



SCHEME OF STUDIES & EXAMINATIONS
B.Tech. 3rd YEAR (SEMESTER –V) COMPUTER SCIENCE AND ENGINEERING
Credit Based Scheme w.e.f. 2015-16

Sr. No.	Course No.	Course Title	Teaching Schedule			Marks of class work	Examination Marks		Total	Credit	Duration of Exam
			L	T	P		Theory	Practical			
1.	CSE 301B	OPERATING SYSTEMS	3	1	-	25	75	-	100	4	3
2.	CSE 303B	COMPUTER GRAPHICS (Common with IT VI th sem)	3	1	-	25	75	-	100	4	3
3.	CSE 305B	COMPUTER NETWORKS (Common with IT)	3	1	-	25	75	-	100	4	3
4.	CSE 307B	ANALYSIS AND DESIGN OF ALGORITHMS (Common with IT)	3	1	-	25	75	-	100	4	3
5.	CSE 309B	THEORY OF AUTOMATA & COMPUTATION (Common with IT VI th sem)	3	1	-	25	75	-	100	4	3
6.	ECE 309B	MICROPROCESSOR AND INTERFACING (Common with BME, AEI & ECE)	3	1	-	25	75	-	100	4	3
7.	CSE 321B	OPERATING SYSTEMS LAB	-	-	2	20	-	30	50	1	3
8.	CSE 323B	COMPUTER GRAPHICS LAB (Common with IT VI th sem)	-	-	2	20	-	30	50	1	3
9.	CSE 325B	COMPUTER NETWORKS LAB (Common with IT)	-	-	2	20	-	30	50	1	3
10.	ECE 329B	MICROPROCESSOR AND INTERFACING LAB (Common with BME, AEI & ECE)	-	-	2	20	-	30	50	1	3
11.	CSE 327B	PROFESSIONAL TRAINING - I	-	-	2	50	-	-	50	2	-
Total			18	6	10	280	450	120	850	30	

Note:

- Every student has to participate in the sports activities. Minimum one hour is fixed for sports activities either in the morning or evening. Weightage of sports is given in General Proficiency and Ethics Syllabus.
- The students will be allowed to use non-programmable scientific calculator. However, sharing/exchange of calculator is prohibited in the examination.
- Electronics gadgets including Cellular phones are not allowed in the examination.
- All the branches are to be divided in to Group-A and Group-B as per the suitability of the Institute/College so that there is equitable distribution of teaching load in odd and even semesters



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Operating System (Theory)

Subject Code: CSE-301B

Detailed Contents

Unit No. 1 Introduction

- Topic No.1 : Introduction to Operating System Concepts (including Multitasking, multiprogramming, multi user, Multithreading etc)
- Topic No.2 : Types of Operating Systems: Batch, Time-sharing systems, Distributed, Network, Real Time OS
- Topic No.3 : Various Operating system services & Architecture
- Topic No.4 : System programs and calls

Unit No. 2 Process Management

- Topic No.5 : Process concept, process scheduling
- Topic No.6 : CPU scheduling, Scheduling criteria
- Topic No.7: Scheduling algorithms -First Come First Serve (FCFS), Shortest-Job-First (SJF)
- Topic No.8: Priority Scheduling, Round Robin (RR)
- Topic No.9: Multilevel Queue Scheduling

Unit No. 3 Memory Management

- Topic No.10: Logical & Physical Address Space
- Topic No.11: Swapping, Contiguous memory allocation
- Topic No.12: Non-contiguous memory allocation paging and segmentation techniques
- Topic No.13: Segmentation with Paging
- Topic No.14: Virtual memory management -Demand Paging & Page Replacement Algorithms
- Topic No.15: Demand Segmentation
- Topic No.16: File System: Different types of files and their access methods,
- Topic No.17: Directory structures, Various allocation methods,
- Topic No.18: Disk scheduling and management and its associated algorithms,
- Topic No.19: Introduction to distributed file system.

Unit No. 4 Process-Synchronization & Dead locks

- Topic No.20: Critical Section Problems, Semaphores
- Topic No.21: Methods for handling deadlocks-deadlock prevention, avoidance & detection, Deadlock recovery
- Topic No.22: I/O Systems: I/O Hardware, Application I/O Interface
- Topic No.23: Kernel, Transforming I/O requests, Performance Issues
- Topic No.24: Unix System And Windows NT Overview: Unix system call for processes and file system management
- Topic No.25: Shell interpreter, Windows NT architecture overview
- Topic No.26: Windows NT file system

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Credits	Internal Assessment	External Assessment (Examination)			
L	T		Max. Marks	Max. Marks	Exam Duration		
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Operating System Concepts by Silberchatz et al, 5th edition, 1998, Addison-Wesley.
2. Modern Operating Systems by A. Tanenbaum, 1992, Prentice-Hall.
3. Operating Systems Internals and Design Principles by William Stallings, 4th edition, 2001, Prentice-Hall

REFERENCE BOOKS:

1. Operating System by Peterson, 1985, AW.
2. Operating System by Milankovic, 1990, TMH.
3. Operating System Incorporating With Unix & Windows By Colin Ritchie, 1974, TMH.



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Computer Graphics (Theory)

Subject Code: CSE-303B

Detailed Contents

Unit No. 1 Introduction to Computer Graphics

- Topic No.1 : What is Computer Graphics
- Topic No.2 : Computer Graphics Applications
- Topic No.3 : Computer Graphics Hardware and software
- Topic No.4 : Two dimensional Graphics Primitives: Points and Lines
- Topic No.5 : Line drawing algorithms: DDA, Bresenham's
- Topic No.6 : Circle drawing algorithms: Using polar coordinates, Bresenham's circle drawing, midpoint circle drawing algorithm

Unit No. 2 Two/Three Dimensional Viewing

- Topic No.7 : The 2-D viewing pipeline
- Topic No.8 : Windows, viewports ,window to view port mapping
- Topic No.9 : Clipping: point, clipping line (algorithms):- 4 bit code algorithm
- Topic No.10: Sutherland-cohen algorithm
- Topic No.11: Parametric line clipping algorithm (Cyrus Beck)
- Topic No.12: Polygon clipping algorithm: Sutherland-Hodgeman polygon clipping algorithm.
- Topic No.13: Two dimensional transformations: transformations, translation, scaling
- Topic No.14: Rotation, reflection, composite transformation
- Topic No.15: 3d dimensional transformations: Three dimensional graphics, Matrix representation of 3-D Transformations
- Topic No.16: Composition of 3-D transformation.

Unit No. 3 Viewing in 3D

- Topic No.17: Projections, types of projections
- Topic No.18: The mathematics of planner geometric projections, coordinate systems
- Topic No.19: Hidden surface removal: Introduction to hidden surface removal .Z-buffer algorithm
- Topic No.20: Scan line algorithm, area sub-division algorithm

Unit No. 4 Representing Curves and Surfaces

- Topic No.21: Parametric representation of curves: Bezier curves, B-Spline curves
- Topic No.22: Parametric representation of surfaces
- Topic No.23: Interpolation method
- Topic No.24: Illumination, shading, image manipulation: Illumination models, shading models for polygons
- Topic No.25: Shadows, transparency
- Topic No.26: Filtering, image processing, Geometric transformation of images

Study Scheme				Evaluation Scheme			Total Marks
L	T	P	Credits	Internal Assessment	External Assessment (Examination)		
				Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Computer Graphics Principles and Practices second edition by James D. Foley, Andeies van Dam,
2. Computer Graphics by Donald Hearn and M.Pauline Baker, 2nd Edition, 1999, PHI

REFERENCE BOOKS:

1. Procedural Elements for Computer Graphics –David F. Rogers, 2001, T.M.H Second Edition
2. Computer Graphics: Secrets and Solutions by Corrign John, BPB



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Computer Networks (Theory)

Subject Code: CSE-305B

Detailed Contents

Unit No. 1 OSI Reference Model and Network Architecture

- Topic No.1 : Introduction to Computer Networks
- Topic No.2 : Example Networks ARPANET
- Topic No.3 : Internet
- Topic No.4 : Private Networks
- Topic No.5 : Network Topologies: Bus, Star, Ring, Hybrid, Tree, Complete, Irregular –Topology
- Topic No.6 : Types of Networks : Local Area Networks, Metropolitan Area Networks, Wide Area Networks
- Topic No.7 : Layering architecture of networks, OSI model
- Topic No.8 : Functions, Services and Protocols of each layer

Unit No. 2 TCP/IP

- Topic No.9: History & Layers of TCP/IP
- Topic No.10: Protocols, Internet Protocol, Transmission Control Protocol , User Datagram Protocol
- Topic No.11: IP Addressing, IP address classes, Subnet Addressing
- Topic No.12: Internet Control Protocols, ARP, RARP, ICMP Application Layer
- Topic No.13: Domain Name System
- Topic No.14: Email –SMTP, POP,IMAP, FTP, NNTP, HTTP
- Topic No.15: Overview of IP version 6

Unit No. 3 Local Area Networks

- Topic No.16: Introduction and features, Components and usage of LANs
- Topic No.17: LAN Standards, IEEE 802 standards
- Topic No.18: Channel Access Methods, Aloha, CSMA, CSMA/CD, Token Passing
- Topic No.19: Ethernet, Layer 2 & 3 switching, Fast Ethernet and Gigabit Ethernet, Token Ring
- Topic No.20: LAN Interconnecting devices: Hubs, Switches, Bridges, Routers, Gateways.

Unit No. 4 Wide Area Networks

- Topic No.21: Introduction of WANs, Routing, Congestion Control
- Topic No.22: WAN Technologies, Distributed Queue Dual Bus (DQDB)
- Topic No.23: Synchronous Digital Hierarchy (SDH)/ Synchronous Optical Network (SONET)
- Topic No.24: Asynchronous Transfer Mode (ATM), Frame Relay, Wireless Links
- Topic No.25: Introduction to Network Management
- Topic No.26: Remote Monitoring Techniques: Polling, Traps, Performance Management
- Topic No.27: Class of Service, Quality of Service
- Topic No.28: Security management, Digital signatures, SSL
- Topic No.29: Firewalls, VLANs, Proxy Servers

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Computer Networks (3rd edition), Tanenbaum Andrew S., International edition, 1996.

REFERENCE BOOKS:

1. Data Communications, Computer Networks and Open Systems (4th edition), Halsall Fred, 2000, Addison Wesley, Low Price Edition.
2. Business Data Communications, Fitzgerald Jerry,. Computer Networks - Larry L. Peterson



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Analysis and Design Of Algorithms (Theory)

Subject Code: CSE-307B

Detailed Contents

Unit No. 1 Brief Review of Graphs

- Topic No.1 : Sets and disjoint sets & union
- Topic No.2 : Sorting and searching algorithms and their analysis in terms of space and time complexity
- Topic No.3 : Divide and Conquer: General method
- Topic No.4 : Binary search
- Topic No.5 : Merge sort, Quick sort, Selection sort
- Topic No.6 : Strassen's matrix multiplication algorithms and analysis of algorithms for these problems

Unit No. 2 Greedy Method

- Topic No.7 : Knapsack problem
- Topic No.8 : Job sequencing with deadlines
- Topic No.9 : Minimum spanning trees
- Topic No.10: Single source paths and analysis of these problems
- Topic No.11: Dynamic Programming: General method, optimal binary search trees
- Topic No.12: O/I knapsack
- Topic No.13: The traveling salesperson problem

Unit No. 3 Back Tracking

- Topic No.14: 8 queen's problem
- Topic No.15: Graph colouring
- Topic No.16: Hamiltonian cycles
- Topic No.17: Analysis of these problems
- Topic No.18: Branch and Bound: Method, O/I knapsack and traveling salesperson problem
- Topic No.19: Efficiency considerations
- Topic No.20: Techniques for algebraic problems
- Topic No.21: Some lower bounds on parallel computations

Unit No. 4 NP Hard and NP Complete Problems

- Topic No.22: Cook's theorem
- Topic No.23: NP hard graph and NP scheduling problems some simplified NP hard problems

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Fundamental of Computer algorithms, Ellis Horowitz and Sartaj Sahni, 1978, Galgotia Publ.,
2. Introduction To Algorithms, Thomas H Cormen, Charles E Leiserson And Ronald L Rivest: 1990, TMH

REFERENCE BOOKS:

1. The Design and Analysis of Computer Algorithm, Aho A.V. Hopcroft J.E., 1974, Addison Wesley.
2. Algorithms-The Construction, Proof and Analysis of Programs, Berlion, P.Bizard, P., 1986. Johan Wiley & Sons,
3. Introduction to Design and Analysis of Algorithm, Goodman, S.E. & Hedetniemi, 1997, MGH.
4. Introduction to Computers Science-An algorithms approach , Jean Paul Trembley, Richard B.Bunt, 2002, T.M.H



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Theory of Automata & Computation (Theory)

Subject Code: CSE-309B

Detailed Contents

Unit No. 1 Basic Computational Constructs

- Topic No.1 : Finite State Systems
- Topic No.2 : Basic Definitions Non-Deterministic finite automata (NFA)
- Topic No.3 : Deterministic finite automata (DFA)
- Topic No.4 : Equivalence of DFA and NFA Finite automata with E-moves
- Topic No.5 : Regular Expressions
- Topic No.6 : Equivalence of finite automata and Regular Expressions
- Topic No.7 : Regular expression conversion and vice versa
- Topic No.8 : Conversion of NFA to DFA by Arden's Method Concept of basic Machine,
- Topic No.9 : Properties and limitations of FSM
- Topic No.10: Moore and Mealy Machines
- Topic No.11: Equivalence of Moore and Mealy machines

Unit No. 2 Regular Sets & Grammars

- Topic No.12: The Pumping Lemma for Regular Sets
- Topic No.13: Applications of the pumping lemma
- Topic No.14: Closure properties of regular sets
- Topic No.15: Myhill-Nerode Theorem and minimization of finite Automata
- Topic No.16: Minimization Algorithm
- Topic No.17: Context free and Context sensitive grammar
- Topic No.18: Ambiguity regular grammar
- Topic No.19: Reduced forms
- Topic No.20: Removal of useless Symbols and unit production
- Topic No.21: Chomsky Normal Form (CNF)
- Topic No.22: Griebach Normal Form (GNF)

Unit No. 3 Pushdown Automata & Turing Machines

- Topic No.23: Introduction to Pushdown Machines
- Topic No.24: Applications of Pushdown Machines Deterministic and Non-Deterministic Turing Machines
- Topic No.25: Design of T.M, Halting problem of T.M.
- Topic No.26: Post's Correspondence Problem

Unit No. 4 Chomsky Hierarchies & Computability

- Topic No.27: Chomsky hierarchies of grammars and Unrestricted grammars
- Topic No.28: Context sensitive languages & Relation between languages of classes
- Topic No.29: Primitive Recursive Functions

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Introduction to automata theory, language & computations-Hopcroft & O.D.Ullman, R Mothwani, Addison Wesley

REFERENCE BOOKS:

1. Theory of Computer Sc.(Automata, Languages and computation):K.L.P.Mishra&N.Chandrasekaran, 2000, PHI.
2. Introduction to formal Languages & Automata-Peter Linz, 2001, NarosaPubl.



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Microprocessor and Interfacing (Theory)

Subject Code: ECE-309B

Detailed Contents

Unit No. 1 THE 8086 MICROPROCESSOR ARCHITECTURE

- Topic No 1 : Introduction to Microprocessor
- Topic No.2 : Block diagram of 8086
- Topic No.3 : Details of sub-blocks such as EU, BIU
- Topic No.4 : Memory segmentation and physical address computations
- Topic No.5 : Program relocation & Addressing modes
- Topic No.6 : Instruction formats & Pin diagram and description of various signals
- Topic No.7 : INSTRUCTION SET OF 8086 & PROGRAMING: Instruction execution timing,
- Topic No.8: Assembler instruction format
- Topic No.9: Data transfer instructions, Arithmetic instructions & Branch instructions
- Topic No.10: Looping instructions, NOP and HLT instructions
- Topic No.11: flag manipulation instructions, logical instructions
- Topic No.12: Shift and rotate instructions, Directives and operators

Unit No. 2 THE X86 FAMILY (80186, 80286, 80386, 80486) MICROPROCESSOR ARCHITECTURE AND PRGRAMMING

- Topic No.13: Block diagram, Details of sub-blocks
- Topic No.14: Hardware features and description of various signals
- Topic No.15: Interrupts, Addressing modes
- Topic No.16: Instruction set and programming example.
- Topic No.17: THE PENTIUM PROCESSOR AND OTHER ADVANCED PROCESSORS: Enhanced features of Pentiu
- Topic No.18: Pentium-II, III, IV
- Topic No.19: Multi-core Technology & Mobile Processor

Unit No. 3 INTERFACING DEVICE

- Topic No.20: The 8255 PPI chip: Architecture
- Topic No.21: Control words, Modes and examples
- Topic No.22: PERIHERAL DEVICES: Introduction to DMA process,
- Topic No.23: 8237 DMA controller
- Topic No.24: 8259 Programmable interrupt controller
- Topic No.25: Programmable interval timer chips

Unit No. 4 COMMUNICATION INTERFACE

- Topic No.26: Parallel interface, serial interface, PCI interface
- Topic No.27: PCMCIA, USB interface
- Topic No.28: PERSONNAL COMPUTER: Modern PC
- Topic No.29: Motherboard, chipset, Expansion buses
- Topic No.30: Memory-SIMM and DIMM

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

REFERENCE BOOKS:

1. "The Intel Microprocessors 8086Pentium Processor", Brey, 4th Edition, 2005.
2. "Microprocessors and interfacing", D. V. Hall, Tata McGraw-Hill, 2nd Edition, 2006.
3. "Microcomputer Systems: The 8086/8088 Family: Architecture, Programming and Design", Liu Yu-Chang and Gibson Glenn A., Prentice Hall of India, 2003.



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Operating System Lab

Subject Code: CSE-321B

Detailed Contents

- 1 : Study of WINDOWS 2000 Operating System.
- 2 : Administration of WINDOWS 2000 (including DNS, LDAP, Directory Services).
- 3 : Study of LINUX Operating System (Linux kernel, shell, basic commands pipe & filter commands).
- 4 : Administration of LINUX Operating System
- 5 : Writing of Shell Scripts (Shell programming).
- 6 : AWK programming
- 7 : Write a shell script to demonstrate Cron jobs.
- 8 : Write s shell script to delete files and print time.
- 9 : Write a shell file to print the access level of a file.
- 10: Write a shell file to recursively print size of all files in a directory.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	50

Note: Teacher may give 5 to 10 more exercises based on course.



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Computer Graphics Lab

Subject Code: CSE-323B

Detailed Contents

- 1 : Write a program for 2D line drawing as Raster Graphics Display.
- 2 : Write a program for circle drawing as Raster Graphics Display
- 3 : Write a program for polygon filling as Raster Graphics Display
- 4 : Write a program for line clipping.
- 5 : Write a program for polygon clipping
- 6 : Write a program for displaying 3D objects as 2D display using perspective transformation.
- 7 : Write a program for rotation of a 3D object about arbitrary axis.
- 8 : Write a program for Hidden surface removal from a 3D object
- 9 : Write a program for draw a circle using Bresenham's algorithm
- 10: Write a program to show scaling of an object
- 11: Write a program to show translation
- 12: Write a program to show rotation
- 13: Write a program for DDA algorithm

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	50

Note: Teacher may give 5 to 10 more exercises based on course



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Computer Networks Lab

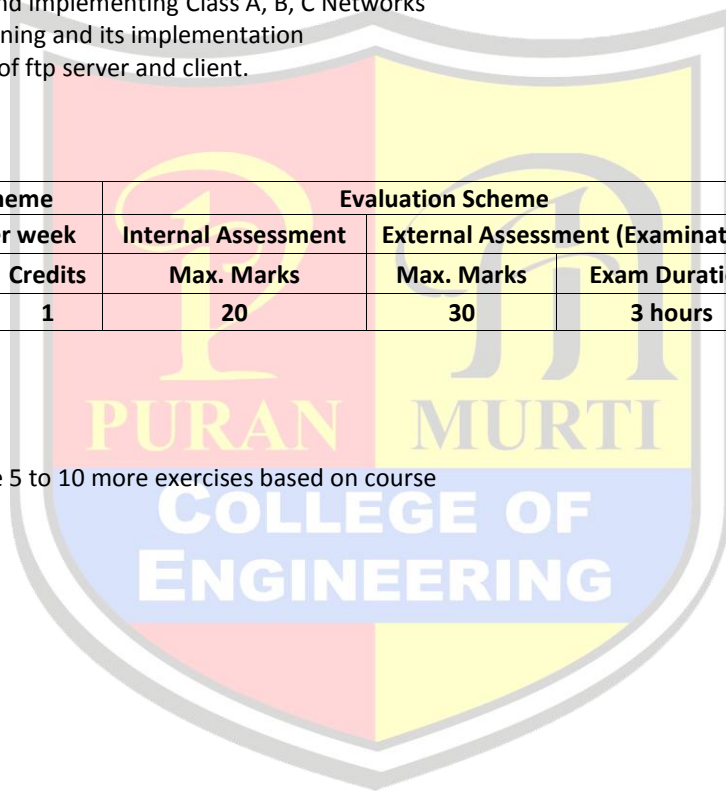
Subject Code: CSE-325B

Detailed Contents

- 1 : Write specifications of latest desktops and laptops.
- 2 : Familiarization with Networking Components and devices: LAN Adapters, Hubs, Switches, Routers etc.
- 3 : Familiarization with Transmission media and Tools: Co-axial cable, UTP Cable, Crimping Tool, Connectors etc.
- 4 : Preparing straight and cross cables.
- 5 : Study of various LAN topologies and their creation using network devices, cables and computers.
- 6 : Configuration of TCP/IP Protocols in Windows/Linux.
- 7 : Implementation of file and printer sharing.
- 8 : Designing and implementing Class A, B, C Networks
- 9 : Subnet planning and its implementation
- 10: Installation of ftp server and client.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Credits	Internal Assessment	External Assessment (Examination)			
L	T		P	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	50

Note: Teacher may give 5 to 10 more exercises based on course





SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: Microprocessor and Interfacing Lab

Subject Code: ECE-329B

Detailed Contents

- 1 : To study the architecture of 8086 microprocessor and 8086 microprocessor kit
- 2 : Write a program to add the contents of the memory location 3000:0400 H to the content of 4000:0700 H and store the result in 6000:0900 H
- 3 : Write a program to add 16 bit number using 8086 instruction set.
- 4 : Write a multiplication of two 16 bit number using 8086 instruction set.
- 5 : Write a program for division of two 16 bit numbers using 8086 instruction set.
- 6 : Write a program factorial of a number.
- 7 : Write a Program to transfer a block of data without overlap.
- 8 : Write a Program to transfer a block of data with overlap.
- 9 : Write a program to find the average of two numbers.
- 10 : Write a Program to check whether data byte is odd or even
- 11 : Write a program to find maximum number in the array of 10 numbers.
- 12 : Write a program to find the sum of the first 'n' integers.
- 13 : Write a program to generate a square wave.
- 14 : Write a program to generate a rectangular wave.
- 15 : Write a program to generate a triangular wave.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Internal Assessment		External Assessment (Examination)			
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	50

Note: Teacher may give 5 to 10 more exercises based on course



SYLLABUS: B Tech (CSE)

Department: Computer Science & Engineering – 5th Semester

Subject: PROFESSIONAL TRAINING I

Subject Code: CSE 327B

Detailed Contents

At the end of 4th semester each student would undergo four weeks Professional Training in an Industry/ Institute/ Professional Organization/ Research Laboratory etc. with the prior approval of the Training and Placement Officer of the University and submit in the department a typed report along with a certificate from the organization.

The typed report should be in a prescribed format.

The report will be evaluated in the V Semester by a Committee consisting of three teachers from different specialization to be constituted by the Chairperson of the department. The basis of evaluation will primarily be the knowledge and exposure of the student towards different processes and the functioning of the organization.

The student will interact with the committee through presentation to demonstrate his/her learning.

Teachers associated with evaluation work will be assigned 2 periods per week load.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Credits	Internal Assessment	External Assessment (Examination)			
L	T		P	Max. Marks	Max. Marks	Exam Duration	
-	-	2	2	50	50	3 hours	50