TILAK MAHARASHTRA VIDYAPEETH,PUNE

TEACHING AND EXAMINATION SCHEME FOR DIPLOMA COURSE

COURSE NAME:COMPUTER ENGINEERING

COURSE CODE : CO

DURATION OF COURSE : SIX SEMESTERS **WITH EFFECT FROM 2008-2009**

SEMESTER : FOURTH SEMESTER **DURATION:18 WEEKS**

FULL TIME

SR. NO.	SUBJECT TITLE	SUBJECT CODE	TEACHING SCHEME		EXAMINATION SCHEME											
			TH	PR	PAPER HRS	TH		INT	TOTAL		PR		OR		TW	
						Max	Min		Max	Min	Max	Min	Max	Min	Max	Min
1	Microprocessor & Programming	CO 4001	04	02	3	80	32	20	100	40	50*	20	--	--	--	--
2	Computer Networks	CO 4002	04	02	3	80	32	20	100	40	--	--	25*	10	25*	10
3	Data Structure	CO 4003	04	04	3	80	32	20	100	40	50**	20	--	--	25*	10
4	Computer Graphics	CO 4004	04	02	3	80	32	20	100	40	50**	20	25*	10	25*	10
5	Computer Architecture & Maintenance	CO 4005	--	02	--	--	--	--	--	--	--	--	--	10	25*	10
6	Development of generic Skill - II	CO 4006	01	02	--	--	--	--	--	--	--	--	25**	10	25*	10
7	Professional Practices III	CO 4007	--	02	--	--	--	--	--	--	--	--	--	--	50*	10
TOTAL			**17**	**16**	**--**	**320**	**--**	**80**	**400**	**--**	**150**	**--**	**75**	**--**	**175**	**--**

STUDENT CONTACT HOURS PER WEEK(FORMAL TEACHING) : **33 HRS**

Theory and Practical Periods are of 60 minutes each

* - INTERNAL ASSESSMENT , ** - EXTERNAL ASSESSMENT

TOTAL MARKS – 800

ABBREVIATIONS : TH – THEORY , INT-INTERNAL , PR – PRACTICALS , OR –ORAL, TW – TERMWORK

All Practical, Orals and Term Work assessments are to be done as per the prevailing norms for implementation and assessment.

Course Name : Computer Engineering

Course Code : CO

Semester : Fourth

Subject Title : Microprocessor and Programming

Subject Code : CO 4001

Teaching and Examination Scheme:

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
04	02	03	80	20	50*	--	--	150

Pre –requisites:

Before studying this subject students must have knowledge of the following

1) Basics of digital electronics signal
2) Working of digital & circuits such as flip- flops, registers, multiplexers etc.,

Objectives : The students will be able

1) To draw the block diagram of 8085 & 8086 architecture
2) To understand the concept of pipe lining and segmentation
3) To write syntax for 8086 instructions
4) To write assembly language program for different problem statement
5) To understand interface memory chips with microprocessor

Contents: Theory

Unit	Name of the Topic	Hours	Marks
01	**Basics of Microprocessor** Evolution of Microprocessor and types, Silent features of 8085 Microprocessor, architecture of 8085 (Block diagram), register organization, limitations of 8-bit Microprocessor.	06	12
02	**16-bit Microprocessor 8086** Salient features of 8086 Microprocessor, architecture of 8086 (Block diagram, signal description), register organization, concepts of pipelining, memory segmentation and memory address generation, Minimum and Maximum Mode operation and diagram	08	12
03	**8086 Instruction set** Machine Language Instruction format, addressing modes, Instruction set (Arithmetic, logical, data transfer, bit manipulation, string, program control transfer, process control)	12	18
04	**The art of assembly Language Programming** Program development steps defining problem, algorithms flowchart, initialization checklist, choosing instructions, converting algorithms to assembly language programs, Assembly Language Programming Tools Editors, Assembler, Linker, Debugger, Assembler directives, model of 8086 assembly language Programming , programming using assembler.	12	18
05	**Procedure and Macro** Defining Procedure (Directives used, FAR and NEAR, CALL and RET instructions), Defining Macros, Assembly Language Programs using Procedure and Macros.	06	12
06	**System Interfacing** Interfacing Techniques (I/O mapped I/O, Memory mapped I/O, memory and I/O addressing, 8086 addressing, and address decoding, memory interfacing as Even and Odd bank)	04	08
	Total	48	80

List of Practical:

1) Basics of Assembler, linker, debugger, editor

2) Write an Assembly Language Program to

- Add / Sub two 16 bit numbers.
- Find sum of series of numbers.
- Multiply two 16 bit unsigned/ signed numbers.
- Divide two unsigned/ signed numbers (32/16 , 16/8, 16/16, 8/8)
- Add / Sub / Multiply / Divide two BCD numbers.
- Find smallest/ largest number from array of n numbers.
- Perform block transfer data using string instructions / without using string instructions.
- Compare two strings using string instructions / without using string instructions.
- Display string in reverse order, string length, Concatenation of two strings.
- Convert Hex to Decimal ,Decimal to Hex.
- Arrange numbers in array in ascending/descending order.

1. Recommended Books

Sr. No	Name of Book	Author	Publication
1	Microprocessor & interfacing (programming & hardware)	Douglas V-Hall	Tata McGraw Hill
2	Advanced microprocessor & peripheral	A.K. Ray & K.M. Bhurchandi	Tata McGraw Hill
3	An introduction to the Intel family of Microprocessors	James L. Antonakos	Pearson Education Asia
4	Microprocessor Architecture programming & application with the 8085	Ramesh A. Gaonkar	Penfam International

Course Name : Computer Engineering

Course Code : CO

Semester : Fourth Semester

Subject Title : Computer Networks

Subject Code : CO 4002

Teaching and Examination Scheme:

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
04	02	03	80	20	--	25*	25*	150

Pre- requisites:

1) Basic knowledge of computer concepts
2) Basic knowledge of computer hardware

Objectives: The student will be able

1) To identifying the benefits of network
2) To distinguish between network classification
3) To describe different types of topology
4) To describe different types of network devices
5) To Compare different transmission media
6) To Compare OSI and TCP/IP model
7) To configure TCP/IP

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Subject Title: COMPUTER NETWORKS	Subject Code : CO 4002

Unit	Name of the Topic	Hours	Marks
01	**Basic Network Concepts:** Understanding Network - Human Networks; Computer Networks; Network Plan, Identifying the Benefits of Network - Sharing Information; Sharing Resources; Facilitating Centralized Management – Managing Software, Maintaining the Network, Backing Up Data, Distinguishing Between Network classifications - Classifying Networks by their Geography – LAN, MAN, WAN; Classifying Networks by their Component Role - Peer to Peer, Server based Network. Network Features - File Sharing; Printer Sharing; Application Services; E- Mail; Remote Access.	08	20
02	**Network Topologies and Networking Devices:** Type of Topology - Bus Topology; Ring Topology; Star Topology; Mesh Topology; Tree Topology; Hybrid Topology, Network Control Devices -Hubs; Switches; Routers; Bridges; Repeaters; Gateways; Modems	08	15
03	**Transmission Media:** Guided Media -Twisted Pair -UPT, STP; Coaxial Cable; Optical Fiber - Optical Fiber Structure, Light Source for Propagation Mode, Advantages of optical fiber, Disadvantages of optical fiber, Un-Guided Media: Wireless Communication – Communication Band; Microwave Communication; Satellite Communication – Access Method; Cellular (Mobile) Telephone – Band in Cellular Telephony, Calls Using Mobile Phones, Transmitting receiving operations; New Developments.	08	15

04	**Network Reference Model** Encapsulation, Horizontal Communication, Vertical OSI Reference Mod el - Interlayer Communication – Data Communication, Encapsulation Terminology; Physical layer; Data link layer; Network layer; Transport layer; Session layer; Presentation layer; Application layer, TCP/IP Reference Model – Link; Internet; Transport; Application layer, Comparison of the OSI and TCP/IP reference models.		**12**	**20**
05	**TCP/IP Fundamentals:** TCP/IP Protocols - SLIP and PPP; ARP; IP; ICMP; TCP and UDP, IP Addressing - IP Address Assignments; IP Address Classes; Subnet Masking; Registered and unregistered Addresses, TCP/IP Configuration - Installing the TCP/IP Protocol; Configuring TCP/IP - Configuring Basic TCP/IP Properties, Configuring Advanced TCP/IP Properties		**12**	**10**
		Total	**48**	**80**

LIST OF PRACTICAL:

1 Draw layout of LAB Network.

2 Use step by step procedure for i.e. File sharing & Printer sharing.

3 Compare different Network Topologies.

4 Compare Network directing devices.

i.e. Hub, Switch, Router.

5 Create a Network cable using RJ45 connectors.

6 To locate MAC address of computer

7 Installation of TCP/IP Protocol

i.e. NetBEUI Protocol.

8 Implementing a TCP/IP Network configuring

1. Recommended Books:

Sr. No.	Title	Author	Publication
01	Introduction to Networking	Richard A. McMohan,	Tata McGraw-Hill Edition
02	Networking + Certification (Second Edition)	Microsoft Press --	
03	Complete Reference Networking	Craig Zacker	Tata McGraw-Hill Edition
04	Data Communication and Networking	Forozon	Tata McGraw-Hill Edition

Course Name : Computer Engineering

Course code : CO

Semester : Fourth

Subject Title : Data structure

Subject Code : CO 4003

Teaching and Examination Scheme:

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
04	04	03	80	20	50**	--	25*	175

Pre-requisites: Students should know the following concept

1) Basic knowledge of computer concepts
2) Basic knowledge of computer hardware

Objectives: The students will be able

1) To debug & repair the fault in system
2) To assemble the system
3) To load the operating system & device drives in the system

Subject Title: DATA STRUCTURE	Subject Code : CO 4003

Unit	Name of the Topic	Hours	Marks
01	**Introduction to data structure:** Data Representation, Abstract data Types, Data Types, Linear data type, Non- Linear data type, Primitive data type, Non primitive data type, Refinement Stages Difference between Abstract Data Types, Data Types And Data Structures	04	8
02	**Principles of programming and Analysis of Algorithms:** Algorithms, Different approaches for designing an algorithm, Complexity, Big 'O' Notation, Algorithm analysis,	02	8
03	**Searching & Sorting:** Sorting-An Introduction, Efficiency of Sorting Algorithms, Bubble Sort, Selection Sort, Quick Sort, Insertion Sort, Merge Sort, Binary Tree Sort, Radix Sort, Shell Sort, Heap Sort, Searching-An Introduction, Binary Search	08	15
04	**Stacks:** Introduction to Stacks, Stacks as an Abstract Data Type, Primitive operations of stacks, Representation of Stacks through Arrays, Representation of Stacks through Linked List, Application of Stacks : Polish Expression Conversion Stack and Recursion.	06	8
05	**Queues:** Introduction, Queue as an Abstract Data Type,	06	8

	Circular Queues, Priority Queue, Application of Queues. Operations on queue : Searching ,Insertion, Deletion, Representation of Queues,		
06	**Linked List** Introduction, Terminologies Node, Address, Pointer, Information, Next, Null pointer, Empty list etc., Operations on list Searching, Insertion and Deletion, Types of lists Linked list and Circular list , Singly linked list ,Doubly linked list, Array stacks, queues, implementation using list,	**06**	**8**
07	**Trees:** Introduction to Binary Trees, Types of Trees, Basic Definition of Binary Trees, Operations on Binary Search Tree, Type of tree Binary, Height balanced and Weight, balanced tree Operations on trees : Insertion, Deletion, Traversal Traversing Pre-order, In-order and Post-order,	**08**	**10**
08	**Graphs:** Introduction to Graphs Terms Associated with Graphs Terminology graph, node (vertices), arcs (edge), directed graph, in-degree, out-degree, adjacent, successor, predecessor, relation ,Weight, path, length Sequential Representation of Graphs Linked Representation of Graphs Traversal of Graphs Spanning Trees Shortest Path Application of Graph	**06** **02**	**10** **05**
09	**Hashing** Hash functions Deleting items from hash tables		
		Total **48**	**80**

List of Practical:

Sr.No.	Practical
01 .	Programs based on: Array operations, insertion, deletion
02.	Programs for implementing various sorting techniques. (Minimum three sorting techniques from topics mentioned in the syllabus))
03.	Programs for implementing various sorting and searching techniques. (Minimum two searching techniques from topics mentioned in the syllabus.
04.	Programs based on Stacks Implementation of PUSH & POP operations, Evaluate postfix expressions, Infix to postfix conversions.
05.	Recursive programs: factorial, fibonacci, Ackerman function, and tower of Hanoi.(any two)
06.	Programs for demonstrating queue operations. one recursive program converted to non recursive ones
07.	Two programs based on Linked lists
08.	Programs based on trees Creating a binary tree, in order, preorder and post order traversal of binary tree, deleting a node from binary tree.
09.	Assignments based on graph theory.
10.	Program based on hashing

Recommended Books:

Sr. No.	Author	Title	Publisher
01	ISRD Group New Dehli	Data Structure Using C	Tata Magraw Hill
02	Tremblie and Sorrenson	Data Structures	TMH Publications
03	Lafore	Teach Yourself data Structure & Algorithm in 24 Hrs	BPB Publication

Course Name : Computer Engineering

Course Code : CO

Semester : Fourth

Subject Title : Computer Graphics

Subject Code :CO 4004

Teaching and Examination Scheme:

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
04	02	03	80	20	50**	25*	25*	200

Pre-requisites:

1) Basic knowledge of computer
2) Knowledge of procedural language such as 'C'
3) Knowledge of engineering drawing, graphs
4) Knowledge of mathematical concepts

Objectives: The students will be able

1) To describe file structure of graphic file format
2) To apply algorithm to draw lines, circles & polygons
3) To use transformation technique to scale & rotate object
4) To describe the fundamental of raster graphics & interactive graphics
5) To develop the logic for drawing the natural objects using different algorithms for curved lines

Contents: **Theory**

Unit	Name of the Topic	Hours	Marks
01	**Basics of Computer Graphics** Display devices, Primitive operations, The Display-file interpreter, Display file structure, and Graphics file formats. Text mode graphics function, Graphic mode graphics functions Shapes, colors, Co-ordinate systems, Applications of computer graphics	**08**	**10**
02	**Line, circle, and polygon.** Basic concepts in line drawing, Line drawing algorithms: DDA algorithms, Bresenham's algorithm Circle generating algorithms: DDA circle drawing algorithm, Bresenham's circle drawing algorithm, midpoint circle algorithm Polygons – Types of polygons, Polygon representation, Entering polygons, inside – outside test, polygon filling: Flood fill, scan-line algorithm	**10**	**15**
03	**Transformations** 2D transformation: scaling, Reflection, shearing, Rotation, Translation, Rotation about an arbitrary point. 3D Transformation: scaling, rotation, translation, rotation about arbitrary axis.	**06**	**10**
04	**Windowing & clipping** Viewing transformation, Normalization transformation Line clipping: Cohen-Sutherland, Line clipping algorithm, midpoint subdivision algorithm Polygon clipping: Sutherland – Hodgeman Polygon clipping algorithm.	**08**	**10**
05	**Curves and fractals** Curve generation: arc generation using DDA algorithm. Interpolation, B-Spline, Bezier curves. Fractals: Hilbert's Curve, Koch curve, Fractal lines, Fractal Surfaces.	**08**	**15**
06	**Raster graphics and interactive graphics** Raster scan display, Random scan display Need for graphics standards, Graphics standards, Advantages of Graphics standards, Hazards of Graphics standards. Graphical user interface Open GL: What is Open GL, How OpenGL works, Open GL and animation.	**08**	**20**
	Total	**48**	**80**

List of Practical:

1) Implement DDA algorithm for line drawing
2) Implement Bresennham's algorithm for line drawing.
3) Implement DDA algorithm for circle drawing
4) Implement Bresennham's algorithm of circle drawing.
5) Implement Flood fill algorithm for Polygon filling.
6) Implement scan-line algorithm for polygon filling.
7) Write Program for 2-D transformations -> scaling, Rotation,
8) Write Program for 2 D transformations shearing and Translation program
9) Write and implement program for rotation about an arbitrary point.
10) Implement Cohen- Sutherland algorithm for line clipping.
11) Implement mid point subdivision algorithm for line clipping.
12) Implement Sutherland-Hodgeman algorithm for polygon clipping.
13) Write a program to draw a curve using Bezier's algorithm.
14) Write a program to draw fractal lines.

List of Practical oriented Projects:

1) Oral geometry insertion for character animation (Develop a system to create an animatable mouth in head geometry)
2) Online storyboarding system (Create a system that will keep still images, text descriptions, sample animations, sample audio for each scene of an animation)

1. Recommended Books:

Sr. No	Book Title	Author	Publication
01	Computer Graphics	ISRD group	Tata McGraw Hill
02	Computer Graphics	Steven Harington	Tata McGraw Hill
03	Computer Graphics	M.Pauline Baker &Donald Hearn	Prentice-Hall
04	Graphics Under 'C'		BPB
05	Principles of Interactive Computer Graphics	Newman and Sproull	Tata McGraw Hill
06	Computer Graphics	Plastock	Tata McGraw Hill

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Course Name : Computer Engineering

Course Code : CO

Semester : Fourth

Subject Title : Computer Architecture and Maintenance

Subject Code : CO 4005

Teaching and Examination Scheme:

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
--	02	--	--	--	--		25*	25

Pre –requisites: T he Students should know the following concepts

1) Basic knowledge of computer concepts
2) Basic knowledge of computer hardware

Objectives: The student will be able

1) To debug and repair the fault in the system
2) To assemble the system
3) To load the operating system & device drivers in the system.

Contents: Theory

Unit	Name of the Topic	Hours
01	**Motherboard And Its Components:** Chipset basic, chipset Architecture: North / South Bridge architecture and Hub architecture, Architecture of Intel chipset 915 G & 945 G, Overview and features of ISA, PCI-X, PCI-X press, AGP, PCMCIA, AGP, Processor BUS (no pin description) PCI versus PCI Express, Logical memory organization: Conventional memory, Extended memory, Extended memory, upper memory (No memory map) Concept of cache memory : Internal cache, External cache (L1, L2, L3 cache) Overview and features of SDRAM, DDR, DDR2, DDR3, Features of Intel processors : Pentium, P2, Celeron, P3, P4, Pentium D and AMD processors : K6, Athlon XP, Athlon 64, Processor Modes : Real mode, Protected mode, Virtual real mode, 64 bit extension mode (AMD 64, EM 64), Bios Basics, main functions, Motherboard Selection criteria	10
02	**Storage Devices And Its Interfacing:** Recording Technique : FM, MFM, RLL Perpendicular magnetic Recording, Hard disk construction and working, Servo Techniques : Wedge servo, Embedded servo, dedicated servo, Terms related to Hard Disk : Track, Sector cylinder, cluster, landing zone, MBR, Zone recording, write precompensation, Formatting, Low level formatting, High level formatting, Partitioning, FAT basics, Introduction to file system FAT 16, FAT 32, NTFS, Hard disk drive interface: features of parallel AT attachment (PATA), Serial ATA (SATA), ATA devices jumper selection : Master, slave, cable select, ATA cables ATA RAID : RAID 0, RAID CDROM drive: Construction, Recording DVD: Construction, Recording Blue-ray disk specification	08

03	**Display Devices & Interfacing:**	**05**

CRT colour monitor : Block diagram and function of each block

Characteristics of CRT monitor : Dot pitch, Resolution, Video

bandwidth, Horizontal scanning frequency, vertical scanning

frequency, Interlaced versus non interlaced monitor

Advantages of CRT display related to LCD display

LCD monitor : functional block diagram of LCD monitor, working

principal, advantages and disadvantages Types : Passive matrix and

Response time

Active matrix, Important characteristics : Resolution, Refresh rate,

Basic block diagram of a video accelerator care.

04	**Input and output devices**	**08**

Construction and Working

Keyboard : Types of keyswitches : Membrane, Mechanical,

Rubber dome, Capacitive and interface,

MOUSE :Mechancial, Optomechanical, optical (New design),

Scanner : Flat bed, sheetfed, Handheld : Block diagram and

specifications, OCR, TWAIN, Resolution, Interpolation,

Modem : Internal and External : Block diagram and specifications,

Printer : Dot matrix, Inkjet, Laser : Block diagram and specifactions.

05	**Power Supplies**	**08**

Block diagram and working of SMPS,
Signal description and pinout diagram of AT and ATX connectors,
Power supply characteristics : Rated wattage, Efficiency,
Regulation, Ripple, Load regulation, Line regulation,
Power problems : Blackout, Brownout, surges and spikes,
Symptoms of power problems,
Protection devices: circuit breaker, Surge suppressor: working,
UPS: Block diagram, working, Types, Ratings.

06	**Interfaces:**	**05**

SCSI, SCSI cables and connectors, SCSI drive configuration.
USB features, Rs 232: (voltages and 9 pin description),
Centronics (interface diagram, important signals and timing
waveform),
Firewire features

07	**PC Troubleshooting , Maintenance and Tools**	**08**

Preventive Maintenance : Active, Passive, Periodic Maintenance Procedure,
Preventive Maintenance of peripherals of PC's , Fault Finding and trouble shooting of
The above peripherals, ESD (Electrostatic Discharge) , RFI Protection, Earthing,
Diagnostic software, Working of logic probe, Logic pulser, Current tracer,
Block diagram and working of logic analysis and CRO.
Virus infections symptoms, precautions to prevent a virus infection

Total **48**

List of Practical :

1. Drawing the motherboard layout of Pentium IV and studying the chipset through data books or Internet.
2. CMOS setup of Pentium.
3. Hard Disk Partitioning.
4. Study of HDD: Identify various components of HDD and write their functions.
5. Study and installation of any one display cards: VGA or SVGA display cards.
6. Installation of Scanner, Printers and Modems.
7. Study of SMPS (ATX)
8. Study of Diagnostic Softwares. (Any one)
9. Fault findings:

(a) Problems related to monitor.

(b) Problems related to CPU.

10. Assembling of PC and Installation of Operating System.
11. Configuration of Client and Server PC, Laptop and Network components.
12. RS232C communication between two computers.

Recommended Books:

Sr.No.	Author	Title	Publisher
01	Mike Meyers, Scott Jernigan	Managing & Troubleshooting PC's	Tata McGraw Hill
02	Bigelow	Bigelow's Troubleshooting maintaining & Repairing PCs	Tata McGraw Hill
03	Mark Minasi	The Complete PC Upgrade & maintainance guide	BPB Publication
04	D. Balasubramanian	Computer Installation & servicing	Tata McGraw Hill
05	Scott Muller	Upgrading & Repairing PCs	Techmedia

Course Name : Diploma Engineering

Course Code : (All Branches)

Semester : Fourth

Subject Title : Development Of Generic Skills-II

Subject Code : CO 4006

TEACHING AND EXAMINATION SCHEME :

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
01	02	--	--	--	--	25**	25*	50

Pre-requisites:

Students should be reasonably proficient in various skills

Objectives: The student will be able to

1) Logical discussion on given topic, which will lead to conclusion (preparing for G.D)
2) Getting ready for interview, preparing to face interviews
3) Try to polish various skills and enhance further knowledge

Contents: Theory

Unit	Contents	HOURS
01	**SOCIAL SKILLS** SOCIETIES SOCIAL STRUCTURE DEVELOP SYMPATHY AND EMPATHY	01
02	**SWOT Analysis – Concept, How to make use of SWOT.**	01
03	**Inter personal Relation** Sources of conflict, Resolution of conflict , Ways to enhance interpersonal relations.	02
04	**Problem Solving** I) STEPS IN PROBLEM SO LVING 1) IDENTIFY AND CLARIFY THE PROBLEM 2) INFORMATION GATHERING RELATED TO PROBLEM 3) EVALUATE THE EVIDENCE , 4) CONSIDER ALTERNATIVE S OLUTIONS AND THEIR IMPLICATIONS 5) CHOOSE AND IMPLEMENT THE BEST ALTERNATIVE 6) REVIEW II) Problem solving technique . (any one technique may be considered) 1) Trial and error, 2) Brain storming, 3) Lateral thinking	02
05	**Presentation Skills** Body language -- Dress like the audience Posture, Gestures, Eye contact and facial expression. PRESENTATION SKILL STAGE FRIGHT Voice and language – Volume, Pitch, Inflection, Speed, Pause Pronunciation, Articulation, Language, Practice of speech. Use of aids –OHP,LCD projector, white board	03
06	**Group discussion and Interview technique** Introduction to group discussion, Ways to carry out group discussion, Parameters— Contact, body language, analytical and logical thinking, decision making INTERVIEW TECHNIQUE NECESSITY TIPS FOR HANDLING COMMON QUESTIONS	03

07	**Working in Teams** UNDERSTAND AND WORK WITHIN THE DYNAMICS OF A GROUPS TIPS TO WORK EFFECTIVELY IN TEAMS ESTABLISH GOOD RAPPORT, INTREST WITH OTHERS AND WORK EFFECTIVELY WITH THEM TO MEET COMMON OBJECTIVES, TIPS TO PROVIDE AND ACCEPT FEEDBACK IN A CONSTRUCTIVE AND CONSIDERATE WAY, LEADERSHIP IN TEAMS , HANDLING FRUSTRATIONS IN GROUP	**02**
08	**Task Management** INTRODUCTI ON TASK IDENTIFICATION TASK PLANNING ,ORGANIZING AND EXECUTION, CLOSING THE TASK	**02**
	TOTAL 16	

CONTENTS: PRACTICAL

List of Assignment: (Any Eight assignments)

1) SWOT analysis: - Analyse yourself with respect to your strength and weaknesses, opportunities and threats. Following points will be useful for doing SWOT.
   a) Your past experiences,
   b) Achievements,
   c) Failures,
   d) Feedback from others etc.
2) Undergo a test on reading skill/memory skill administered by your teacher.
3) Solve the puzzles.
4) Form a group of 5-10 students and do a work for social cause e.g. tree Plantation, blood donation, environment protection, camps on awareness like importance of cleanliness in slump area, social activities like giving cloths to poor etc.(One activity per group)
5) Deliver a seminar for 10-12 minutes using presentation aids on the topic given by your teacher.
6) Watch/listen an informative session on social activities. Make a report on topic of your interest using audio/visual aids. Make a report on the programme
7) Conduct an interview of a personality and write a report on it.
8) Discuss a topic in a group and prepare minutes of discussion. Write thorough description of the topic discussed
9) Arrange an exhibition, displaying flow-charts, posters, paper cutting, Photographs etc on the topic given by your teacher.

MINI PROJECT ON TASK MANAGEMENT DECIDE ANY TASK TO BE COMPLETED IN A STIPULATED TI ME WITH THE HELP OF TEACHER. WRITE A REPORT CONSIDERING VARIOUS STEPS IN TAS K MANAGEMENT.

Recommended Books:

Sr.No	Author	Title	Publisher
1	Marshall Cooks	Adams Time management Viva Books	Viva Books
2	E.H. Mc Grath , S.J.	Basic Managerial Skills for All	Prentice Hall of India, Pvt Ltd
3	Allen Pease	Body Language Sudha Publications	Sudha Publications Pvt. Ltd.
4	Lowe and Phil	Creativity and problem solving	Kogan Page (I) P Ltd
5	Adair, J	Decision making & Problem solving	Orient Longman
6	Bishop , Sue	Develop Your Assertiveness	Kogan Page India
7	Marion E Haynes	Make Every Minute Count	Kogan page India
8	Steven L McShane and Mary Ann Glinow	Organizational Behavior	Tata McGraw Hill
9	Stephen P. Robbins	Organizational Behavior	Pretice Hall of India, Pvt Ltd
10	Michael Hatton (Canada – India Project)	Presentation Skills	ISTE New Delhi
11	--	Stress Management Through Yoga and Meditation	Sterling Publisher Pvt Ltd .
12	Richard Hale ,Peter Whilom	Target setting and Goal Achievement	Kogan page India
13	Chakravarty, Ajanta	Time management	Rupa and Company
14	Harding ham .A	Working in Teams	Orient Longman

Course Name : Computer Engineering

Course Code : CO

Semester : Fourth

Subject Title : Professional Practices - III

Subject Code : CO 4007

Teaching and Examination Scheme:

Teaching Scheme		Examination Scheme						
TH	PR	PAPER HRS	TH	INT	PR	OR	TW	TOTAL
--	02	--	--	--	--	--	50*	50

Pre-requisites:

1. Students must know basic English with an interest in reading.
2. Good presentation skill.
3. Basic knowledge of C , VB
4. Knowledge of Database concepts
5. Basic knowledge of Ms Access.
6. Knowledge of using search engine.

Objectives: The student will be able to

1) Acquire information from different sources, present it in your own words – languages
2) Acquire experience in developing software.
3) Acquire knowledge of current affairs / topics in industry.
4) Prepare yourself for presenting certain topic in such a way that you may impress the audience one should take care of
   a) Body language
   b) Eye contact
   c) Voice pitch
   d) Facial expression
   e) Overall impact on the audience

Activity	Content	Hours
01	**Industrial Visits** Structured industrial visits be arranged and report of the same should be submitted by the individual student, to form a part of the term work. The industrial visits may be arranged in the following areas / industries : 1) Telephone Exchange 2) District Level National Information Center (NIC) 3) Any other	21
02	**Lectures by Professional / Industrial Expert to be organized from any of the following areas:** i) Interview Techniques. ii) Cyber Laws iii) Nano Technology iv) Ethical Hacking v) Any other suitable topic	14
03	**Information Search :** Information search can be done through manufacturers, catalogue, internet, magazines; books etc. and submit a report. Following topics are suggested : i) Market survey of different processors. ii) Blue tooth Technology iii) Artificial Technology iv) Data ware-housing v) Cryptography vi) Digital signal processing vii) Bio-informatics viii) Any other suitable areas	12
04	**Seminar :** Each student shall submit a report of at least 10 pages and deliver a seminar (Presentation time – 10 minutes) Seminar topic i) Parallel Computing ii) Distributed Processing iii) Wireless communication iv) Virtual reality v) Embedded system vi) Computer security vii) Multimedia Techniques viii) Bio - Technology ix) Any other suitable topic	17
05	**Mini Project / Activities :** a) Web-site development b) Database related any topic c) System projects in VB like notepad, editors d) Animation projects using C, C++, VB etc e) Any other suitable topic.	16
	Total	**80**