

**SCHEME OF
STUDIES AND SYLLABUS
OF
SECOND SEMESTER
DIPLOMA IN
COMPUTER SCIENCE
& ENGINEERING
(C-21)(34)**

JSS MAHAVIDYAPEETHA
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED, MYSURU-06
CURRICULUM STRUCTURE

II Semester Scheme of Studies-Diploma in Computer Science and Engineering (C-21)

| Sl. No | Course Category / Teaching Department | Course Code | Course Title | Hours per Week | | | Total contact hours per week | Credits | CIE Marks | | SEE Marks | | Total Marks | Min Marks for Passing (including CIE) |
|--------------------------|---------------------------------------|-------------------|-------------------------------------|----------------|----------|-----------|------------------------------|-----------|--------------|------------|------------|-----------|-------------|---------------------------------------|
| | | | | L | T | P | | | Max | Min | Max | Min | | |
| THEORY COURSES | | | | | | | | | | | | | | |
| 1 | SC/CS | 3421 | Project management Skills | 2 | 0 | 4 | 6 | 4 | 50 | 20 | 50 | 20 | 100 | 40 |
| PRACTICAL COURSES | | | | | | | | | | | | | | |
| 2 | BS/SC | 3422 | Statistics and Analytics | 2 | 0 | 4 | 6 | 4 | 60 | 24 | 40 | 16 | 100 | 40 |
| 3 | EG/SC/CS | 3423 | Communication Skills in English | 2 | 0 | 4 | 6 | 4 | 60 | 24 | 40 | 16 | 100 | 40 |
| 4 | ES/ME | 3424 | Computer Aided Engineering Graphics | 2 | 0 | 4 | 6 | 4 | 60 | 24 | 40 | 16 | 100 | 40 |
| 5 | ES/CS | 3425 | Multimedia and Animation | 2 | 0 | 4 | 6 | 4 | 60 | 24 | 40 | 16 | 100 | 40 |
| AUDIT COURSES | | | | | | | | | | | | | | |
| 6 | AU/KA | 21KA21/ 21NK21 | Kannada-I/ನಾಹಿತ್ಯ ಸಿಂಚನ ಕನ್ನಡ - I | 2 | 0 | 0 | 2 | 2 | 50 | 20 | -- | -- | 50 | 20 |
| 7 | SL | --- | Sign Language-II | 2 | 0 | 0 | 2 | -- | NOT FOR EXAM | | | | | |
| 8 | Psy | --- | Psychology & Counseling-II | 2 | 0 | 0 | 2 | -- | NOT FOR EXAM | | | | | |
| Total | | | | 16 | 0 | 20 | 36 | 22 | 340 | 136 | 210 | 84 | 550 | 220 |

T-Theory P-Practical D-Drawing E-Elective BS—Basic Science ES-Engineering Science HS-Humanities & Social Science AU-Audit Course
 EG-English SC-Science

Note:

1. Assigned Grade, Grade Point, SGPA and CGPA to be recorded in the Grade / Marks Card.
2. Theory Course Semester End Examination(SEE) is conducted for 100 marks(3Hours Duration)
3. Practical course CIE and SEE is conducted for the 100 marks (3 Hours Duration)

Programme Coordinator

Principal

Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)
PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|------------------------|--|----------------------------|---|
| Course Code | 3421 | Semester | II |
| Course Title | Project Management Skills | Course Group | PM |
| No. of Credits | 4 | Type of Course | Activity based study |
| Course Category | Theory with Activities | Total Contact Hours | 6 Hrs Per Week (2Theory +4 hrs of classroom activities) |
| | | | 96 Hrs Per Semester |
| Prerequisites | 10th Level Mathematics | Teaching Scheme | 4 hrs per week classroom sessions dedicated to case studies & activities |
| CIE Marks | 50 | SEE Marks | 50 |

RATIONALE

Project Management is a confluence of Management principles and Engineering subject area. This course enables the students to develop conceptualization of Engineering Management principles and apply the same for their engineering projects, in their domains, example, Software Development project or Construction Project and so on. The course integrates three core areas of Planning, Execution and Auditing of Projects.

1. COURSE SKILL SET

Student will be able to:

1. Understand what constitutes a project, Plan for the execution of the project by breaking into manageable work units, and Prepare necessary project artifacts
2. Track and control the Project while preparing verifiable records for Project Inspections and Audits
3. Inspect and Audit projects for Milestones or other project completion criteria and other metrics, Defects and remediation, Project learning's
4. Gain knowledge and develop curiosity on latest technology trends in Project management

2. COURSE OUT COMES

At the end of the course, student will be able to

| | |
|------------|---|
| CO1 | Apply the concepts of Project Management to real projects which are expressed in the form of the Project reports or Engineering drawings |
| CO2 | Estimate Project resources needed Time, Material and Effort, and Plan for execution |
| CO3 | Understand, analyze and assess the risks involved in a project and plan for managing them |
| CO4 | Use Project Management Software and processes to track and control Projects |
| CO5 | Conduct inspection of Projects and audit progress and bills. Understand the Digital Technology trends in Project management and concepts like Smart cities |

3. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS

| UNIT NO | UNIT TITLE | TEACHING HOURS (L-T-P) | MARKS DISTRIBUTION(THEORY) | | | |
|---------|--|------------------------|----------------------------|-----------|-----------|------------|
| | | | R LEVEL | U LEVEL | A LEVEL | TOTAL |
| 1 | Introduction | 02-00-06 | 8 | 8 | 4 | 20 |
| 2 | Project Administration | 06-00-14 | 8 | 12 | 20 | 40 |
| 3 | Project Life cycle | 06-00-14 | 8 | 12 | 20 | 40 |
| 4 | Project Planning, Scheduling and Monitoring | 06-00-14 | 8 | 12 | 20 | 40 |
| 5 | Project Control, Review & Audit and Digital Project Management | 08-00-20 | 16 | 20 | 24 | 60 |
| | Total | 28-00-68=96 | 48 | 64 | 88 | 200 |

Legends: R = Remember; U = Understand; A = Apply and above levels (Bloom's revised taxonomy)

4. DETAILS OF COURSE CONTENT

The following topics/subtopics is to be taught and assessed in order to develop Unit Skill sets for achieving CO to attain identified skill sets.

| UNIT NO | Unit skill set (In cognitive Domain) | Topics / Subtopics | Hours L-T-P |
|---|---|--|----------------|
| 1. Introduction | Use Basic Science, Math's skills to understand Project management and project planning, execution and control. | Introduction and definition, Features of a Project, Types of Projects, Benefits and Obstacles in Project Management, Project Management Profession, Role of Project manager, Consultants, Project and Operation, Project Management Process, Project Scope. | 02-00-06 |
| 2. Project Administration | Able to develop WBS, PEP and PM processes for Project with given inputs | Project Administration, Project Team, Project Design, Work Breakdown Structure (WBS), Project Execution Plan (PEP), Systems and Procedure Plan, Project Direction, Communication and Co-ordination, Project Success. Case Study 1 | 06-00-14 |
| 3. Project Lifecycle | Use project administration and project lifecycle knowledge to Assess and plan for project risk | Project Life Cycle, Phases - Project Planning, Project Execution, Project Closure, Project Risks, Project Cost Risk Analysis, Time and Cost overruns. Case Study 2a | 06-00-14 |
| 4. Project Planning, Project Scheduling and Project Monitoring and Implementation | Able to develop a detailed project plan given the inputs on manpower, funds availability and time availability | Project Planning Function, Structure, Project Scheduling, Project monitoring and Project evaluation Case Study 2b | 06-00-14 |
| 5. Project Control, Review & Audit and Digital Project Management | Use Project Management lifecycle knowledge to Control project parameters, review and audit project performance. Understand latest trends of digital technologies impacting the domain of project management and application of the same in multiple scenario | Project Control, Problems of Project Control, Gantt Charts, Milestone Charts, Critical Path Method (CPM), Network Technique in Project Scheduling, Crashing Project Duration through Network, Project Review, Initial Review, Performance Evaluation, Abandonment Analysis, Project Audit Case Study 2c Digital Technology trends in Project management, Cloud Technology, IoT, Smart cities, Data and analytics, case studies Case study 3 | 08-00-20 |

5. MAPPING OF CO WITH PO

| CO | Course Outcome | PO Mapped | UNIT Linked | CL R/U/A | Sessions in Hrs | TOTAL Marks |
|--------------|--|------------|-------------|----------|-----------------|-------------|
| CO1 | Understand the concepts of Project Management in relation to real projects which are expressed in the form of the Project reports or Engineering drawings Case Study - 1 | 1, 2, 5, 7 | 1, 2 | R/U/A | 08 | 20 |
| CO2 | Estimate Project resources needed Time, Material and Effort, and Plan for execution Case study-2a | 1, 2, 3, 7 | 2, 3 | R/U/A | 20 | 40 |
| CO3 | Evaluate the risks involved in a project and Plan for managing them Case Study - 2a | 1,2,3,7 | 2,3 | R/U/A | 20 | 40 |
| CO4 | Use Project Management methods with Software and/or processes to track and control Projects Case Study-2b | 1, 4, 6, 7 | 4 | R/U/A | 20 | 40 |
| CO5 | Conduct inspection of Projects and audit progress and bills. Understand the Digital Technology trends in Project management, and Engineering Industries Case Study- 2c. Case Study-3 | 1, 2, 5, 7 | 5 | R/U/A | 28 | 60 |
| Total | | | | | 96 | 100 |

| | CO's | Programme Outcomes (POs) | | | | | | | Programme Specific Outcomes (PSOs) | |
|---------------------------|------|--------------------------|-------------|----------|----------|----------|----------|------------|------------------------------------|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 |
| Project Management | CO1 | 3 | 3 | - | - | 2 | - | 1 | - | - |
| | CO2 | 3 | 3 | 3 | - | - | - | 1 | - | - |
| | CO3 | 3 | - | - | 3 | - | 3 | 1 | - | - |
| | CO4 | 3 | - | - | 3 | - | 3 | 1 | - | - |
| | CO5 | 3 | 2 | - | - | 2 | - | 2 | - | - |
| Average | | 3 | 2.67 | 3 | 3 | 2 | 3 | 1.2 | - | - |

Level 3- Highly Mapped, Level 2-Moderately Mapped, Level 1-Low Mapped, Level 0-Not Mapped

7. INSTRUCTIONAL STRATEGY

These are sample Strategies, which teacher can use to accelerate the attainment of the various course

outcomes

1. Explicit instruction will be provided in intervention classes or by using differentiated strategies in the main classroom.
2. Lecturer method (L) does not mean only traditional lecture method, but different type of teaching method and media that are employed to develop the outcomes.
3. Observing the way their more proficient peers use prior knowledge to solve current challenges and persevere in problem solving will help struggling students to improve their approach to engaging with rich contextual problems.
4. Topics be introduced always with a real life example and then answering What, how, why and when.
5. The teacher is able to show different ways to solve the same problem and encourage the students to come up with their own creative ways to solve them.
6. In a perfect world, teacher would always be able to demonstrate how every concept can be applied to the real world - and when that's possible, it helps improve the students' understanding. When a concept cannot be applied in that manner, we can still share how it might be applied within mathematics.
7. Use oral and Sign language in the class room as many of the students are hearing impaired.
8. Use of Audio and Visual techniques like E-Books, PPT, Videos etc
9. Teaching through group discussion, Guest lecture etc.
10. Providing course materials.
11. Providing extra inputs through industrial visits, employability skills and career awareness programs.
12. Additional inputs' through MOOCs and NPTEL courses.
13. Hands on training through demonstration to tutorial classes in laboratories.

8. SUGGESTED LEARNING RESOURCES:

| Sl.No. | Author | Title of Books | Publication/Year |
|--------|--|--|---------------------------|
| 1 | Dr. Lalitha Balakrishnan & Dr. Gowri amachandran | Project Management | Himalaya Publishing, 2019 |
| 2 | Shailesh Kumar Shivakumar | Complete Guide to Digital Project Management | Apress, 2019 |
| 3 | Prasanna Chandra | Project planning, analysis, selection, implementation and review | Tata McGraw Hill |
| 4 | Gopala Krishnan | Project Management | Mc Millan India Ltd. |

9. COURSE ASSESSMENT AND EVALUATION CHART

| Sl.No | Assessment | Duration | Max marks | Conversion |
|---|--|------------|-----------|---|
| 1 | CIE Assessment 1 (Written Test -1) At the end of 6 th week | 80 minutes | 30 | Average of three written tests 30 |
| 2 | CIE Assessment 2 (Written Test -2) At the end of 10 th week | 80 minutes | 30 | |
| 3 | CIE Assessment 3 (Written Test -3) At the end of 15 th week | 80 minutes | 30 | |
| 4 | CIE Assessment 4 (Group Assignment -1) At the end of 8 th week | 60 minutes | 20 | Average of three 20 |
| 5 | CIE Assessment 5 (Group Assignment -2) At the end of 13 th week | 60 minutes | 20 | |
| 6 | CIE Assessment 6 (Individual Student activity/Assignment) At the end of 16 th week | 60 minutes | 20 | |
| Total Continuous Internal Evaluation (CIE) Assessment | | | | 50 |
| 8 | Semester End Examination (SEE) Assessment (Written Test) | 3 Hrs | 100 | 50 |
| Total Marks | | | | 100 |

Note:

- SEE (Semester End Examination) is conducted for 100 Marks theory course for a time duration of 3 Hrs
- Three CIE (written test), each of 30 marks for a time duration of 80 minutes shall be conducted. Also, three CIE (MCQ or Quiz/Group Assignment/Individual student activity or assignment) each of 20 marks for the time duration of 60 minutes shall be conducted. Any fraction at any stage during evaluation will be rounded off to the next higher digit
- Assessment of assignment and student activity is evaluated through appropriate rubrics by the respective course coordinator. The secured mark in each case is rounded off to the next higher digit.

10 DETAILED COURSE CONTENT

| Unit No And Name | DETAILED COURSE CONTENT | CONTACT HRS | TOTAL |
|---------------------------|---|-------------|-------|
| 1. Introduction | 1.1 Introduction | 4 | 08 |
| | 1.2 Meaning of Project | | |
| | 1.3 Definition and No Change Mode | | |
| | 1.4 Features of a Project | | |
| | 1.5 Types of Projects | | |
| | 1.6 Benefits of Project Management | | |
| | 1.7 Obstacles in Project Management | | |
| | 1.8 Project Management A Profession | | |
| | 1.9 Project Manager and His Role | | |
| | 1.10 Project Consultants | | |
| | 1.11 What is Operation? | 4 | |
| | 1.12 Difference between Project and Operation | | |
| | 1.13 What is Process in Project Management and Process Groups? | | |
| | 1.14 What is Scope? Difference between Project Group Objectives and | | |
| | 1.15 Project Scope | | |
| 2. Project Administration | 2.1 Essentials of Project Administration | 3 | 20 |
| | 2.2 Project Team | | |
| | 2.3 Project Design | | |
| | 2.4 Work Breakdown Structure (WBS) | | |
| | 2.5 Project Execution Plan (PEP) | 8 | |
| | 2.6 Contracting Plan | | |
| | 2.7 Work Packing Plan | | |
| | 2.8 Organization Plan | 3 | |
| | 2.9 Systems and Procedure Plan | | |
| | 2.10 Project Procedure Manual | | |
| | 2.11 Project Diary | 3 | |
| | 2.12 Project Execution System | | |
| | 2.13 Project Direction | 3 | |
| | 2.14 Communication in a Project | | |
| | 2.15 Project Co-ordination | | |
| | 2.16 Pre-requisites for Successful Project Implementation | | |

| | | | |
|---|--|----|----|
| 3. Project Life cycle | 3.1 Introduction | 10 | 20 |
| | 3.2 Phases of Project Life Cycle | | |
| | 3.3 Project Management Life Cycle General | | |
| | 3.4 Project Planning | | |
| | 3.5 Project Execution | | |
| | 3.6 Project Closure | | |
| | 3.7 Project Risks | 5 | |
| | 3.8 Types of Risks: Illustrations | | |
| | 3.9 Risk Assessment Techniques with Illustrations | | |
| | 3.10 Project Cost Risk Analysis | 5 | |
| | 3.11 Estimating Time and Cost Overrun Risks | | |
| | 3.12 Organisation/Procedural/Systemic Reasonsfor Project Cost Overruns | | |
| | 3.13 Time Overruns | | |
| 4. Project Planning, Schedulingand Monitoring | 4.1 Introduction | 6 | 20 |
| | 4.2 Nature of Project Planning | | |
| | 4.3 Need for Project Planning | | |
| | 4.4 Functions of Project Planning | | |
| | 4.5 Steps in Project Planning | | |
| | 4.6 Project Planning Structure | | |
| | 4.7 Project Objectives and Policies | | |
| | 4.8 Tools of Project Planning | | |
| | 4.9 Project Scheduling | 6 | |
| | 4.10 Time Monitoring Efforts | | |
| | 4.11 Bounding Schedules | | |
| | 4.12 Scheduling to Match Availability of Manpower | | |
| | 4.13 Scheduling to Match Release of Funds | | |
| | 4.14 Problems in Scheduling Real-life Projects | 4 | |
| | 4.15 Introduction | | |
| | 4.16 Situation Analysis and Problem Definition | | |
| | 4.17 Setting Goals and Objectives | | |
| | 4.18 Generating Structures and Strategies | | |
| | 4.19 Implementation | | |
| | 4.20 What is Project Evaluation? | 4 | |

| | | | |
|---|--|---|----|
| | 4.21 Why is Project Evaluation Important? | | |
| | 4.22 What are the Challenges in Monitoring and Evaluation? | | |
| 6. Project Control, Review and Audit AND Digital Project Management | 5.1 Introduction | 6 | 28 |
| | 5.2 Projected Control Purposes | | |
| | 5.3 Problems of Project Control | | |
| | 5.4 Gantt Charts | | |
| | 5.5 Milestone Charts | 6 | |
| | 5.6 Critical Path Method (CPM) | | |
| | 5.7 Construction of a Network | | |
| | 5.8 Network Technique in Project Scheduling | | |
| | 5.9 Crashing Project Duration through Network | 4 | |
| | 5.10 Project Review | | |
| | 5.11 Initial Review | | |
| | 5.12 Post Audit | | |
| | 5.13 Performance Evaluation | 4 | |
| | 5.14 Abandonment Analysis | | |
| | 5.15 Objectives of Project Audit | | |
| | 5.16 Functions of Project Auditor | | |
| | 5.17 Project Audit Programme | 4 | |
| | 5.18 Difficulties in Establishing Audit Purpose and Scope | | |
| | 5.19 Digital Technology trends in Project management | 2 | |
| | 5.20 Cloud Technology, IoT, AR and VR applications in Project management, Smart Cities | 2 | |
| | 5.21 Data Science and Analytics in Project Management | 2 | |
| | 5.22 Case Studies | 2 | |

Case Studies:

Please note: The Tutors can either use the following Case studies and activities or Design on their own, with the overall Learning Outcomes being met.

Case Study 1: Residential House – Project Execution Plan

Dr. Sunil Kulkarni wants to build a house on his 9000 square feet (90x100) vacant plot in Bengaluru. His requirements were given below.

- i) He lives with his wife, parents and two college going children.
- ii) He likes open space around his house and likes to do gardening during free time
- iii) His wife teaches Yoga and about 30 middle aged and old people attend the daily sessions.
- iv) He has a budget limitation of INR 230,00,000 for this project and wants to present to his wife on their 20th wedding anniversary which is 18 months away.
- v) His parents cannot climb stairs and hence prefer a ground floor room
- vi) All the rooms should have attached bathrooms

How-ever the Civil contractor who took the work, overshoot the time and money available and hence Dr Sunil was unhappy with the Architect firm who recommended the Contractor.

Tasks:

- Split the class into groups of three
- Ask them to prepare 2D drawings with Plan, Elevation, Sections and perspectives.
- Prepare the detailed WBS, a Project execution plan and Project communication plan for contractors
 - Estimate the quantities
 - Discuss on the possible reasons for delay and methods with which performance to both time and budget could have been achieved
 - Present it in a seminar, with each group getting 5-10 minutes to present their idea.

Case Study 2a:

The Columbus Hospital proposed in Hubli is a 200 bed speciality private hospital for treatment of Cancer. The hospital will come up on a 12 acre plot between Hubli-Dharwad. A leading construction company has come forward to complete the hospital works from concept to commissioning in 9 months. The promoters are willing to spend a premium to complete the hospital in 9 month time and are not particular about type of construction, ie, RCC, Steel frame etc.

The key requirements are as follows:

- i) 200 bed hospital of which 40 are for critical care (ICU), 40 for pre and post Operative care
- ii) 4 Operation Theatres - 2 Major (Minimum 800 SFT each) and 2 minor (minimum 400 sft each)
- iii) One full fledged Diagnostic laboratory (1500 Sft)
- iv) One 24x7 pharmacy (360 Sft min)
- v) Doctors rooms, Nurses enclosures, Change rooms
- vi) Office with billing counters (min 2000 sft) for all administrative staff
- vii) Wheel chair parking bays, Stretcher parking bays in all floors

- viii) One Cafeteria with 50 person capacity
- ix) One conference room with Multimedia equipment (300 sft min)
- x) Parking for ambulances, 4 wheelers, two wheelers
- xi) Reception and enquiry counter
- xii) All amenities should be accessible for disabled persons
- xiii) Incinerator, Waste storage and disposal area
- xiv) Generator and fuel storage area

Discuss

- i) The various alternative approaches available to complete the hospital.
- ii) Look into National Building Code and BIS standards for arriving at approximate(+/- 10%) super built-up area required, amenities to be planned
- iii) The various phases of the project according to Project lifecycle and durations
- iv) Prepare the detailed WBS, Project Organization required and Project Dairy template
- v) Prepare a Project Plan with risks involved and the risk management plan.
- vi) Estimate the cost of time overrun if the project is delayed by 114 calendar days due to issues with approvals

Case Study 2b:

For case study 2 above, prepare an Implementation Plan using spreadsheet software.

Discuss

- i) What happens if a pandemic affects the project in its 7th Month. How do you mitigate the possible issues in implementation?
- ii) What happens if during the fourth month of projects the client decides to reduce funds for the month by 50%?

Case Study 2c: For case study 2 above, prepare a Critical Path method Chart (CPM) showing all main activities in the WBS with milestones.

Discuss

What happens if the client decides to complete the ground floor roof 15 days earlier?

- i) What happens if the client reduces the inflow of project funds by 50% for the month 4?
- ii) Write an Audit report for the project at the end of 6th month

Case Study 3:

This will be done as a student activity and has two components.

- i) Research on 3D printing in any industry and prepare a three page article
- ii) Study usage of Drones in different Industries and evaluate the Cost benefits of using the same for any one scenario.

Model Question Paper
I A Test (CIE)

| Programme: | | Semester: I | | | |
|---|----------|----------------------------------|----|----|-------|
| Course: | | Max Marks: 30 | | | |
| Course Code: | | Duration: 1 Hr 20 minutes | | | |
| Name of the course coordinator: | | Test: I/II/III | | | |
| Note: Answer one full question from each section. One full question carries 10 marks. | | | | | |
| Qn.No | Question | CL | CO | PO | Marks |
| Section-1 | | | | | |
| 1.a) | | | | | |
| b) | | | | | |
| c) | | | | | |
| 2.a) | | | | | |
| b) | | | | | |
| c) | | | | | |
| Section-2 | | | | | |
| 3.a) | | | | | |
| b) | | | | | |
| c) | | | | | |
| 4.a) | | | | | |
| b) | | | | | |
| c) | | | | | |
| Section-3 | | | | | |
| 5.a) | | | | | |
| b) | | | | | |
| c) | | | | | |
| 6.a) | | | | | |
| b) | | | | | |
| c) | | | | | |

Model Question Paper for End Examination

PROJECT MANAGEMENT SKILLS

Duration: 3 Hours]

Subject Code: 3421

[Max. Marks: 100

Instruction: Answer all the questions considering the internal choice in each section. Each section carries 20 marks.

SECTION – 1

- | | | |
|-----------------------------------|-----------|---------|
| 1. Multiple choice Four questions | | 4 Marks |
| 2. a) | | 8 marks |
| | OR | |
| b) | | |
| 3. a) | | 8marks |
| | OR | |
| b) | | |

SECTION – 2

- | | | |
|-----------------------------------|-----------|---------|
| 4. Multiple choice Four questions | | 4 Marks |
| 5. a) | | 8 marks |
| | OR | |
| b) | | |
| 6. a) | | 8marks |
| | OR | |
| b) | | |

SECTION – 3

- | | | |
|-----------------------------------|-----------|---------|
| 7. Multiple choice Four questions | | 4 Marks |
| 8. a) | | 8 marks |
| | OR | |
| b) | | |
| 9. a) | | 8marks |
| | OR | |
| b) | | |

SECTION-4

- | | | |
|------------------------------------|-----------|---------|
| 10. Multiple choice Four questions | | 4 Marks |
| 11. a) | | 8 marks |
| | OR | |
| b) | | |
| 12. a) | | 8marks |
| | OR | |
| b) | | |

SECTION – 5

- | | | |
|------------------------------------|-----------|---------|
| 13. Multiple choice Four questions | | 4 Marks |
| 14. a) | | 8 marks |
| | OR | |
| b) | | |
| 15. a) | | 8marks |
| | OR | |
| b) | | |

---000---

Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)
PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|-------------------|---------------------------------|---------------------|----------------------------------|
| Course Code | 3422 | Semester | I / II |
| Course Name | STATISTICS AND ANALYTICS | Course Group | SC |
| Number of Credits | 4 | Type of Course | Lecture and Practice |
| Course Category | AR/CS/EC | Total Contact Hours | 6 Hrs. / Week |
| | | | 96 Hrs. / Semester |
| Prerequisites | SSLC Mathematics | Teaching Scheme | [L : T : P] = 1 : 0 : 2 |
| CIE Marks | 60 | SEE Marks | 40 |

RATIONALE:

Statistics and analytics help the learner to use the proper methods to collect the data, employ the correct analyses, effectively present the results and conduct research, to be able to read and evaluate journal articles, to further develop critical thinking and analytic skills, to act as an informed consumer and to know when you need to hire outside statistical help. The python language is one of the most accessible programming languages available because it has simplified syntax and not complicated, which gives more emphasis on natural language.

1. COURSE OUTCOMES

At the end of the course, student will be able to

| | |
|------|---|
| CO-1 | Understand the tools of data collection, classification and cleaning of data. |
| CO-2 | Able to summarize the given statistical data |
| CO-3 | Understand the measure of location and dispersion of data. |
| CO-4 | Learn the basics of Python programming. |

2. DETAILS OF COURSE CONTENT

The following topics/subtopics is to be taught and assessed in order to develop Unit Skill Sets for achieving CO to attain identified skill sets.

| UNIT NO AND NAME | Unit skill set (In cognitive domain) | Topics/Subtopics | L-T-P Hours |
|---|--|--|-------------|
| UNIT-1 STATISTICAL DATA COLLECTION AND TYPES | <ul style="list-style-type: none"> ➤ Able to collect statistical data. ➤ Able to distinguish the data types. ➤ Understands the usage of data collection tools ➤ Able to specify problem statement for data collection ➤ Able to collect data pointing the root cause of the problem statement. | <ul style="list-style-type: none"> a. Definition of data and classification (qualitative quantitative discrete and continuous data). b. Data collection tools <ul style="list-style-type: none"> a. Questionnaires. b. Survey. c. Interviews. d. Focus group discussion. c. Data cleaning. | 3-0-12 |
| UNIT-2 SUMMARIZATI ON OF DATA | <ul style="list-style-type: none"> ➤ Sketches bar, pie and histograms on Microsoft Excel spread sheet. ➤ Sketches frequency curve and frequency polygon for the data set on Microsoft Excel spread sheet. ➤ Sketches bar, pie and histograms on Microsoft Excel spread sheet. ➤ Sketches frequency curve and frequency polygon for the data set on Microsoft Excel spread sheet. | <ul style="list-style-type: none"> a. Descriptive statistics <ul style="list-style-type: none"> i. Data tabulation (frequency ii. Table iii. Relative frequency table. b. Grouped data <ul style="list-style-type: none"> i. Bar graph ii. Pie chart iii. Line graph iv. Frequency polygon v. Frequency curve vi. Relative frequency vii. polygon viii. Histograms ix. Box plot x. Leaf-stem plot <p>To be done in Microsoft excel.</p> | 12-0-21 |

| | | | |
|--|---|---|---------|
| UNIT-3 MEASURE OF LOCATION AND DISPERSION | <ul style="list-style-type: none"> ➤ Able to determine the descriptive statistical variables using Microsoft Excel. ➤ Able to determine the absolute measures of dispersion of the given data set. ➤ Explain the symmetry and asymmetry of the distributed data. | <ul style="list-style-type: none"> a. Determination of central tendencies Range, Mean, Mode and Median for the data in Microsoft Excel. b. Determination of absolute measures of dispersion for data like range quartile deviation, mean deviation, standard deviation and variance in Microsoft Excel. c. Skewness and Kurtosis graphs in Microsoft excel and Interpretations of results. | 6-0-12 |
| UNIT-4 INTRODUCTION TO PYTHON PROGRAMMING | <ul style="list-style-type: none"> ➤ Able Install and run the Python interpreter. Create and execute Python programs. ➤ Understand the concepts of file I/O. ➤ Able to read data from a text file using Python. ➤ Learn variable declarations in Python. ➤ Learn control structures. ➤ Learn loop constructs. | <ul style="list-style-type: none"> a. Introduction to PYTHON. b. Syntax of PYTHON. c. Comments of PYTHON. d. Data types of PYTHON. e. Variables of PYTHON. f. If-else in PYTHON. g. Loops in PYTHON. h. Arrays and functions in PYTHON. | 09-0-21 |

3. PRACTICAL OUTCOMES / PRACTICAL EXERCISES WITH CO-PO MAPPING

| SL. NO. | PRACTICAL OUTCOMES / PRACTICAL EXERCISES | UNIT | C O | P O | L : T : P |
|---------|---|------|-----|-----------|-----------|
| 1 | Prepare a questionnaire (closed end) containing 25 questions for a specified problem statement: for example Experience of an individual in a restaurant. | 1 | 1 | 1,2,4,5,7 | 1 : 0 : 2 |
| 2 | Prepare a Google form for a specified problem statement to collect the dataset. (for example questionnaire to conduct online quiz) | 1 | 1 | 1,2,4,5,7 | 1 : 0 : 2 |
| 3 | Send out a survey on your problem statement to number of 50 (By Google forms) and collect the data. | 1 | 1 | 1,2,4,5,7 | 1 : 0 : 4 |
| 4 | Remove duplicate or irrelevant observations. Remove Unwanted observations from the dataset provided, including duplicate observations or irrelevant observations. | 1 | 1 | 1,2,4,5,7 | 1 : 0 : 4 |

| | | | | | |
|----|--|---|---|-----------|-----------|
| 5 | In Microsoft Excel spread sheet draw the frequency Distribution table for the given data (data set should contain minimum 50 data). | 2 | 2 | 1,2,4,5,7 | 1 : 0 : 2 |
| 6 | In Microsoft Excel spread sheet draw the relative frequency distribution table for the given data (data set should contain Minimum 50 data). | 2 | 2 | 1,2,4,5,7 | 1 : 0 : 2 |
| 7 | Using Microsoft Excel spread sheet plot bar graph for the data collected from 100 people(for example, conduct a survey on the favorite fruit of a person in your locality (restricting to 5 to 6 fruits). Explain the bar graph with Minimum 30 words. | 2 | 2 | 1,2,4,5,7 | 1 : 0 : 2 |
| 8 | Using Microsoft Excel spread sheet plot pie chart for the data collected from 50 people(for example, conduct a survey on the smokers with respect to their ages in your Locality. Explain the pie chart with minimum 30 words. | 2 | 2 | 1,2,4,5,7 | 1 : 0 : 4 |
| 9 | Using Microsoft Excel spread sheet draw a line graph for the given dataset. | 2 | 2 | 1,2,4,5,7 | 2 : 0 : 2 |
| 10 | Using Microsoft Excel spread sheet draw frequency polygon and frequency curve for the data collected from 50 people. (For example, marks obtained by the students in your class in 5 subjects in previous examination). Explain your observations from the graph in minimum 30 words. | 2 | 2 | 1,2,4,5,7 | 2 : 0 : 3 |
| 11 | Using Microsoft Excel spread sheet construct a box plot for the given dataset. (For example data set can be the number of passengers in a flat form at different time in a day). | 2 | 2 | 1,2,4,5,7 | 2 : 0 : 4 |
| 12 | Using Microsoft Excel spread sheet construct a leaf plot for the given dataset. Explain the graph with minimum 30 words. | 2 | 2 | 1,2,4,5,7 | 0 : 0 : 2 |
| 13 | Using Microsoft Excel spread sheet find the Mean, Mode and Median for the data (univariate data) given and also represent them in a Histogram. | 3 | 3 | 1,2,4,5,7 | 1 : 0 : 2 |
| 14 | Generate a 50 random data sample (even and odd number dataset) using Microsoft Excel spread sheet and determine the range and Quartiles. | 3 | 3 | 1,2,4,5,7 | 1 : 0 : 2 |
| 15 | Collect the current yield of a crop from 50 different persons (problem statement can be changed according to priorities of the tutor) in your locality and determine mean deviation and Quartile deviation in Microsoft excel spread sheet and brief your inference with less than 30 words. | 3 | 3 | 1,2,4,5,7 | 1 : 0 : 2 |

| | | | | | |
|--------------------|---|---|---|-----------|-----------|
| 16 | Collect the data of any 2 livestock population from 50 different houses in your locality (problem statement can be changed according to priorities of the tutor) and determine standard deviation for both the two separately in Microsoft excel spread sheet and brief your inference with less than 30 words. | 3 | 3 | 1,2,4,5,7 | 1:0:2 |
| 17 | Collect the data of two wheeler (with a rider and a pillion) crossing a busy junction in your locality in the peak hours (problem statement can be changed according to priorities of the tutor) and determine the variance of the data in Microsoft excel spread sheet and brief your inference with less than 30 words. | 3 | 3 | 1,2,4,5,7 | 1:0:2 |
| 18 | Using Microsoft Excel spread sheet draw a Skewness graph and kurtosis graph for randomly generated dataset. | 3 | 3 | 1,2,4,5,7 | 1:0:2 |
| 19 | Write a python program to add 2 integers and 2 strings and print the result. | 4 | 4 | 1,2,4,5,7 | 1:0:2 |
| 20 | Write a python program to find the sum of first 10 natural Numbers. | 4 | 4 | 1,2,4,5,7 | 1:0:2 |
| 21 | Write a python program to find whether the number is odd or even. | 4 | 4 | 1,2,4,5,7 | 1:0:2 |
| 22 | Write a python program to find the variance and standard deviation for the given data. | 4 | 4 | 1,2,4,5,7 | 2:0:4 |
| 23 | Write a python program to display student marks from the record. | 4 | 4 | 1,2,4,5,7 | 1:0:2 |
| 24 | Write a python program to create a labeled bar graph using matplotlib. pyplot. | 4 | 4 | 1,2,4,5,7 | 2:0:4 |
| 25 | Write a python program to create a labeled pie chart using matplotlib. pyplot. | 4 | 4 | 1,2,4,5,7 | 2:0:4 |
| TOTAL HOURS | | | | | 96 |

4. MAPPING OF CO WITH PO

| CO | COURSE OUTCOME | PO MAPPED | EXPERIMENT LINKED | COGNITIVE LEVEL(R/) | TUTORIAL & PRACTICAL SESSIONS IN HRS. |
|------|---|---------------|-------------------|---------------------|---------------------------------------|
| CO-1 | Understand the tools of data Collection, classification and cleaning of data. | 1, 2, 4, 5, 7 | 1-4 | A | 15 |

| | | | | | |
|--------------|--|---------------|-------|---|-----------|
| CO-2 | Able to summarize the given statistical data | 1, 2, 4, 5, 7 | 5-12 | A | 33 |
| CO-3 | Understand the measure of location And dispersion of data. | 1, 2, 4, 5, 7 | 13-18 | A | 18 |
| CO-4 | Learn the basics of Python Programming. | 1, 2, 4, 5, 7 | 19-25 | A | 30 |
| Total | | | | | 96 |

| Course | COs | Programme Outcomes (POs) | | | | | | |
|---|------|--------------------------|----------|----------|----------|----------|----------|----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Statistics & Analytics | CO-1 | 3 | 3 | - | 3 | 3 | - | 3 |
| | CO-2 | 3 | 3 | - | 3 | 3 | - | 3 |
| | CO-3 | 3 | 3 | - | 3 | 3 | - | 3 |
| | CO-4 | 3 | 3 | - | 3 | 3 | - | 3 |
| AVERAGE VALUE | | 3 | 3 | - | 3 | 3 | - | 3 |
| Level – 3 : Highly Mapped, Level – 2 : Moderately Mapped, Level – 1 : Low Mapped and Level – 0 : Not Mapped | | | | | | | | |

5. INSTRUCTIONAL STRATEGY

These are sample Strategies, which teacher can use to accelerate the attainment of the various course outcomes

1. Use of sign language for communication in classroom since most of students are hearing impaired in nature.
2. Use of Audio-Visual aids like ppt, videos ,Animation, E-books etc..
3. Hands on training providing for the students in practical and tutorial classes through demonstration.
4. Encourage to attend interactive sessions, Group discussion, guest lectures, workshops, Industrial visit, MCQ/Quiz, Assignment, open book test to facilitate students for learning.
5. Providing the course material in soft/hard copy in advance to the students, to come prepared to the class.
6. Use oral and Sign language in the class room as many of the students are hearing impaired.
7. Use of Audio and Visual techniques like E-Books, PPT, Videos etc.
8. Teaching through group discussion, Guest lecture etc.
9. Providing course materials.
10. Providing extra inputs through industrial visits, employability skills and career awareness programs.

11. Additional inputs' through MOOCs and NPTEL courses.
12. Hands on training through demonstration to tutorial classes in laboratories

6. SUGGESTED LEARNING RESOURCES:

- a. Statistical Analysis with Excel For Dummies (For Dummies Series) Paperback Import, 9 April 2013 by Joseph Schmuller (Author)
- b. <https://www.brianheinold.net/python/A Practical Introduction to Python Programming Heinold.pdf>
- c. http://www.bikeprof.com/uploads/9/0/6/5/9065192/excel_stats_handout_npl.pdf
- d. Introduction to Python programming for beginners by Vivian Baily Kindle edition.
- e. PYTHON PROGRAMMING: Python programming: the ultimate guide from a beginner to expert by Clive Campbell.
- f. Open source for python: <https://hub.gke2.mybinder.org/user/jupyterlabjupyterlab-demo-zfkdw4y/lab>

7. SUGGESTED LIST OF STUDENT ACTIVITIES

Note: The following activities or similar activities for assessing CIE (IA) for 10 marks (Any one)

| Sl. No. | Activity |
|---------|--|
| 1 | Describe the data collection activity itself (interviews, surveys, library research, etc.) AND why this specific form of data collection was chosen. Be sure to explain why you think this kind of data will help you in your design process. Also be sure to provide details about the activity: how many interviews, how long they took, where they took place, how many questions asked in a survey, how many respondents, etc. |

| | |
|---|---|
| | <p>Present the results of your data collection.</p> <p>You do not have to have completely analyzed all your data, but do make sure you present the results of your research.</p> <p>If you did a survey, please attach a copy of the survey as an appendix; if you did interviews, please attach a copy of the interview questions.</p> <p>Discuss any preliminary analysis of your data. What have you learned thus far from the data should be discussed from an analytical perspective (rather than a data dump).</p> <p>For example, if you surveyed people about their use of the local bus system, and 90% of your respondents said they take the bus when it is raining, and 60% of your respondents said they usually wait more than 10 minutes for a bus, think about what this teaches you rather than just the information itself.</p> <p>In this instance, you can see that people are generally waiting for several minutes in the rain for bus, so a covered bus stop might be a good idea.</p> <p>Keep in mind that your findings from data should lead directly to the conclusions you make about your design recommendations.</p> <p>This is the time to begin thinking very specifically about your research in those terms. This is also an opportunity to think about your definition of “better” and how it applies to your design goals and your choice of research activities (for example, if you are choosing to make something better by making it cheaper, maybe you are interviewing people to see how much loss of functionality or decrease in features for a technology they are willing to tolerate).</p> |
| 2 | <p>https://ils.unc.edu/courses/2013spring/inls541001/Assignments.html#Assignment 9 DOWNLOAD a dataset from the above link and use data visualization tools to Analyze it.</p> |
| 3 | <p>Acquire the dataset from https://www.kaggle.com/datasets (For example acquire the data of IPL ball by ball scores and find the standard deviation and Variance of score of a batsmen) and clean the data for the root cause of the problem statement and summarize the data and explain the inference.</p> |

8.a. COURSE ASSESSMENT AND EVALUATION CHART

| Assessment Methods | Types of Assessment | | Target | Assessment Methods | Max Marks | Types of Record | Course Outcomes for Assessment |
|---------------------|---------------------------------------|-------------------|----------|--|----------------------|-----------------|--|
| DIRECT ASSESSMENT | CIE CONTINUOUS INTERNAL EVALUATION | IA Test | STUDENTS | Two tests (Average of two tests will be Computed) | 20 | Blue Books | All Co's |
| | | Skill test | | Three tests (Average of three tests will be Computed) | 20 | Model/Report | Specified CO by the Course Coordinator |
| | | Student Activity | | | 20 | Model/Report | |
| | | Total CIE Marks | | 60 | | | |
| | SEE SEMESTER END EXAMINATION | Semester End Exam | STUDENTS | End of the Course | 40 | Answer Scripts | All Co's |
| | Total | | | 100 | | | |
| | Student Feedback | | | | Middle of the Course | | |
| INDIRECT ASSESSMENT | Student Feedback | | STUDENTS | Middle of the Course | Feed Back Forms | | |

b.COURSE ASSESSMENT AND EVALUATION CHART

| SL. NO. | ASSESSMENT | Evidence Collected | DURATION | COs | MAX MARKS | CONVERSION |
|--|---|--------------------|----------|---------|-----------|------------------------------------|
| 1 | CIE Assessment 1 (Written Test -1-theory) - At the end of 6 th week | Blue Book | 1 Hour | 1, 2 | 20 | Average of 2 written tests 20 |
| 2 | CIE Assessment 2 (Written Test -2-theory) - At the end of 14 th week | Blue Book | 1 Hour | 3, 4 | 20 | |
| 3 | CIE Assessment 3 (Skill test) - At the end of 8 th week | Model / Report | 3 Hours | 1, 2 | 20 | Average of 3 skill tests 20 |
| 4 | CIE Assessment 4 (Skill test) - At the end of 12 th week | Model / Report | 3 Hours | 3 | 20 | |
| 5 | CIE Assessment 5 (Skill test) - At the end of 15 th Week | Model / Report | 3 Hours | 4 | 20 | |
| 6 | CIE Assessment 6 (Student activity) - At the beginning of 16 th week | Model / Report | -- | 1, 2, 3 | 20 | 20 |
| Total Continuous Internal Evaluation (CIE) Assessment | | | | | | 60 |
| 7 | Semester End Examination (SEE) Assessment (Practical Test) | Answer Booklet | 3 Hours | | 100 | 40 |
| Total | | | | | | 100 |

Note:

1. CIE written test is conducted for 20 marks (Two sections). Each section shall have two full questions of same CL, CO. Student shall answer one full question (10 marks) from each section.
2. CIE Skill test is conducted for 100 marks (3 Hours duration) as per scheme of evaluation and the obtained marks are scaled down to 20 marks.
3. SEE is conducted for 100 Marks (3 Hours duration) as per scheme of evaluation.

First Semester Examination, Model Question Paper**STATISTICS AND ANALYTICS****Duration: 3 Hours]****Subject Code:****[Max. Marks: 100***Instruction: Answer both the questions. Each question carries 50 marks.*

| Qn. No. | Question | CL | COs | POs | Marks |
|--------------------|--|-----------|------------|---------------|--------------|
| 1 | Short and Objective type Questions | R / U | 1 | 1, 2, 4, 5, 7 | 10 |
| 2 | For the given ungrouped data set plot the bar graph by grouping the data in Microsoft Excel spread sheet and interpret the obtained results. (Dataset, bar graphs and interpretation have to be entered in the answer script). OR Generate a random data set in Microsoft excel spread sheet containing 50 data and find the mean mode and median in Microsoft excel spread sheet and interpret the obtained results. (Dataset, bar graphs and interpretation have to be entered in the answer script). | A | 2, 3 | 1, 2, 4, 5, 7 | 45 |
| 3 | Write the python program to enter two integers and two strings and to print the sum two integers and two strings. | A | 4 | 1, 2, 4, 5, 7 | 45 |
| Total Marks | | | | | 100 |

Questions are not framed from Unit 1 in the final SEE. Short questions can only be asked from that unit.

SCHEME OF EVALUATION FOR BOTH CIE AND SEE

| Sl. No. | Particulars of Evaluation | Marks |
|----------------|---|--------------|
| 1. | Short questions from Unit 1 | 10 |
| 2. | Writing of Observation / Flow Chart / Logic / Algorithm / Program | 30 |
| 3. | Conduction of experiment | 20 |
| 4. | Output and Interpretation of results | 20 |
| 5. | Viva-Voce | 20 |
| Total | | 100 |

---000---

Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)

PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|-----------------|--|---------------------|-------------------------------|
| Course Code | 3423 | Semester | II |
| Course Name | Communication Skills in English | Course Group | Core |
| No. of Credits | 4 | Type of Course | Lecture + Practice |
| Course Category | AR/CS/EC/JD | Total Contact Hours | 6 Hrs. / Week |
| | | | 96 Hrs. / Semester |
| Prerequisites | English Knowledge | Teaching Scheme | [L : T : P] = 0: 2 : 4 |
| CIE Marks | 60 | SEE Marks | 40 |

Preamble

Today, Communication is a very important skill for the success of every millennial student. Millennials affinity to use digital media for communication, changing career and working landscapes, and greater competition in colleges and workplaces makes enhancing student communication skills beyond language a must. Rote learning a few tips or tricks the night before an interview or performance review won't do the job if students are trying to make an impression in highly collaborative workplaces of the future. Expectations from students aspiring to be part of such future workplaces are that they have not just good verbal and non-verbal communication skills but also a good understanding of how to use modern tools for effective communication.

1. COURSE SKILL SET

At the end of the course, the students will be able to acquire the following skills:

1. Enable critical thinking
2. Empower with active learning skills
3. Enable team work/collaboration
4. Develop Reading and communication skills
5. Speak formally and informally in the day-to-day context.

2. COURSE OUTCOMES

At the end of the course, students will be able to

| | Course Outcome |
|------------|--|
| CO1 | Acquire Knowledge functional grammar concepts & Reading. |
| CO2 | Inculcate Importance of Body language and its impact. |
| CO3 | Acquire Knowledge on Articulate ideas and engage in impromptu conversations. |
| CO4 | Acquire knowledge on confidence in presenting written content in logical and organized manner. |

3. COURSE CONTENT OUTLINE WITH TEACHING HOURS AND MARK

| UNIT NO | UNIT TITLE | TEACHING HOURS | DISTRIBUTION LEVELS (Marks) | | | TOTAL |
|--------------|--------------------------|----------------|-----------------------------|-----------|-----------|-----------|
| | | | R | U | A | |
| 01 | Parts of Speech | 24 | 05 | 05 | - | 10 |
| 02 | Non-Verbal Communication | 24 | - | 05 | 05 | 10 |
| 03 | Communication skills | 24 | 05 | - | 05 | 10 |
| 04 | Writing skills | 24 | 05 | - | 05 | 10 |
| Total | | 96 | 15 | 10 | 15 | 40 |

(R = Remember, U = Understand, A = Apply and above levels (Bloom's Revised Taxonomy))

4. DETAILS OF COURSE CONTENT

The following topics / subtopics is to be taught and accessed in order to develop Unit Skill Sets for achieving CO to attain identified skill sets:

| UNIT NO. | UNIT SKILL SET | TOPICS / SUBTOPICS | HOURS L-T-P |
|----------------------------|---|---|-------------|
| UNIT-1. Parts of Speech | Understand of Functional Grammar Concepts | 2.1 Definitions- Meanings of Parts of speech 2.2 Parts of speech Sentence structure 2.3 Examples of right sentences 2.4 Reading Comprehension 2.5 Reading a paragraph in Braille/ text 2.6 Time Concept Activities 2.7 Reading Fluency Activities 2.8 Comprehending the read message and understanding it, reproduce with the write up - Exercises/ Activities | 0-15-09 |

| | | | |
|--|---|---|----------------|
| <p style="text-align: center;">UNIT-2 Non-Verbal Communication</p> | <p>Understand the strategies for effective body language</p> | <p>2.1 Body language tips:</p> <ul style="list-style-type: none"> • Keep appropriate distance • Take care of your appearance • Maintain eye contact <p>2.2 Do's in Non-Verbal Communication</p> <ul style="list-style-type: none"> • Smile • stand up confident and straight • use appropriate hand gestures • Make eye contact with audience • Hold neat note cards while presenting content <p>2.3 Don'ts in Non-Verbal Communication</p> <ul style="list-style-type: none"> • point at anyone • rock backwards and forwards • pace across front of room • read off slides read off notes • Techniques of categorizing sentences, understanding how to build with punctuation and effectively use in the verbal and non-verbal communication. This involves more of hands-on activities. <p>2.4 Ten Different types of Non-Verbal Communication</p> <ol style="list-style-type: none"> a) Facial Expressions b) Gestures c) Paralinguistic's D) PROXIMIC" (PROXIMITY/PERSONAL SPACE) e) EYE CONTACT/EYE GAZE f) HAPTIC (PHYSICAL TOUCH) | <p>0-14-10</p> |
| <p style="text-align: center;">UNIT-3 Communication skills</p> | <p>Understand and apply knowledge on Communication and demonstration skills</p> | <p>3.1 Language Functions</p> <p>3.2 General Knowledge Questions – Factual propositions, Argumentative issue</p> <p>3.3 The nature of group Discussion – Opinion forming, storming, Norms and Performing- Leadership Roles</p> <p>3.4 Dialogue presentation.</p> <p>3.5 Role Play – Sales man, Guide, Narration, News and Views – Jobs, Business and everyday activities – Programme and plans -Giving message.</p> <p>3.6 Starting Conversation with a stranger – Making Request- Expression Gratitude</p> <ul style="list-style-type: none"> – Complimenting and congratulating – Apologizing and Responding to an Apology – Expressing Sympathy – Seeking Permission – Introducing – Leave taking – Request for Repetition – Asking for Information – Offering to help – Agreeing and Disagreeing <p>3.7 Webinar / Web Presentation (zoom, Google meet, Skype)</p> | <p>0-14-10</p> |

| | | | |
|----------------------------------|--|--|---------|
| UNIT-4 Writing Skills | Understand and apply knowledge on writing skills | <p>4.1 Present content in the PPT format efficiently.</p> <p>4.2 Job Interviews Preparation- To understand and Practice Questions and effective replies at a job interview.</p> <p>4.3 Preparing CV in a latest Format.</p> <p>4.4 Personal Details – Interview Manners -HR questions.</p> <p>4.5 Passage comprehension Conversation comprehension;</p> <p>4.6 Reports using MS Word</p> <p>4.7 Different types of emails: Job application, request letter, letter writing and quick notes</p> | 0-13-11 |
|----------------------------------|--|--|---------|

Course Class Activity List (Unit-wise)

The following are the various activities that faculty could conduct for each unit are presented below;

| Unit No. | Unit Title | Unit Activities |
|----------|-----------------|--|
| UNIT 1: | Parts of speech | <p>Parts of Speech:</p> <p>building sentence using parts of speech: Demonstration by teacher: (Will be explained in the book as an example)</p> <p>Jumbled parts of speech: Student should pick the right order to build meaningful sentence: (More samples will be provided in the workbook)</p> <ul style="list-style-type: none"> • College goes to you every day. • Makes spider web a <p>Gender, Singular and Plurals: Match the following activity for singular and plural</p> <ul style="list-style-type: none"> • Fill in the blanks activity for genders <p>Reading & Comprehension: Conversation</p> <ul style="list-style-type: none"> • Conversation at the bank (provided in the workbook along with few more conversation samples) |

| | | |
|---------|--------------------------|---|
| | | <ul style="list-style-type: none"> • Questions based on this conversation will be provided in the workbook |
| Unit 2: | Non-verbal communication | <p>Body language</p> <p>Instructions and set up:</p> <ol style="list-style-type: none"> 1.Series of instructions to the group that are to be copied/reproduced. Start slowly and increase the pace 2.State the following actions as YOU do them: 3.Put your hand to your nose 4.Clap your hands 5.Stand up 6.Turn around 7.Touch your shoulder 8.Sit down 9.Stamp your foot 10.Cross your arms 11.Put your hand to your forehead – BUT WHILE SAYING THIS PUT YOUR HAND TO YOUR NOSE 12.Observe the number of group members who copy what you did rather than what you said. <p>Outcome of this activity: Discuss how body language can reinforce/influence verbal communication and drive the importance of body language and how to work on it</p> |
| UNIT 3: | Communication skills | <ul style="list-style-type: none"> • Reading passage (Provided in workbook) • Reading passage from the text book • Comprehension: Passage & Conversation (will be provided in workbook) <p>Chunking words and reading activities</p> <ul style="list-style-type: none"> • Presentation: <ul style="list-style-type: none"> ○ About learning in the communication class ○ Concept presentation <p>Hosting online meeting using online meeting tools Inviting people</p> |
| Unit 4: | Writing Skills | <ul style="list-style-type: none"> • Email writing activities: Writing emails using email provider. Theme based email writing • Report writing assignment <p>Additional essential writing skills – Framework will be provided and assignments will be advised:</p> <ul style="list-style-type: none"> • Resume writing /Curriculum Vitae • Report Writing • Portfolio writing <p>Formal letters Writing about a machinery tool/interior designing plan? Related to the diploma stream.</p> |

| | | |
|--|--|--|
| | | <ul style="list-style-type: none"> Resume writing assignment Data handling: Collecting data about machines/number of students passed out of college for last three years and creating graph about it. <ul style="list-style-type: none"> Sharing screen <p>Email communication & using technical jargons:</p> <p>Sample letter writing as assignment to students. (List will be provided in the text book – Request, apology, job application and relevant email formats that are useful for students post diploma course)</p> <ul style="list-style-type: none"> There will be at least one assignment that utilizes technical jargons in email communication. |
|--|--|--|

6. MAPPING OF CO WITH PO

| CO | Course Outcome | PO Mapped | Unit Linked | CL R/U/A | Theory in Hrs. | Total Marks |
|--------------|--|-----------|-------------|----------|----------------|-------------|
| 1 | Acquire Knowledge functional grammar concepts & Reading. | 1,6,7 | 1 | R/U/A | 24 | 10 |
| 2 | Inculcate Importance of Body language and its impact. | 1,6,7 | 2 | R/U/A | 24 | 10 |
| 3 | Acquire Knowledge on Articulate ideas and engage in impromptu conversations. | 1,6,7 | 3 | R/U/A | 24 | 10 |
| 4 | Acquire knowledge on confidence in presenting written content in logical and organized manner. | 1,6,7 | 4 | R/U/A | 24 | 10 |
| Total | | 96 | 40 | | | |

7. LEVELS OF CO AND PO MAPPING

| Course | CO's | Programme Outcomes | | | | | | | Programme Specific Objectives | |
|---------------------------------|-------|--------------------|---|---|---|---|---|---|-------------------------------|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 |
| Communication skills in English | SI.No | | | | | | | | | |
| | CO1 | 3 | - | - | - | - | 2 | 3 | 2 | 3 |
| | CO2 | 3 | - | - | - | - | 2 | 3 | 2 | 3 |
| | CO3 | 3 | - | - | - | - | 2 | 3 | 2 | 3 |
| | CO4 | 3 | - | - | - | - | 2 | 3 | 2 | 3 |
| AVERAGE | | 3 | - | - | - | - | 2 | 3 | 2 | 3 |

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If >40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at

Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

8. INSTRUCTIONAL STRATEGY

To achieve course objectives, it is important to provide the blended mode of instruction for each of the concepts. This blended mode of instruction enables and empowers students with:

Understanding of Concept (Theory):

Through definitions, discussions, explanation, conclusions.

Through demonstrations: Show films or other workplace clips that model various conversation skills. This provides greater clarity of the concept by enabling observation skills

- Helping in expression of gesture
- Building confidence

Application of Concept (Learning by doing): It is imperative that to become a good communicator, the skills have to be built by applying the concept in the hypothetically created real life situations. Students are encouraged to participate in each of these activities during lab session to help build the effective communication skills.

Use of technology tools like audio books, apps like voice thread or paper telephone, etc.

- To help in workplace conversions.
- To increase active listening, pronunciation
- To help invoice modulation Group discussion Reinforce active listening
 - Enable group debate to imbibe healthy communication strategies
 - Sharpen the skills of “Asking clarifying questions”
 - Sharpen Feedback/Response skills Time management skills Group presentations/peer reviews
 - Enable team work
 - Assess concept understanding
 - Sharpen both oral and written communication skills Group activities:
 - Foster critical thinking
 - Enable reflective learning Tool’s usage:
 - Understand the difference between a Dictionary and a Thesaurus
 - Understand “When” and “How” to use these tools for communication.

8. SUGGESTED LEARNING RESOURCES:

Recommended Learning Resources <https://www.englishclub.com/grammar/parts-of-speech.htm>

Watch Amy Cuddy’s TED Talk: Your Body Language Shapes Who You Are

Additional Reading: http://money.cnn.com/2000/05/03/career/q_body_language/

9. COURSE ASSESSMENT AND EVALUATION CHART

| Sl.No | Assessment | Schedule | Duration | Max. Test marks |
|-------|------------|----------|----------|-----------------|
| | | | | |

| | | | | |
|-------|------------|---|-------|----|
| 1 | SkillTest1 | Attheendof 5 th weekofthesem | 2 Hrs | 20 |
| 2 | SkillTest2 | Attheendof 9 th weekofthesem | 2 Hrs | 20 |
| 3 | SkillTest3 | Attheendof15 th weekofthesem | 2 Hrs | 20 |
| Total | | | | 60 |

Scheme of Valuation for CIE

| Serial no | Assessm ent | Marks |
|--------------|--|-----------|
| 1 | Portfolio Evaluation of activities / exercises conducted up to the schedule of Skill Test. (Work Book Based) | 10 |
| 2 | Assessment of any one through qualitative assessment (Rubrics) | 10 |
| TOTAL | | 20 |

RUBRICS FOR ASSESSMENT OF ACTIVITY (10marks) (Qualitative Assessment)

| Dimension | Beginner | Intermediate | Good | Advanced | Expert | Student Score |
|-----------|------------|--------------|------------|------------|------------|------------------|
| | 2 | 4 | 6 | 8 | 10 | |
| | Descriptor | Descriptor | Descriptor | Descriptor | Descriptor | |
| | Descriptor | Descriptor | Descriptor | Descriptor | Descriptor | |
| | Descriptor | Descriptor | Descriptor | Descriptor | Descriptor | |
| | Descriptor | Descriptor | Descriptor | Descriptor | Descriptor | |

Note:

- SEE (Semester End Examination) is conducted for 80 Marks Practical courses for a time duration of 3 Hours.
- Two CIE (written test),(Theory Test) each of 20 marks for a time duration of 60 minutes shall be conducted. Two CIE (written test),(Practical Test) each of 20 marks for a time duration of 60 minutes shall be conducted Also, Three CIE (MCQ or Quiz/ /student activity or assignment) each of 20 marks for the time duration of 60 minutes shall be conducted. Any fraction at any stage during evaluation will be rounded off to the next higher digit
- Assessment of assignment and student activity is evaluated through appropriate rubrics by the respective course coordinator. The secured mark in each case is rounded off to the next higher digit.

10. DETAILED COURSE CONTENTS

| UNIT NO. AND NAME | DETAILED COURSE CONTENT | CO | PO | CONTACT HRS. | TOTAL |
|---|--|----|-------|--------------|-------|
| 1. Parts of speech | 1.1 Definitions- Meanings of Parts of speech | 1 | 1,7 | 4 | 24 |
| | 1.2 Parts of speech Sentence structure | 1 | 1,7 | 4 | |
| | 1.3 Examples of right sentences | 1 | 1,7 | 4 | |
| | 1.4 Reading Comprehension | 1 | 1,7 | 3 | |
| | 1.5 Reading a paragraph in braille/ text | 1 | 1,7 | 2 | |
| | 1.6 Time Concept Activities | 1 | 1,7 | 2 | |
| | 1.7 Reading Fluency Activities | 1 | 1,7 | 2 | |
| | 1.8 Comprehending the read message and understanding it, reproduce with the write up | 1 | 1,7 | 3 | |
| | Exercises/ Activities | | | | |
| 3. Non-verbal communication | 2.1 Body language tips: | 2 | 1,6,7 | 4 | 24 |
| | • Keep appropriate distance | 2 | 1,6,7 | 4 | |
| | • Take care of your appearance | 2 | 1,6,7 | 4 | |
| | • Maintain eye contact | 2 | 1,6,7 | 4 | |
| | 2.2 Do's in Non-Verbal Communication | 2 | 1,6,7 | 4 | |
| | • smile | | | | |
| | • stand up confident and straight | | | | |
| | • use appropriate hand gestures | | | | |
| | • Don'ts in Non-Verbal Communication | | | | |
| | 2.3 Don'ts in Non-Verbal Communication | | | | |
| | • point at anyone | | | | |
| | • rock backwards and forwards | | | | |
| | • pace across front of room | | | | |
| | • read off slides read off notes | | | | |
| | • Techniques of categorizing sentences, understanding how to build with punctuation and effectively use in the verbal and non-verbal communication. This involves more of hands-on activities. | | | | |
| | 2.4 Ten Different types of Non-Verbal Communication | | | | |
| | • Facial Expressions | | | | |
| • Gestures | | | | | |
| • Paralinguistics | | | | | |
| • Proxemic" (proximity/personal space) | | | | | |
| • Eye contact/eye gaze | | | | | |
| • Haptic (physical touch) | | | | | |

| | | | | | |
|-------------------------|--|---|-------|-----------|----|
| 3. Communication Skills | 3.1 Language Functions | 3 | 1,6,7 | 4 | 24 |
| | 3.2 General Knowledge Questions – Factual propositions, Argumentative issue | 3 | 1,6,7 | 4 | |
| | 3.3 The nature of group Discussion – Opinion forming, storming, Norms and Performing- Leadership Roles | 3 | 1,6,7 | 3 | |
| | 3.4 Dialogue presentation. | 3 | 1,6,7 | 3 | |
| | 3.5 Role Play – Sales man, Guide, Narration, News and Views – Jobs, Business and everyday activities – Programme and plans -Giving message. | 3 | 1,6,7 | 3 | |
| | 3.6 Starting Conversation with a stranger – Making Request- Expression Gratitude | 3 | 1,6,7 | 4 | |
| | – Complimenting and congratulating – Apologizing and Responding to an Apology – Expressing Sympathy – Seeking Permission | | | | |
| | – Introducing – Leave taking – Request for Repetition Asking for Information – Offering to help – Agreeing and Disagreeing Webinar / Web Presentation (zoom, Google meet, Skype) | | | | |
| 4. Presentation Skills | 4.1 Present content in the PPT format efficiently. | 4 | 1,6,7 | 6 | 24 |
| | 4.2 Job Interviews Preparation- To understand and Practice Questions and effective replies at a job interview. | 4 | 1,6,7 | 4 | |
| | 4.3 Preparing CV in a latest Format. | 4 | 1,6,7 | 2 | |
| | 4. 4Personal Details – Interview Manners -HR questions | 4 | 1,6,7 | 2 | |
| | 4. Reports using MS Word | 4 | 1,6,7 | 2 | |
| | 4.6Apologizing and Responding to an Apology | 4 | 1,6,7 | 2 | |
| | 4. Different types of emails: Job application, request letter, letter writing and quick notes | 4 | 1,6,7 | 2 | |
| | 4.8Introducing – Leave taking – Request for Repetition– | 4 | 1,6,7 | 2 | |
| | 4.9Asking for Information – Offering to help – Agreeing and Disagreeing | 4 | 1,6,7 | 2 | |
| Total | | | | 96 | |

First Semester Examination, Model Question Paper – 2021

Communication Skills in English Lab

Duration: 3 Hours]

Course Code: 6424

[Max. Marks: 100

Instruction: Answer all the questions considering the internal choice in each section.

Each section carries 20 marks.

SECTION – 1 [20 Marks]

[Questions from Unit 1 – which covers CO-1 and POs 1]

| Question Number | Question 1 | OR | Question 2 | Marks |
|-----------------|--------------------|----|--------------------|-------|
| 1 | State the question | | State the question | 5 |
| 2 | State the question | | State the question | 5 |
| 3 | State the question | | State the question | 5 |
| 4 | State the question | | State the question | 5 |

SECTION – 2 [20 Marks]

[Questions from Unit 2 - Forms of Business Organization which covers CO-2 and POs 1&2]

| Question Number | Question 1 | OR | Question 2 | Marks |
|-----------------|--------------------|----|--------------------|-------|
| 1 | State the question | | State the question | 5 |
| 2 | State the question | | State the question | 5 |
| 3 | State the question | | State the question | 5 |
| 4 | State the question | | State the question | 5 |

SECTION – 3 [20 Marks]

[Questions from Unit 3 - Business Services which covers CO-3 and POs 1]

| Question Number | Question 1 | OR | Question 2 | Marks |
|-----------------|--------------------|----|--------------------|-------|
| 1 | State the question | | State the question | 5 |
| 2 | State the question | | State the question | 5 |
| 3 | State the question | | State the question | 5 |
| 4 | State the question | | State the question | 5 |

SECTION – 4 [20 Marks]

[Questions from Unit 4 - Emerging Modes of Business which covers CO-4 and POs 1,5&7]

| Question Number | Question 1 | OR | Question 2 | Marks |
|-----------------|--------------------|----|--------------------|-------|
| 1 | State the question | | State the question | 5 |
| 2 | State the question | | State the question | 5 |
| 3 | State the question | | State the question | 5 |
| 4 | State the question | | State the question | 5 |

SECTION – 5 [20 Marks]

[Questions from Unit 5 -Social Responsibility of Business and Business Ethics which covers CO-5 and POs 1,5&7]

| Question Number | Question 1 | OR | Question 2 | Marks |
|-----------------|--------------------|----|--------------------|-------|
| 1 | State the question | | State the question | 5 |
| 2 | State the question | | State the question | 5 |
| 3 | State the question | | State the question | 5 |
| 4 | State the question | | State the question | 5 |

Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)

PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|-----------------|--|---------------------|---------------------|
| Course Code | 3424 | Semester | I/II |
| Course Title | Computer Aided Engineering Graphics | Course Group | CS,EC |
| No. of Credits | 4 | Type of Course | Lecture & Practice |
| Course Category | PC | Total Contact Hours | 6 Hrs Per Week |
| | | | 96 Hrs Per Semester |
| Prerequisites | Enthusiasm to learn the subject/Visualizing/Creativity | Teaching Scheme | (L: T:P) = 1:0:2 |
| CIE Marks | 60 | SEE Marks | 40 |

RATIONALE:

Engineering Drawing is an effective language of engineers. It is the foundation block which strengthens the engineering & technological structure. Moreover, it is the transmitting link between ideas and realization.

Course Skill Set

At the end of the course, the students will be able to acquire the following skills

Prepare engineering drawings both manually and using CAD with given geometrical dimensions using prevailing standards and drafting instruments. Visualize the shape of simple object from orthographic views and vice versa

1. COURSE OUTCOMES:

At the end of course, students are able to

| | |
|-----|--|
| CO1 | Adopt the standards, dimensioning and construct appropriate drawing scales, in technical Drawing development. |
| CO2 | Visualize objects in all planes and learn displaying techniques for graphical Communication in design process. |
| CO3 | Sketch orthographic projections into isometric projections and vice versa. |
| CO4 | Use computer software and Apply computer aided drafting tools to create 2D/3D engineering drawings |

2. INSTRUCTIONAL STRATEGY:

1. Teacher should show model of real of the component/part whose drawing is to be made. Emphasis should be given on cleanliness, dimensioning and layout of sheet.
2. Focus should be on proper selection of drawing instruments and their proper use.
3. The institute should procure AutoCAD or other engineering graphics software for practice in engineering drawings.

4. Separate labs for practice on Engineering graphics Software should be established
5. Use oral and Sign language in the class room as many of the students are hearing impaired.
6. Use of Audio and Visual techniques like E-Books, PPT, Videos etc.
7. Teaching through group discussion, Guest lecture etc.
8. Providing course materials.
9. Providing extra inputs through industrial visits, employability skills and career awareness programs
10. Additional inputs' through MOOCs and NPTEL courses.
11. Hands on training through demonstration to tutorial classes in laboratories.

3. DETAILS OF COURSE CONTENT

The following topics/subtopics is to be taught and assessed in order to develop Unit Skill sets for achieving CO to attain identified skill sets:

| Unit | Major Learning Topics and Sub- Topics | Outcomes (in cognitive domain) | Hours L-T-P |
|-------------------------------------|--|--|-------------|
| UNIT-1 Basic elements of Drawing | 1.1 List the different drawing instruments and application 1.2 Convention of lines and its application (Thick, Thin, Axis etc.) 1.3 Practice use of drawing instruments 1.4 Representative fraction Scales - Full Scale, Reduced Scale and Enlarged Scale 1.6 Dimensioning a) Aligned system and Unidirectional system in the Sketches b) Chain dimensioning and Parallel dimensioning 1.7 Construct different polygons | 1. Drawing equipment's, instruments and materials. 2. Equipment's-types, specifications, method to use them, applications. 3. Instruments-types, specifications, methods to use them and applications. 4. Pencils-grades, applications, Different types of lines. 5. Scaling technique used in drawing. 6. Dimensioning methods. - Aligned method. Unilateral with chain, parallel dimensioning. 7. Constructions of geometrical figures | 4-0-8 |

| | | | |
|--|---|--|---------------|
| <p>UNIT-2 CAD Interface</p> | <p>2.1 Introduction to CAD- Hardware requirements. 2.2 Various CAD software available 2.3 Familiarization of CAD window - Commands like New file, Saving the file, opening an existing drawing file, Creating templates 2.4 Setting up new drawing: Units, Limits, Grid, Snap. Standard sizes of sheet. 2.5 Selecting Various plotting parameters such as Paper size, paper units, drawing orientation ,plot scale, plot offset, plot area, print preview</p> | <ol style="list-style-type: none"> 1. CAD-Definition-Importance. 2. Familiarization with CAD Environment and utilities. 3. Setting up layout in CAD software's by taking plotting parameters | <p>5-0-10</p> |
| <p>UNIT-3 Exposure to CAD Commands</p> | <p>3.1 Draw basic entities like Line, Circle, Arc, Polygon, Ellipse, Rectangle, Multiline, Dimensioning, Inserting text Applying constraints-horizontal, vertical, parallel, concentric, perpendicular, symmetric equal, collinear 3.2 Insert title block for the drawing and take the Printout 3.3 Create objects by applying constraints and convert the objects to full scale, reduced scale and enlarged scale 3.4 Apply copy, mirroring, array, fillet and trim on the object created.</p> | <ol style="list-style-type: none"> 1. Computer graphics &its terminology. 2. CAD definition, concept &need. 3. Commands used in CAD 4. Functional areas of CAD.- Coordinate systems. 5. Familiarization of Cad commands 6. Draw simple Geometrical figures using CAD | <p>6-0-12</p> |

| | | | |
|---------------------------------------|---|--|---------|
| UNIT-4 Orthographic projections | 4.1 Introduction to orthographic projection 4.2 Conversion of pictorial view into Orthographic Views | 1. Types of projections- orthographic concept and applications. 2 Various term associated with orthographic projections. (a) Theory of projection. (b) Methods of projection. (c) Orthographic projection. (d) Planes of projection. 3 Conversion of simple pictorial views into Orthographic views. Illustrative problems on orthographic projection. Note : (1)Problem should be restricted up to - Front view/Elevation, Top view/Plan and Side views only. Use First Angle Method only. | 6-0-12 |
| UNIT-5 Isometric projections | 5.1 Introduction to Isometric Projections 5.2 Isometric Scales and Actual Scale 5.3 Isometric View and Isometric Projection 5.4 Conversion of Orthographic Views into Isometric | 1. Isometric axis, lines and planes. 2. Isometric scales. 3. Isometric view and isometric drawing. 4. Difference between isometric projection and isometric drawing. 5. Illustrative problems limited to Simple elements | 5-0-10 |
| UNIT-6 CAD Drafting | 6.1 Draw different types of 2D/3D modeling entities using viewing commands, to view them (Problems solved in chapter no4 and 5 i.e Orthographic, isometric projection). | 1 Difference between 2D&3D models. 2.2D/3D modeling concept, Simple objects | 3-0-6 |
| TOTAL | | | 29-0-58 |

4. LIST OF PRACTICAL EXERCISES:

The exercises/practical/experiments should be properly designed and implemented with an attempt to different types of skills leading to the achievement of the competency. Following is the list of exercises/practical/experiments for guidance.

| Sl. No | Unit No. | Practical Exercises (Outcomes in Psychomotor Domain) | Hours |
|--------|----------|---|---------|
| 1 | 1 | 1. Teacher will demonstrate a: Use of a Drawing instruments. b. Planning and layout as per IS. c:Scalingtechnique. | 1-0-2 |
| | | 2. Draw following. Problem–1Drawing horizontal,vertical,30degree,45degree,60 &75degrees lines using Tee and Setsquares/drafter.(Sketch book) | |
| | | Problem – 2 Indicate different convention of lines on the drawing.(Sketch Book) | 1-0-2 |
| | | Problem–3 Copy the sketch to the required scale and dimensioning adopting right system and positioning of dimensions using Tee and Set squares / drafter. (Sketch Book) | 1-0-2 |
| | | Problem 4. Draw regular geometric constructions Pentagon, Hexagon, Square, circle, Triangle and other shapes. (Sketch Book) | 1-0-2 |
| 2 | 2 | Use of CAD commands, plotting the drawing | 5-0-10 |
| 3 | 3 | Problem 5: Drawing basic entities: Circle, Arc, Polygon, Ellipse, Rectangle, Multiline | 6-0-12 |
| 4 | 4 | Problem 6: Draw Orthographic views for the given object. (CAD Drawing)(Minimum 5 Problems) | 6-0-12 |
| 5 | 5 | Problem7: Draw Isometric projections for the given Orthographic views(CAD Drawing) (Minimum5Problems) | 5-0-10 |
| 6 | 6 | Problem8:Produce Orthographic (2D) DrawingsinCAD–Chap4 Problem14:ProduceIsometricand3DDrawingsinCAD–Chap5 (CAD Drawings and Printout)(Minimum5Problems) | 3-0-6 |
| TOTAL | | | 29-0-58 |

1. Theory & practice should be in first angle projections and IS codes should be followed wherever applicable.
2. The dimensions of line, axes, distances, angle, side of polygon, diameter, etc. must be varied for each student in batch so that each student will have same problems, but with different dimensions.
3. The sketch book has to contain data of all problems, solutions of all problems and student activities performed.
4. Student's activities are compulsory to be performed.

5. SUGGESTED LIST OF STUDENT ACTIVITIES:

| SL.NO. | ACTIVITY |
|--------|---|
| 1 | Sketch the combinations of set squares to draw angles in step of 150,300,450,600,750,900,1050,1200,1350,1500,1650,1800. |
| 2 | Take two simple objects. Sketch isometric of them. |
| 3 | Take two simple objects. Sketch Pictorial orthographic views of them. |
| 4 | Prepare a 2D drawing using AutoCAD and 2D parametric sketcher environment. |
| 5 | Prepare 3D solid models using AutoCAD any one mechanical component(Four Components). |

6. SUGGESTED LEARNING RESOURCES:

- Bureau of Indian Standards. Engineering Drawing Practice for Schools and Colleges IS: Sp-46. BIS. Government of India, Third Reprint, October 1998; ISBN:81-7061-091-2.
- Bhatt, N. D. Engineering Drawing. Charotar Publishing House, Anand, Gujrat 2010; ISBN: 978-93-80358-17-8.
- Jain &Gautam, Engineering Graphics & Design, Khanna Publishing House, New Delhi (ISBN: 978- 93-86173-478)
- Jolhe,D.A.EngineeringDrawing.TataMcGrawHillEdu.NewDelhi,2010;ISBN:978- 0-07-064837-1
- Dhawan, R.K. EngineeringDrawing.S.ChandandCompany,NewDelhi;ISBN:81-219- 1431-0.
- Shah, P. J. Aiiig/reei iiiiig Drowiiiig. S. Chond and Company, New Delhi, 2008, ISBN:81- 219-2964-4.
- Kulkarni,D.M.;Rostogi,A.P.;Soikar,A.K.EngineeringGraphicswithAutoCAD.PHI Learning Private Limited-New Delhi (2010): ISBN:978-8120337831.
- Jeyapooon,T.EssentialsofEngineeringDrmviwgaiirlGraphicsusing
- Auto CAD.Vikas Publishing HousePvt. Ltd, Noida, 2011; ISBN:978-8125953005.
- Autodesk. AutoCAD User RirJe. Autodesk Press, USA,2015.
- Shalrn, Tickoo. Auto CAD 2016 for Engineers and Designers .Dieamtech Press; Golpotia Publication, New Delhi, 2015; ISBN978-9351199113.

7. SOFTWARE/LEARNING WEBSITES :

1. <https://www.youtube.com/watch?v=TI4jGvDWCw>
2. https://www.youtube.com/watch?v=dmt6_n7Sgcg
3. <https://www.youtube.com/watch?v=MQScnLXL0M>
4. <https://www.youtube.com/watch?v=3WXPanCq9LI>
5. <https://www.youtube.com/watch?v=fvik7PlxAuo>
6. <http://www.me.umn.edu/coursesme2011/handouts/engge%20graphics.pdf>
7. <https://www.machinedesignonline.com>

8. Mapping of Course Outcomes with Programme Outcomes (Suggestive only):

| Course | CO's | Programme Outcomes (PO's) | | | | | | | Programme Specific Outcomes (PSO's) | |
|---|------|---------------------------|----------|----------|----------|----------|----------|----------|-------------------------------------|----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 |
| Engineering Graphics | CO1 | 3 | - | - | 3 | - | - | 2 | - | - |
| | CO2 | 3 | - | - | 3 | - | - | 2 | - | - |
| | CO3 | 3 | - | - | 3 | - | - | 2 | - | - |
| | CO4 | 3 | - | - | 3 | - | - | 2 | - | - |
| AERAGE | | 3 | - | - | 3 | - | - | 2 | - | - |
| Level 3- Highly Mapped, Level 2-Moderately Mapped, Level 1-Low Mapped | | | | | | | | | | |

9. COURSE ASSESSMENT AND EVALUATION CHART:

| Sl. No | Assessment | Time frame in semester | Duration | Max marks | Conversion |
|--------------|--|------------------------|----------|-----------|--|
| 1. | Portfolio Evaluation of Drawings (CAD Practice Exercises) | Entire Duration | | 20 | 20 |
| 2 | Skill Test-1 (Skill test 1-Unit 1&2) | At the end of 6 week | 3 Hrs | 100 | Average of two skill Tests 1 and 2 (Both skill tests are to be reduced to weightage of 20 independently)20 |
| 3 | Skill Test-2 (Skill test 2 is of CAD based-Unit,3,4) | At the end of 10 week | 3 Hrs | 100 | |
| 4 | Skill Test-3 (Skill test 3 is of CAD based Unit 5,6) | At the end of 15 week | 3 Hrs | 100 | |
| 5 | Total Continuous Internal Evaluation (CIE)Assessment | | | | 60 |
| 6 | Semester End Examination (SEE) Assessment conducted for 100 marks, finally reduced to 40 marks weightage | | 3 Hrs | 100 | 40 |
| TOTAL | | | | | 100 |

10. Scheme of Valuation for End Examination

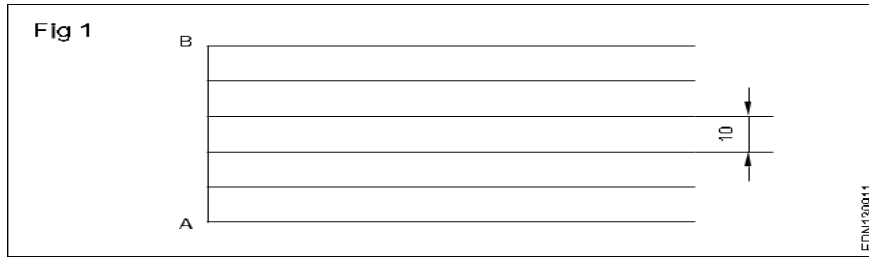
| SL NO | QUESTIONS | MARKS |
|-------|---|-------|
| 1 | Construct a Regular hexagon of side 35mm. | 10 |
| 2 | Divide a line of length 165 mm into seven equal parts. | 10 |
| 3 | Copy the given sketch and dimensioning by Aligned system | 10 |
| 4 | Create Orthographic views for the given Pictorial drawing. Indicate all Dimensions and Annotations. (CAD) | 35 |
| | OR | |
| | Create Isometric views for the given orthographic drawing. Indicate all Dimensions and Annotations. (CAD) | |
| 5 | Create 3D drawing for the given Sketch (CAD) | 35 |
| TOTAL | | 100 |

- CAD Laboratory and Other Requirements to Conduct Engineering Graphics Course
- Latest Configuration Computers which can be able to run latest any Computer Aided Drafting Software. (At least One Computer per student in practical session.)- 30 no
- Any latest Authorized Computer Aided Drafting Software (30 user licenses)
- Plotter of size A2/A3
- LCD Projector.

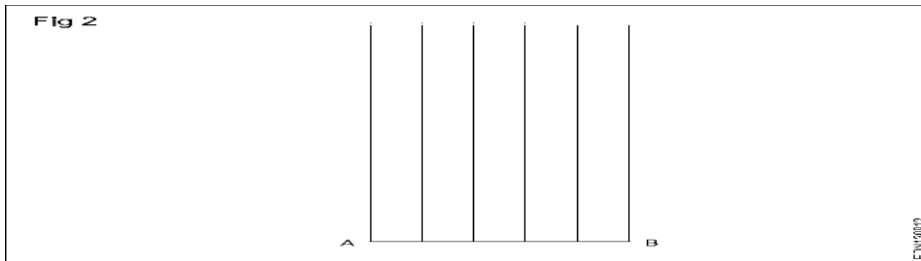
Note- 1. Orthopedic Disability students can perform all the drawing in CAD
 2. In semester end examination the questions 1, 2, and 3 should be performing in booklet (Drawing sheets) and Questions 4 and 5 must be in CAD.

MODEL QUESTION BANK (Suggestive only)

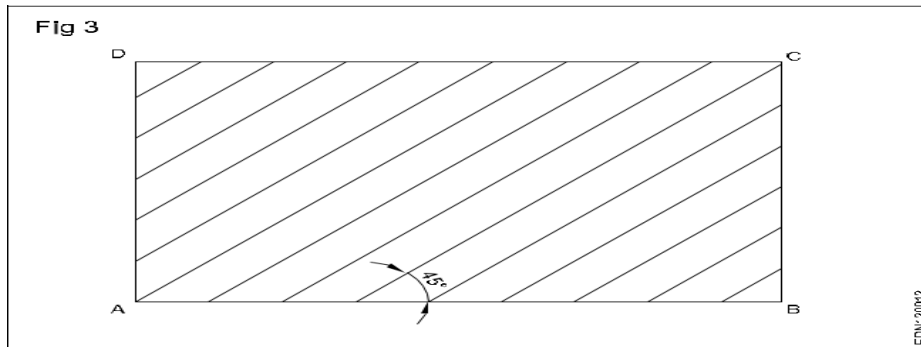
1. Draw six horizontal parallel lines of 50mm long with 10mm intervals (Fig1).



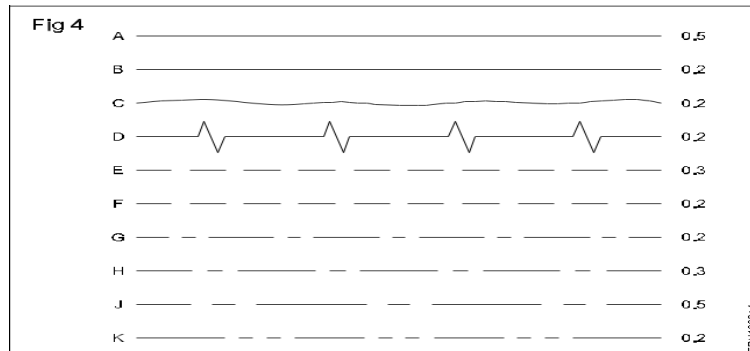
2. Draw six vertical parallel lines of 50mm length with 10mm intervals (Fig2)



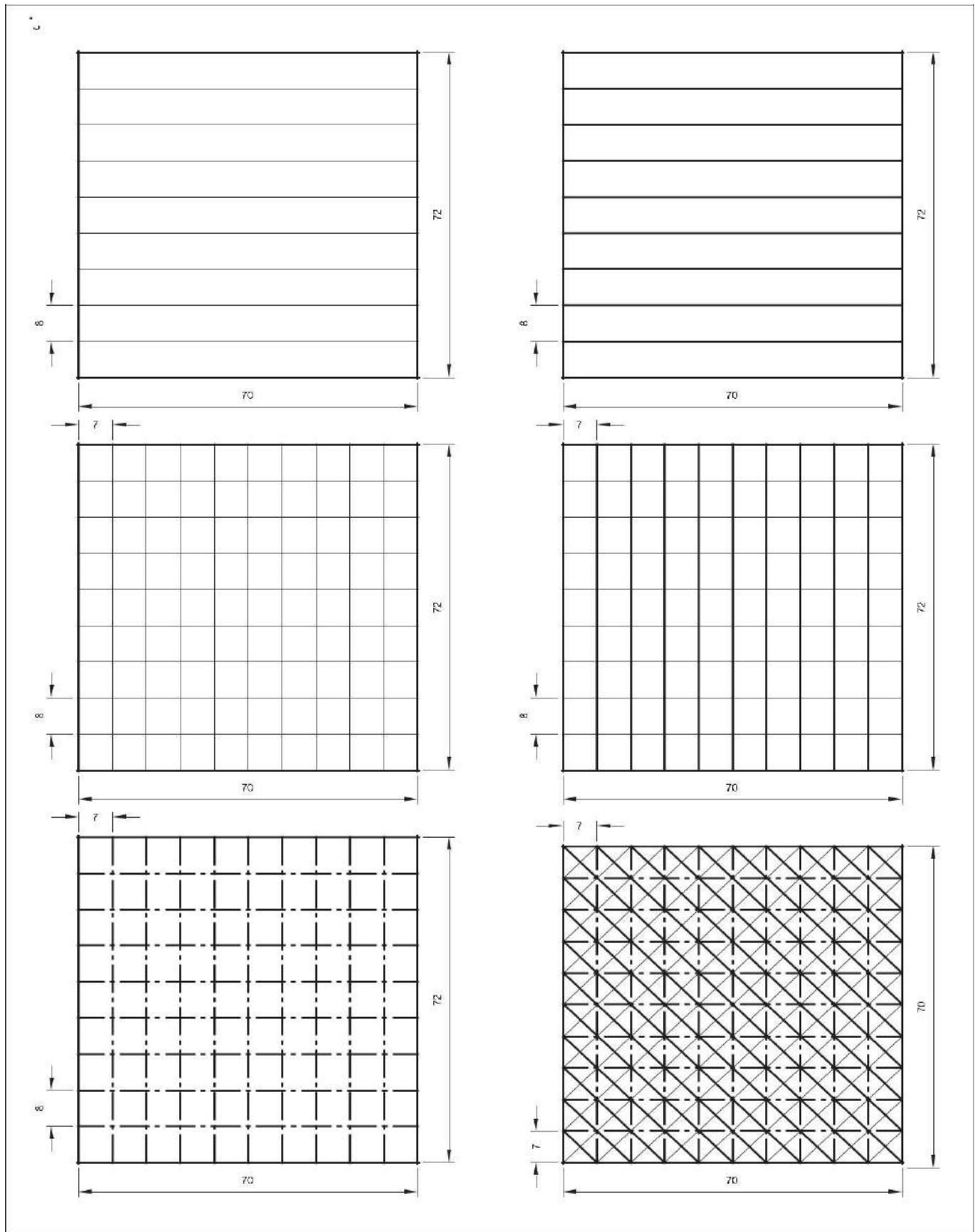
3. Draw 45° inclined lines (Fig3).



4. Draw the given types of lines using 0.5 range thickness of line according to the specification (Fig 4).



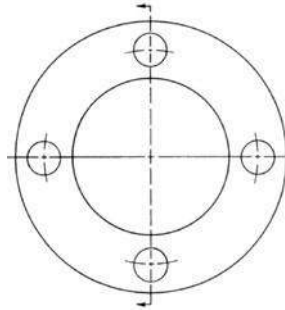
5. Draw the following Exercises in A4 sheet(Fig5).



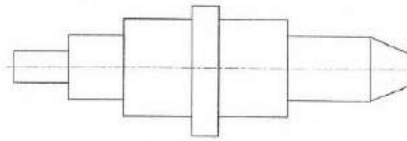
6a) Illustrate the elements of dimensioning with the help of a sketch.

b) Illustrate the dimensioning of given common features: diameter, radius, chord, Arc and angle.

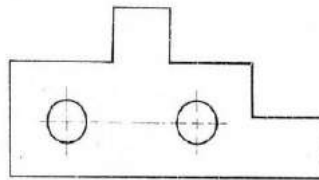
7. Copy the sketch to 1:1 scale and dimension it using Aligned system.



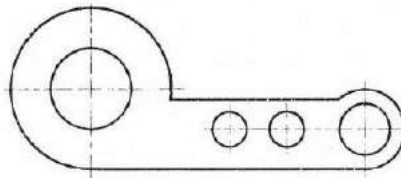
8. Copy the sketch to 1:1 scale and dimension it using unidirectional system with Parallel dimensioning method.



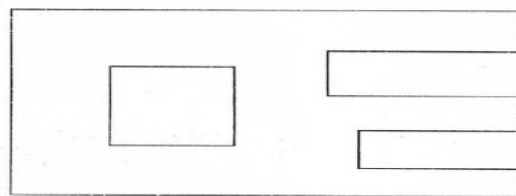
9. Copy the sketch to 1:1 scale and dimension it using Aligned system with Chain dimensioning method.



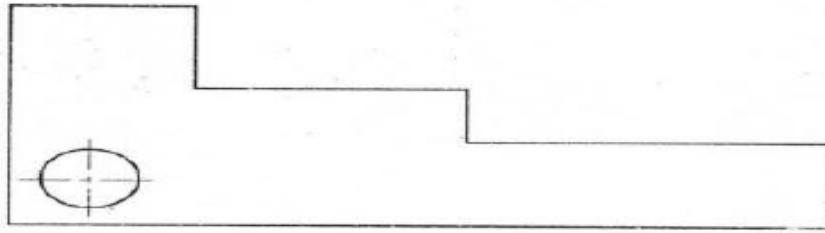
10. Copy the sketch to 1:1 scale and dimension it using Aligned system with Parallel dimensioning method.



11. Copy the sketch to 1:1 scale and dimension it using unidirectional system with Chain dimensioning method

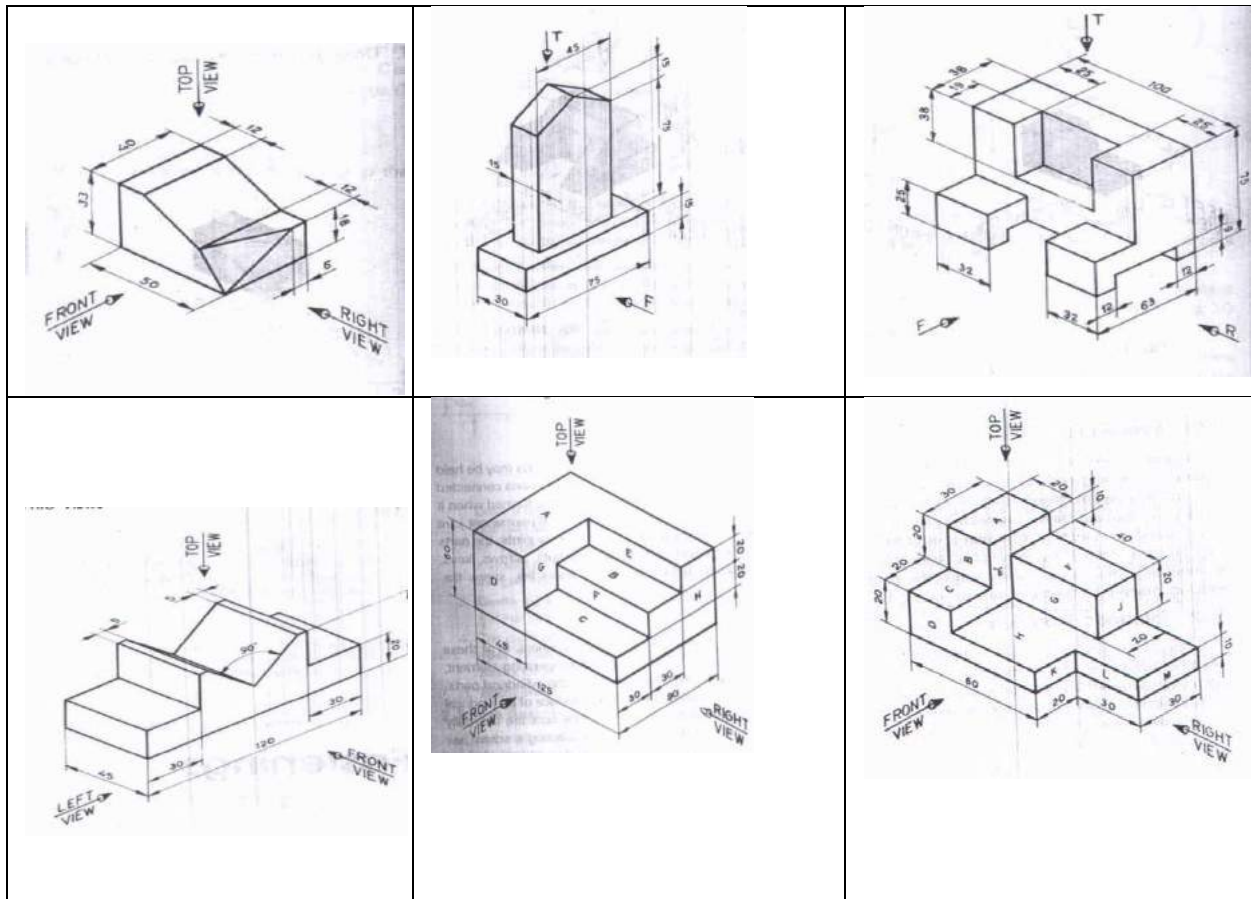


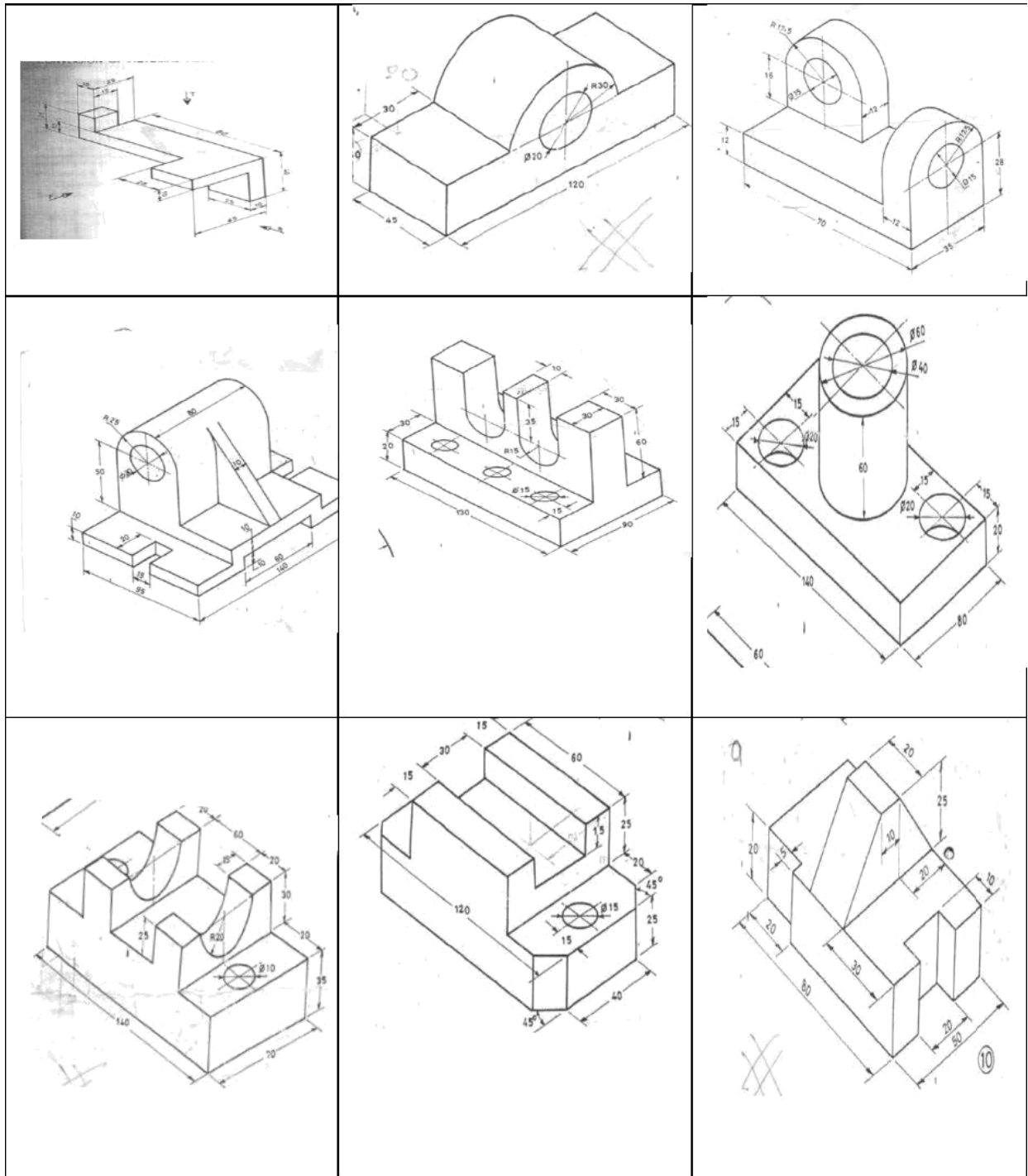
12. Copy the sketch to 1:1 scale and dimension it using unidirectional system with Parallel dimensioning method.



ORTHOGRAPHIC ROJECTIONS

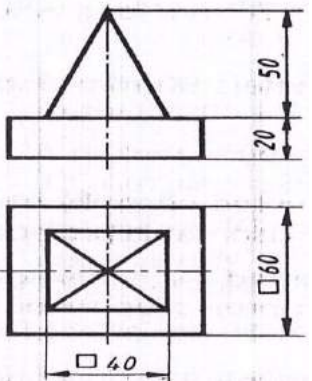
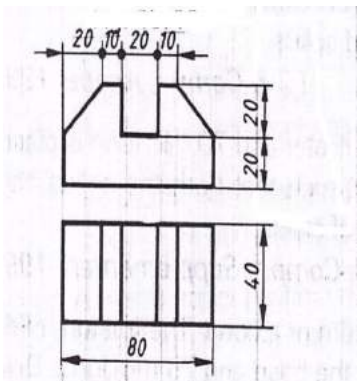
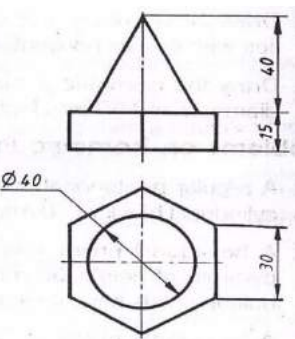
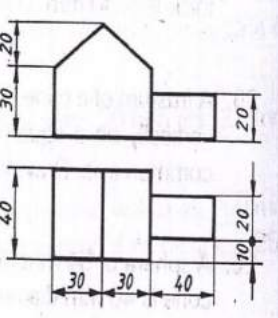
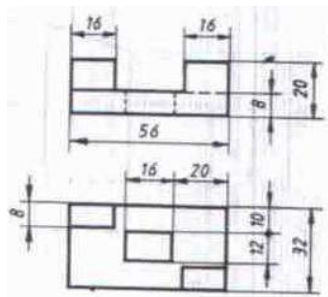
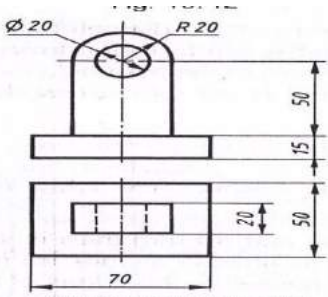
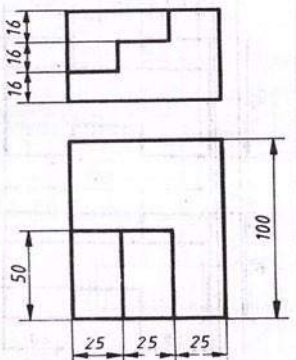
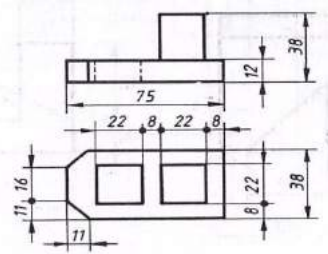
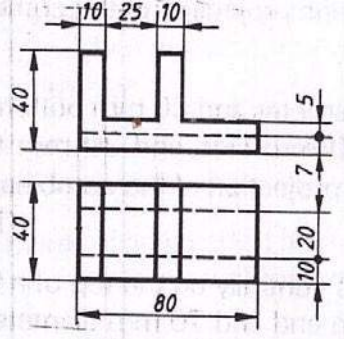
1 .Draw the three principal views of the component as shown in the figure.



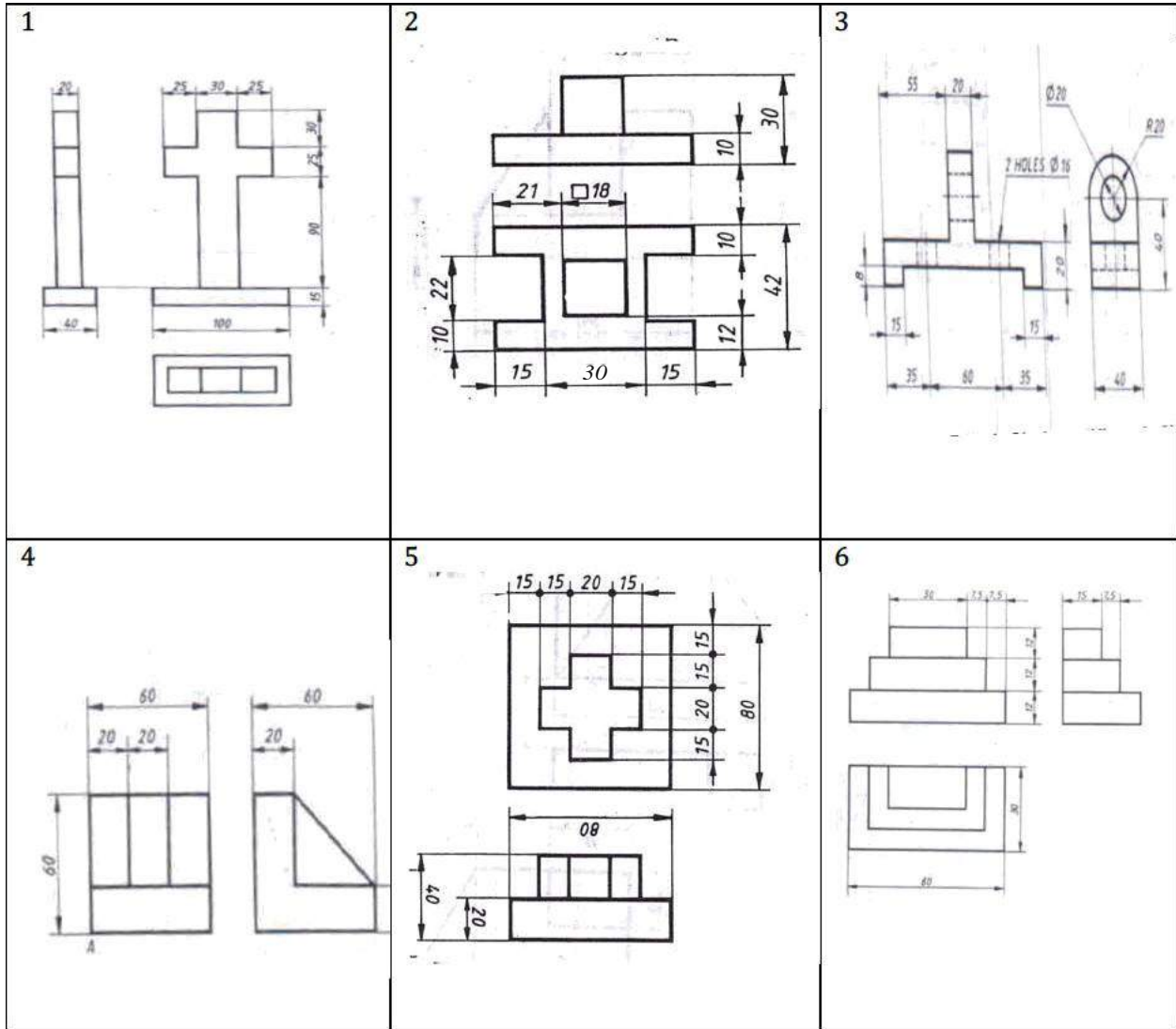


ISOMETRIC PROJECTIONS

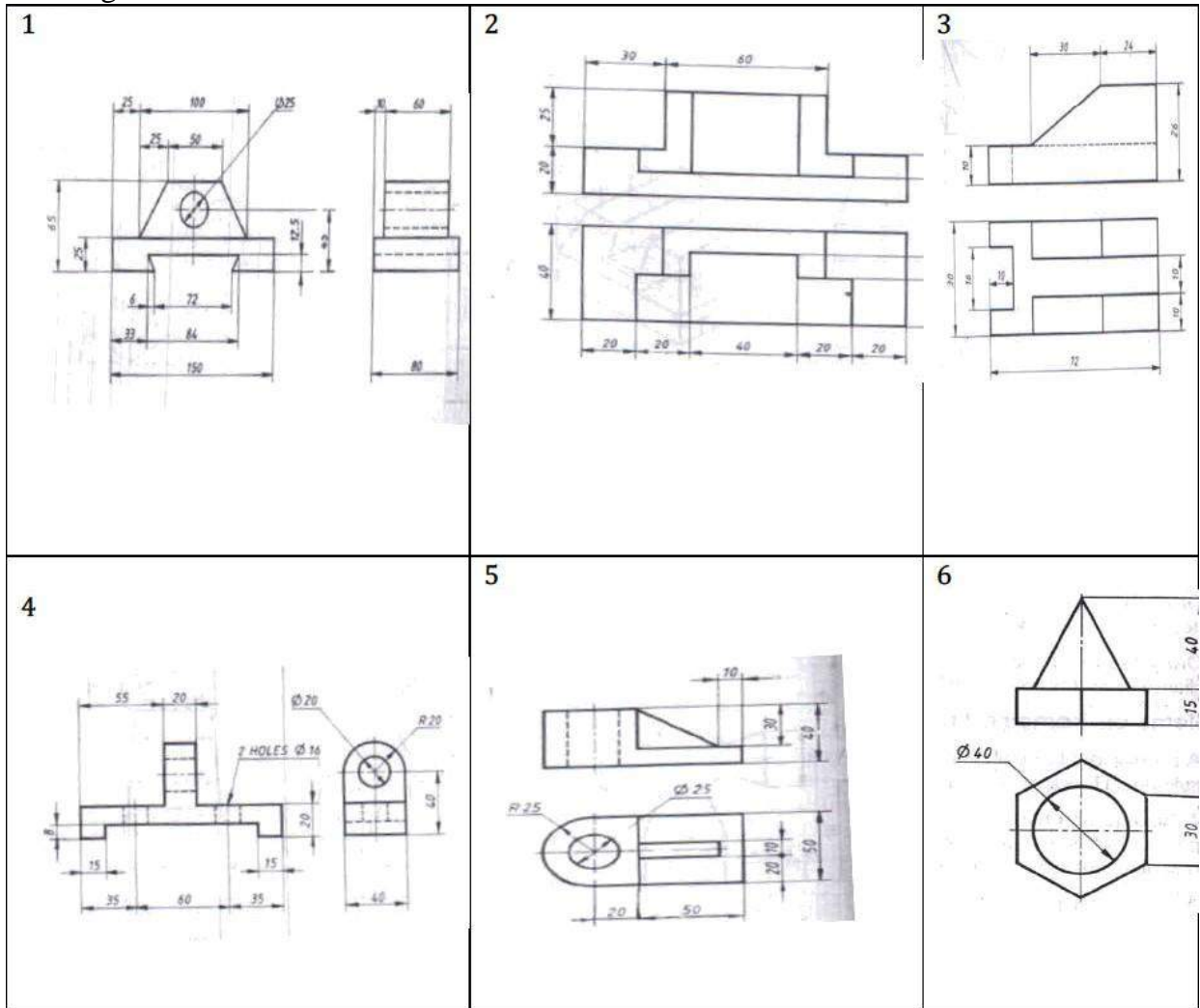
1. Draw the isometric view of the machine component whose orthographic views are given below:

| | | |
|---|---|--|
| <p>1.</p>  | <p>2.</p>  | <p>3.</p>  |
| <p>4.</p>  | <p>5.</p>  | <p>6.</p>  <p style="text-align: center;"><i>All dimensions in mm</i></p> |
| <p>7.</p>  | <p>8.</p>  | <p>9.</p>  <p style="text-align: center;"><i>All dimensions in mm</i></p> |

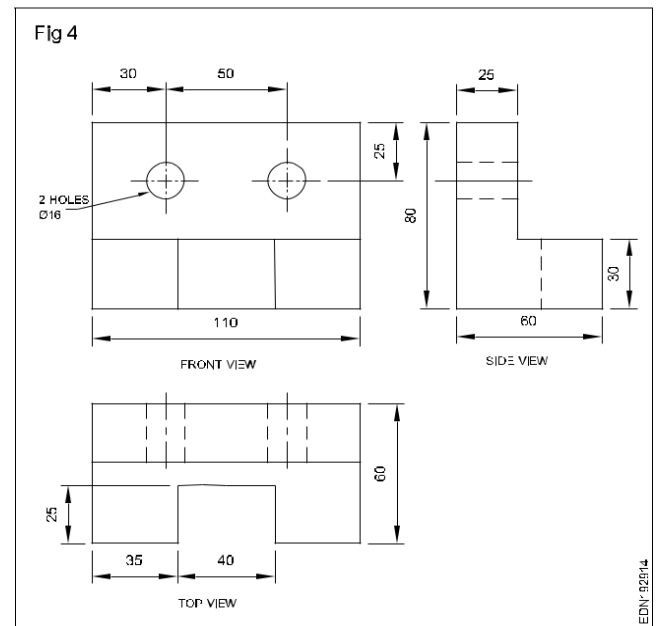
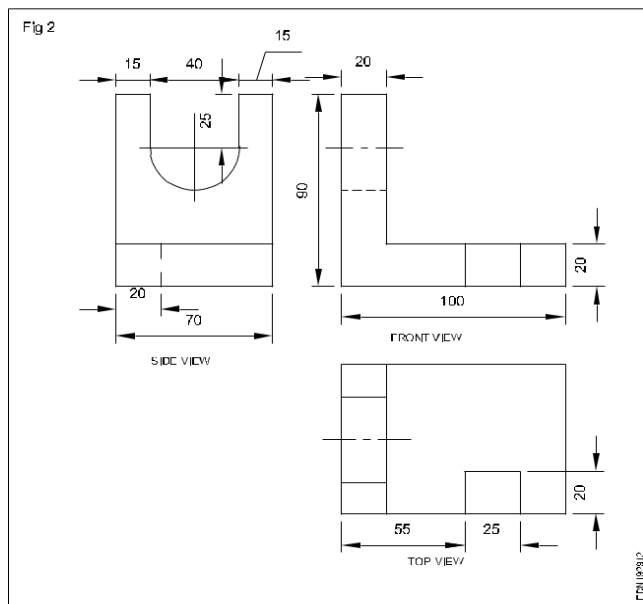
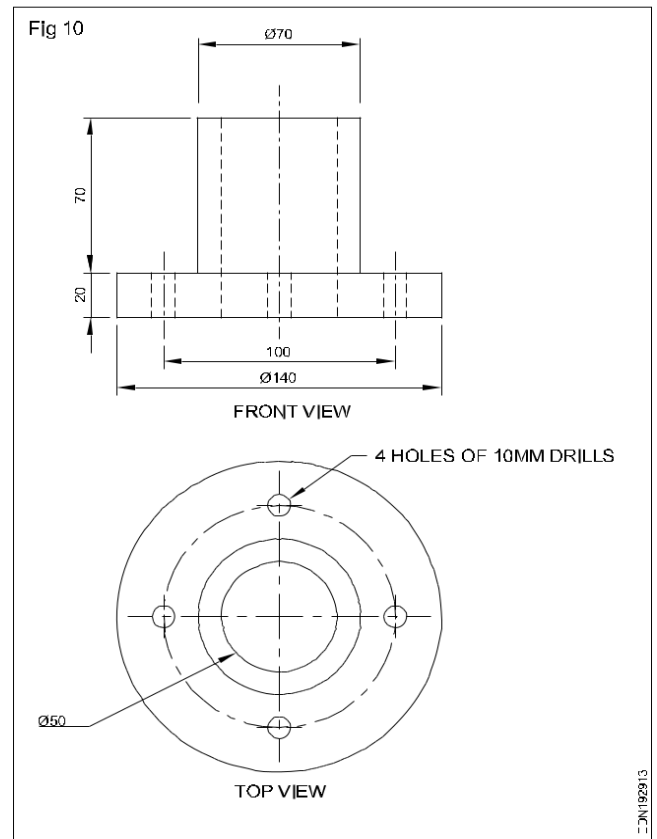
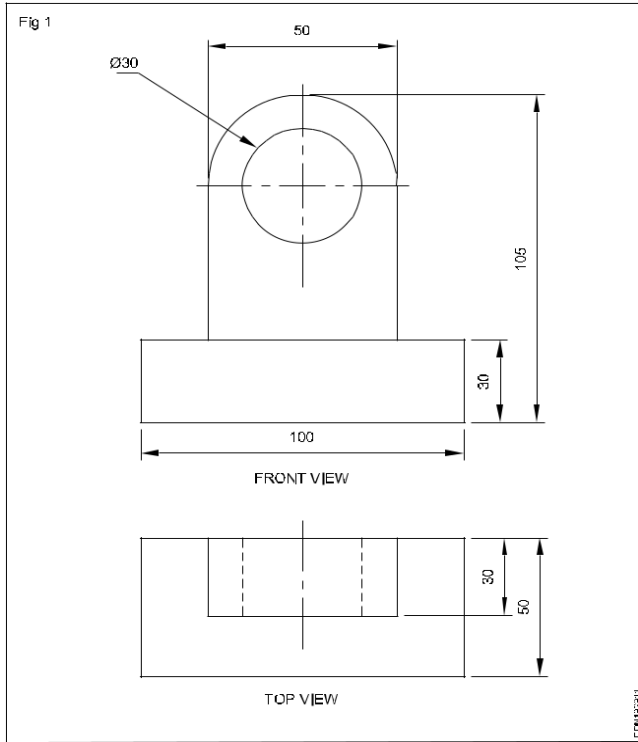
2. Draw the isometric Projection of the machine component whose orthographic views are given below:



3. Draw the isometric Projection of the machine component whose orthographic views are given below



4. Draw the isometric View of the machine component whose orthographic views are given below



Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)

PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|------------------------|------------------------|----------------------------|--------------------|
| Course Code | 3425 | Semester | II |
| Course Title | MULTIMEDIA & ANIMATION | Course Group | Core |
| No. of Credits | 4 | Type of Course | Lecture + Practice |
| Course Category | PC | Total Contact Hours | 6Hrs PerWeek |
| | | | 96Hrs Per Semester |
| Prerequisites | Nil | Teaching Scheme | (L: T:P) = 1:0:2 |
| CIE Marks | 60 | SEE Marks | 40 |

1. RATIONALE

Multimedia is one of the very effective forms of communication through which students can enhance their presentation skills. Learning multimedia enables the brain's ability to make connections between verbal and visual representations of content, leading to a deeper understanding, which in turn supports the transfer of learning to other situations. Animation is the broad field of study that allows one to show their creativity, amplify their imagination and exercise graphic and technical skills.

2. COURSE SKILL SET

The aim of the course is to help the student to attain the following industry identified competency through various teaching-learning experiences

Perform jobs related to Multimedia – Text, Image, Audio, Video, and Animation.

3. COURSE OBJECTIVES

1. Explore Multimedia features and applications
2. Demonstrate various Photo editing techniques to enhance visual effects of the image
3. Construct graphic design.
4. Demonstrate animation principles.

4. JOB ROLE

| SL.NO | LEVEL | JOB ROLES |
|-------|-------|---|
| 1 | 3 | Freelance Photo Editor and Graphic Designer |
| 2 | 3 | Junior Creative Designer/Digital Artist |
| 3 | 3 | Junior Animator |

5. PREREQUISITES

| | |
|---------|--|
| STUDENT | Nil. |
| TEACHER | FDP training on Multimedia and Animation course. |

6. COURSE OUTCOMES

On successful completion of the course, the students will be able to demonstrate industry- oriented COs associated with the above-mentioned competency:

| COURSE OUTCOME | | CL | LINKED PO | TEACHING HOURS |
|----------------|--|-----|-----------|----------------|
| CO1 | Identify basic Multimedia features and applications. | U | 1,4 | 09 |
| CO2 | Compile various Photo Editing techniques to create excellent Images. | U,A | 1,4,7 | 33 |
| CO3 | Construct graphic design / web design like Advertisement/logo/flyer/Invitation Card/Banner/web site. | U,A | 1,4,7 | 12 |
| CO4 | Animate geometrical objects by applying different animation principles. | U,A | 1,4,7 | 42 |

Legends: R = Remember; U = Understand; A = Apply and above levels (Bloom's revised taxonomy)

7. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

| UNITNO. | UNIT NAME | TEACHING HOURS | DISTRIBUTION OF THEORY MARKS | | | |
|----------|------------------------------------|-------------------|---------------------------------|----|-----|------------|
| | | | R | U | A | TOTAL |
| 1 | Introduction to Multimedia Systems | 09 | 30 | 30 | - | 60 |
| 2 | Image editing | 33 | 20 | 20 | 20 | 60 |
| 3 | Graphic Design | 18 | 10 | 10 | 40 | 60 |
| 4 | Animation | 36 | 10 | 10 | 40 | 60 |
| | Total | 96 | 70 | 70 | 100 | 240 |

8. INSTRUCTIONAL STRATEGY

These are sample strategies, which teacher can use to accelerate the attainment of the various course outcomes

1. Instructors should expose students to explore User Interface thoroughly.
2. Demonstration using visual/graphic content should be delivered. Emphasis should be given on presentational skills.
3. Arrange visits to nearby Photo studios/ Advertising Industries/ DTP centers /other related industries.
4. Students should be exposed to other relevant & similar software and their interfaces.
5. Use oral and Sign language in the class room as many of the students are hearing impaired.
6. Use of Audio and Visual techniques like E-Books, PPT, Videos etc.
7. Teaching through group discussion, Guest lecture etc.
8. Providing course materials.
9. Providing extra inputs through industrial visits, employability skills and career awareness programs.
10. Additional inputs' through MOOCs and NPTEL courses.
11. Hands on training through demonstration to tutorial classes in laboratories.

9. DETAILS OF COURSE CONTENT

The following topics/subtopics is to be taught and assessed in order to develop Unit Skill sets for achieving CO to attain identified skill sets

| UNIT NO | TOPICS/SUBTOPICS | LEARNING OUTCOME (IN COGNITIVE DOMAIN) | HOURS L : P |
|----------|--|---|----------------|
| 1 | INTRODUCTION TO MULTIMEDIA SYSTEMS | | 3:6 |
| | <p>1.1 Introduction</p> <ul style="list-style-type: none"> ▪ Significant Features ▪ Classifications ▪ Applications <p>1.2 Multimedia Building blocks</p> <ul style="list-style-type: none"> ▪ Text ▪ Audio ▪ Image ▪ Animation ▪ Video ▪ Image Data Types <p>1.3 Multimedia Image and Graphics</p> <ul style="list-style-type: none"> ▪ Resolution, Size and Compression ▪ File formats <p>1.4 Multimedia Hardware</p> <ul style="list-style-type: none"> ▪ Interfaces ▪ I/O Devices ▪ Storage ▪ Communication Devices. | <ol style="list-style-type: none"> 1. Identify Multimedia features and Applications 2. Describe building blocks of multimedia 3. Classify multimedia data types and file formats 4. Discuss multimedia hardware | |
| 2 | IMAGE EDITING | | 11:22 |
| | <p>2.1 Explore image editing tool interface.</p> <ul style="list-style-type: none"> ▪ Customizing Workspaces. ▪ File Handling ▪ Setting size and resolution parameters. ▪ Importing files. ▪ Navigating open document <p>2.2 Working with Layers</p> <p>2.3 Exploring Selection Tools</p> <p>2.4 Exploring Layer Styles</p> <p>2.5 Using filters</p> <p>2.6 Image editing techniques</p> <ul style="list-style-type: none"> ▪ Adjusting exposure (brightness) ▪ Adjusting color | <ol style="list-style-type: none"> 1. Explore interfaces of editing tool 2. Perform photo compositing 3. Create abstract art 4. Apply image editing techniques | |

| | | | |
|----------|---|--|-------|
| | <ul style="list-style-type: none"> ▪ Cropping and adjusting aspect ratio ▪ Dodging and burning ▪ Retouching ▪ Sharpening and noise reduction | | |
| 3 | GRAPHIC DESIGN | | 06:12 |
| | <p>3.1 Design a graphic</p> <ul style="list-style-type: none"> ▪ Cards ▪ Flyer ▪ Banner ▪ Advertisement <p>3.2 Using blend modes create</p> <p style="margin-left: 20px;">3.2.1 Logo</p> <p style="margin-left: 20px;">3.2.2 Poster</p> <p>3.3 Creating custom shape & text wrapping</p> | <ol style="list-style-type: none"> 1. Construct a graphic design for a theme 2. Create social media graphic (like emoji's) | |
| 4 | ANIMATION | | 12:24 |
| | <p>4.1 Exploring User Interface</p> <ul style="list-style-type: none"> ▪ Installation & Configuration ▪ Getting to know about Editors, Scenes and Objects <p>4.2 Fundamentals of Animation.</p> <ul style="list-style-type: none"> ▪ Types of Animation. ▪ 12 Basic Principles of Animation. ▪ Keyframes, Timelines, Graph Editor, Dope Sheet <p>4.3 3D Object Animation.</p> <ul style="list-style-type: none"> ▪ Creating/Importing Object. ▪ Texturing ▪ Lighting & Rendering ▪ Dynamics ▪ Animation | <ol style="list-style-type: none"> 1. Explore interfaces of Animation Tool. 2. Applying foundation principles of animation | |

| | | | |
|--|--|--|--|
| | <ul style="list-style-type: none"> ▪ Adding Sound effects ▪ Saving and Exporting. | | |
| | <p>Note</p> <p>1. Emphasis to be given on Basic Animation principles - Squash & Stretch, Timing, Spacing, Arc, Overlapping, and Anticipation</p> | | |

10. SUGGESTED PRACTICAL EXERCISES

| Sl No | Suggested Practical Exercises (should be similar in skills to the ones enlisted) | Unit No | PO | CO | L:P Hrs |
|-------|---|---------|-------|----|---------|
| 1. | Browse the Internet and find different Multimedia Presentations and identify the building blocks. | 1 | 1,4 | 1 | 1:2 |
| 2. | i) Identify the importance of Resolution, Size and compression of Images. ii) Classify file formats of various Multimedia files | 1 | 1,4,7 | 1 | 2:4 |
| 3. | i) Practice setting the canvas on the workspace for different requirements. ii) Import an image from the browser / Picture folder and place it on the workspace. iii) Click and drag the image on the work space. iv) Scale the image up and down. | 2 | 1,4 | 2 | 2:4 |
| 4. | Design a Greeting card. Use different Layers for image and text. | 2 | 1,4,7 | 2 | 1:2 |
| 5. | Practice using different Selection tools. | 2 | 1,4,7 | 2 | 1:2 |
| 6. | Practice using different painting tools. | 2 | 1,4 | 2 | 1:2 |
| 7. | Restore old monochrome photos to a new one. Apply suitable colors. | 2 | 1,4,7 | 2 | 1:2 |
| 8. | Import a similar picture from the internet. Erase unwanted parts in the image, retouch old photos into new. Color partially. | 2 | 1,4,7 | 2 | 2:4 |
| 9. | Import a picture of a stationary motorcyclist. Apply suitable masking filters and background. The image should appear as though the motorcyclist is speeding fast. | 2 | 1,4,7 | 2 | 2:4 |
| 10. | Create a professional web layout. Use different layers, textures, colors, text, blending features and filter masking. | 2 | 1,4,7 | 2 | 1:2 |
| 11. | Create an innovative logo for your Institute considering all the features of your Institute. | 2 | 1,4,7 | 3 | 3:6 |
| 12. | Design a flyer for a short term course that is supposed to commence from 3 weeks ahead from the current date. | 2 | 1,4,7 | 3 | 3:6 |

| | | | | | |
|--------------------|--|---|-------|-------------------|-----|
| 13. | i) Add different objects to the space. Practice with both shortcut keys and menus. ii) Perform Transformation operations on objects added in 14 (i) | 3 | 1,4,7 | 4 | 2:4 |
| 14. | Create primitive objects like an ice cream cone, snowman, house, tunnel and like. | 3 | 1,4,7 | 4 | 2:4 |
| 15. | Change the structure of objects by editing Vertices, Edges, Faces and transform the same and observe the changes. | 3 | 1,4,7 | 4 | 2:4 |
| 16. | Design a red ball lying on green grass. Apply suitable texture and render the same. | 3 | 1,4,7 | 4 | 2:4 |
| 17. | Animate the ball in Ex. 15 (both rigid and elastic) to bounce thrice and roll. Use suitable animation principles. Add a booping sound when the ball bounces. | 3 | 1,4,7 | 4 | 2:4 |
| 18. | Design two playing dice and animate the same. Add suitable sound for dice fall. | 3 | 1,4,7 | 4 | 1:2 |
| 19 | Show the animation of water flowing out from a pipe around a suitable environment. | 3 | 1,4,7 | 4 | 1:2 |
| Total Hours | | | | 32:0:64=96 | |

The **suggested practical exercises** specified above are demonstrated for the attainment of the competency. These practical activities can also be used for the student assessment in portfolio mode for awarding CIE marks. **The lecturer can enhance the competency level of the students by sketching more practical exercises.**

NOTES:

1. It is compulsory to prepare log book/record of exercises. It is also required to get each exercise recorded in logbook, checked and duly dated signed by the teacher
2. Student activities are compulsory and are also required to be performed and noted in logbook.
3. Student activity is compulsory and part of skill assessment. The activity enables student to explore the course, help student to demonstrate creativity & critical thinking.
4. Student activity report is compulsory part to be submitted at the time of practical ESE
5. Term work report is compulsory part to be submitted at the time of practical ESE.
6. Student activity and student activity reports must be uploaded to Learning management system.
7. For CIE, students are to be assessed for Skills/competencies achieved.

11. MAPPING OF CO WITH PO

| COURSE | CO'S | PROGRAMME OUTCOMES (POs) | | | | | | | PROGRAMME SPECIFIC OUTCOMES (PSOs) | |
|------------------------|------|--------------------------|---|---|---|---|---|------|------------------------------------|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 1 | 2 |
| MULTIMEDIA & ANIMATION | CO1 | 3 | 0 | 0 | 3 | 0 | 0 | 2 | 3 | 3 |
| | CO2 | 3 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 3 |
| | CO3 | 3 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 3 |
| | CO4 | 3 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 3 |
| | Avg | 3 | 0 | 0 | 3 | 0 | 0 | 2.75 | 3 | 3 |

Level 3- Highly Mapped, Level 2-Moderately Mapped, Level 1-Low Mapped, Level 0- Not Mapped

12. SUGGESTED LEARNING RESOURCES

| BOOKS | |
|-------|---|
| 1 | The Illusion of Life / Frank Thomas and Ollie Johnston |
| 2 | The Animator's Survival Kit / Richard Williams |
| 3 | Animation For Beginners / Morr Meroz |
| URL'S | |
| 1 | https://webneel.com/ |
| 2 | https://clippingpathindia.com/ |
| 3 | https://www.photoshopessentials.com/basics/ https://www.befunky.com/ |
| 4 | https://www.creativeblog.com/advice/understand-the-12-principles-of-animation |
| 5 | https://www.cgarian.com/animation-tutorials/disney-animation-principles.html |
| 6 | https://ohmy.disney.com/movies/2016/07/20/twelve-principles-animation-disney/ |
| 7 | https://wave.video/blog/12-basic-principles-of-animation/ |
| 8 | https://www.youtube.com/watch?v=ILqOWe3zAbk&list=PLa1F2ddGya-UvuAqHAksYnB0qL9yWDO6&index=2 |

| | |
|----|---|
| 9 | https://www.youtube.com/watch?v=8XyYRW_2xk&list=PLa1F2ddGya - UvuAqHAksYnB0qL9yWDO6&index=3 |
| 10 | https://www.youtube.com/watch?v=hTL6AKR8YDs&list=PLa1F2ddGya - UvuAqHAksYnB0qL9yWDO6&index=4 |
| 11 | https://www.youtube.com/watch?v=JSAobQPRLwc&list=PLa1F2ddGya - UvuAqHAksYnB0qL9yWDO6&index=5 |
| 12 | https://www.youtube.com/watch?v=7DNmaR7TKwU&list=PLa1F2ddGya - UvuAqHAksYnB0qL9yWDO6&index=7 |

13. SUGGESTED LIST OF PROPOSED STUDENT ACTIVITYS

Note: the following activities or similar activities for assessing CIE (IA)

| SL. NO | ACTIVITY |
|--------|--|
| 1 | Create a Collage of college events with various layouts |
| 2 | Create a flyer or advertisement for social issue. |
| 3 | Create a matte painting of a mountain region |
| 4 | Create scenery with a mirror reflection and proper lighting effect. |
| 6 | Create colourful balls and apply animation effects such that balls fall from a table and roll in different directions. |
| 7 | Animate blossoming of a flower. |
| 8 | Leaf falling from a tree. |

14. COURSE ASSESSMENT AND EVALUATION CHART

| | SL.NO | ASSESSMENT | DURATION (in minutes) | MAX MARKS | CONVERSION |
|---|----------------------------|--|--------------------------|-------------------------|--|
| DIRECT ASSESSMENT | 1 | CIEAssessment1(WrittenTest-1TH) - At the end of 3 rd week | 60 | 20 | Average of two written tests 20 |
| | 2 | CIEAssessment2(WrittenTest-2TH) - At the end of 13 th week | 60 | 20 | |
| | 3 | CIEAssessment3(SkillTest) -Attheendof 5 th week | 3 hrs | 20 | Average of three skilltest 20 |
| | 4 | CIEAssessment4(SkillTest) - Atthe end of 7 th week | 3 hrs | 20 | |
| | 5 | CIEAssessment5(SkillTest)-Attheendof 9 th week | 3 hrs | 20 | |
| | 6 | CIEAssessment6(Studentactivity)-Atthe end of 11 th week | - | 20 | 20 |
| | 7 | Total Continuous Internal Evaluation (CIE) Assessment | | | 60 |
| | 8 | Semester End Examination(SEE) Assessment (PracticalTest) | 3 hrs | 100 | 40 |
| TOAL MARKS | | | | | 100 |
| INDIRECT ASSESSMENT METHODS | Student Feedback on course | | Students | Middle of the Course | Feedback forms |
| | End of Course Survey | | | End of the Course | Questionnaire |
| Note:CIEwrittentestisconductedfor100marks(Twosections).Eachsectionshallhavetwofull questions of same CL, CO. Student shall answer one full question from each section. | | | | | |

15. RUBRICS FOR EVALUATION OF ACTIVITY

| RUBRICS FOR ACTIVITY | | | | | | |
|--------------------------------------|---|---|--|---|--|----------------------|
| Dimension | Poor | Below Average | Average | Good | Exemplary | Student Score |
| | 2 | 4 | 6 | 8 | 10 | |
| Project Guidelines Compliance | Guidelines have not been followed. | Guidelines have been followed with little noise. | Guidelines have been followed to an average extent. | Guidelines have been followed and executed to maximum extent. | All guidelines have been exceptionally followed and executed. | 8 |
| Concept/ Idea | No thought given to the subject. No idea or concept presented in the work. | Cliché idea or concept. Needs to brainstorm and apply fresh ideas. | Average idea or concept. Subject is presented in a typical manner | Good idea or concept. Subject is presented in a competent manner. | Good use of an idea or concept. Presented the idea in a unique and novel way. | 6 |
| Editing Techniques | Lacks demonstration of qualities and characteristics of various techniques and processes. | Demonstrates few qualities and characteristics of various techniques and processes, but unreliable. | Demonstrates some qualities and characteristics of various techniques and processes. | Good demonstration of qualities and characteristics of various techniques and processes | Excellent demonstration of qualities and characteristics of all techniques and processes expected. | 8 |
| Graphic Design | Limited or no expression of creative ideas and thoughts. | Designing needs more planning and creativity. | Competent development of creative ideas. | Excellent approach to creative thinking and expression. | Refined and sophisticated approach to original and unique presentation. | 8 |

| | | | | | | |
|---|---|--|--|---|---|----------------------|
| Animation & Rendering | 3D animation / rendering is not done at all. Lacks knowledge on saving and appropriately naming files. | 3D animation / rendering is incomplete. Expected to improve in techniques. Saved in appropriately named file | 3D animation / rendering is completed. Works/looks satisfactorily and saved in an appropriately named file. | 3D animation / rendering is done well, works/look s properly and saved in an appropriate ly named file. | 3D animation / rendering is done extremely well, works/look s properly and issaved in an appropriate ly named file. | 7 |
| Appeal | Messy and confusing. | Presentation can be better. | Good. | Excellent show. | Exemplary. Very well organized. | 7 |
| Average/Total Marks: (8+6+8+8+7+7)/6 | | | | | | 7.3 = 8 marks |

16. RUBRICS FOR SKILL TEST EVALUATION (CIE & SEE)

| Sl. No. | Parameter to be observed | Marks Allotted |
|---------|--------------------------------|----------------|
| 1 | Selection of suitable tool | 10 |
| 2 | Comfort level of working on UI | |
| 3 | Techniques Applied | 30 |
| 4 | Completion of task | 40 |
| 5 | Appeal | 20 |
| Total | | 100 |

Note: Execution of task – Image Editing & Graphic Design / Animation.

17. SYSTEM REQUIREMENTS:

| Sl. No. | Specification | Quantity |
|---------|--|----------|
| 1. | Computers with HD Graphics Card | 20 |
| 2. | Software:GIMP,KRETA,BLENDER,PHOTOSHOPorany other relevant open-source software. | - |
| 3. | Internet Connectivity, | - |

Note: Above specification is for a batch of 20 students

ಜೆಎಸ್‌ಎಸ್ ವಿಶೇಷಜೀತನರ ಪಾಲಿಟೆಕ್ನಿಕ್, ಮೈಸೂರು -570 06

2021-22ನೇ ಸಾಲಿನಲ್ಲಿ ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ ಕನ್ನಡ ಬಲ್ಲ ಡಿಪ್ಲೋಮಾ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನಿಗದಿಪಡಿಸಿದ ಪಠ್ಯಕ್ರಮ

ಸಾಹಿತ್ಯ ಸಿಂಚನ -1

(ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಪರಂಪರೆ ಕುರಿತು)

| | | | |
|---------------------|---------------------------------------|--|-----------------------------------|
| Course Code | 21KA21 | Semester | II |
| Course Title | ಸಾಹಿತ್ಯ ಸಿಂಚನ -1 | Category : | Lecture |
| No. of Credits | 2 | Type of Course | Audit Course |
| Total Contact Hours | 2 Hrs Per Week 32 Hrs Per semester | Teaching Scheme [L : T : P] 2:0:0 | CIE Marks : 50 SEE Marks : Nil |

ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್

ಸಾಹಿತ್ಯ ಸಿಂಚನ - 1 Course Code: 3426

ಕನ್ನಡ ಬಲ್ಲ ಡಿಪ್ಲೋಮಾ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನಿಗದಿಪಡಿಸಿ ಕಾರ್ಯಪಠ್ಯಪುಸ್ತಕ

(ಕನ್ನಡ ಭಾಷೆ, ಸಾಹಿತ್ಯ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಪರಂಪರೆ ಕುರಿತು)

| ಪಠ್ಯ ಪುಸ್ತಕದ ಪರಿವಿಡಿ | ಬೋಧನಾ ಅವಧಿ |
|--|------------|
| 1. ಕರ್ನಾಟಕದ ಸಂಕ್ಷಿಪ್ತ ಇತಿಹಾಸ ಮತ್ತು ಸಾಹಿತ್ಯದ ಬೆಳವಣಿಗೆ | 02 ಗಂಟೆ |
| 2. ಕನ್ನಡ ಸಾಹಿತ್ಯದ ಸಂಕ್ಷಿಪ್ತ ಚರಿತ್ರೆ | 02 ಗಂಟೆ |
| 3. ಹಳಗನ್ನಡ ಸಾಹಿತ್ಯ - ಪಂಪ ಪೂರ್ವ ಯುಗ ಕನ್ನಡ ಸಾಹಿತ್ಯದ ರಚನೆಗೆ ಪ್ರಮುಖ ಪ್ರೇರಣೆಗಳು ಮತ್ತು ಪ್ರಭಾವಗಳು ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪರಂಪರೆ ಮತ್ತು ರಾಜಾಶ್ರಯ ಕವಿರಾಜಮಾರ್ಗ ಮತ್ತು ವಡ್ಡಾರಾಧನೆ | 04 ಗಂಟೆ |
| 4. ಪಂಪ / ಚಂಪೂ ಯುಗದ ಕನ್ನಡ ಸಾಹಿತ್ಯ ಮತ್ತು ಪರಂಪರೆ ಆದಿಕವಿ ಪಂಪ, ರನ್ನ, ಪೊನ್ನ, ಜನ್ನ, ಒಂದನೇ ನಾಗವರ್ಮ ಮತ್ತು ನಾಗಚಂದ್ರ 10 ಮತ್ತು 12 ನೇ ಶತಮಾನದ ಸಮಕಾಲೀನ ಪ್ರಮುಖ ಕವಿಗಳು | 04 ಗಂಟೆ |
| 5. ನಡುಗನ್ನಡ ಸಾಹಿತ್ಯ - ವಚನ ಸಾಹಿತ್ಯ / ಬಸವ ಯುಗ ವಚನ ಸಾಹಿತ್ಯದ ಬೆಳವಣಿಗೆಗೆ ಕಾರಣಗಳು ಮತ್ತು ಅದರ ಮಹತ್ವ ಪ್ರಮುಖ ವಚನಕಾರರು, ವಚನ ಸಾಹಿತ್ಯದಲ್ಲಿ ವೈಚಾರಿಕತೆ ಮತ್ತು ಕಾಯಕ ತತ್ವ | 06 ಗಂಟೆ |
| 6. ಕುಮಾರವ್ಯಾಸ ಯುಗ ಮತ್ತು ಸಾಹಿತ್ಯದ ಇತರೆ ರೂಪಗಳು ರಗಳೆ - ಹರಿಹರ ಷಟ್ಪದಿ - ಕುಮಾರವ್ಯಾಸ, ಲಕ್ಷ್ಮೀಣ ಮತ್ತು ರಾಘವಾಂಕ ಸಾಂಗತ್ಯ - ರತ್ನಾಕರವರ್ಣಿ | 04 ಗಂಟೆ |
| 7. ದಾಸ ಸಾಹಿತ್ಯ / ಕೀರ್ತನೆಗಳು | 02 ಗಂಟೆ |

| ಪುರಂದರದಾಸರು, ಕನಕದಾಸರು ಮತ್ತು ಇತರೆ ಕೀರ್ತನಕಾರರು | |
|--|------------|
| 8. ಇತರೆ ಸಾಹಿತ್ಯದ ಪ್ರಕಾರಗಳು ತ್ರಿಪದಿ - ಸರ್ವಜ್ಞ ಜಾನಪದ ಸಾಹಿತ್ಯ ತತ್ವಪದಗಳು - ಶಿಶುನಾಳ ಶರೀಫರು | 02 ಗಂಟೆ |
| 9. ಮಹಿಳಾ ಸಾಹಿತ್ಯ : ಹೆಳವನಕಟ್ಟೆ ಗಿರಿಯಮ್ಮ ಮತ್ತು ಸಂಚಿಹೊನ್ನಮ್ಮ ಆಧುನಿಕ ಪೂರ್ವ ಕನ್ನಡ ಸಾಹಿತ್ಯ : ಕೆಂಪುನಾರಾಯಣ ಮತ್ತು ಮುದ್ದಣ | 04 ಗಂಟೆ |
| 10. ಹಳಗನ್ನಡ ಮತ್ತು ನಡುಗನ್ನಡ ಸಾಹಿತ್ಯ ಚರಿತ್ರೆಯ ಒಂದು ಅವಲೋಕನ | 02 ಗಂಟೆ |
| ಒಟ್ಟು ಬೋಧನಾ ಅವಧಿ 32 ಗಂಟೆಗಳು | 32 ಗಂಟೆಗಳು |

ಬಳಕೆ ಕನ್ನಡ-1 ಮತ್ತು ಸಾಹಿತ್ಯ ಸಿಂಚನ-1 ಪಠ್ಯಕ್ರಮಗಳಿಗೆ ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನದ ಮಾರ್ಗಸೂಚಿಗಳು

(COURSE ASSESSMENT AND EVALUATION CHART –CIE ONLY)

| Sl. No | Assessment | Duration | Max Marks | Conversion |
|---|---|------------|-----------|--|
| 1 | CIE Assessment – 1 (Written Test – 1) At the end of 6th Week (Theory Test) | 80 Minutes | 30 | Average of two written tests 30 Marks |
| 2 | CIE Assessment – 2 (Written Test – 2) At the end of 10th Week (Theory Test) | 80 Minutes | 30 | |
| 3 | CIE Assessment – 3 (Skill Test-1) At the end of 1th Week (Practical Test) | 80 Minutes | 30 | Average of three Assessment |
| 4 | CIE Assessment – 4 (MCQ / Quiz) At the end of 8th Week | 60 Minutes | 20 | |
| 5 | CIE Assessment – 5 (Open Book Test-3) At the end of 13th Week | 60 Minutes | 20 | |
| 6 | CIE Assessment 6 (Student Activity / Assignment) At the end of 16th Week | 60 Minutes | 20 | |
| Total Continuous Internal Evaluation (CIE) Assessment | | | | 50 |

At the end of each unit, the student be able to achieve the following course outcomes:

COURSE OUTCOMES :

CO – 1 : Understand the history of Kannada language.

CO – 2 : Familiarize the usage of old Kannada and Kannada heritage

CO – 3 : Understand Mid-age Kannada (Basava Yuga and Kumaravyasa Yuga)Usage

CO – 4 : Know the Kannada Language through poems and Folk literature

CO – 5 : Familiarize the use of Kannada language through literature for women

CO-PO Mapping

| CO's | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PSO1 | PSO2 |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|
| CO-1 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-2 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-3 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-4 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-5 | 2 | - | - | - | 2 | 1 | 2 | | |

ಜೆಎಸ್‌ಎಸ್ ವಿಶೇಷಜೀತನರ ಪಾಲಿಟೆಕ್ನಿಕ್, ಮೈಸೂರು -570 06

2021-22ನೇ ಸಾಲಿನಲ್ಲಿ ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್ ಕನ್ನಡ ಬಾರದ / ಕನ್ನಡೇತರ ಡಿಪ್ಲೋಮಾ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ
ನಿಗದಿಪಡಿಸಿದ ಪಠ್ಯಕ್ರಮ

ಬಳಕೆ ಕನ್ನಡ -1

| | | | |
|---------------------|---------------------------------------|--|----------------------------------|
| Course Code | 21NK21 | Semester | II |
| Course Title | ಕನ್ನಡ -1 | Category | Lecture |
| No. of Credits | 2 | Type of Course | Audit Course |
| Total Contact Hours | 2 Hrs Per Week 32 Hrs Per semester | Teaching Scheme [L : T : P] 2:0:0 | CIE Marks : 50 SEE Marks: Nil |

ದ್ವಿತೀಯ ಸೆಮಿಸ್ಟರ್

ಕನ್ನಡ ಬಾರದ / ಕನ್ನಡೇತರ ಡಿಪ್ಲೋಮಾ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನಿಗದಿಪಡಿಸಿದ ಪಠ್ಯಕ್ರಮ

ಬಳಕೆ ಕನ್ನಡ -1 (ಕಾರ್ಯಪುಸ್ತಕ) Course Code: 21NK21

Table of Contents (ಪರಿವಿಡಿ)

| PART - I | Teaching Hours |
|--|----------------|
| Introduction to the Book, Necessity of learning a local language, Tips to learn the language with easy methods. Easy learning of a Kannada Language : A few tips. Hints for correct and polite conversation. Instructions to teachers for Listening and Speaking Activities. | |
| PART - II | |
| Key to Transcription for Correct Pronunciation of Kannada Language, Instructions to Teachers to teach Kannada Language | |
| PART - III Lessons to teach Kannada Language - | |
| CO-1: baLake Kannada – Parichaya (Introduction) | |
| 1.1 ಕನ್ನಡ ಅಕ್ಷರಗಳ ಮತ್ತು ಉಚ್ಚಾರಣೆ Kannada Alphabets and Pronuciation | 08 |
| 1.2 Kannada Stress letters – vattakshara (also often written as Ottakashara) | |
| 1.3 Kannada Khaghunitha (Pronuced as ka-gunitha) | |
| 1.4 Pronuciation (Uchcharane), Memorisation and usage of the Kannada Letters | |
| 1.5 (D) Vargeeya Vyanjanagala Uchcharane (Pronuciation of Structured Consonants) | |
| 1.6 (E) Avareeya Vyanjanagala Uchcharane Uchcharane (Pronuciation of Unstructured Consonants) | |
| 1.7 Exercise – 1 to 7 | |
| CO -2: | |
| 2.1 Introduction | 04 |
| 2.2 Ekaavachana mattu Bhahuvachana (Singular and Plural Nouns) - ಕನ್ನಡದಲ್ಲಿ ಏಕವಚನ ಮತ್ತು ಬಹುವಚನ | |

| | |
|---|----|
| <p>2.3 Linga (Gender) - ° AUA</p> <p>2.4 Pullinga (Masculine gender) - ¥Å° AUA</p> <p>2.5 Stree linga (Feminine gender) - 1Å ° AUA</p> <p>2.6 Napumsakaa linga (Neuter gender) - EÅÅA, PÅ ° AUA</p> <p>2.7 Samanya linga (Common gender) - Åª ÅÅEÅ ° AUA</p> <p>2.8 Exercise</p> <p>2.9 Prashnarthaka Padagalu (Interrogative words) - ¥ÅÅÅ×DPA ¥ÅÅÅÅÅ</p> <p>2.10 Viruddha Padagalu / Virodarthaka Padagalu (Antonyms) - «gÅzV«gÅEÅZÅ×DPA¥ÅÅÅÅÅ.</p> <p>2.11 Asamanjasa Uchcharane (Inappropriate Pronunciation) - C, P ÅAd, Å GZÅÅÅÅ</p> | |
| <p>CO – 3:</p> | |
| <p>3.1 Sankhya Vyavasthe (Numbers system) – ÅÅÅÅª Åª ÅÅÅÅ</p> <p>3.2 Kannada moolaankagalu (Cardinal numbers), Stanasuchaka / Sankeyyegalu / Kramasuchaka sanekyyegalu (ordinal numbers) ÅÅÅÅ, ÅÅZPA ÅÅÅÅÅÅ / PÅÅÅ ÅÅZPA ÅÅÅÅÅÅ</p> <p>3.3 Fractional weights and measurements</p> <p>3.4 Gunitha Chinnhegalu (Mathematical symbols) – UÅÅÅ Å ÅÅÅÅÅÅ</p> <p>3.5 Bhinnamshagalu (Fractions) - ÅÅÅÅÅÅÅÅÅÅÅÅ</p> <p>3.6 List of Vegetables</p> <p>3.7 Tindiya Hesarugalu / Belagina upaharagala Hesarugalu – Menu (Names) of the breakfast items - wÅÅÅÅ Å ÅÅÅÅÅÅÅÅÅÅ</p> <p>3.8 Aaharakke sambandhisida padagalu / Aahara padarthagala Hesarugalu (Names connected with food) – D ÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> <p>3.9 Samaya / Kalakke Sambhandhisida padhagalu (Words Relating to Time) – Åª ÅÅÅÅ / PÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> <p>3.10 Dikkugalige sambhandhisida padhagalu (Words Relating to Directions) – ÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> <p>3.11 Manavana Bhavanegalige sambhanddisida Padagalu (Words Relating to Human's feelings and Emotions) – Åª ÅÅÅÅ Åª Åª ÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> | 08 |
| <p>CO – 4:</p> | |
| <p>1.1 Manavana shareerada bagagalu / angagalu (Parts of the Human body) – Åª ÅÅÅÅ Åª Åª ÅÅÅÅ ÅÅÅÅÅÅÅÅ / CAUÅÅÅÅÅ</p> <p>1.2 Manava sambhandhada / Sambhandhaakke sambhandhisida padhagalu (Terms relating to Human Relationship) – Åª ÅÅÅÅ Åª ÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> <p>1.3 Vaasada sstalakke sambhandhisidanthaha padhagalu (Words Relating to Place of Living) – Åª ÅÅÅÅ Åª Åª ÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> <p>1.4 Saamanya sambhashaneyalli Bhlasuvanathaha Padagala Patti (List of Words, used in the general conversation) – Åª ÅÅÅÅ Åª Åª ÅÅÅÅ Åª Åª ÅÅÅÅ Åª Åª ÅÅÅÅ ÅÅÅÅÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> <p>1.5 Bannagala Hesarugalu (Name of the Colours) – Åª ÅÅÅÅ Åª Åª ÅÅÅÅ ÅÅÅÅÅÅÅÅ</p> | 04 |
| <p>CO – 5:</p> | |

| | |
|--|-------------|
| Sambhashaneyalli Kannada Kannada in conversations 5.1 Introduction 5.2 naamapadagaLu (Nouns) – ಲೇಖನಗಳನ್ನು 5.3. SarvanaamapadagaLu (Pronouns) – ಸರ್ವಲೇಖನಗಳನ್ನು 5.4. Kannada naamavisheshanagaLu (Kannada Adjectives and its usage) – ಪೀಠಿಕೆ ಲೇಖನಗಳನ್ನು 5.5 Kriya padagaLu (Kannada Verbs) - ಕ್ರಿಯಾಪದಗಳನ್ನು 5.6. KriyavisheshanagaLu (Adverbs in Kannada) – ಪೀಠಿಕೆ ಕ್ರಿಯಾಪದಗಳನ್ನು 5.7 Kannadadalli SamyogagaLu (Conjunctions in Kannada) ಪೀಠಿಕೆ ಸಮಯಗಳನ್ನು 5.8 Upasarga (Prepositions in Kannada) – ಉಪಸರ್ಗಗಳನ್ನು 5.9 Prashnarthaka padagalu (Interrogative words) – ಪ್ರಶ್ನಾರ್ಥಕ ಪದಗಳನ್ನು 5.10 vicharaneya / Vicharisuva / bedikeya vaakyagaLu (Enquiry/ Request sentences) – «ಚಿಂತನೆ» / «ಚಿಂತನೆ» / «ಚಿಂತನೆ» | 04 |
| CO – 6 : 6.1 Activities in Kannada (Kannadadalli chatuvatike -1 (Activity -1) 6.2 Sambhashane – Conversation - ಸಂಭಾಷಣೆ - 1 and 2 with Exersies 6.3 Chatuvatike – 2 (Activity -2 Shabdakisha – Vocabulary – ಪೀಠಿಕೆ 6.4 Sambhashane - Conversation - ಸಂಭಾಷಣೆ - 1,2 & 3 with Exersies Model Question Papers and Extra Actitie.– ಉಪಸರ್ಗಗಳನ್ನು | 04 |
| Total Teaching Hours | 32 Hours |

ಬಳಕೆ ಕನ್ನಡ-1 ಮತ್ತು ಸಾಹಿತ್ಯ ಸಿಂಚನ-1 ಪಠ್ಯಕ್ರಮಗಳಿಗೆ ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನದ ಮಾರ್ಗಸೂಚಿಗಳು

(COURSE ASSESSMENT AND EVALUATION CHART –CIE ONLY)

| Sl. No | Assessment | Duration | Max Marks | Conversion |
|---|--|---------------|-----------|---|
| 1 | CIE Assessment – 1 (Written Test – 1) At the end of 6th Week (Theory Test) | 80 Minutes | 30 | Average of two written tests 30 Marks |
| 2 | CIE Assessment – 2 (Written Test – 2) At the end of 10th Week (Theory Test) | 80 Minutes | 30 | |
| 3 | CIE Assessment – 3 (Skill Test-1) At the end of 1th Week (Practical Test) | 80 Minutes | 30 | Average of three Assessment |
| 4 | CIE Assessment – 4 (MCQ / Quiz) At the end of 8th Week | 60 Minutes | 20 | |
| 5 | CIE Assessment – 5 (Open Book Test-3) At the end of 13th Week | 60 Minutes | 20 | |
| 6 | CIE Assessment 6 (Student Activity / Assignment) At the end of 16th Week | 60 Minutes | 20 | |
| Total Continuous Internal Evaluation (CIE) Assessment | | | | 50 |

COURSE OUTCOMES:

- CO – 1: Understand & usage of Kannada alphabets
 CO – 2: Use of singular & plural nouns in Kannada language
 CO – 3: Usage of numbers and day-to-day application of Kannada language
 CO – 4: Know the human body parts & general conversation
 CO – 5: Apply knowledge acquired in Kannada Language & related activities

CO-PO-PSO Mapping

| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PSO1 | PSO2 |
|------|-----|-----|-----|-----|-----|-----|-----|------|------|
| CO-1 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-2 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-3 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-4 | 2 | - | - | - | 2 | 1 | 2 | | |
| CO-5 | 2 | - | - | - | 2 | 1 | 2 | | |

Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)
PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|-----------------------|----------------------------------|----------------------------|--------------------|
| Course Code | --- | Semester | II |
| Course Title | Sign Language II | Course Group | Audit |
| Type of Course | Lecture | Total Contact Hours | 2Hrs Per Week |
| | | | 32Hrs Per Semester |
| Prerequisites | Knowledge of Basic Sign Language | Teaching Scheme | (L:T:P)=2:0:0 |
| CIE Marks | 50 | SEE Marks | - |

COURSE OBJECTIVES:

1. Understand and apply signs of English, Banking and others.
2. Understand the Departmental Technical Terminology.
3. Understand and apply signs of Mathematical Terminologies.

COURSE OUTCOMES:

At the end of the course student will be able to achieve the following course outcomes:

| | |
|------------|---|
| CO1 | Acquire and apply the signs of English and Computer terminology. |
| CO2 | Acquire and apply the signs of Banking Terminologies. |
| CO3 | Obtain and apply the signs of Department related Technical terms. |
| CO4 | Acquire and apply the signs and Measuring Units. |
| CO5 | Acquire and apply the signs of Mathematical terminologies. |

COURSE CONTENT:

| Unit No & Name | Detailed Course Content | CO | PO | Contact Hrs |
|---|---|-----------|-----------|--------------------|
| 1. English Terminologies and Computer Terminologies | 1.1 Know the signs for English Terminology | CO1 | 1,5,6,7 | 2 |
| | 1.2 Know the signs for Computer Terminology | CO1 | 1,5,6,7 | 2 |
| | 1.3 Practice session | CO1 | 1,5,6, 7 | 1 |
| | CIE Assessment 1 | | | 1 |
| 2. Banking Terminologies | 2.1 Know the signs for Banking Terminology | CO2 | 1,5,6, 7 | 2 |
| | 2.2 Practice Session | CO2 | 1,5,6,7 | 1 |
| | CIE Assessment 2 | | | 1 |
| 3. Department | 3.1 Learning Department related words of Computer Science | CO3 | 1,5,6, 7 | 2 |

| | | | | |
|-------------------------------|--|-----|---------|---|
| Related Words | 3.2 Learning Department related words of Electronics & Communication Engineering | CO3 | 1,5,6,7 | 2 |
| | 3.3 Learning Department related words of Architecture | CO2 | 1,5,6,7 | 2 |
| | 3.4 Learn Department related words of Commercial Practice | CO3 | 1,5,6,7 | 2 |
| | 3.5 Learn Department related words of Jewellery Design & Technology | CO3 | 1,5,6,7 | 2 |
| | 3.6 Practice Session | | | 3 |
| | CIE Assessment 3 | | | 1 |
| 4. Measuring Units | 4.1 Know the signs for Measuring Units | CO3 | 1,5,6,7 | 3 |
| | 4.2 Practice Session | | | |
| | CIE Assessment 4 | | | 1 |
| 5. Mathematical Terminologies | 5.1 Know the signs for Mathematical Terminologies. | CO3 | 1,5,6,7 | 3 |
| | 5.2 Practice Session | | | |
| | CIE Assessment 5 | | | 1 |

References:

Suggested Learning Resources:

1. Book on Sign Language, Ali Yavar Jung National Institute for the Hearing Handicapped, Training Center for Adult Deaf.
 2. Indian Sign Language Dictionary, Ramakrishna Mission Vidyalaya.
 3. Book on Hearing Impairment, Ali Yavar Jung National Institute for the Hearing Handicapped, Training Center for Adult Deaf.
 4. Signing Naturally Level 1, Cheri Smith, Ella Mae Lentz , Ken Mikes.
 5. Signing Naturally Level 2, Cheri Smith, Ella Mae Lentz , Ken Mikes
- 1) www.indiansignlanguage.org
 - 2) www.islrtc.nic.in
 - 3) www.talkinghands.co.in
 - 4) www.def.org.in

Teaching strategies:

- Demonstrating the words using signs.
- Interaction with the students using sign language.
- Online assistance is given to the students
- Involving the students in group discussion

Mapping of Course Outcomes with Programme Outcomes

| CO's | Course Outcome | PO Mapped | Cognitive Level R/U/A | Units | Theory Sessions In Hrs |
|-----------------------------------|---|-----------|-----------------------|-------|------------------------|
| CO1 | Acquire and apply the signs of English and Computer terminology. | 1,5,6,7 | R,UA | 1 | 6 |
| CO2 | Acquire and apply the signs of Banking Terminologies. | 1,5,6, 7 | R,U,A | 2 | 4 |
| CO3 | Obtain and apply the knowledge of signing the Department related Technical terms. | 1,5,6,7 | R,U | 3 | 14 |
| CO4 | Acquire and apply the signs and measuring units. | 1,5,6,7 | R,UA | 4 | 4 |
| CO5 | Acquire and apply the signs of Mathematical terminologies. | 1,5,6,7 | R,UA | 5 | 4 |
| Total Hours of instruction | | | | | 32 |

Level of Mapping PO's with CO's

| Course | CO's | Programme Outcomes(PO's) | | | | | | |
|--|------|--------------------------|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Sign Language-II | CO1 | 2 | 0 | 0 | 0 | 2 | 2 | 2 |
| | CO2 | 2 | 0 | 0 | 0 | 2 | 2 | 2 |
| | CO3 | 2 | 0 | 0 | 0 | 2 | 2 | 2 |
| | CO4 | 2 | 0 | 0 | 0 | 2 | 2 | 2 |
| | CO5 | 2 | 0 | 0 | 0 | 2 | 2 | 2 |
| <p>Level 3-Highly Mapped, Level 2-Moderately Mapped, Level 1- Low Mapped, Level 0-Not Mapped</p> <p>Method is to relate the level of PO with the number of hours devoted to the CO's which maps the given PO.</p> <p>If $\geq 50\%$ of classroom sessions related to the CO are addressing a particular PO, it is considered that PO is mapped at Level 3</p> <p>If 30 to 50% of classroom sessions related to the CO are addressing a particular PO, it is considered that PO is mapped at Level 2</p> <p>If 5 to 30% of classroom sessions related to the CO are addressing a particular PO, it is considered that PO is mapped at Level 1</p> <p>If $< 5\%$ of classroom sessions related to the CO are addressing a particular PO, it is considered that PO is considered not-mapped i.e.; Level 0</p> | | | | | | | | |

Course Assessment and Evaluation Chart

| Sl. No | Assessment | Duration | Max marks | Conversion |
|--------------------|---|------------|-----------|------------------------------------|
| 1. | CIE Assessment 1 (Activity 1 – At the end of 3 ^d week | 60 minutes | 10 | Total of all the CIE Assessment |
| 2. | CIE Assessment 2 (Activity -2) – At the end of 5 th week | 60 minutes | 10 | |
| 3. | CIE Assessment 3 (Activity -3) – At the end of 12 th week | 60 minutes | 10 | |
| 4. | CIE Assessment 4 (MCQ/Quiz) – At the end of 14 th week | 60 minutes | 10 | |
| 5. | CIE Assessment 5 (Activity/Assignment) – At the beginning of 16 th week | 60 minutes | 10 | |
| 7. | Total Continuous Internal Evaluation (CIE) Assessment | | | 50 |
| Total Marks | | | | 50 |

Government of Karnataka
DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION
JSS POLYTECHNIC FOR THE DIFFERENTLY ABLED(AUTONOMOUS)

PROGRAM: COMPUTER SCIENCE AND ENGINEERING

| | | | |
|----------------|--------------------------------|---------------------|---------------------|
| Course Code | ---- | Semester | II |
| Course Title | Psychology and Counseling - II | Course Group | Audit |
| Type of Course | Lecture | Total Contact Hours | 2 Hrs. / Week |
| | | | 32 Hrs. / Semester |
| Prerequisites | English Knowledge | Teaching Scheme | [L : T : P] 2:0:0 |
| CIE Marks | 50 | SEE Marks | - |

1. COURSE OBJECTIVES

At the end of the course the students shall be able to:

- a) Understand Psychology related problems and acquire problem solving skills.
- b) Understand and learn to work in teams.
- c) Adapt positive psychology in daily life.
- d) Understand career planning and explore career options.

2. COURSE OUTCOMES

At the end of the course, the students shall be able to

| CO's | Course Outcomes |
|------|---|
| CO 1 | Develop knowledge on problem solving skills. |
| CO 2 | Work in teams. |
| CO 3 | Acquire knowledge and adapt a good mental well-being. |
| CO 4 | Obtain positive attitude and self esteem. |
| CO 5 | Obtain knowledge about career planning and apply it. |

3. COURSE CONTENT OUTLINE WITH TEACHING HOURS AND MARK

| UNIT NO | UNIT TITLE | TEACHING HOURS | MARKS |
|---------|-------------------------------------|----------------|-------|
| 01 | Problems and problem solving skills | 06 | 10 |
| 02 | Working with groups | 06 | 10 |
| 03 | Positive Psychology | 07 | 10 |
| 04 | Attitude | 07 | 10 |
| 05 | Career Planning | 06 | 10 |
| Total | | 32 | 50 |

4. DETAILS OF COURSE CONTENTS

The following topics / subtopics are to be taught and accessed in order to develop Unit Skill sets for achieving CO to attain identified skill sets:

| UNIT NO. | SKILLS | TOPICS / SUBTOPICS | HOURS |
|--|--|--|-------|
| UNIT- 1. Problems and problem solving skills | Understand and apply problem solving skills. Learn self value and live a well-balanced life. | 2.1 Analyzing a problem 2.2 Problem solving skills 2.3 Forgiving self and understanding self-worth. 2.4 Well-balanced living. | 06 |
| UNIT- 2. Working with groups | Understand and learn to work/adjust in a groups. | 2.1 Nature of groups. 2.2 Group productivity. 2.3 Leadership. 2.4 Success. 2.5 Understanding Pros and Cons of working in groups. | 06 |
| UNIT- 3 Positive Psychology | Understand the importance of staying positive and have a good mental health. | 3.1 Science of happiness 3.2 Mindfulness 3.3 Positive thinking 3.4 Optimism 3.5 Mental well-being | 07 |

| | | | |
|----------------------------|--|--|----|
| UNIT-4 Attitude | Understand the importance of positive attitude and self esteem. | a. Attitude b. Factors Influencing our attitude c. Changing attitude- negative to positive. d. Building positive self-esteem and image. e. Forming positive habits and characters. f. Prejudice g. Overcoming loneliness h. Witnessing/ interacting with successful differently abled people. | 07 |
| UNIT- 5 Career Planning | Understand the importance of career planning and apply it in exploring suitable options. | 5.1 Career planning 5.2 Features and importance of career planning. 5.3 Understanding job satisfaction. 5.4 Exploring career options suitable for their personality. 5.5 Goal setting and working towards it. 5.6 Time Management. 5.7 Decision Making | 06 |

2. MAPPING OF CO WITH PO

| CO | Course Outcome | PO Mapped | Unit | CL R/U/A | Theory in Hrs. |
|-------|---|-----------|------|----------|----------------|
| 1 | Develop knowledge on problem solving skills. | 1,5,6,7 | 1 | R/U/A | 6 |
| 2 | Work in teams. | 1,5,6,7 | 2 | R/U/A | 6 |
| 3 | Acquire knowledge and adapt a good mental well-being. | 1,5,6,7 | 3 | R/U/A | 7 |
| 4 | Obtain positive attitude and self esteem. | 1,5,6,7 | 4 | R/U/A | 7 |
| 5 | Obtain knowledge about career planning and apply it. | 1,5,6,7 | 5 | R/U/A | 6 |
| Total | | | | | 32 |

3. LEVELS OF CO AND PO MAPPING

| Psychology and Counselling | Programme Outcomes | | | | | | |
|----------------------------|--------------------|---|---|---|---|---|---|
| Course outcomes | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| CO1 | 2 | 0 | 0 | 0 | 3 | 1 | 0 |
| CO2 | 2 | 0 | 0 | 0 | 3 | 1 | 0 |
| CO3 | 2 | 0 | 0 | 0 | 3 | 1 | 0 |
| CO4 | 2 | 0 | 0 | 0 | 3 | 0 | 0 |
| CO5 | 2 | 0 | 0 | 0 | 3 | 1 | 0 |

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO.

If >40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3

If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2

If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1

If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

4. COURSE ASSESSMENT AND EVALUATION CHART

| Sl. No | Assessment | Duration | Max marks | Conversion |
|---|---|------------|-----------|-----------------------------------|
| 1. | CIE Assessment 1 (Activity) - At the end of 3 rd week | 60 minutes | 10 | Total of all the CIE assessments. |
| 2. | CIE Assessment 2 (Activity) - At the end of 6 th week | 60 minutes | 10 | |
| 3. | CIE Assessment 3 (MCQ/Quiz) - At the end of 9 th week | 60 minutes | 10 | |
| 4. | CIE Assessment 4 (MCQ/Quiz) - At the end of 12 th week | 60 minutes | 10 | |
| 5. | CIE Assessment 5 (Activity) - At the beginning of 15 th week | 60 minutes | 10 | |
| Total Continuous Internal Evaluation (CIE) Assessment | | | | 50 |
| Total Marks | | | | 50 |

5. INSTRUCTIONAL STRATEGY

- Emphasis on demonstration based learning activities.
- Involve the students in the group discussions.
- Explain the students with real time problems.
- Providing the course materials in soft copy, power point presentation and hard copy to revise the contains in depth.
- Encourage innovative teaching by providing online references.

6. DETAILED COURSE CONTENTS

| UNIT NO. | DETAILED COURSE CONTENT | CO | PO | CONTACT HRS. | TOTAL |
|---|--|---------|---------|--------------|-----------|
| 1. Problems and problem solving skills | Analyzing a problem | 1 | 1,5,6,7 | 1 | 06 |
| | Problem solving skills | 1 | 1,5,6,7 | 1 | |
| | Forgiving self and understanding self-worth | 1 | 1,5,6,7 | 1 | |
| | Well-balanced living. | 1 | 1,5,6,7 | 1 | |
| | Activity on problem solving. | 1 | 1,5,6,7 | 1 | |
| | CIE Assessment 1 | 1 | 1,5,6,7 | 1 | |
| 3. Working with groups | Nature of groups. | 2 | 1,5,6,7 | 1 | 06 |
| | Group productivity. | 2 | 1,5,6,7 | 1 | |
| | Leadership. Success. | 2 | 1,5,6,7 | 1 | |
| | Understanding Pros and Cons of working in groups | 2 | 1,5,6,7 | 1 | |
| | Activity on working in groups - 2 Tasks | 2 | 1,5,6,7 | 1 | |
| | CIE Assessment 2 | 2 | 1,5,6,7 | 1 | |
| 4. Positive Psychology | Science of happiness | 3 | 1,5,6,7 | 1 | 07 |
| | Mindfulness | 3 | 1,5,6,7 | 1 | |
| | Positive thinking | 3 | 1,5,6,7 | 1 | |
| | Optimism | 3 | 1,5,6,7 | 1 | |
| | Mental well-being | 3 | 1,5,6,7 | 1 | |
| | Activity on staying positive | 3 | 1,5,6,7 | 1 | |
| 4. Attitude | CIE Assessment 3 | 3 | 1,5,6,7 | 1 | 07 |
| | Attitude | 4 | 1,5,6,7 | 1 | |
| | Factors Influencing our attitude | | | | |
| | Changing attitude- negative to positive. | 4 | 1,5,6,7 | 1 | |
| | Building positive self-esteem and image. | 4 | 1,5,6,7 | 1 | |
| | Forming positive habits and characters. | 4 | 1,5,6,7 | 1 | |
| | Prejudice | 4 | 1,5,6,7 | 1 | |
| | Overcoming loneliness | | | | |
| Witnessing/ interacting with successful differently abled people. | 4 | 1,5,6,7 | 1 | | |
| CIE Assessment 4 | 4 | 1,5,6,7 | 1 | | |

| | | | | | |
|---------------------------|---|---|---------|---|-----------|
| 5. Career Planning | Career planning Features and importance of career planning. | 5 | 1,5,6,7 | 1 | 06 |
| | Understanding job satisfaction. Exploring career options suitable for their personality. | 5 | 1,5,6,7 | 1 | |
| | Goal setting and working towards it. | 5 | 1,5,6,7 | 1 | |
| | Time Management. | 5 | 1,5,6,7 | 1 | |
| | Decision Making | 5 | 1,5,6,7 | 1 | |
| | CIE Assessment 5 | 5 | 1,5,6,7 | 1 | |
| Total | | | | | 32 |

7. SUGGESTED LIST OF STUDENTS ACTIVITIES

| Sl. No | Suggested Activities |
|--------|---|
| 1 | uzzle activity- to build their creativity. |
| 2 | Individual tasks in the classroom stage to build confidence |
| 3 | Healthy competitions to know their caliber and learn to encourage and support each other. |
| 4 | Group discussions |
| 5 | Mock Interview |

8. SUGGESTED LEARNING REFERENCES

| Sl.No | References |
|-------|---|
| 1 | Introduction to Psychology by Morgan and King |
| 2 | Social Psychology by Shelley E. Taylor |
| 3 | Positive Psychology by Baumgardner Steve Crothers Marie |
| 4 | Things Mentally Strong People Don't Do by Amy Morin |
| 5 | The Righteous Life by A.P.J. Abdul Kalam |
| 6 | https://www.youtube.com/watch?v=ZnjJpa1LBOY |
| 7 | https://www.youtube.com/watch?v=_gJ5V525Sck |