
	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT	
	Department__CSE Branch/Sem__CSE-6 th sem	Session__Jan-June 2018 Subject Name & Code CN (IT-305-F)
Lesson Plan		TEACHER : Savita

Books Referred: 1. Computer Networks (3rd edition), Tanenbaum Andrew S.
2. Computer Networking – ED Tittel , 2002, T.M.H.

Lecture No.	Topics to be Covered
SECTION-A	Basic introduction to computer networks
1.	Internet, Private Networks,
2.	Network Topologies: Bus-, Star-, Ring-, Hybrid -, Tree -, Complete -, Irregular – Topology;
3.	Types of Networks : Local Area Networks, Metropolitan Area Networks, Wide Area Networks;
4.	Layering architecture of networks, OSI model, Functions of each layer,
5.	Services and Protocols of each Data communication ,
6.	modulation
SECTION -B	Introduction, History of TCP/IP, Overview of IP version 6. S
7.	Layers of TCP/IP Transmission Control Protocol
8.	User Datagram Protocol, IP Addressing
9.	IP address classes, Subnet Addressing
10	Internet Control Protocols, ARP, RARP
11	ICMP, Application Layer, Domain Name System,
12	Email – SMTP, POP,IMAP; FTP, NNTP, HTTP,
13	Protocols, Internet Protocol,
SECTION-C	Introduction to LAN,
14	Components of LANs, Usage of LANs
15	Features of LANs, LAN Standards, IEEE 802 standards

16	Channel Access Methods,
17	Aloha, CSMA, CSMA/CD,
18	Token Passing, Ethernet, Layer 2 & 3 switching
19	Fast Ethernet and Gigabit Ethernet
20	Token Ring, LAN interconnecting devices: Hubs, Switches,
21	Bridges, Routers, Gateways. Wide Area Networks
22	Introduction of WANs, Routing,
23	Congestion Control, WAN Technologies, Distributed Queue Dual Bus (DQDB)
SECTION-D	Synchronous Digital Hierarchy
24	Synchronous Optical Network (SONET),
25	Asynchronous Transfer Mode (ATM)
26	Frame Relay., Wireless Links. SDH
27	Introduction to Network Management: Remote Monitoring Techniques
28	Performance Management
29	Class of Service, Quality of Service,
30	Security management, Firewalls, VLANs
31	Proxy Servers, Introduction to Network Operating Systems
32	Client-Server infrastructure, Windows NT/2000.
33	Polling, Traps

FORM NO. - GITM-FRM-73 (REV. NO. 00)

	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT	
	Department__CSE Branch/Sem__CSE-2 nd sem	Session__Jan-June 2014 Subject Name & Code :FOCP (CSE-101-F)
Faculty Dairy		TEACHER : Dr. Vivek Kumar

Lecture No.	Topics to be Covered	Remarks with Date
SECTION-A	An overview of computer system and operating system	
1.	Evaluation of computer ,hardware organization of computer	
2.	Introduction to microprocessor, generation of microprocessor	
3.	Commonly used CPU's	
4.	Input –output devices ,ports and connectors	
5.	Operating system basics: introduction to operating system	
6.	Function of an operating system, classification of an operating system	
7.	Basic introduction to DOS	
8.	UNIX/LINUX operating system, windows XP	
SECTION -B	Basic introduction to system software and programs	
9.	Machine language, assembly language	
10.	Low level language, high level language, types of high level language	
11.	Compiler,interpreter,assembler,loader,linker	
12.	Relationship between compiler,interpreter,loader,linker.	
	Basic introduction to computer networks	
13.	Data communication ,modulation	
14.	Network devices LAN,LAN topologies	
15.	WAN , OSI reference model. Introduction to internet and protocols	
16.	TCP/IP reference model, backbone neyworks,network connecting devices	
17.	Hypertext documents,HTTP,DNS ,Network security	
SECTION-C	An overview of C	
18.	Constants,variables and data types,operators and expression	
19.	Managing I/O operations,decision making and branching	
20.	Loopings ,arrays and strings , user defined functions.	

	Structure and union in C	
21.	Defining structures, declaring variables , accessing structure members	
22.	Structure initialization , copying and comparing structures variables	
23.	Operation on individual members , array of structure	
24.	Structure with structure , unions, size of structure.	
SECTION-D	Pointers in C	
25.	Introduction, understanding pointers , accessing the address of a variable	
26.	Declaring pointer variables, initialization of pointer variables	
27.	Accessing a variable through pointer, chain of pointers, pointer expression, pointer expression	
28.	Pointer increment, pointers and arrays, pointer and character strings, arrays of pointers	
29.	Pointer as function arguments, function returning pointers ,pointers to functions.	
	Dynamic memory allocation and file management in C	
30.	Introduction ,dynamic memory allocation, allocating a block of memory:malloc	
31.	allocating multipal blocks of memory:calloc,releasing the used space:free	
32.	Altering the size of blocks:realloc,defining and opening file,closing file	
33.	I/O operation on file, error handling during I/O operation	
34.	Random access to files and command line arguments.	

CSE-101-F Fundamentals of Computers & Programming in C (FCPC)

L T P Class Work: 50 Marks

3 1 0 Exams: 100 Marks

Total: 150 Marks

Duration of Exam: 3 Hours

Note: Examiner will set 9 questions in total, with two questions from each section and one question covering all sections which will be Q.1. This Q.1 is compulsory and of short answer type. Each question carries equal mark (20 marks). Students have to attempt 5 questions in total.

Section A

An Overview of Computer System and Operating Systems: Fundamentals :- Evaluation of computers, Hardware organization of a computer, Introduction to microprocessor, generations of microprocessors, Commonly used CPUs, Input /Output devices, Input / Output ports and connectors.

Operating System Basics: Introduction to Operating system, Functions of an Operating Systems, Classification of Operating Systems, Basic introduction to DOS, UNIX/LINUX OS, Windows XP.

Section B

Basic Introduction to System Software and Programs:- Machine Language, Assembly Languages, Low level languages, High level Languages, Types of high level Languages, Compiler, Interpreter, Assembler, Loader, Linker, Relationship between Compiler, Interpreter, Loader and Linker.

Basic Introduction to Computer Networks:- Data Communication, modulation, Network devices, LAN, LAN topologies, WAN, OSI Reference model, Introduction to Internet and protocols: TCP/IP Reference model, Backbone network, Network connecting devices, Hypertext documents, HTTP, DNS, Network Security.

Section C

An Overview of C: Constants, Variables and Data types, operators and Expressions, managing I/O operations, Decision Making and Branching, Decision Making and looping, Arrays, Character Arrays and Strings, User Defined Functions.

Structure and Union in C :Defining structure, declaring variables, Accessing structure members, structure initialization, copying and comparing structures variables, operations on individual members, Array of structure, structure with structure, unions, size of structure.MDU B.Tech Syllabus (common for all branches) – I Year

Section D

Pointers in C : Introduction, Understanding Pointers, Accessing the address of a variable, Declaring Pointer Variables, Initialization of Pointer Variables, Accessing a variable through its pointer, Chain of Pointers, Pointer Expressions, Pointer Increments and Scale Factors, pointers and Arrays, Pointer and Character Strings, Arrays of Pointers, Pointers as Function Arguments, Functions Returning Pointers, Pointers to Functions.

Dynamic Memory Allocation and File Management in C :- Introduction, Dynamic memory allocation, allocating a block of memory: Malloc, allocating multiple blocks of memory: Calloc. Releasing the used space: Free, Altering the size of block: Realloc, Defining and opening file, closing file, I/O operation on files, error handling during I/O operations, Random Access to files and command line arguments.

Text Books: 1. Fundamental of Computers and Programing with C, by A. K. Sharma, Dhanpat Rai Publications, New Delhi.

2. Fundamental of Information Technology, by A.Leon & M.Leon.

3. Computer Networks (4th Edition), by Andrew S. Tanenbaum

Reference Books: 1. ANSI C, by Dennis Ritchi

2. Programming in C, by Lipschutz, SCHAUM SERIES OUTLINES

3. Operating System Concepts, (6th Edition), by Abraham Silberschatz, Peter Baer Galvin, Greg Gagne