. Determination of Manning's and Chezy's constants for Open channel flow.
9. Impact of jet on vanes
10. Performance Characteristics of Pelton wheel turbine
11. Performance Characteristics of Francis turbine
12. Performance characteristics of Keplan Turbine
13. Performance Characteristics of a single stage / multi stage Centrifugal Pump

ENVIRONMENTAL ENGINEERING LAB

List of Experiments:

1. Determination of pH
2. Determination of Electrical Conductivity
3. Determination of Total Solids (Organic and inorganic)
4. Determination of Acidity
5. Determination of Alkalinity
6. Determination of Hardness (Total, Calcium and Magnesium Hardness)
7. Determination of Chlorides
8. Determination of optimum coagulant Dosage
9. Determination of Dissolved Oxygen (Winkler Method)
10. Determination of COD
11. Determination of BOD/DO
12. Determination of Residual Chlorine
13. Total count No.
14. Noise level measurement

COMPUTER AIDED DESIGN LAB

List of Experiments:

1. Analysis & Design determinate structures using a software
2. Analysis & Design of fixed & continuous beams using a software
3. Analysis & Design of Plane Frames
4. Analysis & Design of space frames subjected to DL & LL
5. Analysis & Design of residential building subjected to all loads (DL,LL,WL,EQL)
6. Analysis & Design of Roof Trusses
7. Design and detailing of built up steel beam
8. Developing a design programme for foundation using EXCEL Spread Sheet
9. Detailing of RCC beam and RCC slab
10. Detailing of Steel built up compression member

Department of Electronics and Communication Engineering – Lab Experiments

Elements of Electronics and Communication Engineering Lab

List of Experiments:

1. Understand the significance of Electronics and communications subjects

2. Identify the different passive and active components

3. Color code of resistors, finding the types and values of capacitors

4. Measure the voltage and current using voltmeter and ammeter

5. Measure the voltage, current with Multimeter and study the other measurements usingMultimeter

6. Study the CRO and measure the frequency and phase of given signal

7. Draw the various Lissajous figures using CRO

8. Study the function generator for various signal generations

9. Study of Spectrum analyzer and measure the spectrum

10. Operate Regulated power supply for different supply voltages

11. Study the various gates module and write down the truth table of them

12. Identify various Digital and Analog ICs

13. Observe the various types of modulated signals.

Know the available softwares: PSpice, Multisim & MATLAB etc. for Electronics and communication applications.

Basic Simulation Lab

List of Experiments:
1. Basic Operations on Matrices.
2. Generation of Various Signals and Sequences (Periodic and Aperiodic), such as Unit Impulse,Unit Step, Square, Saw tooth, Triangular, Sinusoidal, Ramp, Sinc.
3. Operations on Signals and Sequences such as Addition, Multiplication, Scaling, Shifting,Folding, Computation of Energy and Average Power.
4. Finding the Even and Odd parts of Signal/Sequence and Real and Imaginary parts of Signal.
5. Convolution for Signals and sequences.

6. Auto Correlation and Cross Correlation for Signals and Sequences.
7. Verification of Linearity and Time Invariance Properties of a given Continuous/Discrete System.
8. Computation of Unit sample, Unit step and Sinusoidal responses of the given LTI system andverifying its physical realiazability and stability properties.
9. Gibbs Phenomenon Simulation.
10. Finding the Fourier Transform of a given signal and plotting its magnitude and phase spectrum.
11. Waveform Synthesis using Laplace Transform.
12. Locating the Zeros and Poles and plotting the Pole-Zero maps in S-plane and Z-Plane for thegiven transfer function.
13. Generation of Gaussian noise (Real and Complex), Computation of its mean, M.S. Value andits Skew, Kurtosis, and PSD, Probability Distribution Function.
14. Verification of Sampling Theorem.
15. Removal of noise by Autocorrelation / Cross correlation.
16. Extraction of Periodic Signal masked by noise using Correlation.
17. Verification of Weiner-Khinchine Relations.
18. Checking a Random Process for Stationarity in Wide sense.

Digital Systems Design Lab

List of Experiments:

1. Realization of Boolean Expressions using Gates
2. Design and realization logic gates using universal gates
3. Generation of clock using NAND / NOR gates
4. Design a 4 – bit Adder / Subtractor
5. Design and realization of a 4 – bit gray to Binary and Binary to Gray Converter
6. Design and realization of an 8 bit parallel load and serial out shift register using flip-flops.
7. Design and realization of a Synchronous and Asynchronous counter using flip-flops
8. Design and realization of Asynchronous counters using flip-flops
9. Design and realization of 8x1 MUX using 2x1 MUX
10. Design and realization of 4 bit comparator
11. Design and Realization of a sequence detector-a finite state machine

Electronic Devices and Circuits Lab

List of Experiments:

Verify any twelve experiments in H/W Laboratory

1. PN Junction diode characteristics A) Forward bias B) Reverse bias.
2. Zener diode characteristics and Zener as voltage Regulator
3. Full Wave Rectifier with & without filters

4. Input and output characteristics of BJT in CE Configuration

5. Input and output characteristics of FE in CS Configuration

6. Common Emitter Amplifier Characteristics

7. Common Base Amplifier Characteristics

8. Common Source amplifier Characteristics

9. Measurement of h-parameters of transistor in CB, CE, CC configurations

10.   Switching characteristics of a transistor

11. SCR Characteristics.

12. Types of Clippers at different reference voltages

13. Types of Clampers at different reference voltages

14. The steady state output waveform of clampers for a square wave input

ELECTRONIC CIRCUIT ANALYSIS LAB

List of Experiments:

Hardware Testing in Laboratory:

1. Common Emitter Amplifier **(*)**

2. Two Stage RC Coupled Amplifier

3. Cascode amplifier Circuit **(*)**

4. Darlington Pair Circuit

5. Current Shunt Feedback amplifier Circuit

6. Voltage Series Feedback amplifier Circuit **(*)**

7. RC Phase shift Oscillator Circuit **(*)**

8. Hartley and Colpitt's Oscillators Circuit

9. Class A power amplifier

10. Class B Complementary symmetry amplifier **(*)**

11. Design a Monostable Multivibrator

12. The output voltage waveform of Miller Sweep Circuit

ANALOG AND DIGITAL COMMUNICATIONS LAB

List of Experiments:

1. (i) Amplitude modulation and demodulation (ii) Spectrum analysis of AM
2. (i) Frequency modulation and demodulation (ii) Spectrum analysis of FM
3. DSB-SC Modulator & Detector
4. SSB-SC Modulator & Detector (Phase Shift Method)
5. Frequency Division Multiplexing & De multiplexing
6. Pulse Amplitude Modulation & Demodulation

7. Pulse Width Modulation & Demodulation
8. Pulse Position Modulation & Demodulation
9. PCM Generation and Detection
10. Delta Modulation
11. Frequency Shift Keying: Generation and Detection
12. Binary Phase Shift Keying: Generation and Detection
13. Generation and Detection (i) DPSK (ii) QPSK

IC APPLICATIONS LAB

List of Experiments:

Note: Verify the functionality of the IC in the given application

Design and Implementation of:

1. Inverting and Non-Inverting Amplifiers using Op Amps
2. Adder and Subtractor using Op Amp.
3. Comparators using Op Amp.
4. Integrator Circuit using IC 741.
5. Differentiator Circuit using Op Amp.
6. Active filter Applications-LPF, HPF (First Order)
7. IC 741 waveform Generators-Sine, Square wave and Triangular Waves.
8. Mono-Stable Multivibrator using IC 555.
9. Astable multivibrator using IC 555.
10. Schmitt Trigger Circuits using IC 741.
11. IC 565-PLL Applications.
12. Voltage Regulator using IC 723
13. Three terminal voltage regulators-7805, 7809, 7912

GENDER SENSITIZATION LAB

UNIT - I: UNDERSTANDING GENDER

Introduction: Definition of Gender-Basic Gender Concepts and Terminology-Exploring Attitudes towards Gender-Construction of Gender-Socialization: Making Women, Making Men
- Preparing for Womanhood. Growing up Male. First lessons in Caste.

UNIT – II: GENDER ROLES AND RELATIONS

Two or Many? -Struggles with Discrimination-Gender Roles and Relations-Types of Gender Roles- Gender Roles and Relationships Matrix-Missing Women-Sex Selection and Its Consequences- Declining Sex Ratio. Demographic Consequences-Gender Spectrum: Beyond the Binary

UNIT – III: GENDER AND LABOUR

Division and Valuation of Labour-Housework: The Invisible Labor- "My Mother doesn't Work." "Share the Load."-Work: Its Politics and Economics -Fact and Fiction. Unrecognized and Unaccounted work. - Gender Development Issues-Gender,

Governance and Sustainable Development-Gender and Human Rights-Gender and Mainstreaming

UNIT – IV: GENDER - BASED VIOLENCE

The Concept of Violence- Types of Gender-based Violence-Gender-based Violence from a Human Rights Perspective-Sexual Harassment: Say No! -Sexual Harassment, not Eve-teasing- Coping with Everyday Harassment- Further Reading: "*Chupulu*".

Domestic Violence: Speaking OutIs Home a Safe Place? -When Women Unite [Film]. Rebuilding Lives. Thinking about Sexual Violence Blaming the Victim-"I Fought for my Life...."

UNIT – V: GENDER AND CULTURE

Gender and Film-Gender and Electronic Media-Gender and Advertisement-Gender and Popular Literature- Gender Development Issues-Gender Issues-Gender Sensitive Language-Gender and Popular Literature - Just Relationships: Being Together as Equals

Mary Kom and Onler. Love and Acid just do not Mix. Love Letters. Mothers and Fathers. Rosa Parks- The Brave Heart.

Note: Since it is Interdisciplinary Course, Resource Persons can be drawn from the fields of English Literature or Sociology or Political Science or any other qualified faculty who has expertise in this field from engineering departments.

MICROPROCESSORS AND MICROCONTROLLERS LAB

List of Experiments:

Cycle 1: Using 8086 Processor Kits and/or Assembler (5 Weeks)

• Assembly Language Programs to 8086 to Perform
1. Arithmetic, Logical, String Operations on 16 Bit and 32-Bit Data.
2. Bit level Logical Operations, Rotate, Shift, Swap and Branch Operations.

Cycle 2: Using 8051 Microcontroller Kit (6 weeks)

• Introduction to IDE
1. Assembly Language Programs to Perform Arithmetic (Both Signed and Unsigned) 16 Bit Data Operations, Logical Operations (Byte and Bit Level Operations), Rotate, Shift, Swap and Branch Instructions
2. Time delay Generation Using Timers of 8051.
3. Serial Communication from / to 8051 to / from I/O devices.
4. Program Using Interrupts to Generate Square Wave 10 KHZ Frequency on P2.1 Using Timer 0 8051 in 8 bit Auto reload Mode and Connect a 1 HZ Pulse to INT1 pin and Displayon Port 0. Assume Crystal Frequency as 11.0592 MHZ

Cycle 3: Interfacing I/O Devices to 8051(5 Weeks)

1. 7 Segment Display to 8051.
2. Matrix Keypad to 8051.
3. Sequence Generator Using Serial Interface in 8051.

4.8 bit ADC Interface to 8051.

5. Triangular Wave Generator through DAC interfaces to 8051.

DATA COMMUNICATIONS AND NETWORKS LAB

List of Experiments:

Note: A) Minimum of 12 Experiments have to be conducted

B) All the Experiments may be Conducted using Network Simulation software like NS-2, NSG-2.1 and Wire SHARK/equivalent software.

Note: For Experiments 2 to 10 Performance may be evaluated through simulation by using theparameters Throughput, Packet Delivery Ratio, Delay etc.

1. Writing a TCL Script to create two nodes and links between nodes
2. Writing a TCL Script to transmit data between nodes
3. Evaluate the performance of various LAN Topologies
4. Evaluate the performance of Drop Tail and RED queue management schemes
5. Evaluate the performance of CBQ and FQ Scheduling Mechanisms
6. Evaluate the performance of TCP and UDP Protocols
7. Evaluate the performance of TCP, New Reno and Vegas
8. Evaluate the performance of AODV and DSR routing protocols
9. Evaluate the performance of AODV and DSDV routing protocols
10. Evaluate the performance of IEEE 802.11 and IEEE 802.15.4
11. Evaluate the performance of IEEE 802.11 and SMAC
12. Capturing and Analysis of TCP and IP Packets
13. Simulation and Analysis of ICMP and IGMP Packets
14. Analyze the Protocols SCTP, ARP, NetBIOS, IPX VINES
15. Analysis of HTTP, DNS and DHCP Protocols

ADVANCED COMMUNICATION SKILLS LAB

1. INTRODUCTION:

The introduction of the Advanced Communication Skills Lab is considered essential at 3rd year level. At this stage, the students need to prepare themselves for their careers which may require them to listen to, read, speak and write in English both for their professional and interpersonal communication in the globalized context.

The proposed course should be a laboratory course to enable students to use 'good'

English and perform the following:

- Gathering ideas and information to organize ideas relevantly and coherently.
- Engaging in debates.
- Participating in group discussions.
- Facing interviews.
- Writing project/research reports/technical reports.
- Making oral presentations.
- Writing formal letters.
- Transferring information from non-verbal to verbal texts and vice-versa.
- Taking part in social and professional communication.

2. OBJECTIVES:

This Lab focuses on using multi-media instruction for language development to meet the following targets:

- To improve the students' fluency in English, through a well-developed vocabulary and enable them to listen to English spoken at normal conversational speed by educated English speakers and respond appropriately in different socio-cultural and professional contexts.
- Further, they would be required to communicate their ideas relevantly and coherently in writing.
- To prepare all the students for their placements.

3. SYLLABUS:

The following course content to conduct the activities is prescribed for the Advanced English Communication Skills (AECS) Lab:

1. **Activities on Fundamentals of Inter-personal Communication and Building Vocabulary** - Starting a conversation – responding appropriately and relevantly – using the right body language

– Role Play in different situations & Discourse Skills- using visuals - Synonyms and antonyms, word roots, one-word substitutes, prefixes and suffixes, study of word origin, business vocabulary, analogy, idioms and phrases, collocations & usage of vocabulary.

2. **Activities on Reading Comprehension** –General Vs Local comprehension, reading for facts, guessing meanings from context, scanning, skimming, inferring meaning,

critical reading& effectivegoogling.

3. **Activities on Writing Skills** – Structure and presentation of different types of writing – *letter writing/Resume writing/ e-correspondence/Technical report writing/* – planning for writing – improving one's writing.

4. **Activities on Presentation Skills** – Oral presentations (individual and group) through JAM sessions/seminars/**PPTs** and written presentations through posters/projects/reports/e-mails/assignmentsetc.

5. **Activities on Group Discussion and Interview Skills** – Dynamics of group discussion, intervention, summarizing, modulation of voice, body language, relevance, fluency and organization of ideas and rubrics for evaluation- Concept and process, pre-interview planning, opening strategies, answering strategies, interview through tele-conference & video-conference and Mock Interviews.

DIGITAL SIGNAL PROCESSING LAB

The Programs shall be implemented in Software (Using MATLAB / Lab View / C Programming/ Equivalent) and Hardware (Using TI / Analog Devices / Motorola / Equivalent DSP processors).

Note: - Minimum of 12 experiments has to be conducted.

List of Experiments:

1. Generation of Sinusoidal Waveform / Signal based on Recursive Difference Equations

2. Histogram of White Gaussian Noise and Uniformly Distributed Noise.

3. To find DFT / IDFT of given DT Signal

4. To find Frequency Response of a given System given in Transfer Function/ Differential equation form.

5. Obtain Fourier series coefficients by formula &using FET and compare for half sine wave.

6. Implementation of FFT of given Sequence

7. Determination of Power Spectrum of a given Signal(s).

8. Implementation of LP FIR Filter for a given Sequence/Signal.

9. Implementation of HP IIR Filter for a given Sequence/Signal

10. Generation of Narrow Band Signal through Filtering

11. Generation of DTMF Signals

12. Implementation of Decimation Process

13. Implementation of Interpolation Process

14. Implementation of I/D Sampling Rate Converters

15. Impulse Response of First order and Second Order Systems

e - CAD LAB

Note: Any **SIX of** the following experiments from each part are to be conducted (Total 12)

Part - I

All the following experiments have to be implemented using HDL

1. Realize all the logic gates

2. Design of 8-to-3 encoder (without and with priority) and 2-to-4 decoder

3. Design of 8-to-1 multiplexer and 1-to-8 demultiplexer

4. Design of 4 bit binary to gray code converter

5. Design of 4 bit comparator

6. Design of Full adder using 3 modeling styles

7. Design of flip flops: SR, D, JK, T

8. Design of 4-bit binary, BCD counters (synchronous/ asynchronous reset) or any sequencecounter

9. Finite State Machine Design

Part-II

Layout, physical verification, placement & route for complex design, static timing analysis, IRdrop analysis and crosstalk analysis for the following:

1. Basic logic gates

2. CMOS inverter

3. CMOS NOR/ NAND gates

4. CMOS XOR and MUX gates

5. Static / Dynamic logic circuit (register cell)

6. Latch

7. Pass transistor

8. Layout of any combinational circuit (complex CMOS logic gate).

SCRIPTING LANGUAGES LAB

List of Experiments

1. Write a Ruby script to create a new string which is n copies of a given string where n is a non-negative integer

2. Write a Ruby script which accept the radius of a circle from the user and compute the parameterand area.

3. Write a Ruby script which accept the user's first and last name and print them in reverse orderwith a space between them

4. Write a Ruby script to accept a filename from the user print the extension of that

5. Write a Ruby script to find the greatest of three numbers

6. Write a Ruby script to print odd numbers from 10 to 1

7. Write a Ruby scirpt to check two integers and return true if one of them is 20 otherwise returntheir sum

8. Write a Ruby script to check two temperatures and return true if one is less than 0 and the otheris greater than 100

9. Write a Ruby script to print the elements of a given array

10. Write a Ruby program to retrieve the total marks where subject name and marks of a studentstored in a hash

11. Write a TCL script to find the factorial of a number

12. Write a TCL script that multiplies the numbers from 1 to 10

13. Write a TCL script for Sorting a list using a comparison function

14. Write a TCL script to (i)create a list (ii)append elements to the list (iii)Traverse the list(iv)Concatenate the list

15. Write a TCL script to comparing the file modified times.

16. Write a TCL script to Copy a file and translate to native format.

17. a) Write a Perl script to find the largest number among three numbers.

a) Write a Perl script to print the multiplication tables from 1-10 using subroutines.

18. Write a Perl program to implement the following list of manipulating functions

a)Shift   b)Unshift   c)Push

19. a) Write a Perl script to substitute a word, with another word in a string.

b) Write a Perl script to validate IP address and email address.

20. Write a Perl script to print the file in reverse order using command line arguments

List of Experiments

1. Reflex Klystron Characteristics.

2. Gunn Diode Characteristics.

3. Attenuation measurement

4. Directional coupler Characteristics.

5. Scattering parameters of wave guide components

6. Frequency measurement.

7. Impedance measurement

8. VSWR measurement

9. Characterization of LED.

10. Characterization of Laser Diode.

11. Intensity modulation of Laser output through an optical fiber.

12. Measurement of Data rate for Digital Optical link.

13. Measurement of Numerical Aperture of fiber cable.

14. Measurement of losses for Optical link

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

LIST OF EXPERIMENTS

PROGRAMMING FOR PROBLEM SOLVING LAB

Practice sessions:
a. Write a simple program that prints the results of all the operators available in C (including pre/post increment, bitwise and/or/not, etc.). Read required operand values from standard input.
b. Write a simple program that converts one given data type to another using auto conversion and casting. Take the values form standard input.
Simple numeric problems:
a. Write a program for fiend the max and min from the three numbers.

b. Write the program for the simple, compound interest.

c. Write program that declares Class awarded for a given percentage of marks, where mark <40%= Failed, 40% to <60% = Second class, 60% to <70%=First class, >= 70% = Distinction. Read percentage from standard input.

d. Write a program that prints a multiplication table for a given number and the number of rows in the table. For example, for a number 5 and rows = 3, the output should be:

e. 5 x 1 = 5

f. 5 x 2 = 10

g. 5 x 3 = 15

h. Write a program that shows the binary equivalent of a given positive number between 0 to 255.

Expression Evaluation:

a. A building has 10 floors with a floor height of 3 meters each. A ball is dropped from the top of the building. Find the time taken by the ball to reach each floor. (Use the formula $s = ut+(1/2)at^2$ where u and a are the initial velocity in m/sec (= 0) and acceleration in m/sec^2 (= 9.8 m/s^2)).

b. Write a C program, which takes two integer operands and one operator from the user, performs the operation and then prints the result. (Consider the operators +,-,*, /, % and use Switch Statement)

c. Write a program that finds if a given number is a prime number

d. Write a C program to find the sum of individual digits of a positive integer and test given number is palindrome.

e. A Fibonacci sequence is defined as follows: the first and second terms in the sequence are 0 and 1. Subsequent terms are found by adding the preceding two terms in the sequence. Write a C program to generate the first n terms of the sequence.

f. Write a C program to generate all the prime numbers between 1 and n, where n is a value supplied by the user.

g. Write a C program to find the roots of a Quadratic equation.

h. Write a C program to calculate the following, where x is a fractional value.

i. $1-x/2 +x^2/4-x^3/6$

j. Write a C program to read in two numbers, x and n, and then compute the sum of this geometric progression: $1+x+x^2+x^3+\ldots\ldots+x^n$. For example: if n is 3 and x is 5, then the program computes 1+5+25+125.

Arrays and Pointers and Functions:

a. Write a C program to find the minimum, maximum and average in an array of integers.

b. Write a functions to compute mean, variance, Standard Deviation, sorting of n elements in single dimension array.

c. Write a C program that uses functions to perform the following:

d. Addition of Two Matrices

e. ii. Multiplication of Two Matrices

f. iii. Transpose of a matrix with memory dynamically allocated for the new matrix as row and column counts may not be same.

g. Write C programs that use both recursive and non-recursive functions

h. To find the factorial of a given integer.

i. ii. To find the GCD (greatest common divisor) of two given integers.

j. iii. To find x^n

k. Write a program for reading elements using pointer into array and display the values using array.

l. Write a program for display values reverse order from array using pointer.

m. Write a program through pointer variable to sum of n elements from array.

Files:

a. Write a C program to display the contents of a file to standard output device.

b. Write a C program which copies one file to another, replacing all lowercase characters with their uppercase equivalents.

c. Write a C program to count the number of times a character occurs in a text file. The file name and the character are supplied as command line arguments.

d. Write a C program that does the following:

   It should first create a binary file and store 10 integers, where the file name and 10 values are given in the command line. (hint: convert the strings using atoi function)

   Now the program asks for an index and a value from the user and the value at that index should be changed to the new value in the file. (hint: use fseek function)

The program should then read all 10 values and print them back.

e. Write a C program to merge two files into a third file (i.e., the contents of the firs t file followed by those of the second are put in the third file).

Strings:

a. Write a C program to convert a Roman numeral ranging from I to L to its decimal equivalent.

b. Write a C program that converts a number ranging from 1 to 50 to Roman equivalent

c. Write a C program that uses functions to perform the following operations:

d. To insert a sub-string in to a given main string from a given position.

e. ii. To delete n Characters from a given position in a given string.

f. Write a C program to determine if the given string is a palindrome or not (Spelled same in both directions with or without a meaning like madam, civic, noon, abcba, etc.)

g. Write a C program that displays the position of a character ch in the string S or – 1 if S doesn't contain ch.

h. Write a C program to count the lines, words and characters in a given text.

Miscellaneous:

a. Write a menu driven C program that allows a user to enter n numbers and then choose between finding the smallest, largest, sum, or average. The menu and all the choices are to be functions. Use a switch statement to determine what action to take. Display an error message if an invalid choice is entered.

b. Write a C program to construct a pyramid of numbers as follows:

1
1 2
1 2 3
*
* *
* * *
1
2 3
4 5 6
1
2 2
3 3 3
4 4 4 4
*
* *
* * *
* *
*

Sorting and Searching:

a. Write a C program that uses non recursive function to search for a Key value in a given

b. list of integers using linear search method.

c. Write a C program that uses non recursive function to search for a Key value in a given

d. sorted list of integers using binary search method.

e. Write a C program that implements the Bubble sort method to sort a given list of

f. integers in ascending order.

g. Write a C program that sorts the given array of integers using selection sort in descending order

h. Write a C program that sorts the given array of integers using insertion sort in ascending order

i. Write a C program that sorts a given array of names

ANALOG AND DIGITAL ELECTRONICS LAB

List of Experiments

1. Full Wave Rectifier with & without filters
2. Common Emitter Amplifier Characteristics
3. Common Base Amplifier Characteristics
4. Common Source amplifier Characteristics
5. Measurement of h-parameters of transistor in CB, CE, CC configurations
6. Input and Output characteristics of FET in CS configuration
7. Realization of Boolean Expressions using Gates
8. Design and realization logic gates using universal gates
9. generation of clock using NAND / NOR gates
10. Design a 4 – bit Adder / Subtractor
11. Design and realization a Synchronous and Asynchronous counter using flip-flops
12. Realization of logic gates using DTL, TTL, ECL, etc.

DATA STRUCTURES LAB

List of Experiments

1. Write a program that uses functions to perform the following operations on singly linked list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal
2. Write a program that uses functions to perform the following operations on doubly linked list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal
3. Write a program that uses functions to perform the following operations on circular linked list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal
4. Write a program that implement stack (its operations) using
i) Arrays ii) Pointers
5. Write a program that implement Queue (its operations) using
i) Arrays ii) Pointers
6. Write a program that implements the following sorting methods to sort a given list of integers in ascending order
i) Bubble sort ii) Selection sort iii) Insertion sort
7. Write a program that use both recursive and non recursive functions to perform the following searching operations for a Key value in a given list of integers:

i) Linear search ii) Binary search

8. Write a program to implement the tree traversal methods.

9. Write a program to implement the graph traversal methods.

PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its functions. Draw the block diagram of the CPU along with the configuration of each peripheral and submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to working condition. Lab

instructors should verify the work and follow it up with a Viva. Also students need to go through the video which shows the process of assembling a PC. A video would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal computer. Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should have windows installed. The system should be configured as dual boot with both windows and Linux. Lab instructors should verify the installation and follow it up with a Viva

Task 5: Hardware Troubleshooting: Students have to be given a PC which does not boot due to improper assembly or defective peripherals. They should identify the problem and fix it to get the computer back to working condition. The work done should be verified by the instructor and followed up with a Viva.

Task 6: Software Troubleshooting: Students have to be given a malfunctioning CPU due to system software problems. They should identify the problem and fix it to get the computer back to working condition. The work done should be verified by the instructor and followed up with a Viva.

Internet & World Wide Web

Task1: **Orientation & Connectivity Boot Camp:** Students should get connected to their Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate, to the instructor, how to access the websites and email. If there is no internet connectivity preparations need to be made by the instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured.

Task 3: **Search Engines & Netiquette:** Students should know what search engines

are and how to use the search engines. A few topics would be given to the students for which they need to search on Google. This should be demonstrated to the instructors by the student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the internet and would be asked to configure their computer to be safe on the internet. They need to first install an antivirus software, configure their personal firewall and windows update on their computer. Then they need to customize their browsers to block pop ups, block active x downloads to avoid viruses and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microsoft (MS) office 2007/ equivalent (FOSS) tool word: Importance of LaTeX and MS office 2007/ equivalent (FOSS) tool Word as word Processors, Details of the four tasks and features that would be covered in each, Using LaTeX and word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter in word.

Task 2: Using LaTeX and Word to create project certificate. Features to be covered:- Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in both LaTeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.

Task 4 : Creating a Newsletter : Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge in word.

Excel

Excel Orientation: The mentor needs to tell the importance of MS office 2007/ equivalent (FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered in each. Using Excel – Accessing, overview of toolbars, saving excel files, Using help and resources.

Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text

Task 2 : Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in excel – average, std.deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP

Task 3: Performance Analysis - Features to be covered:- Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting

LaTeX and MS/equivalent (FOSS) tool Power Point

Task 1: Students will be working on basic power point utilities and tools which help them create basic power point presentation. Topic covered during this week includes: - PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows in both LaTeX and PowerPoint. Students will be given model power point presentation which needs to be replicated (exactly how it's asked).

Task 2: Second week helps students in making their presentations interactive. Topic covered during this week includes: Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.

Task 3: Concentrating on the in and out of Microsoft power point and presentations in LaTeX. Helps them learn best practices in designing and preparing power point presentation. Topic covered during this week includes: - Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden slides.

C++ PROGRAMMING LAB

List of Experiments

1. Write a C++ Program to display Names, Roll No., and grades of 3 students who have appeared in the examination. Declare the class of name, Roll No. and grade. Create an array of class objects. Read and display the contents of the array.

2. Write a C++ program to declare Struct. Initialize and display contents of member variables.

3. Write a C++ program to declare a class. Declare pointer to class. Initialize and display the contents of the class member.

4. Given that an EMPLOYEE class contains following members: data members: Employee number, Employee name, Basic, DA, IT, Net Salary and print data members.

5. Write a C++ program to read the data of N employee and compute Net salary of each employee (DA=52% of Basic and Income Tax (IT) =30% of the gross salary).

6. Write a C++ to illustrate the concepts of console I/O operations.

7. Write a C++ program to use scope resolution operator. Display the various values of the same variables declared at different scope levels.

8. Write a C++ program to allocate memory using new operator.

9. Write a C++ program to create multilevel inheritance. (Hint: Classes A1, A2, A3)

10. Write a C++ program to create an array of pointers. Invoke functions using

array objects.

11. Write a C++ program to use pointer for both base and derived classes and call the member function. Use Virtual keyword.

OPERATING SYSTEMS LAB

List of Experiments:

1. Write C programs to simulate the following CPU Scheduling algorithms
a) FCFS b) SJF c) Round Robin d) priority
2. Write programs using the I/O system calls of UNIX/LINUX operating system (open, read, write, close, fcntl, seek, stat, opendir, readdir)
3. Write a C program to simulate Bankers Algorithm for Deadlock Avoidance and Prevention.
4. Write a C program to implement the Producer – Consumer problem using semaphores using UNIX/LINUX system calls.
5. Write C programs to illustrate the following IPC mechanisms
a) Pipes b) FIFOs c) Message Queues d) Shared Memory
6. Write C programs to simulate the following memory management techniques
a) Paging b) Segmentation

DATABASE MANAGEMENT SYSTEMS LAB

List of Experiments:

1. Concept design with E-R Model

2. Relational Model

3. Normalization

4. Practicing DDL commands

5. Practicing DML commands

6. Querying (using ANY, ALL, IN, Exists, NOT EXISTS, UNION, INTERSECT, Constraints etc.)

7. Queries using Aggregate functions, GROUP BY, HAVING and Creation and dropping of Views.

8. Triggers (Creation of insert trigger, delete trigger, update trigger)

9. Procedures

10. Usage of Cursors

JAVA PROGRAMMING LAB

List of Experiments:

1. Use Eclipse or Net bean platform and acquaint with the various menus. Create a test project, add a test class, and run it. See how you can use auto suggestions, auto fill. Try code formatter and code refactoring like renaming variables, methods, and classes. Try debug step by step with a small program of about 10 to 15 lines which contains at least one if else condition and a for loop.

2. Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +, -,*, % operations. Add a text field to display the result. Handle any possible exceptions like divided by zero.

3. a) Develop an applet in Java that displays a simple message.

b) Develop an applet in Java that receives an integer in one text field, and computes its factorial Value and returns it in another text field, when the button named "Compute" is clicked.

4. Write a Java program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num 2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw a Number Format Exception. If Num2 were Zero, the program would throw an Arithmetic Exception. Display the exception in a message dialog box.

5. Write a Java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.

6. Write a Java program for the following:

Create a doubly linked list of elements.

Delete a given element from the above list.

7. Write a Java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green with radio buttons. On selecting a button, an appropriate message with "Stop" or "Ready" or "Go" should appear above the buttons in selected color. Initially, there is no message shown.

8. Write a Java program to create an abstract class named Shape that contains two integers and an empty method named print Area (). Provide three classes named Rectangle, Triangle, and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area () that prints the area of the given shape.

9. Suppose that a table named Table.txt is stored in a text file. The first line in the file is the header, and the remaining lines correspond to rows in the table. The elements are separated by commas. Write a java program to display the table using Labels in Grid Layout.

10. Write a Java program that handles all mouse events and shows the event name at the center of the window when a mouse event is fired (Use Adapter classes).

11. Write a Java program that loads names and phone numbers from a text file where the data is organized as one line per record and each field in a record are separated by a tab (\t). It takes a name or phone number as input and prints the corresponding other value from the hash table (hint:use hash tables).

12. Write a Java program that correctly implements the producer – consumer problem using the concept of interthread communication.

13. Write a Java program to list all the files in a directory including the files present in all its subdirectories.

14. Write a Java program that implements Quick sort algorithm for sorting a list of names in ascending order

15. Write a Java program that implements Bubble sort algorithm for sorting in descending order and also shows the number of interchanges occurred for the given set of integers.

SOFTWARE ENGINEERING LAB

List of Experiments

Do the following 8 exercises for any two projects given in the list of sample projects or any other
projects:
1. Development of problem statement.
2. Preparation of Software Requirement Specification Document, Design Documents and Testing Phase related documents.
3. Preparation of Software Configuration Management and Risk Management related documents.
4. Study and usage of any Design phase CASE tool
5. Performing the Design by using any Design phase CASE tools.
6. Develop test cases for unit testing and integration testing
7. Develop test cases for various white box and black box testing techniques.
Sample Projects:
1. Passport automation System
2. Book Bank

3. Online Exam Registration
4. Stock Maintenance System
5. Online course reservation system
6. E-ticketing
7. Software Personnel Management System
8. Credit Card Processing
9. E-book management System.
10. Recruitment system

COMPUTER NETWORKS & WEB TECHNOLOGIES LAB

List of Experiments

1. Implement the data link layer framing methods such as character, character-stuffing and bit stuffing.
2. Write a program to compute CRC code for the polynomials CRC-12, CRC-16 and CRC CCIP
3. Develop a simple data link layer that performs the flow control using the sliding window protocol, and loss recovery using the Go-Back-N mechanism.
4. Implement Dijsktra's algorithm to compute the shortest path through a network
5. Take an example subnet of hosts and obtain a broadcast tree for the subnet.

6. Implement distance vector routing algorithm for obtaining routing tables at each node.
7. Implement data encryption and data decryption
8. Write a program for congestion control using Leaky bucket algorithm.
9. Write a program for frame sorting technique used in buffers.
10. Wireshark
    i. Packet Capture Using Wire shark
    ii. Starting Wire shark
    iii. Viewing Captured Traffic
    iv. Analysis and Statistics & Filters.
11. How to run Nmap scan
12. Operating System Detection using Nmap
13. Do the following using NS2 Simulator
    i. NS2 Simulator-Introduction
    ii. Simulate to Find the Number of Packets Dropped
    iii. Simulate to Find the Number of Packets Dropped by TCP/UDP
    iv. Simulate to Find the Number of Packets Dropped due to Congestion
    v. Simulate to Compare Data Rate& Throughput.
    vi. Simulate to Plot Congestion for Different Source/Destination

vii. Simulate to Determine the Performance with respect to Transmission of Packets

Web Technologies Experiments

1. Write a PHP script to print prime numbers between 1-50.

2. PHP script to

a. Find the length of a string.

b. Count no of words in a string.

c. Reverse a string.

d. Search for a specific string.

3. Write a PHP script to merge two arrays and sort them as numbers, in descending order.

4. Write a PHP script that reads data from one file and write into another file.

5. Develop static pages (using Only HTML) of an online book store. The pages should resemble:

www.amazon.com. The website should consist the following pages.

  a) Home page

  b) Registration and user Login

  c) User Profile Page

  d) Books catalog

  e) Shopping Cart

  f) Payment By credit card

  g) Order Conformation

6. Validate the Registration, user login, user profile and payment by credit card pages using JavaScript.

7. Create and save an XML document on the server, which contains 10 users information. Write a program, which takes User Id as an input and returns the user details by taking the user information from the XML document.

8. Install TOMCAT web server. Convert the static web pages of assignments 2 into dynamic web pages using servlets and cookies. Hint: Users information (user id, password, credit card number) would be stored in web.xml. Each user should have a separate Shopping Cart.

9. Redo the previous task using JSP by converting the static web pages of assignments 2 into dynamic web pages. Create a database with user information and books information. The books catalogue should be dynamically loaded from the database. Follow the MVC architecture while doing the website.

ADVANCED COMMUNICATION SKILLS LAB

1. INTRODUCTION:

The introduction of the Advanced Communication Skills Lab is considered essential at 3rd year level. At this stage, the students need to prepare themselves for their careers which may require them to listen to, read, speak and write in English both for their professional and interpersonal communication in the globalized context.

The proposed course should be a laboratory course to enable students to use 'good' English and perform the following:
☐ Gathering ideas and information to organize ideas relevantly and coherently.
⊔ Engaging in debates.
☐ Participating in group discussions.
☐ Facing interviews.
☐ Writing project/research reports/technical reports.
☐ Making oral presentations.
☐ Writing formal letters.
☐ Transferring information from non-verbal to verbal texts and vice-versa.
☐ Taking part in social and professional communication.

2. OBJECTIVES:

This Lab focuses on using multi-media instruction for language development to meet the following targets:

☐ To improve the students' fluency in English, through a well-developed vocabulary and enable them to listen to English spoken at normal conversational speed by educated English speakers and respond appropriately in different socio-cultural and professional contexts.

⊔ Further, they would be required to communicate their ideas relevantly and coherently in writing.

☐ To prepare all the students for their placements.

3. SYLLABUS:

The following course content to conduct the activities is prescribed for the Advanced English Communication Skills (AECS) Lab:

1. **Activities on Fundamentals of Inter-personal Communication and Building Vocabulary** -

Starting a conversation – responding appropriately and relevantly – using the right body language – Role Play in different situations & Discourse Skills- using visuals - Synonyms and antonyms, word roots, one-word substitutes, prefixes and suffixes, study of word origin, business vocabulary, analogy, idioms and phrases, collocations & usage of vocabulary.

1. **Activities on Reading Comprehension** –General Vs Local comprehension, reading for facts, guessing meanings from context, scanning, skimming, inferring meaning, critical reading& effective googling.

3. **Activities on Writing Skills** – Structure and presentation of different types of writing – *letter writing/Resume writing/ e-correspondence/Technical report writing/* – planning for writing – improving one's writing.

4. **Activities on Presentation Skills** – Oral presentations (individual and group) through JAM sessions/seminars/**PPTs** and written presentations through posters/projects/reports/ emails/ assignments etc.

5. **Activities on Group Discussion and Interview Skills** – Dynamics of group discussion,

intervention, summarizing, modulation of voice, body language, relevance, fluency and organization of ideas and rubrics for evaluation- Concept and process, pre-interview planning, opening strategies, answering strategies, interview through tele-conference & video-conference and Mock Interviews.

4. MINIMUM REQUIREMENT:

The Advanced English Communication Skills (AECS) Laboratory shall have the following infrastructural facilities to accommodate at least 35 students in the lab:

- Spacious room with appropriate acoustics.
- Round Tables with movable chairs
- Audio-visual aids
- LCD Projector
- Public Address system
- P – IV Processor, Hard Disk – 80 GB, RAM–512 MB Minimum, Speed – 2.8 GHZ
- T. V, a digital stereo & Camcorder
- Headphones of High quality

5. SUGGESTED SOFTWARE:

The software consisting of the prescribed topics elaborated above should be procured and used.

- Oxford Advanced Learner's Compass, 7th Edition
- DELTA's key to the Next Generation TOEFL Test: Advanced Skill Practice.
- Lingua TOEFL CBT Insider, by Dream tech

MACHINE LEARNING LAB

List of Experiments

1. The probability that it is Friday and that a student is absent is 3 %. Since there are 5 school days in a week, the probability that it is Friday is 20 %. What is theprobability that a student is absent given that today is Friday? Apply Baye's rule in python to get the result. (Ans: 15%)
2. Extract the data from database using python
3. Implement k-nearest neighbours classification using python
4. Given the following data, which specify classifications for nine combinations of VAR1 and VAR2 predict a classification for a case where VAR1=0.906 and VAR2=0.606, using the result of kmeans clustering with 3 means (i.e., 3 centroids)
VAR1 VAR2 CLASS
1.713 1.586 0
0.180 1.786 1
0.353 1.240 1
0.940 1.566 0
1.486 0.759 1

1.266 1.106 0
1.540 0.419 1
0.459 1.799 1
0.773 0.186 1

5. The following training examples map descriptions of individuals onto high, medium and low credit-worthiness.

medium skiing design single twenties no -> highRisk

high golf trading married forties yes -> lowRisk

low speedway transport married thirties yes -> medRisk

medium football banking single thirties yes -> lowRisk

high flying media married fifties yes -> highRisk

low football security single twenties no -> medRisk

medium golf media single thirties yes -> medRisk

medium golf transport married forties yes -> lowRisk

high skiing banking single thirties yes -> highRisk

low golf unemployed married forties yes -> highRisk Input attributes are (from left to right) income, recreation, job, status, age-group, home-owner. Find the unconditional probability of `golf' and the conditional probability of `single' given `medRisk' in the dataset?

6. Implement linear regression using python.
7. Implement Naïve Bayes theorem to classify the English text
8. Implement an algorithm to demonstrate the significance of genetic algorithm
9. Implement the finite words classification system using Back-propagation algorithm

COMPILER DESIGN LAB

List of Experiments

Compiler Design Experiments
1. Write a LEX Program to scan reserved word & Identifiers of C Language
2. Implement Predictive Parsing algorithm
3. Write a C program to generate three address code.
4. Implement SLR(1) Parsing algorithm
5. Design LALR bottom up parser for the given language
<program> ::= <block>
<block> ::= { <variabledefinition> <slist> }
| { <slist> }
<variabledefinition> ::= int <vardeflist> ;
<vardeflist> ::= <vardec> | <vardec> , <vardeflist>
<vardec> ::= <identifier> | <identifier> [<constant>]
<slist> ::= <statement> | <statement> ; <slist>

<statement> ::= <assignment> | <ifstatement> | <whilestatement>
| <block> | <printstatement> | <empty>
<assignment> ::= <identifier> = <expression>
| <identifier> [<expression>] = <expression>
<ifstatement> ::= if <bexpression> then <slist> else <slist> endif
| if <bexpression> then <slist> endif
<whilestatement> ::= while <bexpression> do <slist> enddo
<printstatement> ::= print (<expression>)
<expression> ::= <expression> <addingop> <term> | <term> | <addingop> <term>
<bexpression> ::= <expression> <relop> <expression>
<relop> ::= < | <= | == | >= | > | !=
<addingop> ::= + | -
<term> ::= <term> <multop> <factor> | <factor>
<multop> ::= * | /
<factor> ::= <constant> | <identifier> | <identifier> [<expression>]
| (<expression>)
<constant> ::= <digit> | <digit> <constant>
<identifier> ::= <identifier> <letterordigit> | <letter>
<letterordigit> ::= <letter> | <digit>
<letter>::=a|b|c|d|e|f|g|h|i|j|k|l|m|n|o|p|q|r|s|t|u|v|w|x|y|z
<digit> ::= 0|1|2|3|4|5|6|7|8|9
<empty> has the obvious meaning
Comments (zero or more characters enclosed between the standard C/Java-style comment brackets
/*...*/) can be inserted. The language has rudimentary support for 1-dimensional arrays. The declaration int a[3] declares an array of three elements, referenced as a[0], a[1] and a[2]. Note also that you should worry about the scoping of names.
A simple program written in this language is:
{ int a[3],t1,t2;
t1=2;
a[0]=1; a[1]=2; a[t1]=3;
t2=-(a[2]+t1*6)/(a[2]-t1);
if t2>5 then
print(t2);
else {
int   t3;
t3=99;
t2=-25;
print(-t1+t2*t3); /* this is a comment
on 2 lines */
}
endif

}

List of Experiments:

1. Recording in context sensitive mode and analog mode
2. GUI checkpoint for single property
3. GUI checkpoint for single object/window
4. GUI checkpoint for multiple objects
5. a) Bitmap checkpoint for object/window
a) Bitmap checkpoint for screen area
6. Database checkpoint for Default check
7. Database checkpoint for custom check
8. Database checkpoint for runtime record check
9. a) Data driven test for dynamic test data submission
b) Data driven test through flat files
c) Data driven test through front grids
d) Data driven test through excel test
10. a) Batch testing without parameter passing
b) Batch testing with parameter passing
11. Data driven batch
12. Silent mode test execution without any interruption
13. Test case for calculator in windows application

CRYPTOGRAPHY & NETWORK SECURITY LAB

List of Experiments:

1. Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should XOR each character in this string with 0 and displays the result.
2. Write a C program that contains a string (char pointer) with a value 'Hello world'. The program should AND or and XOR each character in this string with 127 and display the result.
3. Write a Java program to perform encryption and decryption using the following algorithms a. Ceaser cipher b. Substitution cipher c. Hill Cipher
4. Write a C/JAVA program to implement the DES algorithm logic.
5. Write a C/JAVA program to implement the Blowfish algorithm logic.
6. Write a C/JAVA program to implement the Rijndael algorithm logic.
7. Write the RC4 logic in Java Using Java cryptography; encrypt the text "Hello world" using Blowfish. Create your own key using Java key tool.
8. Write a Java program to implement RSA algorithm.

9. Implement the Diffie-Hellman Key Exchange mechanism using HTML and JavaScript.
10. Calculate the message digest of a text using the SHA-1 algorithm in JAVA.
11. Calculate the message digest of a text using the MD5 algorithm in JAVA.

DEPARTMENT OF CSE (Artificial Intelligence &Machine Learning)

LIST OF EXPERIMENTS

PROGRAMMING FOR PROBLEM SOLVING LAB

Practice sessions:
a. Write a simple program that prints the results of all the operators available in C (including pre/post increment, bitwise and/or/not, etc.). Read required operand valu e from standard input.
b. Write a simple program that converts one given data type to another using aut conversion and casting. Take the values form standard input.

Simple numeric problems:
a. Write a program for fiend the max and min from the three numbers.
b. Write the program for the simple, compound interest.
c. Write program that declares Class awarded for a given percentage of marks, wher mark <40%= Failed, 40% to <60% = Second class, 60% to <70%=First class, >= 70% Distinction. Read percentage from standard input.
d. Write a program that prints a multiplication table for a given number and the numb e of rows in the table. For example, for a number 5 and rows = 3, the output should be:
e. 5 x 1 = 5
f. 5 x 2 = 10
g. 5 x 3 = 15
h. Write a program that shows the binary equivalent of a given positive number betwee 0 to 255.

Expression Evaluation:
a. A building has 10 floors with a floor height of 3 meters each. A ball is dropped from th top of the building. Find the time taken by the ball to reach each floor. (Use the formula = ut+(1/2)at^2 where u and a are the initial velocity in m/sec (= 0) and acceleration i m/sec^2 (= 9.8 m/s^2)).
b. Write a C program, which takes two integer operands and one operator from the use performs the operation and then prints the result. (Consider the operators +,-,*, /, % an use Switch Statement)
c. Write a program that finds if a given number is a prime number
d. Write a C program to find the sum of individual digits of a positive integer and te given number is palindrome.
e. A Fibonacci sequence is defined as follows: the first and second terms in th sequence are 0 and 1. Subsequent terms are found by adding the preceding two ter m

in the sequence. Write a C program to generate the first n terms of the sequence.

f. Write a C program to generate all the prime numbers between 1 and n, where n is ˍ value supplied by the user.

g. Write a C program to find the roots of a Quadratic equation.

h. Write a C program to calculate the following, where x is a fractional value.

i. 1-x/2 +x^2/4-x^3/6

j. Write a C program to read in two numbers, x and n, and then compute the sum of th geometric progression: 1+x+x^2+x^3+………….+x^n. For example: if n is 3 and x is 5, the the program computes 1+5+25+125.

Arrays and Pointers and Functions:

a. Write a C program to find the minimum, maximum and average in an array ⸱ integers.

b. Write a functions to compute mean, variance, Standard Deviation, sorting of ˍˍˍ elements in single dimension array.

c. Write a C program that uses functions to perform the following:

d. Addition of Two Matrices

e. ii. Multiplication of Two Matrices

f. iii. Transpose of a matrix with memory dynamically allocated for the new matrix as ro ˅ and column counts may not be same.

g. Write C programs that use both recursive and non-recursive functions

h. To find the factorial of a given integer.

i. ii. To find the GCD (greatest common divisor) of two given integers.

j. iii. To find x^n

k. Write a program for reading elements using pointer into array and display the valu ∈ˍ using array.

l. Write a program for display values reverse order from array using pointer.

m. Write a program through pointer variable to sum of n elements from array.

Files:

a. Write a C program to display the contents of a file to standard output device.

b. Write a C program which copies one file to another, replacing all lowercas characters with their uppercase equivalents.

c. Write a C program to count the number of times a character occurs in a text file. Th file name and the character are supplied as command line arguments.

d. Write a C program that does the following:

   It should first create a binary file and store 10 integers, where the file name and 1 ˍˍˍ values are given in the command line. (hint: convert the strings using atoi function)

   Now the program asks for an index and a value from the user and the value at th ⸱ˍ index should be changed to the new value in the file. (hint: use fseek function)

The program should then read all 10 values and print them back.

e. Write a C program to merge two files into a third file (i.e., the contents of the firs t fil followed by those of the second are put in the third file).

Strings:

a. Write a C program to convert a Roman numeral ranging from I to L to its decim
equivalent.

b. Write a C program that converts a number ranging from 1 to 50 to Roman equivalent

c. Write a C program that uses functions to perform the following operations:

d. To insert a sub-string in to a given main string from a given position.

e. ii. To delete n Characters from a given position in a given string.

f. Write a C program to determine if the given string is a palindrome or not (Spelled sam
in both directions with or without a meaning like madam, civic, noon, abcba, etc.)

g. Write a C program that displays the position of a character ch in the string S or – 1 if
doesn't contain ch.

h. Write a C program to count the lines, words and characters in a given text.

Miscellaneous:

a. Write a menu driven C program that allows a user to enter n numbers and the
choose between finding the smallest, largest, sum, or average. The menu and all th
choices are to be functions. Use a switch statement to determine what action to tak e
Display an error message if an invalid choice is entered.

b. Write a C program to construct a pyramid of numbers as follows:

1

1 2

1 2 3

*

* *

* * *

1

2 3

4 5 6

1

2 2

3 3 3

4 4 4 4

*

* *

* * *

* *

*

Sorting and Searching:

a. Write a C program that uses non recursive function to search for a Key value in
given

b. list of integers using linear search method.

c. Write a C program that uses non recursive function to search for a Key value in a give

d. sorted list of integers using binary search method.

e. Write a C program that implements the Bubble sort method to sort a given list of

f. integers in ascending order.

g. Write a C program that sorts the given array of integers using selection sort i descending order

h. Write a C program that sorts the given array of integers using insertion sort i ascending order

i. Write a C program that sorts a given array of names

Python Programming Lab

List of Experiments

Note: The lab experiments will be like the following experiment examples

Week -1:

1.i) Use a web browser to go to the Python website http://python.org. This page contai r information about Python and links to Python-related pages, and it gives you the ability t search the Python documentation.

ii) Start the Python interpreter and type help() to start the online help utility.

2.Start a Python interpreter and use it as a Calculator.

3.

i) write a program to calculate compound interest when principal, rate and number of periods aregiven.

ii)   Given coordinates (x1, y1), (x2, y2) find the distance between two points

4. Read name, address, email and phone number of a person through keyboard and print thedetails.

Week - 2:

1.Print the below triangle using for loop.5

4 4

3 3 3

2 2 2 2

1 1 1 1 1

2.Write a program to check whether the given input is digit or lowercase character o uppercase character or a special character (use 'if-else-if' ladder)

3.Python Program to Print the Fibonacci sequence using while loop

4.Python program to print all prime numbers in a given interval (use break)

Week - 3:

1.i) Write a program to convert a list and tuple into arrays.

ii) Write a program to find common values between two arrays.

2. Write a function called gcd that takes parameters a and b and returns their greatest commondivisor.

3. Write a function called palindrome that takes a string argument and returns True if it is palindromeand False otherwise. Remember that you can use the built-in function len to checkthe length of a string.

Week - 4:

1. Write a function called is_sorted that takes a list as a parameter and returns True if the list issorted in ascending order and False otherwise.

2. Write a function called has_duplicates that takes a list and returns True if there is any elementthatappears more than once. It should not modify the original list.

i). Write a function called remove_duplicates that takes a list and returns a new list with only theunique elements from the original. Hint: they don't have to be in the same order.

ii). The wordlist I provided, words.txt, doesn't contain single letter words. So you might want toadd "I", "a", and the empty string.

iii). Write a python code to read dictionary values from the user. Construct a function to invertits content. i.e., keys should be values and values should be keys.

3.i) Add a comma between the characters. If the given word is 'Apple', it should become 'A,p,p,l,e'

ii) Remove the given word in all the places in a string?

iii)   Write a function that takes a sentence as an input parameter and replace the first letterof everyword with the corresponding upper case letter and the rest of the letters in the word by corresponding letters in lower case without using a built-in function

4. Writes a recursive function that generates all binary strings of n-bit length

Week - 5:

1.i) Write a python program that defines a matrix and prints

ii) Write a python program to perform addition of two square matrices

iii)   Write a python program to perform multiplication of two square matrices

2. How do you make a module? Give an example of construction of a module using differentgeometrical shapes and operations on them as its functions.

3. Use the structure of exception handling all general purpose exceptions.

Week-6:

1. a. Write a function called draw_rectangle that takes a Canvas and a Rectangle as arguments and draws a representation of the Rectangle on the Canvas.

b. Add an attribute named color to your Rectangle objects and modify draw_rectangle so that ituses the color attribute as the fill color.

c. Write a function called draw_point that takes a Canvas and a Point as arguments an draws are presentation of the Point on the Canvas.

d. Define a new class called Circle with appropriate attributes and instantiate a fewCircl objects.Write a function called draw_circle that draws circles on the canvas.

2. Write a Python program to demonstrate the usage of Method Resolution Order (MRO) in multiple levels of Inheritances.

3. Write a python code to read a phone number and email-id from the user and validate it forcorrectness.

Week- 7

1. Write a Python code to merge two given file contents into a third file.

2. Write a Python code to open a given file and construct a function to check for given wordspresent init and display on found.

3. Write a Python code to Read text from a text file, find the word with most number of occurrences

4. Write a function that reads a file *file1* and displays the number of words, number of vowels, blankspaces, lower case letters and uppercase letters.

Week - 8:

1. Import numpy, Plotpy and Scipy and explore their functionalities.

2. a) Install NumPy package with pip and explore it.

3. Write a program to implement Digital Logic Gates – AND, OR, NOT, EX-OR

4. Write a program to implement Half Adder, Full Adder, and Parallel Adder

5. Write a GUI program to create a window wizard having two text labels, two text fields

and twobuttons as Submit and Reset.

IT WORKSHOP Lab

List of Experiments
PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its function. Draw the block diagram of the CPU along with the configuration of each peripheral an submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to workin condition. Lab instructors should verify the work and follow it up with a Viva. Also studen need to go through the video which shows the process of assembling a PC. A vide would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal compute Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should hav windows installed. The system should be configured as dual boot with both Windows an Linux. Lab instructors should verify the installation and follow it up with a Viva

Internet & World Wide Web

Task1: **Orientation & Connectivity Boot Camp:** Students should get connected to th e Local Area Network and access the Internet. In the process they configure the TCP/I setting. Finally students should demonstrate, to the instructor, how to access the websit e and email. If there is no internet connectivity preparations need to be made by th instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with th LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins lik Macromedia Flash and JRE for applets should be configured.

Task 3: **Search Engines & Netiquette:** Students should know what search engines are an how to use the search engines. A few topics would be given to the students for whic they need to search on Google. This should be demonstrated to the instructors by th student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the intern and would be asked to configure their computer to be safe on the internet. They nee

to customize their browsers to block pop ups, block active x downloads to avoid virus e
and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microso
(MS) office or equivalent (FOSS) tool word: Importance of LaTeX and MS office
equivalent (FOSS) tool Word as word Processors, Details of the four tasks and features th
would be covered in each, Using LaTeX and word – Accessing, overview of toolba
saving files, Using help and resources, rulers, format painter in word.

Task 2: Using LaTeX and Word to create a project certificate. Features to be covered
Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Charact
Spacing, Borders and Colors,Inserting Header and Footer, Using Date and Time option i
both LaTeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Insertin
table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnot
Hyperlink, Symbols, Spell Check, Track Changes.

Task 4: Creating a Newsletter: Features to be covered:- Table of Content, Newspap
columns, Images from files and clipart, Drawing toolbar and Word Art, Formattin
Images, Textboxes, Paragraphs and Mail Merge in word.

Excel

Excel Orientation: The mentor needs to tell the importance of MS office or equivale
(FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and featue
that would be covered in each. Using Excel – Accessing, overview of toolbars, savin
excel files, Using help and resources.

Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cell
Summation, auto fill,Formatting Text

Task 2 : Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in exc
– average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linkin
Count function, LOOKUP/VLOOKUP

Task 3: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators
Conditionalformatting.

Powerpoint

Task 1: Students will be working on basic power point utilities and tools which help them create basicpowerpoint presentations. PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text,Bullets and Numbering, Auto Shapes, Lines and Arrows in PowerPoint.

Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.

Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden slides.

<div align="center">

DATA STRUCTURES LAB

</div>

List of Experiments

1. Write a program that uses functions to perform the following operations on singly linked list.:

  i) Creation ii) Insertion iii) Deletion iv) Traversal

2. Write a program that uses functions to perform the following operations on dou b linked list.:

  i) Creation ii) Insertion iii) Deletion iv) Traversal

3. Write a program that uses functions to perform the following operations on circul c linked list.:

  i) Creation ii) Insertion iii) Deletion iv) Traversal

4. Write a program that implement stack (its operations) using

  i) Arrays ii) Pointers

5. Write a program that implement Queue (its operations) using

  i) Arrays ii) Pointers

6. Write a program that implements the following sorting methods to sort a given list of integers in ascending order

  i) Bubble sort ii) Selection sort iii) Insertion sort

7. Write a program that use both recursive and non recursive functions to perform the following searching operations for a Key value in a given list of integers:

i) Linear search ii) Binary search

8. Write a program to implement the tree traversal methods.
9. Write a program to implement the graph traversal methods

PYTHON PROGRAMMING LAB

List of Experiments:

1. Write a program to demonstrate different number data types in Python.

2. Write a program to perform different Arithmetic Operations on numbers in Python.

3. Write a program to create, concatenate and print a string and accessing sub-strin from a given string.

4. Write a python script to print the current date in the following format "Sun May 2 02:26:23 IST 2017"

5. Write a program to create, append, and remove lists in python.

6. Write a program to demonstrate working with tuples in python.

7. Write a program to demonstrate working with dictionaries in python.

8. Write a python program to find largest of three numbers.

9. Write a Python program to convert temperatures to and from Celsius, Fahrenheit. Formula : c/5 = f-32/9]

10. Write a Python program to construct the following pattern, using a nested for loop

*

* *

* * *

* * * *

* * * * *

* * * *

* * *

* *

*

11. Write a Python script that prints prime numbers less than 20.

12. Write a python program to find factorial of a number using Recursion.

13. Write a program that accepts the lengths of three sides of a triangle as inputs. Th program output should indicate whether or not the triangle is a right triangle (Recall fro the Pythagorean Theorem that in a right triangle, the square of one side equals the su of the squares of the other two sides).

14. Write a python program to define a module to find Fibonacci Numbers and impo the module to another program.

15. Write a python program to define a module and import a specific function in th module to another program.

16. Write a script named copyfile.py. This script should prompt the user for the names two text files. The contents of the first file should be input and written to the second file.

17. Write a program that inputs a text file. The program should print all of the uniqu words in the file in alphabetical order.

18. Write a Python class to convert an integer to a roman numeral.\

19. Write a Python class to implement pow(x, n)

20. Write a Python class to reverse a string word by word.

OPERATING SYSTEMS LAB

List of Experiments:

1. Write C programs to simulate the following CPU Scheduling algorithms
a) FCFS b) SJF c) Round Robin d) priority
2. Write programs using the I/O system calls of UNIX/LINUX operating system
(open, read, write, close, fcntl, seek, stat, opendir, readdir)
3. Write a C program to simulate Bankers Algorithm for Deadlock Avoidance an
Prevention.
4. Write a C program to implement the Producer – Consumer problem using semaphor e
using
UNIX/LINUX system calls.
5. Write C programs to illustrate the following IPC mechanisms
a) Pipes b) FIFOs c) Message Queues d) Shared Memory
6. Write C programs to simulate the following memory management techniques

a) Paging b) Segmentation

List of Experiments:

1. Concept design with E-R Model

2. Relational Model

3. Normalization

4. Practicing DDL commands

5. Practicing DML commands

6. Querying (using ANY, ALL, IN, Exists, NOT EXISTS, UNION, INTERSECT, Constraints etc.)

7. Queries using Aggregate functions, GROUP BY, HAVING and Creation and dropping of Views.

8. Triggers (Creation of insert trigger, delete trigger, update trigger)

9. Procedures

10. Usage of Cursors

List of Experiments:

1. Use Eclipse or Net bean platform and acquaint with the various menus. Create a te project, add a test class, and run it. See how you can use auto suggestions, auto fill. T code formatter and code refactoring like renaming variables, methods, and classes. T debug step by step with a small program of about 10 to 15 lines which contains at lea one if else condition and a for loop.

2. Write a Java program that works as a simple calculator. Use a grid layout to arrang buttons for the digits and for the +, -,*, % operations. Add a text field to display the resul Handle any possible exceptions like divided by zero.

3. a) Develop an applet in Java that displays a simple message.

b) Develop an applet in Java that receives an integer in one text field, and computes i factorial Value and returns it in another text field, when the button named "Compute" clicked.

4. Write a Java program that creates a user interface to perform integer divisions. The user enters two numbers in the text fields, Num1 and Num2. The division of Num1 and Num 2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num were not an integer, the program would throw a Number Format Exception. If Num were Zero, the program would throw an Arithmetic Exception. Display the exception in message dialog box.

5. Write a Java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.

6. Write a Java program for the following:

Create a doubly linked list of elements.

Delete a given element from the above list.

7. Write a Java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green with radio buttons. On selecting a button, an appropriate message with "Stop" or "Ready" or "Go" should appear above the button in selected color. Initially, there is no message shown.

8. Write a Java program to create an abstract class named Shape that contains two integers and an empty method named print Area (). Provide three classes named Rectangle, Triangle, and Circle such that each one of the classes extends the class Shape. Each one of the classes contains only the method print Area () that prints the area of the given shape.

9. Suppose that a table named Table.txt is stored in a text file. The first line in the file is the header, and the remaining lines correspond to rows in the table. The elements are separated by commas. Write a java program to display the table using Labels in Grid Layout.

10. Write a Java program that handles all mouse events and shows the event name at the center of the window when a mouse event is fired (Use Adapter classes).

11. Write a Java program that loads names and phone numbers from a text file where the data is organized as one line per record and each field in a record are separated by a tab (\t). It takes a name or phone number as input and prints the corresponding other value from the hash table (hint: use hash tables).

12. Write a Java program that correctly implements the producer – consumer problem using the concept of interthread communication.

13. Write a Java program to list all the files in a directory including the files present in all i subdirectories.

14. Write a Java program that implements Quick sort algorithm for sorting a list of nam ϵ in ascending order

15. Write a Java program that implements Bubble sort algorithm for sorting in descendin order and also shows the number of interchanges occurred for the given set of integers.

Computer Network Lab

List of Experiments

1. Implement the data link layer framing methods such as character, character-stuffin g and bitstuffing.

2. Write a program to compute CRC code for the polynomials CRC-12, CRC-16 and CR (CCIP

3. Develop a simple data link layer that performs the flow control using the sliding window protocol,and loss recovery using the Go-Back-N mechanism.

4. Implement Dijsktra's algorithm to compute the shortest path through a network

5. Take an example subnet of hosts and obtain a broadcast tree for the subnet.

6. Implement distance vector routing algorithm for obtaining routing tables at each node.

7. Implement data encryption and data decryption

8. Write a program for congestion control using Leaky bucket algorithm.

9. Write a program for frame sorting techniques used in buffers.

10. Wireshark

i. Packet Capture Using Wire shark

ii. Starting Wire shark

iii. Viewing Captured Traffic

iv. Analysis and Statistics & Filters.

11. How to run Nmap scan

12. Operating System Detection using Nmap

13. Do the following using NS2 Simulator

i. NS2 Simulator-Introduction

ii. Simulate to Find the Number of Packets Dropped

iii. Simulate to Find the Number of Packets Dropped by TCP/UDP

iv. Simulate to Find the Number of Packets Dropped due to Congestion

v. Simulate to Compare Data Rate& Throughput.

vi. Simulate to Plot Congestion for Different Source/Destination

vii. Simulate to Determine the Performance with respect to Transmission of Packets

Machine Learning Lab

List of Experiments

1. The probability that it is Friday and that a student is absent is 3 %. Since there are school days in a week, the probability that it is Friday is 20 %. What is theprobability that student is absent given that today is Friday? Apply Baye's rule in python to get the resul (Ans: 15%)

2. Extract the data from database using python

3. Implement k-nearest neighbours classification using python

4. Given the following data, which specify classifications for nine combinations of VA F and VAR2 predict a classification for a case where VAR1=0.906 and VAR2=0.606, usin the result of k- means clustering with 3 means (i.e., 3 centroids)

VAR1	VAR2	CLASS
1.713	1.586	0
0.180	1.786	1
0.353	1.240	1
0.940	1.566	0
1.486	0.759	1
1.266	1.106	0
1.540	0.419	1
0.459	1.799	1
0.773	0.186	1

5. The following training examples map descriptions of individuals onto high, medium and lowcredit-worthiness.

medium   skiing   design   single   twenties no -> highRisk high   golf

trading   married forties yes -> lowRisk

ow speedway transport married thirties yes -> medRiskmedium   football banking

single thirties yes -> lowRisk high   flying

media   married fifties yes -> highRisk

ow football security single twenties no -> medRisk medium   golf   media

single thirties yes -> medRisk medium   golf

transport married forties yes -> lowRisk high   skiing

banking   single thirties yes -> highRisk low   golf

unemployed married forties yes -> highRisk

Input attributes are (from left to right) income, recreation, job, status, age-group, hom e

owner. Find the unconditional probability of `golf' and the conditional probability of

`single' given `medRisk' in the dataset?

6.   Implement linear regression using python.

7.   Implement Naïve Bayes theorem to classify the English text

8.   Implement an algorithm to demonstrate the significance of genetic algorithm

9.   Implement the finite words classification system using Back-propagation algorithm

Advanced Communication Skills Lab

1. INTRODUCTION:

The introduction of the Advanced Communication Skills Lab is considered essential at 3r
year level. At this stage, the students need to prepare themselves for their careers whic
may require them to listen to, read, speak and write in English both for their profession
and interpersonal communication in the globalized context.

The proposed course should be a laboratory course to enable students to use 'goo d
English and perform the following:

☐ Gathering ideas and information to organize ideas relevantly and coherently.

☐ Engaging in debates.

☐ Participating in group discussions.

☐ Facing interviews.

☐ Writing project/research reports/technical reports.

☐ Making oral presentations.

☐ Writing formal letters.

☐ Transferring information from non-verbal to verbal texts and vice-versa.

☐ Taking part in social and professional communication.

2. OBJECTIVES:

This Lab focuses on using multi-media instruction for language development to meet th
following targets:

☐ To improve the students' fluency in English, through a well-developed vocabulary an
enable them to listen to English spoken at normal conversational speed by educate
English speakers and respond appropriately in different socio-cultural and profession
contexts.

☐ Further, they would be required to communicate their ideas relevantly and coherent
in writing.

☐ To prepare all the students for their placements.

3. SYLLABUS:

The following course content to conduct the activities is prescribed for the Advance
English Communication Skills (AECS) Lab:

1. **Activities on Fundamentals of Inter-personal Communication and Building Vocabul** ar
-

Starting a conversation – responding appropriately and relevantly – using the right bo d
language – Role Play in different situations & Discourse Skills- using visuals - Synonyms an
antonyms, word roots, one-word substitutes, prefixes and suffixes, study of word origi n
business vocabulary, analogy, idioms and phrases, collocations & usage of vocabulary.

Activities on Reading Comprehension –General Vs Local comprehension, reading f
facts, guessing meanings from context, scanning, skimming, inferring meaning, critic
reading& effective googling.

3. **Activities on Writing Skills** – Structure and presentation of different types of writing
letter writing/Resume writing/ e-correspondence/Technical report writing/ – planning f
writing – improving one's writing.

4. **Activities on Presentation Skills** – Oral presentations (individual and group) throug
JAM sessions/seminars/**PPTs** and written presentations through posters/projects/repor t
emails/ assignments etc.

5. **Activities on Group Discussion and Interview Skills** – Dynamics of group discussion,
intervention, summarizing, modulation of voice, body language, relevance, fluency an
organization of ideas and rubrics for evaluation- Concept and process, pre-intervie
planning, opening strategies, answering strategies, interview through tele-conference
video-conference and Mock Interviews.

4. MINIMUM REQUIREMENT:

The Advanced English Communication Skills (AECS) Laboratory shall have the followin
infrastructural facilities to accommodate at least 35 students in the lab:

☐ Spacious room with appropriate acoustics.

☐ Round Tables with movable chairs

☐ Audio-visual aids

☐ LCD Projector

☐ Public Address system

☐ P – IV Processor, Hard Disk – 80 GB, RAM–512 MB Minimum, Speed – 2.8 GHZ

☐ T. V, a digital stereo & Camcorder

☐ Headphones of High quality

5. SUGGESTED SOFTWARE:

The software consisting of the prescribed topics elaborated above should be procure and used.

☐ Oxford Advanced Learner's Compass, 7th Edition

☐ DELTA's key to the Next Generation TOEFL Test: Advanced Skill Practice.

☐ Lingua TOEFL CBT Insider, by Dream tech

DevOps Lab

List of Experiments

1. Write code for a simple user registration form for an event.

2. Explore Git and GitHub commands.

3. Practice Source code management on GitHub. Experiment with the source code written inexercise 1.

4. Jenkins installation and setup, explore the environment.

5. Demonstrate continuous integration and development using Jenkins.

6. Explore Docker commands for content management.

7. Develop a simple containerized application using Docker.

8. Integrate Kubernetes and Docker

9. Automate the process of running containerized application developed in exercise 7 usingKubernetes.

10. Install and Explore Selenium for automated testing.
11. Write a simple program in JavaScript and perform testing using Selenium.
12. Develop test cases for the above containerized application using selenium.

Artificial Intelligence & Natural Language Processing Lab

List of Experiments (AI)

1) Write a program in prolog to implement simple facts and Queries

2) Write a program in prolog to implement simple arithmetic

3) Write a program in prolog to solve Monkey banana problem

4) Write a program in prolog to solve Tower of Hanoi

5) Write a program in prolog to solve 8 Puzzle problems

6) Write a program in prolog to solve 4-Queens problem

7) Write a program in prolog to solve Traveling salesman problem

8) Write a program in prolog for Water jug problem

List of Experiments (NLP)

1. Word Analysis

2. Word Generation

3. Morphology

4. N-Grams

5. N-Grams Smoothing

Professional Elective – III Internet of Things/ Data Mining/ Scripting Languages/ Mobile Application Development/Cryptography & Network Security Lab

List of Experiments

1.   Write a C program that contains a string (char pointer) with a value 'Hello world'. The programshould XOR each character in this string with 0 and displays the result.

2.   Write a C program that contains a string (char pointer) with a value 'Hello world'. The programshould AND or and XOR each character in this string with 127 and display the result.

3.   Write a Java program to perform encryption and decryption using the following algorithms

a.   Ceaser cipher b. Substitution cipher c. Hill Cipher

4.   Write a C/JAVA program to implement the DES algorithm logic.

5.   Write a C/JAVA program to implement the Blowfish algorithm logic.

6.   Write a C/JAVA program to implement the Rijndael algorithm logic.

7.   Write the RC4 logic in Java Using Java cryptography; encrypt the text "Hello world" usingBlowfish. Create your own key using Java key tool.

8.   Write a Java program to implement RSA algorithm.

9.   Implement the Diffie-Hellman Key Exchange mechanism using HTML and JavaScript.

10.   Calculate the message digest of a text using the SHA-1 algorithm in JAVA.

11.   Calculate the message digest of a text using the MD5 algorithm in JAVA.

DEPARTMENT OF CSE (Internet of Things)

PROGRAMMING FOR PROBLEM SOLVING LAB

Practice sessions:
a. Write a simple program that prints the results of all the operators available in
(including pre/post increment, bitwise and/or/not, etc.). Read required operand valu e
from standard input.
b. Write a simple program that converts one given data type to another using aut
conversion and casting. Take the values form standard input.

Simple numeric problems:
a. Write a program for fiend the max and min from the three numbers.
b. Write the program for the simple, compound interest.
c. Write program that declares Class awarded for a given percentage of marks, wher
mark <40%= Failed, 40% to <60% = Second class, 60% to <70%=First class, >= 70%
Distinction. Read percentage from standard input.
d. Write a program that prints a multiplication table for a given number and the numb e.
of rows in the table. For example, for a number 5 and rows = 3, the output should be:
e. 5 x 1 = 5
f. 5 x 2 = 10
g. 5 x 3 = 15
h. Write a program that shows the binary equivalent of a given positive number betwee
0 to 255.

Expression Evaluation:
a. A building has 10 floors with a floor height of 3 meters each. A ball is dropped from th
top of the building. Find the time taken by the ball to reach each floor. (Use the formula
= ut+(1/2)at^2 where u and a are the initial velocity in m/sec (= 0) and acceleration i
m/sec^2 (= 9.8 m/s^2)).
b. Write a C program, which takes two integer operands and one operator from the use
performs the operation and then prints the result. (Consider the operators +,-,*, /, % an
use Switch Statement)
c. Write a program that finds if a given number is a prime number
d. Write a C program to find the sum of individual digits of a positive integer and te
given number is palindrome.
e. A Fibonacci sequence is defined as follows: the first and second terms in th
sequence are 0 and 1. Subsequent terms are found by adding the preceding two ter m
in the sequence. Write a C program to generate the first n terms of the sequence.
f. Write a C program to generate all the prime numbers between 1 and n, where n is
value supplied by the user.
g. Write a C program to find the roots of a Quadratic equation.
h. Write a C program to calculate the following, where x is a fractional value.

i. 1-x/2 +x^2/4-x^3/6

j. Write a C program to read in two numbers, x and n, and then compute the sum of th
geometric progression: 1+x+x^2+x^3+………….+x^n. For example: if n is 3 and x is 5, the
the program computes 1+5+25+125.

Arrays and Pointers and Functions:

a. Write a C program to find the minimum, maximum and average in an array (
integers.

b. Write a functions to compute mean, variance, Standard Deviation, sorting of
elements in single dimension array.

c. Write a C program that uses functions to perform the following:

d. Addition of Two Matrices

e. ii. Multiplication of Two Matrices

f. iii. Transpose of a matrix with memory dynamically allocated for the new matrix as ro
and column counts may not be same.

g. Write C programs that use both recursive and non-recursive functions

h. To find the factorial of a given integer.

i. ii. To find the GCD (greatest common divisor) of two given integers.

j. iii. To find x^n

k. Write a program for reading elements using pointer into array and display the valu
using array.

l. Write a program for display values reverse order from array using pointer.

m. Write a program through pointer variable to sum of n elements from array.

Files:

a. Write a C program to display the contents of a file to standard output device.

b. Write a C program which copies one file to another, replacing all lowercase
characters with their uppercase equivalents.

c. Write a C program to count the number of times a character occurs in a text file. Th
file name and the character are supplied as command line arguments.

d. Write a C program that does the following:

  It should first create a binary file and store 10 integers, where the file name and 1
values are given in the command line. (hint: convert the strings using atoi function)

  Now the program asks for an index and a value from the user and the value at th (
index should be changed to the new value in the file. (hint: use fseek function)

The program should then read all 10 values and print them back.

e. Write a C program to merge two files into a third file (i.e., the contents of the firs t fil
followed by those of the second are put in the third file).

Strings:

a. Write a C program to convert a Roman numeral ranging from I to L to its decim c
equivalent.

b. Write a C program that converts a number ranging from 1 to 50 to Roman equivalent

c. Write a C program that uses functions to perform the following operations:

d. To insert a sub-string in to a given main string from a given position.

e. ii. To delete n Characters from a given position in a given string.

f. Write a C program to determine if the given string is a palindrome or not (Spelled sam

in both directions with or without a meaning like madam, civic, noon, abcba, etc.)

g. Write a C program that displays the position of a character ch in the string S or – 1 if

doesn't contain ch.

h. Write a C program to count the lines, words and characters in a given text.

Miscellaneous:

a. Write a menu driven C program that allows a user to enter n numbers and the

choose between finding the smallest, largest, sum, or average. The menu and all th

choices are to be functions. Use a switch statement to determine what action to tak e

Display an error message if an invalid choice is entered.

b. Write a C program to construct a pyramid of numbers as follows:

1

1 2

1 2 3

*

* *

* * *

1

2 3

4 5 6

1

2 2

3 3 3

4 4 4 4

*

* *

* * *

* *

*

Sorting and Searching:

a. Write a C program that uses non recursive function to search for a Key value in

given

b. list of integers using linear search method.

c. Write a C program that uses non recursive function to search for a Key value in a give

d. sorted list of integers using binary search method.

e. Write a C program that implements the Bubble sort method to sort a given list of

f. integers in ascending order.

g. Write a C program that sorts the given array of integers using selection sort i

descending order

h. Write a C program that sorts the given array of integers using insertion sort i

ascending order

i. Write a C program that sorts a given array of names

Python Programming Lab

List of Experiments

Note: The lab experiments will be like the following experiment examples

Week -1:

1. i) Use a web browser to go to the Python website http://python.org. This pag contains information about Python and links to Python-related pages, and it gives you th ability to search the Python documentation.

ii) Start the Python interpreter and type help() to start the online help utility.

2. Start a Python interpreter and use it as a Calculator.

3.

i) write a program to calculate compound interest when principal, rate and number of periods aregiven.

ii) Given coordinates (x1, y1), (x2, y2) find the distance between two points

4. Read name, address, email and phone number of a person through keyboard and print thedetails.

Week - 2:

1. Print the below triangle using for loop.5

4 4

3 3 3

2 2 2 2

1 1 1 1 1

2. Write a program to check whether the given input is digit or lowercase character o uppercase character or a special character (use 'if-else-if' ladder)

3. Python Program to Print the Fibonacci sequence using while loop

4. Python program to print all prime numbers in a given interval (use break)

Week - 3:

1. i) Write a program to convert a list and tuple into arrays.

ii) Write a program to find common values between two arrays.

2. Write a function called gcd that takes parameters a and b and returns their greatest commondivisor.

3. Write a function called palindrome that takes a string argument and returns True if it is a palindromeand False otherwise. Remember that you can use the built-in function len to checkthe length of a string.

Week - 4:

1. Write a function called is_sorted that takes a list as a parameter and returns True if the list issorted in ascending order and False otherwise.

2. Write a function called has_duplicates that takes a list and returns True if there is any elementthatappears more than once. It should not modify the original list.

i). Write a function called remove_duplicates that takes a list and returns a new list with only theunique elements from the original. Hint: they don't have to be in the same order

ii).The wordlist I provided, words.txt, doesn't contain single letter words. So you might want toadd "I", "a", and the empty string.

iii). Write a python code to read dictionary values from the user. Construct a function to invertits content. i.e., keys should be values and values should be keys.

3. i) Add a comma between the characters. If the given word is 'Apple', it should become 'A,p,p,l,e'

iv) Remove the given word in all the places in a string?

v) Write a function that takes a sentence as an input parameter and replaces the first letterof everyword with the corresponding upper case letter and the rest of the letters in the word by corresponding letters in lower case without using a built-in function?

4. Writes a recursive function that generates all binary strings of n-bit length

Week - 5:

1. i) Write a python program that defines a matrix and prints

iv) Write a python program to perform addition of two square matrices

v) Write a python program to perform multiplication of two square matrices

2. How do you make a module? Give an example of construction of a module using differentgeometrical shapes and operations on them as its functions.

3. Use the structure of exception handling all general purpose exceptions.

Week-6:

1. a. Write a function called draw_rectangle that takes a Canvas and a Rectangle as arguments and draws a representation of the Rectangle on the Canvas.

e. Add an attribute named color to your Rectangle objects and modify draw_rectangle so that ituses the color attribute as the fill color.

f. Write a function called draw_point that takes a Canvas and a Point as arguments anddraws are presentation of the Point on the Canvas.

g. Define a new class called Circle with appropriate attributes and instantiate a few Circle objects.Write a function called draw_circle that draws circles on the canvas.

2. Write a Python program to demonstrate the usage of Method Resolution Order (MRO in multiple levels of Inheritances.

3. Write a python code to read a phone number and email-id from the user and validate it forcorrectness.

Week- 7

1. Write a Python code to merge two given file contents into a third file.

2. Write a Python code to open a given file and construct a function to check for given wordspresent init and display on found.

3. Write a Python code to Read text from a text file, find the word with most number of occurrences

4. Write a function that reads a file *file1* and displays the number of words, number of vowels, blankspaces, lower case letters and uppercase letters.

Week - 8:

1. Import numpy, Plotpy and Scipy and explore their functionalities.

2. a) Install NumPy package with pip and explore it.

3. Write a program to implement Digital Logic Gates – AND, OR, NOT, EX-OR

4. Write a program to implement Half Adder, Full Adder, and Parallel Adder

5. Write a GUI program to create a window wizard having two text labels, two text fields and twobuttons as Submit and Reset.

IT WORKSHOP Lab

List of Experiments

PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its function Draw the block diagram of the CPU along with the configuration of each peripheral an submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to workin condition. Lab instructors should verify the work and follow it up with a Viva. Also studen need to go through the video which shows the process of assembling a PC. A vide would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal compute Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should hav windows installed. The system should be configured as dual boot with both Windows an Linux. Lab instructors should verify the installation and follow it up with a Viva

Internet & World Wide Web

Task1: **Orientation & Connectivity Boot Camp:** Students should get connected to th Local Area Network and access the Internet. In the process they configure the TCP/I setting. Finally students should demonstrate, to the instructor, how to access the websit and email. If there is no internet connectivity preparations need to be made by th instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with th LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins lik Macromedia Flash and JRE for applets should be configured.

Task 3: **Search Engines & Netiquette:** Students should know what search engines are an how to use the search engines. A few topics would be given to the students for whic they need to search on Google. This should be demonstrated to the instructors by th student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the intern and would be asked to configure their computer to be safe on the internet. They nee to customize their browsers to block pop ups, block active x downloads to avoid virus e and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microso (MS) office or equivalent (FOSS) tool word: Importance of LaTeX and MS office equivalent (FOSS) tool Word as word Processors, Details of the four tasks and features th would be covered in each, Using LaTeX and word – Accessing, overview of toolba r, saving files, Using help and resources, rulers, format painter in word.

Task 2: Using LaTeX and Word to create a project certificate. Features to be covered Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Charact e Spacing, Borders and Colors,Inserting Header and Footer, Using Date and Time option i both LaTeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Insertin table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnot Hyperlink, Symbols, Spell Check, Track Changes.

Task 4: Creating a Newsletter: Features to be covered:- Table of Content, Newspap columns, Images from files and clipart, Drawing toolbar and Word Art, Formattin Images, Textboxes, Paragraphs and Mail Merge in word.

Excel

Excel Orientation: The mentor needs to tell the importance of MS office or equivale (FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and featue that would be covered in each. Using Excel – Accessing, overview of toolbars, savin excel files, Using help and resources.

Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cell Summation, auto fill,Formatting Text

Task 2 : Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in exc – average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP

Task 3: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators Conditionalformatting.

Powerpoint

Task 1: Students will be working on basic power point utilities and tools which help the r

create basicpowerpoint presentations. PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text,Bullets and Numbering, Auto Shapes, Lines and Arrows in PowerPoint.

Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.

Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden slides.

ANALOG AND DIGITAL ELECTRONICS LAB

List of Experiments
1. Full Wave Rectifier with & without filters
2. Common Emitter Amplifier Characteristics
3. Common Base Amplifier Characteristics
4. Common Source amplifier Characteristics
5. Measurement of h-parameters of transistor in CB, CE, CC configurations
6. Input and Output characteristics of FET in CS configuration
7. Realization of Boolean Expressions using Gates
8. Design and realization logic gates using universal gates
9. generation of clock using NAND / NOR gates
10. Design a 4 – bit Adder / Subtractor
11. Design and realization a Synchronous and Asynchronous counter using flip-flops
12. Realization of logic gates using DTL, TTL, ECL, etc.

DATA STRUCTURES LAB

List of Experiments
1. Write a program that uses functions to perform the following operations on singly linked list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal
2. Write a program that uses functions to perform the following operations on dou b. linked list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal
3. Write a program that uses functions to perform the following operations on circul c linked list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal
4. Write a program that implement stack (its operations) using
i) Arrays ii) Pointers
5. Write a program that implement Queue (its operations) using
i) Arrays ii) Pointers

6. Write a program that implements the following sorting methods to sort a given list c
integers in ascending order
i) Bubble sort ii) Selection sort iii) Insertion sort
7. Write a program that use both recursive and non recursive functions to perform th
following searching operations for a Key value in a given list of integers:

Linear search ii) Binary search
8. Write a program to implement the tree traversal methods.
9. Write a program to implement the graph traversal methods.

IT WORKSHOP LAB

PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its function
Draw the block diagram of the CPU along with the configuration of each peripheral an
submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to workin
condition. Lab instructors should verify the work and follow it up with a Viva. Also studen
need to go through the video which shows the process of assembling a PC. A vide
would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal compute
Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should hav
windows installed. The system should be configured as dual boot with both windows an
Linux. Lab instructors should verify the installation and follow it up with a Viva

Task 5: Hardware Troubleshooting: Students have to be given a PC which does not bo
due to improper assembly or defective peripherals. They should identify the problem an
fix it to get the computer back to working condition. The work done should be verified b
the instructor and followed up with a Viva.

Task 6: Software Troubleshooting: Students have to be given a malfunctioning CPU du
to system software problems. They should identify the problem and fix it to get th
computer back to working condition. The work done should be verified by the instruct
and followed up with a Viva.

Internet & World Wide Web

Task1: Orientation & Connectivity Boot Camp: Students should get connected to th e
Local Area Network and access the Internet. In the process they configure the TCP/I
setting. Finally students should demonstrate, to the instructor, how to access the websit e
and email. If there is no internet connectivity preparations need to be made by th
instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with th

LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins lik
Macromedia Flash and
JRE for applets should be configured.

Task 3: **Search Engines & Netiquette:** Students should know what search engines are an
how to use the search engines. A few topics would be given to the students for whic
they need to search on Google. This should be demonstrated to the instructors by th
student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the intern e
and would be asked to configure their computer to be safe on the internet. They nee
to first install an antivirus software, configure their personal firewall and windows updat
on their computer. Then they need to customize their browsers to block pop ups, blo c
active x downloads to avoid viruses and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microso
(MS) office 2007/ equivalent (FOSS) tool word: Importance of LaTeX and MS office 200 7
equivalent (FOSS) tool Word as word Processors, Details of the four tasks and featur e
that would be covered in each, Using LaTeX and word – Accessing, overview of toolba r
saving files, Using help and resources, rulers, format painter in word.

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Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Charact e
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columns, Images from files and clipart, Drawing toolbar and Word Art, Formattin
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(FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and featu e
that would be covered in each. Using Excel – Accessing, overview of toolbars, savin
excel files, Using help and resources.

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Summation, auto fill, Formatting Text

Task 2 : Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in exc e
– average, std.deviation, Charts, Renaming and Inserting worksheets, Hyper linking
Count function, LOOKUP/VLOOKUP

Task 3: Performance Analysis - Features to be covered:- Split cells, freeze panes, grou

and outline, Sorting, Boolean and logical operators, Conditional formatting

LaTeX and MS/equivalent (FOSS) tool Power Point

Task 1: Students will be working on basic power point utilities and tools which help the m create basic power point presentation. Topic covered during this week includes: - P F Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets an Numbering, Auto Shapes, Lines and Arrows in both LaTeX and PowerPoint. Students w be given model power point presentation which needs to be replicated (exactly how it asked).

Task 2: Second week helps students in making their presentations interactive. Topi covered during this week includes: Hyperlinks, Inserting –Images, Clip Art, Audio, Vide Objects, Tables and Charts.

Task 3: Concentrating on the in and out of Microsoft power point and presentations i LaTeX. Helps them learn best practices in designing and preparing power poi presentation. Topic covered during this week includes: - Master Layouts (slide, templat and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting Background, textures, Design Templates, Hidden slides.

PYTHON PROGRAMMING LAB

List of Experiments:

1. Write a program to demonstrate different number data types in Python.

2. Write a program to perform different Arithmetic Operations on numbers in Python.

3. Write a program to create, concatenate and print a string and accessing sub-strin from a given string.

4. Write a python script to print the current date in the following format "Sun May 2, 02:26:23 IST 2017"

5. Write a program to create, append, and remove lists in python.

6. Write a program to demonstrate working with tuples in python.

7. Write a program to demonstrate working with dictionaries in python.

8. Write a python program to find largest of three numbers.

9. Write a Python program to convert temperatures to and from Celsius, Fahrenheit. Formula : c/5 = f-32/9]

10. Write a Python program to construct the following pattern, using a nested for loop

*

* *

* * *

* * * *

* * * * *

* * * *

* * *

* *

*

11. Write a Python script that prints prime numbers less than 20.

12. Write a python program to find factorial of a number using Recursion.

13. Write a program that accepts the lengths of three sides of a triangle as inputs. Th
program output should indicate whether or not the triangle is a right triangle (Recall fro
the Pythagorean Theorem that in a right triangle, the square of one side equals the su
of the squares of the other two sides).

14. Write a python program to define a module to find Fibonacci Numbers and impo
the module to another program.

15. Write a python program to define a module and import a specific function in th
module to another program.

16. Write a script named copyfile.py. This script should prompt the user for the names
two text files. The contents of the first file should be input and written to the second file.

17. Write a program that inputs a text file. The program should print all of the uniqu
words in the file in alphabetical order.

18. Write a Python class to convert an integer to a roman numeral.\

19. Write a Python class to implement pow(x, n)

20. Write a Python class to reverse a string word by word.

Operating Systems Lab

List of Experiments:

1. Write C programs to simulate the following CPU Scheduling algorithms

a) FCFS   b) SJF c) Round Robin   d) priority

2. Write programs using the I/O system calls of UNIX/LINUX operating system (open, read,write, close, fcntl, seek, stat, opendir, readdir)

3. Write a C program to simulate Bankers Algorithm for Deadlock Avoidance and Prevention.

4. Write a C program to implement the Producer – Consumer problem using semaphores usingUNIX/LINUX system calls.

5. Write C programs to illustrate the following IPC mechanisms

a) Pipes   b) FIFOs   c) Message Queues   d) Shared Memory

6. Write C programs to simulate the following memory management techniques

a) Paging   b) Segmentation

Sensors and Devices Lab

List of Experiments:

1. Connect an LED to GPIO pin 25 and control it through command line.

2. Connect an LED to GPIO pin 24 and a Switch to GPIO 25 and control the LED wit .. theswitch.

3. The state of LED should toggle with every press of the switch Use DHT11 temperature sensorand print the temperature and humidity of the room with an interval of 15 second

4. Use joystick and display the direction on the screen

5. Use Light Dependent Resistor (LDR) and control an LED that should switch-on/off dependingon the light.

6. Create a traffic light signal with three colored lights (Red, Orange and Green) wit h a dutycycle of 5-2-10 seconds.

7. Switch on and switch of a DC motor based on the position of a switch.

8. Convert an analog voltage to digital value and show it on the screen.

9. Create a door lock application using a reed switch and magnet and give a beep when thedoor is opened.

10.Control a 230V device (Bulb) with Raspberry Pi using a relay.

11.Control a 230V device using a threshold temperature, using temperature sensor.

12.Create an application that has three LEDs (Red, Green and white). The LEDs should followthe cycle (All Off, Red On, Green On, White On) for each clap (use sound sensor).

13.Create a web application for the above applications wherever possible with suitablemodifications to get input and to send output.

Java Programming Lab

List of Experiments:

1. Use Eclipse or Net bean platform and acquaint with the various menus. Create a te project, add a test class, and run it. See how you can use auto suggestions, auto fill. T code formatter and code refactoring like renaming variables, methods, and classes. T debug step by step with a small program of about 10 to 15 lines which contains at lea one if else condition and a for loop.

2. Write a Java program that works as a simple calculator. Use a grid layout to arrang buttons for the digits and for the +, -,*, % operations. Add a text field to display the resul Handle any possible exceptions like divided by zero.

3. a) Develop an applet in Java that displays a simple message.

b) Develop an applet in Java that receives an integer in one text field, and computes it factorialValue and returns it in another text field, when the button named "Compute" is clicked.

4. Write a Java program that creates a user interface to perform integer divisions. Th user enters two numbers in the text fields, Num1 and Num2. The division of Num1 an Num 2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num were not an integer, the program would throw a Number Format Exception. If Num were Zero, the program would throw an Arithmetic Exception. Display the exception in message dialog box.

5. Write a Java program that implements a multi-thread application that has thre threads. First thread generates random integer every 1 second and if the value is eva second thread computes the square of the number and prints. If the value is odd, th

third thread will print the value of cube of the number.

6. Write a Java program for the following: Create a doubly linked list of elements. Dele te a given element from the above list.

Display the contents of the list after deletion.

7. Write a Java program that simulates a traffic light. The program lets the user select on of three lights: red, yellow, or green with radio buttons. On selecting a button, a appropriate message with "Stop" or "Ready" or "Go" should appear above the butto r in selected color. Initially, there is no message shown.

8. Write a Java program to create an abstract class named Shape that contains tw integers and an empty method named print Area (). Provide three classes named Rectangle, Triangle, and Circle such that each one of the classes extends the cla Shape. Each one of the classes contains onlythe method print Area () that prints the are of the given shape.

9. Suppose that a table named Table.txt is stored in a text file. The first line in the file is th header, and the remaining lines correspond to rows in the table. The elements ar separated by commas. Write a java program to display the table using Labels in Gri Layout.

10. Write a Java program that handles all mouse events and shows the event name at th center of the window when a mouse event is fired (Use Adapter classes).

11. Write a Java program that loads names and phone numbers from a text file where th data is organized as one line per record and each field in a record are separated by tab (\t). It takes a name or phone number as input and prints the corresponding oth value from the hash table (hint: use hash tables).

12. Write a Java program that correctly implements the producer – consumer proble using the concept of interthread communication.

13. Write a Java program to list all the files in a directory including the files present in all i subdirectories.

14. Write a Java program that implements Quick sort algorithm for sorting a list of nam in ascending order

15. Write a Java program that implements Bubble sort algorithm for sorting in descendin order and also shows the number of interchanges occurred for the given set of integers.

Database Management Systems Lab

List of Experiments:

1. Concept design with E-R Model

2. Relational Model

3. Normalization

4. Practicing DDL commands

5. Practicing DML commands

6. Querying (using ANY, ALL, IN, Exists, NOT EXISTS, UNION, INTERSECT, Constraints etc.)

7. Queries using Aggregate functions, GROUP BY, HAVING and Creation and dropping o Views.

8. Triggers (Creation of insert trigger, delete trigger, update trigger)

9. Procedures

10. Usage of Cursors

MICROPROCESSORS & MICROCONTROLLERS Lab

List of Experiments: Using 8086 Processor Kits and/or Assembler

- Write Assembly Language Programs to 8086 to Perform

1. Arithmetic, Logical, String Operations on 16 Bit and 32-Bit Data.

2. Bit level Logical Operations, Rotate, Shift, Swap and Branch Operations.

Using 8051 Microcontroller Kit

- Introduction to IDE

1. Assembly Language Programs to Perform Arithmetic (Both Signed and Unsigned) 16 B Data Operations, Logical Operations (Byte and Bit Level Operations), Rotate, Shift, Swa and Branch Instructions.

2. Time delay Generation Using Timers of 8051.

3. Serial Communication from / to 8051 to / from I/O devices.

4. Program Using Interrupts to Generate Square Wave 10 KHZ Frequency on P2.1 Usin Timer0 8051 in 8 bit Auto reload Mode and Connect a 1 HZ Pulse to INT1 pin and Displ on Port

1. Assume Crystal Frequency as 11.0592 MHZ.

Interfacing I/O Devices to 8051

2. 7 Segment Display to 8051.

3. Matrix Keypad to 8051.

4. Sequence Generator Using Serial Interface in 8051.

5. 8 bit ADC Interface to 8051.

6. Triangular Wave Generator through DAC interfaces to 8051.

Advanced Communication Skills Lab

1. INTRODUCTION:

The introduction of the Advanced Communication Skills Lab is considered essential at 3r year level. At this stage, the students need to prepare themselves for their careers whic may require them to listen to, read, speak and write in English both for their profession and interpersonal communication in the globalized context.

The proposed course should be a laboratory course to enable students to use 'goo c English and perform the following:

☐ Gathering ideas and information to organize ideas relevantly and coherently.

☐ Engaging in debates.

☐ Participating in group discussions.

☐ Facing interviews.

☐ Writing project/research reports/technical reports.

☐ Making oral presentations.

☐ Writing formal letters.

☐ Transferring information from non-verbal to verbal texts and vice-versa.

☐ Taking part in social and professional communication.

2. OBJECTIVES:

This Lab focuses on using multi-media instruction for language development to meet th following targets:

☐ To improve the students' fluency in English, through a well-developed vocabulary an enable them to listen to English spoken at normal conversational speed by educate English speakers and respond appropriately in different socio-cultural and profession c

contexts.

☐ Further, they would be required to communicate their ideas relevantly and coherent in writing.

☐ To prepare all the students for their placements.

3. SYLLABUS:

The following course content to conduct the activities is prescribed for the Advanced English Communication Skills (AECS) Lab:

1. **Activities on Fundamentals of Inter-personal Communication and Building Vocabul a**

-

Starting a conversation – responding appropriately and relevantly – using the right bo d language – Role Play in different situations & Discourse Skills- using visuals - Synonyms an antonyms, word roots, one-word substitutes, prefixes and suffixes, study of word origi n business vocabulary, analogy, idioms and phrases, collocations & usage of vocabulary.

Activities on Reading Comprehension –General Vs Local comprehension, reading f facts, guessing meanings from context, scanning, skimming, inferring meaning, critic reading& effective googling.

3. **Activities on Writing Skills** – Structure and presentation of different types of writing *letter writing/Resume writing/ e-correspondence/Technical report writing/* – planning f writing – improving one's writing.

4. **Activities on Presentation Skills** – Oral presentations (individual and group) throug JAM sessions/seminars/**PPTs** and written presentations through posters/projects/repor t emails/ assignments etc.

5. **Activities on Group Discussion and Interview Skills** – Dynamics of group discussion, intervention, summarizing, modulation of voice, body language, relevance, fluency an organization of ideas and rubrics for evaluation- Concept and process, pre-intervie planning, opening strategies, answering strategies, interview through tele-conference video-conference and Mock Interviews.

4. MINIMUM REQUIREMENT:

The Advanced English Communication Skills (AECS) Laboratory shall have the followin infrastructural facilities to accommodate at least 35 students in the lab:

☐ Spacious room with appropriate acoustics.

- Round Tables with movable chairs
- Audio-visual aids
- LCD Projector
- Public Address system
- P – IV Processor, Hard Disk – 80 GB, RAM–512 MB Minimum, Speed – 2.8 GHZ
- T. V, a digital stereo & Camcorder
- Headphones of High quality

5. SUGGESTED SOFTWARE:

The software consisting of the prescribed topics elaborated above should be procure and used.

- Oxford Advanced Learner's Compass, 7th Edition
- DELTA's key to the Next Generation TOEFL Test: Advanced Skill Practice.
- Lingua TOEFL CBT Insider, by Dream tech

Computer Vision Lab

List of Experiments:

1. Familiarization of the tool used for computer vision.
2. Implement basic image operations
a. Loading and displaying an image.
b. Color formats
c. Image enhancement.
3. Implement smoothing filters on an image using
a. Gaussian filter
b. Median filter
c. Mean Filter
4. Demonstrate fourier Transformations.
5. Implement histogram calculation and equalization for the given image.
6. Implement morphological operations like dilation, erosion, opening and closing on thegiven image
7. Implement edge detection on images using any two edge detection masks.
8. Detection of motion from structure.

9   Implement texture extraction of a given image.

10   Implement object detection like recognizing pedestrians.

11. Implement face recognition of an image using K-Means clustering.

12. Implement dimensionality reduction using PCA for the given images.

13. Demonstrate model based reconstruction using tensor flow.

IoT Lab

List of Experiments:

1. Using raspberry pi

a. Calculate the distance using a distance sensor.

b. Basic LED functionality.

2. Using Arduino

a. Calculate the distance using a distance sensor.

b. Basic LED functionality.

c. Calculate temperature using a temperature sensor.

3. Using Node MCU

a. Calculate the distance using a distance sensor.

b. Basic LED functionality.

c. Calculate temperature using a temperature sensor.

Professional Elective – III Mobile Application Development for IoT/Cloud Computing and Virtualization/Artificial Intelligence/Lightweight Cryptography/ Software Testing methodology La

List of Experiments:

1. Recording in context sensitive mode and analog mode

2. GUI checkpoint for single property

3. GUI checkpoint for single object/window

4. GUI checkpoint for multiple objects

5. a) Bitmap checkpoint for object/window

a) Bitmap checkpoint for screen area

6. Database checkpoint for Default check

7. Database checkpoint for custom check

8. Database checkpoint for runtime record check

9. a) Data driven test for dynamic test data submission

b) Data driven test through flat files

c) Data driven test through front grids

d) Data driven test through excel test

10. a) Batch testing without parameter passing

b) Batch testing with parameter passing

11. Data driven batch

12. Silent mode test execution without any interruption

13. Test case for calculator in windows application

DEPARTMENT OF CSE (Cyber Security)

LIST OF EXPERIMENTS

PROGRAMMING FOR PROBLEM SOLVING LAB

Practice sessions:
a. Write a simple program that prints the results of all the operators available in (including pre/post increment, bitwise and/or/not, etc.). Read required operand value from standard input.
b. Write a simple program that converts one given data type to another using aut conversion and casting. Take the values form standard input.

Simple numeric problems:
a. Write a program for fiend the max and min from the three numbers.
b. Write the program for the simple, compound interest.
c. Write program that declares Class awarded for a given percentage of marks, wher mark <40%= Failed, 40% to <60% = Second class, 60% to <70%=First class, >= 70% Distinction. Read percentage from standard input.
d. Write a program that prints a multiplication table for a given number and the numb of rows in the table. For example, for a number 5 and rows = 3, the output should be:
e. 5 x 1 = 5
f. 5 x 2 = 10
g. 5 x 3 = 15
h. Write a program that shows the binary equivalent of a given positive number betwee 0 to 255.

Expression Evaluation:
a. A building has 10 floors with a floor height of 3 meters each. A ball is dropped from th

top of the building. Find the time taken by the ball to reach each floor. (Use the formula = ut+(1/2)at^2 where u and a are the initial velocity in m/sec (= 0) and acceleration i m/sec^2 (= 9.8 m/s^2)).

b. Write a C program, which takes two integer operands and one operator from the use performs the operation and then prints the result. (Consider the operators +,-,*, /, % an use Switch Statement)

c. Write a program that finds if a given number is a prime number

d. Write a C program to find the sum of individual digits of a positive integer and te given number is palindrome.

e. A Fibonacci sequence is defined as follows: the first and second terms in th sequence are 0 and 1. Subsequent terms are found by adding the preceding two ter n in the sequence. Write a C program to generate the first n terms of the sequence.

f. Write a C program to generate all the prime numbers between 1 and n, where n is value supplied by the user.

g. Write a C program to find the roots of a Quadratic equation.

h. Write a C program to calculate the following, where x is a fractional value.

i. 1-x/2 +x^2/4-x^3/6

j. Write a C program to read in two numbers, x and n, and then compute the sum of th geometric progression: 1+x+x^2+x^3+………….+x^n. For example: if n is 3 and x is 5, the the program computes 1+5+25+125.

Arrays and Pointers and Functions:

a. Write a C program to find the minimum, maximum and average in an array integers.

b. Write a functions to compute mean, variance, Standard Deviation, sorting of elements in single dimension array.

c. Write a C program that uses functions to perform the following:

d. Addition of Two Matrices

e. ii. Multiplication of Two Matrices

f. iii. Transpose of a matrix with memory dynamically allocated for the new matrix as ro and column counts may not be same.

g. Write C programs that use both recursive and non-recursive functions

h. To find the factorial of a given integer.

i. ii. To find the GCD (greatest common divisor) of two given integers.

j. iii. To find x^n

k. Write a program for reading elements using pointer into array and display the valu using array.

l. Write a program for display values reverse order from array using pointer.

m. Write a program through pointer variable to sum of n elements from array.

Files:

a. Write a C program to display the contents of a file to standard output device.

b. Write a C program which copies one file to another, replacing all lowercas characters with their uppercase equivalents.

c. Write a C program to count the number of times a character occurs in a text file. Th
file name and the character are supplied as command line arguments.

d. Write a C program that does the following:

It should first create a binary file and store 10 integers, where the file name and 1
values are given in the command line. (hint: convert the strings using atoi function)

Now the program asks for an index and a value from the user and the value at th
index should be changed to the new value in the file. (hint: use fseek function)

The program should then read all 10 values and print them back.

e. Write a C program to merge two files into a third file (i.e., the contents of the firs t fil
followed by those of the second are put in the third file).

Strings:

a. Write a C program to convert a Roman numeral ranging from I to L to its decim
equivalent.

b. Write a C program that converts a number ranging from 1 to 50 to Roman equivalent

c. Write a C program that uses functions to perform the following operations:

d. To insert a sub-string in to a given main string from a given position.

e. ii. To delete n Characters from a given position in a given string.

f. Write a C program to determine if the given string is a palindrome or not (Spelled sam
in both directions with or without a meaning like madam, civic, noon, abcba, etc.)

g. Write a C program that displays the position of a character ch in the string S or – 1 if
doesn't contain ch.

h. Write a C program to count the lines, words and characters in a given text.

Miscellaneous:

a. Write a menu driven C program that allows a user to enter n numbers and the
choose between finding the smallest, largest, sum, or average. The menu and all the
choices are to be functions. Use a switch statement to determine what action to tak e
Display an error message if an invalid choice is entered.

b. Write a C program to construct a pyramid of numbers as follows:

1

1 2

1 2 3

*

* *

* * *

1

2 3

4 5 6

1

2 2

3 3 3

4 4 4 4

*

```
* *
* * *
* *
*
```

Sorting and Searching:

Write a C program that uses non recursive function to search for a Key value in a given
b. list of integers using linear search method.

Write a C program that uses non recursive function to search for a Key value in a given
d. sorted list of integers using binary search method.

Write a C program that implements the Bubble sort method to sort a given list of
f. integers in ascending order.

Write a C program that sorts the given array of integers using selection sort i
descending order

Write a C program that sorts the given array of integers using insertion sort in ascendin g
order

i. Write a C program that sorts a given array of names

List of Experiments

Note: The lab experiments will be like the following experiment examples

Week -1:

i) Use a web browser to go to the Python website http://python.org. This page contai r
information about Python and links to Python-related pages, and it gives you the ability t
search the Python documentation.

ii) Start the Python interpreter and type help() to start the online help utility.

Start a Python interpreter and use it as a Calculator.

3.write a program to calculate compound interest when principal, rate and number of
periods aregiven.

Given coordinates (x1, y1), (x2, y2) find the distance between two points

Read name, address, email and phone number of a person through keyboard and print
thedetails.

Week - 2:

Print the below triangle using for loop.5

4 4

3 3 3

2 2 2 2

1 1 1 1 1

Write a program to check whether the given input is digit or lowercase character or uppercase character or a special character (use 'if-else-if' ladder)

Python Program to Print the Fibonacci sequence using while loop

Python program to print all prime numbers in a given interval (use break)

Week - 3:

i) Write a program to convert a list and tuple into arrays.

ii) Write a program to find common values between two arrays.

Write a function called gcd that takes parameters a and b and returns their greatest commondivisor.

Write a function called palindrome that takes a string argument and returns True if it is a palindromeand False otherwise. Remember that you can use the built-in function len to checkthe length of a string.

Week - 4:

Write a function called is_sorted that takes a list as a parameter and returns True if the list issorted in ascending order and False otherwise.

Write a function called has_duplicates that takes a list and returns True if there is any elementthatappears more than once. It should not modify the original list.

i). Write a function called remove_duplicates that takes a list and returns a new list with only theunique elements from the original. Hint: they don't have to be in the same order.

ii).The wordlist I provided, words.txt, doesn't contain single letter words. So you might want toadd "I", "a", and the empty string.

iii). Write a python code to read dictionary values from the user. Construct a function to invertits content. i.e., keys should be values and values should be keys.

i) Add a comma between the characters. If the given word is 'Apple', it should become 'A,p,p,l,e'

Remove the given word in all the places in a string?

vii) Write a function that takes a sentence as an input parameter and replaces the fir letterof everyword with the corresponding upper case letter and the rest of the letters i

the word by corresponding letters in lower case without using a built-in function?

Writes a recursive function that generates all binary strings of n-bit length

Week - 5:

i) Write a python program that defines a matrix and prints

Write a python program to perform addition of two square matrices

Write a python program to perform multiplication of two square matrices

How do you make a module? Give an example of construction of a module using differe r geometrical shapes and operations on them as its functions.

Use the structure of exception handling all general purpose exceptions.

Week-6:

a. Write a function called draw_rectangle that takes a Canvas and a Rectangle as arguments and draws a representation of the Rectangle on the Canvas.

h. Add an attribute named color to your Rectangle objects and modify draw_rectangle so that ituses the color attribute as the fill color.

i. Write a function called draw_point that takes a Canvas and a Point as arguments anddraws are presentation of the Point on the Canvas.

j. Define a new class called Circle with appropriate attributes and instantiate a fewCircl e objects.Write a function called draw_circle that draws circles on the canvas.

Write a Python program to demonstrate the usage of Method Resolution Order (MRO) ir multiple levels of Inheritances.

Write a python code to read a phone number and email-id from the user and validate it forcorrectness.

Week- 7

Write a Python code to merge two given file contents into a third file.

Write a Python code to open a given file and construct a function to check for given wordspresent init and display on found.

Write a Python code to Read text from a text file, find the word with most number of occurrences

Write a function that reads a file *file1* and displays the number of words, number of vowels, blankspaces, lower case letters and uppercase letters.

Week - 8:

Import numpy, Plotpy and Scipy and explore their functionalities.

a) Install NumPy package with pip and explore it.

Write a program to implement Digital Logic Gates – AND, OR, NOT, EX-OR

Write a program to implement Half Adder, Full Adder, and Parallel Adder

Write a GUI program to create a window wizard having two text labels, two text fields and twobuttons as Submit and Reset.

<div align="center">

IT WORKSHOP Lab

</div>

List of Experiments
PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its function Draw the block diagram of the CPU along with the configuration of each peripheral an submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to workin condition. Lab instructors should verify the work and follow it up with a Viva. Also studen need to go through the video which shows the process of assembling a PC. A vide would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal compute Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should hav windows installed. The system should be configured as dual boot with both Windows an Linux. Lab instructors should verify the installation and follow it up with a Viva

Internet & World Wide Web

Task1: **Orientation & Connectivity Boot Camp:** Students should get connected to th Local Area Network and access the Internet. In the process they configure the TCP/I setting. Finally students should demonstrate, to the instructor, how to access the websit and email. If there is no internet connectivity preparations need to be made by th instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with th

LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured.

Task 3: **Search Engines & Netiquette:** Students should know what search engines are and how to use the search engines. A few topics would be given to the students for which they need to search on Google. This should be demonstrated to the instructors by the student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the internet and would be asked to configure their computer to be safe on the internet. They need to customize their browsers to block pop ups, block active x downloads to avoid virus and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microsoft (MS) office or equivalent (FOSS) tool word: Importance of LaTeX and MS office or equivalent (FOSS) tool Word as word Processors, Details of the four tasks and features that would be covered in each, Using LaTeX and word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter in word.

Task 2: Using LaTeX and Word to create a project certificate. Features to be covered: Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors,Inserting Header and Footer, Using Date and Time option in both LaTeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check, Track Changes.

Task 4: Creating a Newsletter: Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes, Paragraphs and Mail Merge in word.

Excel

Excel Orientation: The mentor needs to tell the importance of MS office or equivalent (FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered in each. Using Excel – Accessing, overview of toolbars, saving excel files, Using help and resources.

Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cell

Summation, auto fill,Formatting Text

Task 2 : Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in exc
– average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linking,
Count function, LOOKUP/VLOOKUP

Task 3: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators
Conditionalformatting.

Powerpoint

Task 1: Students will be working on basic power point utilities and tools which help the
create basicpowerpoint presentations. PPT Orientation, Slide Layouts, Inserting Text, Wor
Art, Formatting Text,Bullets and Numbering, Auto Shapes, Lines and Arrows in PowerPoint

Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video
Objects, Tables and Charts.

Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation
slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidden
slides.

ANALOG AND DIGITAL ELECTRONICS LAB

List of Experiments
1. Full Wave Rectifier with & without filters
2. Common Emitter Amplifier Characteristics
3. Common Base Amplifier Characteristics
4. Common Source amplifier Characteristics
5. Measurement of h-parameters of transistor in CB, CE, CC configurations
6. Input and Output characteristics of FET in CS configuration
7. Realization of Boolean Expressions using Gates
8. Design and realization logic gates using universal gates
9. generation of clock using NAND / NOR gates
10. Design a 4 – bit Adder / Subtractor
11. Design and realization a Synchronous and Asynchronous counter using flip-flops
12. Realization of logic gates using DTL, TTL, ECL, etc.

DATA STRUCTURES LAB

List of Experiments
1. Write a program that uses functions to perform the following operations on singly linke
list.:
i) Creation ii) Insertion iii) Deletion iv) Traversal

2. Write a program that uses functions to perform the following operations on doubl
linked list.:

i) Creation ii) Insertion iii) Deletion iv) Traversal

3. Write a program that uses functions to perform the following operations on circul
linked list.:

i) Creation ii) Insertion iii) Deletion iv) Traversal

4. Write a program that implement stack (its operations) using

i) Arrays ii) Pointers

5. Write a program that implement Queue (its operations) using

i) Arrays ii) Pointers

6. Write a program that implements the following sorting methods to sort a given list
integers in ascending order

i) Bubble sort ii) Selection sort iii) Insertion sort

7. Write a program that use both recursive and non recursive functions to perform th
following searching operations for a Key value in a given list of integers:

i)   Linear search ii) Binary search

8. Write a program to implement the tree traversal methods.

9. Write a program to implement the graph traversal methods.

IT WORKSHOP LAB

PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its function
Draw the block diagram of the CPU along with the configuration of each peripheral an
submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to workin
condition. Lab instructors should verify the work and follow it up with a Viva. Also studen
need to go through the video which shows the process of assembling a PC. A vide
would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal compute
Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should hav
windows installed. The system should be configured as dual boot with both windows an
Linux. Lab instructors should verify the installation and follow it up with a Viva

Task 5: Hardware Troubleshooting: Students have to be given a PC which does not bo
due to improper assembly or defective peripherals. They should identify the problem an
fix it to get the computer back to working condition. The work done should be verified b
the instructor and followed up with a Viva.

Task 6: Software Troubleshooting: Students have to be given a malfunctioning CPU du
to system software problems. They should identify the problem and fix it to get th
computer back to working condition. The work done should be verified by the instruct

and followed up with a Viva.

Internet & World Wide Web

Task1: **Orientation & Connectivity Boot Camp:** Students should get connected to the Local Area Network and access the Internet. In the process they configure the TCP/I setting. Finally students should demonstrate, to the instructor, how to access the website and email. If there is no internet connectivity preparations need to be made by the instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and

JRE for applets should be configured.

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Task 4: Cyber Hygiene: Students would be exposed to the various threats on the internet and would be asked to configure their computer to be safe on the internet. They need to first install an antivirus software, configure their personal firewall and windows update on their computer. Then they need to customize their browsers to block pop ups, block active x downloads to avoid viruses and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microso (MS) office 2007/ equivalent (FOSS) tool word: Importance of LaTeX and MS office 200 7 equivalent (FOSS) tool Word as word Processors, Details of the four tasks and feature that would be covered in each, Using LaTeX and word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter in word.

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Summation, auto fill, Formatting Text

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– average, std.deviation, Charts, Renaming and Inserting worksheets, Hyper linkin g
Count function, LOOKUP/VLOOKUP

Task 3: Performance Analysis - Features to be covered:- Split cells, freeze panes, grou
and outline, Sorting, Boolean and logical operators, Conditional formatting

LaTeX and MS/equivalent (FOSS) tool Power Point

Task 1: Students will be working on basic power point utilities and tools which help the r
create basic power point presentation. Topic covered during this week includes: - P F
Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets an
Numbering, Auto Shapes, Lines and Arrows in both LaTeX and PowerPoint. Students w
be given model power point presentation which needs to be replicated (exactly how it
asked).

Task 2: Second week helps students in making their presentations interactive. Topi
covered during this week includes: Hyperlinks, Inserting –Images, Clip Art, Audio, Vide
Objects, Tables and Charts.

Task 3: Concentrating on the in and out of Microsoft power point and presentations i
LaTeX. Helps them learn best practices in designing and preparing power poi r
presentation. Topic covered during this week includes: - Master Layouts (slide, templat ɛ
and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting
Background, textures, Design Templates, Hidden slides.

PYTHON PROGRAMMING LAB

List of Experiments:

1. Write a program to demonstrate different number data types in Python.

2. Write a program to perform different Arithmetic Operations on numbers in Python.

3. Write a program to create, concatenate and print a string and accessing sub-strin
from a given string.

4. Write a python script to print the current date in the following format "Sun May 2
02:26:23 IST 2017"

5. Write a program to create, append, and remove lists in python.

6. Write a program to demonstrate working with tuples in python.

7. Write a program to demonstrate working with dictionaries in python.

8. Write a python program to find largest of three numbers.

9. Write a Python program to convert temperatures to and from Celsius, Fahrenheit.

Formula : c/5 = f-32/9]

10. Write a Python program to construct the following pattern, using a nested for loop

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

11. Write a Python script that prints prime numbers less than 20.

12. Write a python program to find factorial of a number using Recursion.

13. Write a program that accepts the lengths of three sides of a triangle as inputs. Th program output should indicate whether or not the triangle is a right triangle (Recall fro the Pythagorean Theorem that in a right triangle, the square of one side equals the su of the squares of the other two sides).

14. Write a python program to define a module to find Fibonacci Numbers and impo the module to another program.

15. Write a python program to define a module and import a specific function in th module to another program.

16. Write a script named copyfile.py. This script should prompt the user for the names two text files. The contents of the first file should be input and written to the second file.

17. Write a program that inputs a text file. The program should print all of the uniqu words in the file in alphabetical order.

18. Write a Python class to convert an integer to a roman numeral.\

19. Write a Python class to implement pow(x, n)

20. Write a Python class to reverse a string word by word.

OPERATING SYSTEMS LAB

List of Experiments:

1. Write C programs to simulate the following CPU Scheduling algorithms
a) FCFS b) SJF c) Round Robin d) priority
2. Write programs using the I/O system calls of UNIX/LINUX operating system
(open, read, write, close, fcntl, seek, stat, opendir, readdir)
3. Write a C program to simulate Bankers Algorithm for Deadlock Avoidance an
Prevention.
4. Write a C program to implement the Producer – Consumer problem using semaphor e
using UNIX/LINUX system calls.
5. Write C programs to illustrate the following IPC mechanisms
a) Pipes b) FIFOs c) Message Queues d) Shared Memory
6. Write C programs to simulate the following memory management techniques
a) Paging b) Segmentation

Computer Networks Lab

List of Experiments

1. Implement the data link layer framing methods such as character, character-stuffin g
and bitstuffing.

2. Write a program to compute CRC code for the polynomials CRC-12, CRC-16 and CRC
CCIP

3. Develop a simple data link layer that performs the flow control using the sliding
windowprotocol, and loss recovery using the Go-Back-N mechanism.

4. Implement Dijsktra's algorithm to compute the shortest path through a network

5. Take an example subnet of hosts and obtain a broadcast tree for the subnet.

6. Implement distance vector routing algorithm for obtaining routing tables at each nod e

7. Implement data encryption and data decryption

8. Write a program for congestion control using Leaky bucket algorithm.

9. Write a program for frame sorting technique used in buffers.

10. Wireshark

i.   Packet Capture Using Wire shark

ii.   Starting Wire shark

iii. Viewing Captured Traffic

iv.   Analysis and Statistics & Filters.

11. How to run Nmap scan

12. Operating System Detection using Nmap

13. Do the following using NS2 Simulator

i.   NS2 Simulator-Introduction

ii.   Simulate to Find the Number of Packets Dropped

iii.   Simulate to Find the Number of Packets Dropped by TCP/UDP

iv.   Simulate to Find the Number of Packets Dropped due to Congestion

v.   Simulate to Compare Data Rate& Throughput.

vi.   Simulate to Plot Congestion for Different Source/Destination

vii.   Simulate to Determine the Performance with respect to Transmission of Packets

Java Programming Lab

List of Experiments

1.   Use Eclipse or Net bean platform and acquaint with the various menus. Create test project, add a test class, and run it. See how you can use auto suggestions, auto fi Try code formatter and code refactoring like renaming variables, methods, and classe Try debug step by step with a small program of about 10 to 15 lines which contains a least one if else condition and a for loop.

2.   Write a Java program that works as a simple calculator. Use a grid layout to arrang buttons for the digits and for the +, -,*, % operations. Add a text field to display the resul Handle any possible exceptions like divided by zero.

3.   a) Develop an applet in Java that displays a simple message.

a)   Develop an applet in Java that receives an integer in one text field, and compute its factorialValue and returns it in another text field, when the button named "Compute is clicked.

4.   Write a Java program that creates a user interface to perform integer divisions. Th user enters two numbers in the text fields, Num1 and Num2. The division of Num1 an Num 2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num were not an integer, the program would throw a Number Format Exception. If Num were Zero, the program would throw an Arithmetic Exception. Display the exception in

message dialog box.

5.   Write a Java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.

6.   Write a Java program for the following: Create a doubly linked list of elements. Delete a given element from the above list. Display the contents of the list after deletion

7.   Write a Java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green with radio buttons. On selecting a button, an appropriate message with "Stop" or "Ready" or "Go" should appear above the button in selected color. Initially, there is no message shown.

8.   Write a Java program to create an abstract class named Shape that contains two integers and an empty method named print Area (). Provide three classes named Rectangle, Triangle, and Circle such that each one of the classes extends the class Shape. Each one of the classes contains onlythe method print Area () that prints the area of the given shape.

9.   Suppose that a table named Table.txt is stored in a text file. The first line in the file the header, and the remaining lines correspond to rows in the table. The elements are separated by commas. Write a java program to display the table using Labels in Grid Layout.

10.   Write a Java program that handles all mouse events and shows the event name at the center of the window when a mouse event is fired (Use Adapter classes).

11.   Write a Java program that loads names and phone numbers from a text file where the data is organized as one line per record and each field in a record are separated by a tab (\t). It takes a name or phone number as input and prints the corresponding other value from the hash table (hint: use hash tables).

12.   Write a Java program that correctly implements the producer – consumer problem using the concept of interthread communication.

13.   Write a Java program to list all the files in a directory including the files present in its subdirectories.

14.   Write a Java program that implements Quick sort algorithm for sorting a list of names in ascending order

15. Write a Java program that implements Bubble sort algorithm for sorting i descending order and also shows the number of interchanges occurred for the given s e of integers.

Cryptography & Network Security Lab

List of Experiments

1. Write a C program that contains a string (char pointer) with a value 'Hello world'. The programshould XOR each character in this string with 0 and displays the result.

2. Write a C program that contains a string (char pointer) with a value 'Hello world'. The programshould AND or and XOR each character in this string with 127 and display the result.

3. Write a Java program to perform encryption and decryption using the following algorithms

a. Ceaser cipher b. Substitution cipher c. Hill Cipher

4. Write a C/JAVA program to implement the DES algorithm logic.

5. Write a C/JAVA program to implement the Blowfish algorithm logic.

6. Write a C/JAVA program to implement the Rijndael algorithm logic.

7. Write the RC4 logic in Java Using Java cryptography; encrypt the text "Hello world ' usingBlowfish. Create your own key using Java key tool.

8. Write a Java program to implement RSA algorithm.

9. Implement the Diffie-Hellman Key Exchange mechanism using HTML and JavaScript.

10. Calculate the message digest of a text using the SHA-1 algorithm in JAVA. Calculate the message digest of a text using the MD5 algorithm in JAVA

Advanced Communication Skills Lab

1. INTRODUCTION:

The introduction of the Advanced Communication Skills Lab is considered essential at 3 year level. Atthis stage, the students need to prepare themselves for their careers whic may require them to listen to, read, speak and write in English both for their profession and interpersonal communication in the globalized context.

The proposed course should be a laboratory course to enable students to use 'goo c

English and perform the following:

- Gathering ideas and information to organize ideas relevantly and coherently.

- Engaging in debates.

- Participating in group discussions.

- Facing interviews.

- Writing project/research reports/technical reports.

- Making oral presentations.

- Writing formal letters.

- Transferring information from non-verbal to verbal texts and vice-versa.

- Taking part in social and professional communication.

2. <u>OBJECTIVES:</u>

This Lab focuses on using multi-media instruction for language development to meet th
following targets:

- To improve the students' fluency in English, through a well-developed vocabulary an
enable them to listen to English spoken at normal conversational speed by educate
English speakers and respond appropriately in different socio-cultural and profession
contexts.

- Further, they would be required to communicate their ideas relevantly and coherent
in writing.

- To prepare all the students for their placements.

3. <u>SYLLABUS:</u>

The following course content to conduct the activities is prescribed for the Advance
English Communication Skills (AECS) Lab:

1. **Activities on Fundamentals of Inter-personal Communication and Building Vocabul a**
- Starting a conversation – responding appropriately and relevantly – using the rig
body language
– Role Play in different situations & Discourse Skills- using visuals - Synonyms and antonym
word roots, one-word substitutes, prefixes and suffixes, study of word origin, busine
vocabulary, analogy, idioms and phrases, collocations & usage of vocabulary.

2. **Activities on Reading Comprehension** –General Vs Local comprehension, reading f
facts, guessing meanings from context, scanning, skimming, inferring meaning, critic

reading& effectivegoogling.

3. **Activities on Writing Skills** – Structure and presentation of different types of writing *letter writing/Resume writing/ e-correspondence/Technical report writing/* – planning fo writing – improving one's writing.

4. **Activities on Presentation Skills** – Oral presentations (individual and group) throug JAM sessions/seminars/**PPTs** and written presentations through posters/projects/reports/ e-mails/assignments etc.

5. **Activities on Group Discussion and Interview Skills** – Dynamics of group discussia intervention, summarizing, modulation of voice, body language, relevance, fluency an organization of ideas and rubrics for evaluation- Concept and process, pre-intervie planning, opening

strategies, answering strategies, interview through tele-conference & video-conference and MockInterviews.

4. <u>MINIMUM REQUIREMENT:</u>

The Advanced English Communication Skills (AECS) Laboratory shall have the following infrastructuralfacilities to accommodate at least 35 students in the lab:

- Spacious room with appropriate acoustics.
- Round Tables with movable chairs
- Audio-visual aids
- LCD Projector
- Public Address system
- P – IV Processor, Hard Disk – 80 GB, RAM–512 MB Minimum, Speed – 2.8 GHZ
- T. V, a digital stereo & Camcorder
- Headphones of High quality

5. <u>SUGGESTED SOFTWARE:</u>

The software consisting of the prescribed topics elaborated above should be procured and used.

- Oxford Advanced Learner's Compass, 7th Edition
- DELTA's key to the Next Generation TOEFL Test: Advanced Skill Practice.
- Lingua TOEFL CBT Insider, by Dream tech
- TOEFL & GRE (KAPLAN, AARCO & BARRONS, USA, Cracking GRE by CLIFFS)

Database Management Systems Lab

List of Experiments

1. Concept design with E-R Model

2. Relational Model

3. Normalization

4. Practicing DDL commands

5. Practicing DML commands

6. Querying (using ANY, ALL, IN, Exists, NOT EXISTS, UNION, INTERSECT, Constraints etc.)

7. Queries using Aggregate functions, GROUP BY, HAVING and Creation and dropping o Views.

8. Triggers (Creation of insert trigger, delete trigger, update trigger)

9. Procedures

10. Usage of Cursors

Professional Elective - III Mobile Application Security/ Machine Learning/ Mobile Application Development/ Blockchain Technology/DevOps Lab

List of Experiments

1. Write code for a simple user registration form for an event.

2. Explore Git and GitHub commands.

3. Practice Source code management on GitHub. Experiment with the source code written inexercise 1.

4. Jenkins installation and setup, explore the environment.

5. Demonstrate continuous integration and development using Jenkins.

6. Explore Docker commands for content management.

7. Develop a simple containerized application using Docker.

8. Integrate Kubernetes and Docker

9. Automate the process of running containerized application developed in exercise 7 usingKubernetes.

10. Install and Explore Selenium for automated testing.

11. Write a simple program in JavaScript and perform testing using Selenium.
Develop test cases for the above containerized application using selenium

Cyber Security Lab

List of Experiments

1. Perform an Experiment for port scanning with nmap
2. Set Up a honeypot and monitor the honeypot on the network
3. Install Jscript/Cryptool tool (or any other equivalent) and demonstrate Asymmetric, Symmetriccrypto algorithm, Hash and Digital/PKI signatures.
4. Generate minimum 10 passwords of length 12 characters using open SSL command
5. Perform practical approach to implement Footprinting-Gathering target information usingDmitry-Dmagic, UAtester
6. Working with sniffers for monitoring network communication (Wireshark).
7. Using Snort, perform real time traffic analysis and packet logging.
8. Perform email analysis using the Autopsy tool.
9. Perform Registry analysis and get boot time logging using process monitor tool
10. Perform File type detection using Autopsy tool
11. Perform Memory capture and analysis using FTK imager tool
12. Perform Network analysis using the Network Miner tool

Cyber Crime Investigation &Digital Forensics Lab

List of Experiments

1. **Perform email analysis** using the tools like Exchange EDB viewer, MBOX viewer an View user mailboxes and public folders, Filter the mailbox data based on various criteri , Search forparticular items in user mailboxes and public folders
2. **Perform Browser history analysis** and get the downloaded content, history, save logins, searches, websites visited etc using Foxton Forensics tool, Dumpzilla.
3. **Perform mobile analysis** in the form of retrieving call logs, SMS log, all contacts list usin theforensics tool like SAFT
4. **Perform Registry analysis** and get boot time logging using process monitor tool
5. **Perform Disk imaging and cloning the** using the X-way Forensics tools
6. **Perform Data Analysis i.e** History about open file and folder, and view folder action : usingLastview activity tool

7. **Perform Network analysis** using the Network Miner tool.

8. **Perform information for incident response** using the crowd Response tool

9. **Perform File type detection using** Autopsy tool

10. **Perform Memory capture and analysis** using the Live RAM capture or any forensic to c
l

LIST OF EXPERIMENTS

PROGRAMMING FOR PROBLEM SOLVING LAB

Practice sessions:

a. Write a simple program that prints the results of all the operators available in
(including pre/post increment, bitwise and/or/not, etc.). Read required operand valu ε
from standard input.

b. Write a simple program that converts one given data type to another using aut
conversion and casting. Take the values form standard input.

Simple numeric problems:

a. Write a program for fiend the max and min from the three numbers.

b. Write the program for the simple, compound interest.

c. Write program that declares Class awarded for a given percentage of marks, wher
mark <40%= Failed, 40% to <60% = Second class, 60% to <70%=First class, >= 70%
Distinction. Read percentage from standard input.

d. Write a program that prints a multiplication table for a given number and the numb ε
of rows in the table. For example, for a number 5 and rows = 3, the output should be:

e. 5 x 1 = 5

f. 5 x 2 = 10

g. 5 x 3 = 15

h. Write a program that shows the binary equivalent of a given positive number betwee
0 to 255.

Expression Evaluation:

a. A building has 10 floors with a floor height of 3 meters each. A ball is dropped from th
top of the building. Find the time taken by the ball to reach each floor. (Use the formula

= ut+(1/2)at^2 where u and a are the initial velocity in m/sec (= 0) and acceleration i
m/sec^2 (= 9.8 m/s^2)).

b. Write a C program, which takes two integer operands and one operator from the use
performs the operation and then prints the result. (Consider the operators +,-,*, /, % an
use Switch Statement)

c. Write a program that finds if a given number is a prime number

d. Write a C program to find the sum of individual digits of a positive integer and te
given number is palindrome.

e. A Fibonacci sequence is defined as follows: the first and second terms in th
sequence are 0 and 1. Subsequent terms are found by adding the preceding two ter n
in the sequence. Write a C program to generate the first n terms of the sequence.

f. Write a C program to generate all the prime numbers between 1 and n, where n is
value supplied by the user.

g. Write a C program to find the roots of a Quadratic equation.

h. Write a C program to calculate the following, where x is a fractional value.

i. 1-x/2 +x^2/4-x^3/6

j. Write a C program to read in two numbers, x and n, and then compute the sum of th
geometric progression: 1+x+x^2+x^3+.............+x^n. For example: if n is 3 and x is 5, the
the program computes 1+5+25+125.

Arrays and Pointers and Functions:

a. Write a C program to find the minimum, maximum and average in an array   c.
integers.

b. Write a functions to compute mean, variance, Standard Deviation, sorting of
elements in single dimension array.

c. Write a C program that uses functions to perform the following:

d. Addition of Two Matrices

e. ii. Multiplication of Two Matrices

f. iii. Transpose of a matrix with memory dynamically allocated for the new matrix as ro
and column counts may not be same.

g. Write C programs that use both recursive and non-recursive functions

h. To find the factorial of a given integer.

i. ii. To find the GCD (greatest common divisor) of two given integers.

j. iii. To find x^n

k. Write a program for reading elements using pointer into array and display the valu e using array.

l. Write a program for display values reverse order from array using pointer.

m. Write a program through pointer variable to sum of n elements from array.

Files:

a. Write a C program to display the contents of a file to standard output device.

b. Write a C program which copies one file to another, replacing all lowercas characters with their uppercase equivalents.

c. Write a C program to count the number of times a character occurs in a text file. Th file name and the character are supplied as command line arguments.

d. Write a C program that does the following:

It should first create a binary file and store 10 integers, where the file name and 1 values are given in the command line. (hint: convert the strings using atoi function)

Now the program asks for an index and a value from the user and the value at th index should be changed to the new value in the file. (hint: use fseek function)

The program should then read all 10 values and print them back.

e. Write a C program to merge two files into a third file (i.e., the contents of the firs t fil followed by those of the second are put in the third file).

Strings:

a. Write a C program to convert a Roman numeral ranging from I to L to its decim a. equivalent.

b. Write a C program that converts a number ranging from 1 to 50 to Roman equivalent

c. Write a C program that uses functions to perform the following operations:

d. To insert a sub-string in to a given main string from a given position.

e. ii. To delete n Characters from a given position in a given string.

f. Write a C program to determine if the given string is a palindrome or not (Spelled sam in both directions with or without a meaning like madam, civic, noon, abcba, etc.)

g. Write a C program that displays the position of a character ch in the string S or – 1 if doesn't contain ch.

h. Write a C program to count the lines, words and characters in a given text.

Miscellaneous:

a. Write a menu driven C program that allows a user to enter n numbers and the choose between finding the smallest, largest, sum, or average. The menu and all th choices are to be functions. Use a switch statement to determine what action to tak e Display an error message if an invalid choice is entered.

b. Write a C program to construct a pyramid of numbers as follows:

1

1 2

1 2 3

*

* *

* * *

1

2 3

4 5 6

1

2 2

3 3 3

4 4 4 4

*

* *

* * *

* *

*

Sorting and Searching:

a. Write a C program that uses non recursive function to search for a Key value in given

b. list of integers using linear search method.

c. Write a C program that uses non recursive function to search for a Key value in a give

d. sorted list of integers using binary search method.

e. Write a C program that implements the Bubble sort method to sort a given list of

f. integers in ascending order.

g. Write a C program that sorts the given array of integers using selection sort i

descending order

h. Write a C program that sorts the given array of integers using insertion sort i ascending order

i. Write a C program that sorts a given array of names

Python Programming Lab

List of Experiments

Note: The lab experiments will be like the following experiment examples

Week -1:

1.i) Use a web browser to go to the Python website http://python.org. This page contai r information about Python and links to Python-related pages, and it gives you the ability t search the Python documentation.

ii) Start the Python interpreter and type help() to start the online help utility.

2.Start a Python interpreter and use it as a Calculator.

3.write a program to calculate compound interest when principal, rate and number of periods aregiven.

i) Given coordinates (x1, y1), (x2, y2) find the distance between two points

4. Read name, address, email and phone number of a person through keyboard and print thedetails.

Week - 2:

1.Print the below triangle using for loop.5

4 4

3 3 3

2 2 2 2

1 1 1 1 1

2.Write a program to check whether the given input is digit or lowercase character o . uppercase character or a special character (use 'if-else-if' ladder)

3.Python Program to Print the Fibonacci sequence using while loop

4.Python program to print all prime numbers in a given interval (use break)

Week - 3:

1.i) Write a program to convert a list and tuple into arrays.

ii) Write a program to find common values between two arrays.

2.Write a function called gcd that takes parameters a and b and returns their greatest commondivisor.

3.Write a function called palindrome that takes a string argument and returns True if it is palindromeand False otherwise. Remember that you can use the built-in function len to checkthe length of a string.

Week - 4:

1.Write a function called is_sorted that takes a list as a parameter and returns True if the list issorted in ascending order and False otherwise.

2.Write a function called has_duplicates that takes a list and returns True if there is any elementthatappears more than once. It should not modify the original list.

i). Write a function called remove_duplicates that takes a list and returns a new list with only theunique elements from the original. Hint: they don't have to be in the same orde r

ii).The wordlist I provided, words.txt, doesn't contain single letter words. So you might want toadd "I", "a", and the empty string.

iii). Write a python code to read dictionary values from the user. Construct a function t c invertits content. i.e., keys should be values and values should be keys.

3.i) Add a comma between the characters. If the given word is 'Apple', it should becom (
'A,p,p,l,e'

viii)   Remove the given word in all the places in a string?

ix) Write a function that takes a sentence as an input parameter and replaces the fir letterof everyword with the corresponding upper case letter and the rest of the letters i the word by corresponding letters in lower case without using a built-in function?

4.Writes a recursive function that generates all binary strings of n-bit length

Week - 5:

1.i) Write a python program that defines a matrix and prints

viii)   Write a python program to perform addition of two square matrices

ix) Write a python program to perform multiplication of two square matrices

2.How do you make a module? Give an example of construction of a module using

differentgeometrical shapes and operations on them as its functions.

3. Use the structure of exception handling all general purpose exceptions.

Week-6:

1.a. Write a function called draw_rectangle that takes a Canvas and a Rectangle as arguments and draws a representation of the Rectangle on the Canvas.

k. Add an attribute named color to your Rectangle objects and modify draw_rectangle so that ituses the color attribute as the fill color.

l. Write a function called draw_point that takes a Canvas and a Point as arguments an draws are presentation of the Point on the Canvas.

m. Define a new class called Circle with appropriate attributes and instantiate a few Circle objects.Write a function called draw_circle that draws circles on the canvas.

2. Write a Python program to demonstrate the usage of Method Resolution Order (MRO) in multiple levels of Inheritances.

3. Write a python code to read a phone number and email-id from the user and validate it forcorrectness.

Week- 7

1. Write a Python code to merge two given file contents into a third file.

2. Write a Python code to open a given file and construct a function to check for given wordspresent init and display on found.

3. Write a Python code to Read text from a text file, find the word with most number of occurrences

4. Write a function that reads a file *file1* and displays the number of words, number of vowels, blankspaces, lower case letters and uppercase letters.

Week - 8:

1. Import numpy, Plotpy and Scipy and explore their functionalities.

2. a) Install NumPy package with pip and explore it.

3. Write a program to implement Digital Logic Gates – AND, OR, NOT, EX-OR

4. Write a program to implement Half Adder, Full Adder, and Parallel Adder

5. Write a GUI program to create a window wizard having two text labels, two text fields and twobuttons as Submit and Reset.

List of Experiments

PC Hardware

Task 1: Identify the peripherals of a computer, components in a CPU and its function Draw the block diagram of the CPU along with the configuration of each peripheral an submit to your instructor.

Task 2: Every student should disassemble and assemble the PC back to workin condition. Lab instructors should verify the work and follow it up with a Viva. Also studen need to go through the video which shows the process of assembling a PC. A vide would be given as part of the course content.

Task 3: Every student should individually install MS windows on the personal compute Lab instructor should verify the installation and follow it up with a Viva.

Task 4: Every student should install Linux on the computer. This computer should hav windows installed. The system should be configured as dual boot with both Windows an Linux. Lab instructors should verify the installation and follow it up with a Viva

Internet & World Wide Web

Task1: **Orientation & Connectivity Boot Camp:** Students should get connected to th e Local Area Network and access the Internet. In the process they configure the TCP/I setting. Finally students should demonstrate, to the instructor, how to access the websit e and email. If there is no internet connectivity preparations need to be made by th instructors to simulate the WWW on the LAN.

Task 2: Web Browsers, Surfing the Web: Students customize their web browsers with th LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins lik Macromedia Flash and JRE for applets should be configured.

Task 3: **Search Engines & Netiquette:** Students should know what search engines are an how to use the search engines. A few topics would be given to the students for whic they need to search on Google. This should be demonstrated to the instructors by th student.

Task 4: Cyber Hygiene: Students would be exposed to the various threats on the interne and would be asked to configure their computer to be safe on the internet. They nee

to customize their browsers to block pop ups, block active x downloads to avoid virus ⌐
and/or worms.

LaTeX and WORD

Task 1 – Word Orientation: The mentor needs to give an overview of LaTeX and Microso
(MS) office or equivalent (FOSS) tool word: Importance of LaTeX and MS office ⌐
equivalent (FOSS) tool Word as word Processors, Details of the four tasks and features th ⌐
would be covered in each, Using LaTeX and word – Accessing, overview of toolba ⌐
saving files, Using help and resources, rulers, format painter in word.

Task 2: Using LaTeX and Word to create a project certificate. Features to be covered
Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Charact ⌐
Spacing, Borders and Colors,Inserting Header and Footer, Using Date and Time option i ⌐
both LaTeX and Word.

Task 3: Creating project abstract Features to be covered:-Formatting Styles, Insertin
table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnot
Hyperlink, Symbols, Spell Check, Track Changes.

Task 4: Creating a Newsletter: Features to be covered:- Table of Content, Newspap
columns, Images from files and clipart, Drawing toolbar and Word Art, Formattin
Images, Textboxes, Paragraphs and Mail Merge in word.

Excel

Excel Orientation: The mentor needs to tell the importance of MS office or equivale
(FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and featue
that would be covered in each. Using Excel – Accessing, overview of toolbars, savin
excel files, Using help and resources.

Task 1: Creating a Scheduler - Features to be covered: Gridlines, Format Cell
Summation, auto fill,Formatting Text

Task 2 : Calculating GPA - .Features to be covered:- Cell Referencing, Formulae in exc ⌐
– average, std. deviation, Charts, Renaming and Inserting worksheets, Hyper linkin⌐
Count function, LOOKUP/VLOOKUP

Task 3: Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators
Conditionalformatting.

Powerpoint

Task 1: Students will be working on basic power point utilities and tools which help them create basicpowerpoint presentations. PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text,Bullets and Numbering, Auto Shapes, Lines and Arrows in PowerPoint.

Task 2: Interactive presentations - Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts.

Task 3: Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), and Inserting – Background, textures, Design Templates, Hidde slides.

Data Structures Lab

List of Experiments

1. Write a program that uses functions to perform the following operations on singly linkedlist.:

i)Creation ii) Insertion   iii) Deletion   iv) Traversal

2. Write a program that uses functions to perform the following operations on doubly linkedlist.:

i)Creation ii) Insertion   iii) Deletion   iv) Traversal

3. Write a program that uses functions to perform the following operations on circular linkedlist.:

i)Creation ii) Insertion   iii) Deletion   iv) Traversal

4. Write a program that implement stack (its operations) using

i)Arrays   ii) Pointers

5. Write a program that implement Queue (its operations) using

i)Arrays   ii) Pointers

6. Write a program that implements the following sorting methods to sort a given list of integersin ascending order

i)Bubble sort   ii) Selection sort   iii) Insertion sort

7. Write a program that use both recursive and non-recursive functions to perform the followingsearching operations for a Key value in a given list of integers:

i)Linear search ii) Binary search

8. Write a program to implement the tree traversal methods.
9. Write a program to implement the graph traversal methods.

Python Programming Lab

List of Experiments

1. Write a program to demonstrate different number data types in Python.
2. Write a program to perform different Arithmetic Operations on numbers in Python.
3. Write a program to create, concatenate and print a string and accessing sub-string from agiven string.

4. Write a python script to print the current date in the following format "Sun May 29 02:26:23IST 2017"

5. Write a program to create, append, and remove lists in python.

6. Write a program to demonstrate working with tuples in python.

7. Write a program to demonstrate working with dictionaries in python.

8. Write a python program to find largest of three numbers.

9. Write a Python program to convert temperatures to and from Celsius, Fahrenheit. [Formula :c/5 = f-32/
]

10. Write a Python program to construct the following pattern, using a nested for loop

*

* *

* * *

* * * *

* * * * *

* * * *

* * *

* *

*

11. Write a Python script that prints prime numbers less than 20.

12. Write a python program to find factorial of a number using Recursion.

13. Write a program that accepts the lengths of three sides of a triangle as inputs. The programoutput should indicate whether or not the triangle is a right triangle (Recall from the

Pythagorean Theorem that in a right triangle, the square of one side equals the sum of thesquares of the other two sides).

14. Write a python program to define a module to find Fibonacci Numbers and import the moduleto another program.

15. Write a python program to define a module and import a specific function in that module toanother program.

16. Write a script named copyfile.py. This script should prompt the user for the names of two textfiles. The contents of the first file should be input and written to the second file.

17. Write a program that inputs a text file. The program should print all of the unique words in thefile in alphabetical order.

18. Write a Python class to convert an integer to a roman numeral.

19. Write a Python class to implement pow(x, n)

20. Write a Python class to reverse a string word by word

Operating Systems Lab

List of Experiments

1. Write C programs to simulate the following CPU Scheduling algorithms

a) FCFS   b) SJF   c) Round Robin   d) priority

2. Write programs using the I/O system calls of UNIX/LINUX operating system (open, read, write,close, fcntl, seek, stat, opendir, readdir)

3. Write a C program to simulate Bankers Algorithm for Deadlock Avoidance and Prevention.

4. Write a C program to implement the Producer – Consumer problem using semaphores usingUNIX/LINUX system calls.

5. Write C programs to illustrate the following IPC mechanisms

a) Pipes   b) FIFOs   c) Message Queues d) Shared Memory

6. Write C programs to simulate the following memory management techniques

a)Paging   b) Segmentation

Artificial Intelligence Lab

List of Experiments

1) Write a program in prolog to implement simple facts and Queries

2) Write a program in prolog to implement simple arithmetic

3) Write a program in prolog to solve Monkey banana problem

4) Write a program in prolog to solve Tower of Hanoi

5) Write a program in prolog to solve 8 Puzzle problems

6) Write a program in prolog to solve 4-Queens problem

7) Write a program in prolog to solve Traveling salesman problem

8) Write a program in prolog for Water jug problem

Database Management Systems Lab

List of Experiments

1. Concept design with E-R Model

2. Relational Model

3. Normalization

4. Practicing DDL commands

5. Practicing DML commands

6. Querying (using ANY, ALL, IN, Exists, NOT EXISTS, UNION, INTERSECT, Constraints etc.)

7. Queries using Aggregate functions, GROUP BY, HAVING and Creation and dropping o ̄
Views.

8. Triggers (Creation of insert trigger, delete trigger, update trigger)

9. Procedures

10. Usage of Cursors

Java Programming Lab

List of Experiments

1. Use Eclipse or Net bean platform and acquaint with the various menus. Create a test project, add test class, and run it. See how you can use auto suggestions, auto fill. Try code formatter and co c refactoring like renaming variables, methods, and classes. Try debug step by step with a small program about 10 to 15 lines which contains at least one if else condition and a for loop.

2. Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for t digits and for the +, -,*, % operations. Add a text field to display the result. Handle any possible exceptio like divided by zero.

3. a) Develop an applet in Java that displays a simple message.

b) Develop an applet in Java that receives an integer in one text field, and computes its factorialValu and returns it in another text field, when the button named "Compute" is clicked.

4. Write a Java program that creates a user interface to perform integer divisions. The user enters t w numbers in the text fields, Num1 and Num2. The division of Num1 and Num 2 is displayed in the Result fie when the Divide button is clicked. If Num1 or Num2 were not an integer, the program would throw Number Format Exception. If Num2 were Zero, the program would throw an Arithmetic Exception. Displ c the exception in a message dialog box.

5. Write a Java program that implements a multi-thread application that has three threads. First threc generates random integer every 1 second and if the value is even, second thread computes the square the number and prints. If the value is odd, the third thread will print the value of cube of the number.

6. Write a Java program for the following: Create a doubly linked list of elements. Delete a given element from the above list. Display the contents of the list after deletion.

7. Write a Java program that simulates a traffic light. The program lets the user select one of three ligh red, yellow, or green with radio buttons. On selecting a button, an appropriate message with "Stop" "Ready" or "Go" should appear above the buttons in selected color. Initially, there is no message shown.

8. Write a Java program to create an abstract class named Shape that contains two integers and c empty method named print Area (). Provide three classes named Rectangle, Triangle, and Circle such th c

each one of the classes extends the class Shape. Each one of the classes contains only the method print Area () that prints the area of the given shape.

9.   Suppose that a table named Table.txt is stored in a text file. The first line in the file is the header, and the remaining lines correspond to rows in the table. The elements are separated by commas. Write a java program to display the table using Labels in Grid Layout.

10.   Write a Java program that handles all mouse events and shows the event name at the center of the window when a mouse event is fired (Use Adapter classes).

11.   Write a Java program that loads names and phone numbers from a text file where the data organized as one line per record and each field in a record are separated by a tab (\t). It takes a name phone number as input and prints the corresponding other value from the hash table (hint:use hash tables

12.   Write a Java program that correctly implements the producer – consumer problem using the concept of interthread communication.

13.   Write a Java program to list all the files in a directory including the files present in all its subdirectorie s

14.   Write a Java program that implements Quick sort algorithm for sorting a list of names in ascending order

15.   Write a Java program that implements Bubble sort algorithm for sorting in descending order and also shows the number of interchanges occurred for the given set of integers.

Department of H& S - Laboratories – Lab Experiments

ENGINEERING WORKSHOP LABORATORY

List of Experiments:

1. TRADES FOR EXERCISES:

At least two exercises from each trade:

I. Carpentry – (T-Lap Joint, Dovetail Joint, Mortise & Tenon Joint)

II. Fitting – (V-Fit, Dovetail Fit & Semi-circular fit)

III. Tin-Smithy – (Square Tin, Rectangular Tray & Conical Funnel)

IV. Foundry – (Preparation of Green Sand Mould using Single Piece and Split Pattern)

V. Welding Practice – (Arc Welding & Gas Welding)

VI. House-wiring – (Parallel & Series, Two-way Switch and Tube Light)

VII. Black Smithy – (Round to Square, Fan Hook and S-Hook)

2. TRADES FOR DEMONSTRATION & EXPOSURE:

Plumbing, Machine Shop, Metal Cutting (Water Plasma), Power tools in

construction and Wood Working

BASIC ELECTRICAL ENGINEERING LABORATORY

List of experiments/demonstrations:
PART- A (compulsory)

1. Verification of KVL and KCL

2. Verification of Thevenin's and Norton's theorem

3. Transient Response of Series RL and RC circuits for DC excitation

4. Resonance in series RLC circuit

5. Calculations and Verification of Impedance and Current of RL, RC andRLC series circuits

6. Measurement of Voltage, Current and Real Power in primary and SecondaryCircuits o a Single-Phase Transformer

7. Performance Characteristics of a DC Shunt Motor

8. Torque-Speed Characteristics of a Three-phase Induction Motor.

PART-B (any two experiments from the given list)

1. Verification of Superposition theorem.

2. Three Phase Transformer: Verification of Relationship between Voltages and Currents(Star-Delta, Delta-Delta, Delta-star, Star-Star)

3. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)

4. Measurement of Active and Reactive Power in a balanced Three-phase circuit No-Load Characteristics of a Three-phase Alternator

BASIC ELECTRICAL AND ELECTRONICS ENGINEERING LAB

List of experiments/demonstrations:

PART A: ELECTRICAL

1.Verification of KVL and KCL

2.(i) Measurement of Voltage, Current and Real Power in primary and Secondary Circuit of aSingle-Phase Transformer

(ii) Verification of Relationship between Voltages and Currents (Star-Delta, Delta-Delta, Delta-star, Star-Star) in a Three Phase Transformer

3.Measurement of Active and Reactive Power in a balanced Three-phase circuit

4.Performance Characteristics of a Separately Excited DC Shunt Motor

5.Performance Characteristics of a Three-phase Induction Motor

6. No-Load Characteristics of a Three-phase Alternator

PART B: ELECTRONICS

1. Study and operation of

(i)Multi-meters (ii) Function Generator (iii) Regulated Power Supplies (iv) CRO.

2. PN Junction diode characteristics

3. Zener diode characteristics and Zener as voltage Regulator

4. Input & Output characteristics of Transistor in CB / CE configuration

5. Full Wave Rectifier with & without filters

6. Input and Output characteristics of FET in CS configuration

APPLIED PHYSICS LAB

List of Experiments:

1. Determination of work function and Planck's constant using photoelectric effect.

2. Determination of Hall co-efficient and carrier concentration of a given semiconducto r

3. Characteristics of series and parallel LCR circuits.

4. V-I characteristics of a p-n junction diode and Zener diode

5. Input and output characteristics of BJT (CE, CB & CC configurations)

6. a) V-I and L-I characteristics of light emitting diode (LED)

b) V-I Characteristics of solar cell

7. Determination of Energy gap of a semiconductor.

8. Determination of the resistivity of semiconductor by two probe method.

9. Study B-H curve of a magnetic material.

10. Determination of dielectric constant of a given material

11. a) Determination of the beam divergence of the given LASER beam

b) Determination of Acceptance Angle and Numerical Apertureof an optical fiber.

12. Understanding the method of least squares – torsional pendulum as an example.

ENGINEERING CHEMISTRY LAB

List of Experiments:

I. Volumetric Analysis: Estimation of Hardness of water by EDTA Complexometry method.

II. Conductometry: Estimation of the concentration of an acid by Conductometry.

III. Potentiometry: Estimation of the amount of Fe^{+2} by Potentiomentry.

IV. pH Metry: Determination of an acid concentration using pH meter.

1. **Preparations:** Preparation of Bakelite.

2. Preparation Nylon – 6.

V. Lubricants:

1. Estimation of acid value of given lubricant oil.

2. Estimation of Viscosity of lubricant oil using Ostwald's Viscometer.

VI. Corrosion: Determination of rate of corrosion of mild steel in the presence and absence ofinhibitor.

VII. Virtual lab experiments

1. Construction of Fuel cell and its working.

2. Smart materials for Biomedical applications

3. Batteries for electrical vehicles.

Functioning of solar cell and its applications

ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB

List of Experiments:

1. Listening Skills

2. Phonetics

3. Communication at work place

4. Ice-Breaking Activity, JAM Session, Situational Dialogues, Role play

5. Self-Introduction

6. Structure of syllables

7. Word Accent (stress)

8. Features of Good conversation

9. Non-verbal communication, Situational Dialogues, Role play

10. Telephone Etiquette

11. English Intonation

12. Neutralization of Mother Tongue Influence

13. Presentation Skills

14. Listening for General Details

15. Public Speaking

16. Listening for Specific Details

17. Interview Skills

15.4 Computing Facilities

Internet Bandwidth Number and Internet Bandwidth   300 Mbps
configuration of System No. of Computers   830
- Total number of system connected by LAN   510
- Total number of system connected   by WAN   320
- Major software packages No. of Legal System Software's   04
Available No. of Application Software's   28
- Special purpose facilities   : Available

15.5 Innovation Cell

Yes

15.6 Social Media Cell

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

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15.8 List of facilities available

- Games and Sports Facilities   Yes
- Extra-Curricular Activities   Yes
- Soft Skill Development Facilities   Yes

15.9 Teaching Learning Process

- Curricula and syllabus for   Yes

   each of the Programmes as approved by the University

- Academic Calendar of the University   Yes
- Academic Time Table with the   Yes

   name of the Faculty members handling the Course

- Teaching Load of each Faculty   Yes
- Internal Continuous Evaluation System and place   Yes
- Student's assessment of Faculty, System in place   Yes

15.10 Post Graduate Courses

NIL

15.11 Special Purpose

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

16   Enrollment of students

For 2025-26 : 807

17   List of Research Projects/ Consultancy Works

17.1 Number of Projects carried out, funding agency, Grant received

LIST OF GRANTS APPLIED/APPROVED

S.no	Name of the Applicant	Name of the Co-Applicant	Funding Organization	Funding Project Title	Title of the Proposal	Application Submission Date	Funding amount	Unique ID/ Application ID	Applied/ Approved
1	Dr K S Sadasiva Rao	Dr Vedavalli Perigisetty	AICTE	VAANI-FDP	Datascience and AI: Novel Processing Techniques for Transforming Data into Intelligent Decisions	10.05.2025	Up to 2,00,000/-	220 641 669 9	Applied
2	Dr K S Sadasiva Rao	Dr Vedavalli Perigisetty	AICTE	GoC	International Conference	30.05.2025	Up to 8,00,000/-		Applied
3	Dr M C Raju	Dr Bala Ramudu	AICTE	ATAL-FDP		11.06.2025	Up to 1,00,000/-	220 892 642 6	Applied
4	Dr Vedavalli Perigisetty	Dr Savala Pavan Kumar	AICTE	GoC	International Conference	24.06.2025	Up to 8,00,000/-		Applied
5	Dr Savala Pavan Kumar	Dr Vedavalli Perigisetty	AICTE	GoC	International Conference	12.07.2025	Up to 8,00,000/-		Applied
6	Dr K S Sadasiva Rao	Dr Vedavalli Perigisetty	AICTE	ATAL-FDP	Datascience and AI: Novel Processing Techniques for Transforming Data into Intelligent Decisions	12.06.2025	Up to 2,00,000/-	220 641 669 9	Applied
7	Dr. B Ratnakanth	Dr Savala Pavan Kumar / Dr Vedavalli Perigisetty	DST	AMT	Risk Management in Wireless Communication to protect from signal jamming and spoofing attacks using network security	30.08.2025	Up to 1 Crore	TPN /13 809 8	Applied
8	Dr. B Ratnakanth	Dr Pavan Kumar / Dr B Babu Rao	SERB	CoE	Interdisciplinary Research Hub for Quantum Science and Engineering	08.09.2025	Up to 7.76 Crore	ANR F/S SH/ 202 5/1 73/ LET	Applied

17.2 Publications (if any) out of research

LIST OF RESEARCH ARTICLE PUBLICATIONS

S.NO	DEPT	NAME OF THE AUTHOR	TITLE OF THE PAPER	NAME OF THE JOURNAL	ISBN/ISSN NO	YEAR
1	CSE	S.ANITHA	Comparision of Ethical AI frame works in real time	JOURNAL OF ENGINEERING INNOVATIONS	ISSN-3006-1226	2025
2	CSE	E.RUPA	PHISHING DETECTION SYSTEM THROUGH HYBRIDMACHINELEARNING BASED ON URL	JETIR	ISSN-2349-5162	2025
3	CSE	K.Sudha	IOT Based Smart Agriculture System and Machine Learning	JETIR	ISSN-2349-5162	2025
4	H&S	V.SUJATHA	AN INTRODUCTION TO GENERALIZED RIEMANN INTEGRAL AND ITS ROLE IN UNDER GRADUATE MATHEMATICS EDUCATION	International Journal of Management, Technology And Engineering	2249-7455	2025
5	H&S	SHRAVANI SINGI REDDY	THE EVOLUTION OF FLUID DYNAMICS AND ITS FUTURE APPLICATIONS	Science, Technology and Development	0950-0707	2025
6	H&S	K.MOUNIKA	OPTIMIZATON OF PROPERTIES IN BAKELITE REINFORCED WITH RECYCLED CELLULOSE FIBER	INTERNATIONAL JOURNAL OF MANAGEMENT,TECHNOLOGY &ENGINEERING	2249-7455	2025
7	H&S	V.MOUNIKA	MULTI SPECTROSCOPIC ANALYSIS OF MGO/NYLON 6/6 POLYMER:ASSESSING HE POTENTIAL OF LIBS AND STATISTICAL APPROACHES	INTERNATIONAL JOURNAL OF MANAGEMENT,TECHNOLOGY &ENGINEERING	2249-7455	2025
8	H&S	M.AKHILA DEVI	A REVIEW OF SMART MATERIALS : RESEARCHES AND PROPERTIES	SCIENCE AND TECHNOLOGY DEVELOPMENT	0950-0707	2025
9	H&S	T.SRIKANTH	BIO DEGRADABLE POLYMERS-RESEARCH AND APPLICATIONS	SCIENCE AND TECHNOLOGY DEVELOPMENT	0950-0707	2025

10	H&S	Fatima Hafeez Unnisa	JOURNAL- 93-98 "Nature and Divinity in the Selected Poems of K.Sareen Raj"	BOOK - "The Concept of Ikhlas in Islam"	7 8 9 3 9 1 8 6 0 5 4 7	27/09/2024 ISSN: 2349 - 9753 VOL.11, NO.3.	2025
11	ECE	Dr Rahman	AI BASED DEVICE FOR DETECTION OF ALZHEIMERS DISEASE				2025
12	AI&DS	D. RAJESWARI	AI ASSISTED DEEP LEARNING REINFORCEMENT LEARNING	JNAO	1 9 0 6 -	ISSN: 1906-9685	2025

17.3 Industry Linkage

SNO	ROLLNUMBER	NAMEOFTHESTUDENT	GENDER	BRANCH	INTERNSHIPDATE	INTERNSHIPSOURCE	INTERNSHIPTITTLE
1	19X31A0501	ALAMPALLISAIKUMAR	MALE	CSE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
2	19X31A0502	ABDURRAHMANFAISAL	MALE	CSE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
3	19X31A0503	ACHINAMANIKANTA	MALE	CSE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
4	19X31A0504	ALUKAVIJAYKUMARREDDY	MALE	CSE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
5	19X31A0505	ANTHIREDDYBHANUPRAKASHREDDY	MALE	CSE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
6	19X31A0506	BOODIDAPREETHI	FEMALE	CSE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
7	19X31A0413	AMANISHREDDY	MALE	ECE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
8	19X31A0414	BALGURIYESHWANTHREDDY	MALE	ECE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
9	19X31A0415	BANDISRINESHGOUD	MALE	ECE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
10	19X31A0416	BHEEMASAIKRISHNA	MALE	ECE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
11	19X31A0417	BHEEMANIRAVITEJA	MALE	ECE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
12	19X31A0420	BURRITEJASRI	FEMALE	ECE	01.05.2023	INTERSHALA	WEBDEVELOPMENTTRAINING
13	20X35A0426	V.HEMANTHKUMAR	MALE	ECE	29.01.2022	KALYANIRAFAELADVANCEDSYSTEMS	MEDICALSYSTEMSDESIGN AND DEVELOPEDBYDRDO
14	20X35A0424	TAMMANNAGARIDEEPIKA	FEMALE	ECE	29.01.2022	KALYANIRAFAELADVANCED SYSTEMS	MEDICALSYSTEMSDESIGN ANDDEVELOPED BY DRDO
15	19X31A04D8	YALAVARTHIGUNASAISANDEEP	MALE	ECE	29.01.2022	KALYANIRAFAELADVANCEDSYSTEMS	MEDICALSYSTEMSDESIGN AND DEVELOPEDBY DRDO

						KALYANI RAFAELA DVANCED SYSTEMS	MEDICALSYSTEMSDESIGN ANDDEVELOPED BY DRDO
16	20X35A0409	CHINTHALAJYOTHI	FEMALE	ECE	29.01.2022		
17	19X31A05F9	VANJAMOHITHKUMAR REDDY	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
18	19X31A05G0	VASIREDDYSAKETH	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
19	19X31A05G1	VENNAMBALU	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
20	19X31A05G3	YALLAVULAPAVANKUMAR	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
21	19X31A05G4	PALTHYARAHUL	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
22	19X31A05G5	YEKULACHANDRASEKHAR REDDY	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
23	19X31A05G6	YERRANITHISH	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
24	19X31A05G7	KANUGULATARUN	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
25	19X31A05G8	PCHANDU	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
26	19X31A05H0	BUDIDHALALITHSAGAR	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
27	19X31A05H1	AKSHARAGUJJARI	FEMALE	CSE	01.02.2022	INTERSHALA	PYTHON
28	19X31A05H2	ETIKALAANVESHREDDY	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
29	19X31A05H3	CHAKILAMSAIDEEKSHITH	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
30	19X31A05H4	ALAKUNTLAASRITHA	FEMALE	CSE	01.02.2022	INTERSHALA	PYTHON
31	19X31A05H6	BURRASRAVANI	FEMALE	CSE	01.02.2022	INTERSHALA	PYTHON
32	19X31A05H7	VSHASHIKANTH	MALE	CSE	01.02.2022	INTERSHALA	PYTHON
33	19X31A05H1	AKSHARAGUJJARI	FEMALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
34	19X31A05H2	ETIKALAANVESHREDDY	MALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
35	19X31A05H3	CHAKILAMSAIDEEKSHITH	MALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
36	19X31A05H4	ALAKUNTLAASRITHA	FEMALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
37	19X31A05H6	BURRASRAVANI	FEMALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
38	19X31A05H7	VSHASHIKANTH	MALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
39	19X31A05I0	GALINGULATEJESHWENE	FEMALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP

40	19X31AO5A3	MOHAMMEDBASHARATHAHMED	MALE	CSE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
41	19X31A0432	DINESHKONDALNAMANI	FEMALE	ECE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
42	19X31A0433	DODLEAKANKSHA	FEMALE	ECE	MAY-JULY2022	MALLIKARJUNAINFOSYS	PYTHONDEVELOPERINTERNSHIP
43	19X31A0434	DOURAVINEETHREDDY	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
44	19X31A0435	DUDUKUBALAJI	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
45	19X31A0436	DUKANTISAMPATH	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
46	19X31A0437	VINAYVINNU	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
47	19X31A0438	GUNREDDYNAVYA	FEMALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
48	19X31A0439	GANDLAVIGNESH	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
49	19X31A0440	GADDAMAJAY REDDY	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
50	19X31A0441	GADHAGANISAIPRAKASHGOUD	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
51	19X31A0442	GAJJALATEJABABU	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
52	19X31A0443	GANDUVINAYKUMAR	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
53	19X31A0444	GANJIJANANI	MALE	ECE	05.06.2023	INTERNSHALA	VLSIDESIGN
54	20X35A0501	ANUMULASANDEEPKUMAR	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
55	20X35A0503	GANJI SAISIDDHARTHA	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
56	20X35A0505	JANJIRALAMAHESHKRISHNA	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
57	20X35A0507	LAKAVATHTHARUNNAYAK	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
58	20X35A0510	MADDENAPELLYDURGAGANESH	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
59	20X35A0511	MADUPUGANGA	FEMALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
60	20X35A0512	NAGABABU	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
61	20X35A0514	POTHURAJUKARTHIK	MALE	CSE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
62	20X35A0515	SRIRAMOJUSAIPRASAD	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
63	20X35A0516	VANTAKUVENKATESH	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
64	20X35A0517	TNIKHIL	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
65	19X31A04C0	SRIRAMSRINATH	MALE	ECE	05.06.2023	INTERSHALA	VLSIDESIGN
66	19X31A04C1	SURABHI KAVYASREE	FEMALE	ECE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL

67	19X31A04C2	SURABOINAMAMATHA	FEMALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
68	19X31A04C3	SUREDDY KISHORE	MALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
69	19X31A04C4	SURISETTYLAXMIGAYATHRI	FEMALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
70	19X31A04C5	TSOWMYA	FEMALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
71	19X31A04C6	THADIKAMALLADIVYASAI	FEMALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
72	19X31A04C7	THAKURSANJANA	FEMALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
73	19X31A04C8	THANGELLAVENKATESHGOU D	MALE	ECE	20.02.2023	TCSIONCAREERE DGE	YOUNGPROFESSI ONAL
74	19X31A04C9	UDUGULASHREYA	FEMALE	ECE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
75	20X35A0422	SRIPADASAIKUMAR	MALE	ECE	29.01.2022	KALYANIRAFA ELADVANCED SYSTEMS	MEDICALSYSTEMSDESIG N ANDDEVELOPED BY DRDO
76	19X31A04D0	URIYAMAMATHA	FEMALE	ECE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
77	19X31A04C0	SRIRAMSRINATH	MALE	ECE	29.01.2022	KALYANIRAFA ELADVANCED SYSTEMS	MEDICALSYSTEMSDESIG N ANDDEVELOPED BY DRDO
78	19X31A0547	GATTUPAVANKUMAR	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
79	19X31A0548	GINJALAASRITHA	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
80	19X31A0549	GONDHI.PREETHI	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
81	19X31A0550	GOSULAHIMABINDU	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
82	19X31A0551	GOTTAMSANJANA	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
83	19X31A0552	GOTTIMUKKALADIVYA REDDY	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
84	19X31A0553	GUGULOTHANIL	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
85	19X31A0575	KARAMTHOTHVENKATESH	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
86	19X31A0576	KARNATISHREYA	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
87	19X31A0577	KAVETIVIJAYKANTH	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
88	19X31A0578	KOLAREVANTH	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
89	19X31A0579	KOLANJAYANTHGOID	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
90	19X31A0580	KOMARAJUANIL	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
91	19X31A0581	KOMMAGONIVIKRAM	MALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL
92	19X31A0582	KOTHURUCHINMAYEE	FEMALE	CSE	20.02.2023	TCSIONCAREEREDG E	YOUNGPROFESSIO NAL

93	20X35A0511	MADUPUGANGA	FEMALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
94	20X35A0512	NAGABABU	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
95	20X35A0507	LAKAVATHTHARUNNAYAK	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
96	20X35A0515	SRIRAMOJUSAIPRASAD	MALE	CSE	20.02.2023	TCSIONCAREEREDGE	YOUNGPROFESSIONAL
97	20X35A0405	BANTUPURNACHANDRA	MALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
98	20X35A0407	BODASAIKRISHNA	MALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
99	19X31A04A3	PANASASHIVA	MALE	ECE	29.01.2022	KALYANIRAFAELADVANCED SYSTEMS	MEDICALSYSTEMS DESIGN ANDDEVELOPED BY DRDO
100	20X35A0408	SANA	FEMALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
101	20X35A0409	CHINTHALAJYOTHI	FEMALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
102	20X35A0410	DUDAMRUSHIKESH	MALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
103	20X35A0411	EEPURIBHAVANA	FEMALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
104	20X35A0412	KADEMKALYAN	FEMALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
105	20X35A0413	KETHAVATHGANESH	MALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
106	20X35A0414	KOTHAPALLYNISHANTH	MALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE
107	20X35A0415	LAVUDIYANARESH	MALE	ECE	07.05.2023	OASISINFOBYTE	DATA SCIENCE

17.4 MoUs with Industries

S.No	Name of the Organization	MoUs Period	
		FROM	**TO**
1	ACE MOU	25-07-2025	25-07-2030
2	FIXITY MOU	04-09-2025	UP to Terminate
3	ICARE ACADEMY	07-07-2025	UP to Terminate
4	BLUE RIBBON MOU	07-11-2024	UP to Terminate
5	FORGE MOU	16-08-2024	UP to Terminate
6	NXT WAVE MOU	10-12-2024	10-12-2027
7	YUVAAN IT LABS PRIVATE LIMITED MOU	19-05-2024	19-05-2029
8	VETERANS INDIA MOU	23-05-2023	23-05-2028
9	ZAPHIRE INFORMATION TECHNOLOGY MOU	02-05-2023	UP to Terminate

18   LoA and subsequent EoA till the current Academic Year

AICTE Extension of Approval (EOA)   : 2025-26

AICTE F.No. South-Central/1-46258696815

19   Accounted audited statement

	2024-25
Income	
Income From Central Govt.	0
Income From State Govt.	0
Income From Student Fees	248692879
Income From Donations	0
Income From UGC	0
Income From Others	16974624
Total Income	265667503
Expenditure	
Salary Teaching Staff	142697838
Salary Non-teaching Staff	24288924
Library	1286296
Equipment	5386652
Building Maintainance	16894829
Other Expenditure	72482446
Total Expenditure	263036985

20 Best Practices adopted, if any

Many Students presented their ideas during 'CSI- Poster Presentation' event. Students have actively involved in the interdisciplinary projects. They have identified the community partners as an end user of their products and visited nearby villages, farmers, hospitals, traffic police station, municipality, transportation departments and NGOs etc. Several Product Expos were organized and Students demonstrated their products and explained about the community partners. Dr D Laxmiah, Head of CSI visited the Expo and appreciated the students. Several MoUs were established and paper publications published in reputed journals and conferences.

Many innovative products are developed in different phases. Some of the products are Foot step power generation, Smart helmet, soil testing kit, smart urinal system etc. Various events like Product expo, workshops were organized and developed products like adjustable water tank cleaner, smart immersion water heater etc. SIIET follows a dedicated academic practice over the years of giving text books for the distinction students achieved in their own subjects in every semester. The head of the department or senior faculty presents the text book belonging to theircurrent semester.

Awards were given to the toppers on Graduation day every year in various disciplines based on their merit and contribution during their 4 years of study. Also award was given to the best outgoing student of SIIET to recognize, motivate and encourage them considering factors like academics, co-curricular and extracurricular activities f o. their all round development.

Smart water tank cleaner (ROBOT) Developed by Centre for Design team team

Smart Rolling Bridge Prototype Developed by Centre for Design

Soil Testing Kit (Artificial Rain System)

Smart Urinal system developed

Sri.R.Venkat Rao, Chairman Sri Indu Group of Institutions, giving suggestions to the students about the product developed under Centre for Design

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Department Toppers are receiving the presentingaward from Chief Guest.

News Paper Statement

Extracurricular activities for their all round development