FUNDAMENTAL OF COMPUTING

CS- 201

L: 2 T: 1 P: 0 Cr: 3

COURSE OUTCOMES

1. Students will able to understand the basics of computer, generation & types of computer, its components and number system
2. Students will able to understand the concept of algorithms, flowchart and c programming language
3. Students will able to develop c programs for string manipulation, sorting and searching techniques
4. Students will able to describe the functions, structure and different types of operating systems
5. Students will able to understand basics of networking, internet and database management systems

Syllabus

UNIT 1: BASICS OF COMPUTERS

Computer fundamentals, Bits and Bytes, CPU, Memory, Types of memory, Input and output devices, I/O devices, Operating system, applications software's, system software. Number system, decimal number system, Binary number system, octal number system, hexadecimal number system. Generation of computer, Classification of computer,

UNIT 2: C PROGRAMMING

Algorithms, flow chart, The C character set, constants, variable, keywords, operator and expressions, decision controls, if and else, conditional operator, for loop, while loop and do-while loop,, switch case, user defined functions, call by value and by reference, array, and single dimensional, 2D matrix, multidimensional arrays

UNIT 3: SEARCHING AND SORTING

Strings, library string functions, pointers and structures, searching and sorting, linear search, binary search, sorting techniques: bubble sort, selection sort

UNIT 4: OPERATING SYSTEM

OS definition, role of OS in computer system, multi programming, time sharing OS, multitasking OS, multiprocessing OS, real time system OS , client server computing, distributed OS, function of OS (user interface, GUI, program execution, I/O management, Resource management,

UNIT 5: NETWORKING & DBMS

Network, communication models, transmission media, connection topologies, LAN, WAN, MAN, ISO-OSI model of networking, Internet, ISP, WWW, Email, URL, Web browsers, websites, intranet,

DBMS, DBMS applications, Advantage of DBMS, Data abstraction.

Books:

1. "Computer Fundamentals & Programming in C", Reema Thareja, Oxford University Press
2. Ashok Kamthane, "Programming with C ".
3. M N Doja, "Introduction to Computers and Information Technology"
4. C Programming by Yaswant Kanetkar