

Veer Bahadur Singh Purvanchal University, Jaunpur

Study & Evaluation Scheme

B.Sc. (Computer Science)

Session 2018-19

Course Content & Marks Distribution

B.Sc. -I Year (CS)

S. No.	Paper Code	Paper Name	Maximum Marks	Total
Theory				
1.	BSC-101	Computer Fundamental & Programming In C	50	200
2.	BSC-102	Fundamental of IT	50	
3.	BSC-103	Computer Organization	50	
Practical				
4.	BSC-L11	MS Office & Programming In C Lab	50	

Computer Fundamental & Programming in C (BSC-101)

MM-50

Unit – I

Introduction

Algorithm, Flowcharts, Introduction of programming languages, History of C, Basic structure of C Programming, Executing C Program

Data Types

Constant, variables, Identifiers, Keywords, Tokens, Declaration of Variables, Assigning values to variables.

Operators

Arithmetic, Relational, Logical, Assignment, Increment, Decrement operators, Condition, Bit wise operators, Arithmetic expressions.

Unit – II

Branching & Looping

Decision making with if, If-else, Switch Statement, GOTO statement, While loop, Do While loop, FOR Loop, Break and Continue statements.

Array

One dimensional array, Two dimensional array, Multidimensional array, Initializing array.

Unit – III

Function

Function declaration, calling a function, The form of C function, Return values and their type, No arguments, no return value, arguments but no return, recursion, Nesting of function.

Pointers

Accessing address of a variable, declaring and initializing pointers, pointer expression, pointer and array, pointer and function, pointer and structure, pointer to pointer

Unit – IV

Structure & Union

Structure definition, giving values to members, structure initialization, Array of structure, structure within structure, Size of structure, Union definition

Unit – V

File Handling

Defining and opening file, closing a file, I/O operations on file. Random access to file, Error handling in file.

Books:

1. Programming in C: Gottfried
2. Programming in ANSI C: E. Balaguruswamy
3. Let us C : Y. Kanetkar

Fundamental of IT (BSC-102)

Unit – I

Introduction

Definition of an Electronic Digital Computer, characteristics, capabilities and limitation of computer, Generation of computers, Types of computers, Classification of computers on size, Computer Hardware components and their functions, Characteristics and Applications of Computers.

Unit – II

Operating system concepts

Introduction to OS, components of OS, Types of OS, multiprogramming, multitasking & time sharing, File & Directories & their use in different OS, DOS operating system, Window operating system, Unix operating system

Unit – III

Software & MS-Office:

Need, Types of software – System software, Application software, Utility programs, Introduction to programming languages, Assembler, Compiler and Interpreter, Programming languages – Assembly language, Machine level language, High level language. Application software.

MS Word, MS Excel, MS Power Point

Unit – IV

Data Communication & networks:

Types of Network – LAN, MAN, WAN, Internet, Intranet, Topologies of LAN – Ring, Bus, Star, Mesh and Tree.

Unit – V

Tools for Program Development:

Algorithms, Flow charts – symbols, Rules for making flow chart, Types of flow chart, advantage and disadvantage, Pseudo codes, Programming techniques – Top Down, Bottom-up, Modular, Structured.

Books:

1. Computer & Languages: A. Arora & S. Bansal
2. Computer Fundamental: B. Ram
3. Information Technology: D. Cyganski & J.A. Orr
4. fundamentals of information technology: Leon & Leon

YEAR - I

B.Sc. (Computer Science)

MM-50

Computer Organization (BSC-103)

Unit – I

Number System

Introduction, Binary, Octal & Hexadecimal number system, Conversion form decimal to binary, octal & hexadecimal etc., Representation of numbers in computer and various character codes.

Unit – II

Logic Gates

Boolean algebra, Minterms, Maxterms, Simplification of Boolean functions, K-Map simplification, Half adder, Full adder, Decoder, Encoder, Multiplexer, Demultiplexer, Binary counters, Flip-Flops.

Unit – III

Memory Organization

RAM, ROM, Auxiliary memory, Memory Hierarchy, Associative memory, Virtual memory, Cache memory, Memory management hardware.

Unit – IV

Input-Output Organization

Peripheral devices, I/O interface, Direct memory access, Type of commands, Modes of transfer, Asynchronous data transfer, Strobe control, Handshaking, DMA transfer, IOP

Unit – V

Processor Organization

Formats, Single Accumulator organization, General register organization, Stack organization, Addressing modes, data transfer and manipulation.

Book:

1. Computer System Architecture, M. Mano(PHI)
2. Computer Organization, Vravice, Zaky & Hamacher (TMH Publication)
3. Structured Computer Organization, Tannenbaum(PHI)
4. Computer Organization, Stallings(PHI)
5. Computer Organization, John P.Hayes (McGraw Hill)