C programming

UNIT-I

Arrays

Definition, declaration and initialization of one dimensional array; Accessing array elements; Displaying array elements; Sorting arrays; Arrays and function; Two- Dimensional array: Declaration and Initialization, Accessing and Displaying, Memory representation of array [Row Major, Column Major]; Multidimensional array

UNIT-II

Pointers

Definition and declaration, Initialization; Indirection operator, address of operator; pointer arithmetic; dynamic memory allocation; arrays and pointers; function and pointers

UNIT-III

Strings

Definition, declaration and initialization of strings; standard library function: strlen(), strcpy(), strcat(), strcmp(); Implementation without using standard library functions

UNIT-IV

Structures

Definition and declaration; Variables initialization; Accessing fields and

structure operations; Nested structures;
Union: Definition and declaration; Differentiate between Union and structure

UNIT-V
Introduction C Preprocessor
Definition of Preprocessor; Macro substitution directives; File inclusion directives; Conditional compilation
Bitwise Operators
Bitwise operators; Shift operators; Masks; Bit field

UNIT-VI
File handling
Definition of Files, Opening modes of files; Standard function: fopen(), fclose(), feof(), fseek(), fewind();Using
text files: fgetc(), fputc(), fscanf()
Command line arguments

Digital electronics and computer organization (DECO)

UNIT-I

Logic gates and circuit

Gates (OR, AND, NOR, NAND, XOR & XNOR); De Morgan's laws; Boolean laws, Circuit designing techniques (SOP, POS, K-Map).

UNIT-II

Combinational Building Blocks

Multiplexors; Decoder; Encoder; Adder and Subtractor.

UNIT-III

Memories

ROMs, PROMs, EPROMs, RAMs, Hard Disk, Floppy Disk and CD-ROM.

UNIT-IV

Sequential Building Blocks

Flip-Flop (RS, D, JK, Master-slave & T flip-flops); Registers & Shift registers; Counters; Synchronous and Asynchronous , Designing method.

UNIT-V

Memory Organization: Basic cell of static and dynamic RAM; Building large memories using chips; Associative memory; Cache memory organization and Virtual memory organization.

Organization behaviour (OB)

UNIT-I

Fundamentals of Organizational Behaviour

Nature, Scope, Definition and Goals of Organizational Behaviour; Fundamental Concepts of Organizational Behaviour; Models of Organizational Behaviour; Emerging aspects of Organizational Behaviour: Meaning, Cultural Diversity, Managing the Perception Process

UNIT-II

Perception, Attitude, Values and Motivation

Concept, Nature, Process, Importance, Management Behavioural aspect of Perception. Effects of employee attitudes; Personal and Organizational Values; Job Satisfaction; Nature and Importance of Motivation; Achievement Motive; Theories of Work Motivation: Maslow's Need Hierarchy Theory, McGregor's Theory 'X' and Theory 'Y'

UNIT-III

Personality

Definition of Personality, Determinants of Personality; Theories of Personality- Trait and Type Theories, The Big Five Traits, Mytes-Briggs Indicator; Locus of Control, SType A and Type B Assessment of Personality

UNIT-IV

Work Stress

Meaning and definition of Stress, Symptoms of Stress; Sources of Stress: Individual Level, Group Level,
Organizational Level; Stressors, Extra Organizational Stressors; Effect of Stress – Burnouts; Stress
Management – Individual Strategies, Organizational Strategies; Employee Counselling

UNIT-V

Group Behaviour and Leadership

Nature of Group, Types of Groups; Nature and Characteristics of team; Team Building, Effective Teamwork;
Nature of Leadership, Leadership Styles; Traits of Effective Leaders

UNIT-VI

Conflict in Organizations

Nature of Conflict, Process of Conflict; Levels of Conflict – Intrapersonal, Interpersonal; Sources of Conflict;
Effect of Conflict; Conflict Resolution, Meaning and types of Grievances & Process of Grievances Hand

Course – financial accounting and management

UNIT-I

Overview – Meaning and Nature of Financial Accounting, Scope of Financial Accounting, Financial Accounting & Management Accounting, Accounting concepts & convention, accounting standards in India.

UNIT-II

Basics of accounting – Capital & Revenue items, Application of Computer in Accounting, Double Entry System, Introduction to Journal, Ledger and Procedure for Recording and Posting, Introduction to Trial Balance, Preparation of Final Account, Profit & Loss Account and related concepts, Balance Sheet and related concept.

UNIT-III

Financial statement analysis: Ratio analysis, Funds flow analysis, concepts, uses, Preparation of funds flow statement – simple problems, Cash flow analysis, Concepts, uses, preparation of cash flow statement- simple problems, Break – even analysis.

UNIT-IV

Definition nature and Objective of Financial Management, Long Term Sources of Finance, Introductory idea about capitalization, Capital Structure, Concept of Cost of Capital, introduction, importance, explicit & implicit cost, Measurement of cost of capital, cost of debt.

UNIT-V

Concept & Components of working Capital. Factors Influencing the Composition of working Capital, Objectives of working Capital Management – Liquidity Vs. Profitability and working capital policies. Theory of working capital: Nature and concepts

UNIT-VI

Cash Management, Inventory Management and Receivables Management.

Course – mathematics ii

UNIT-I

SETS

Sets, Subsets, Equal Sets , Universal Sets, Finite and Infinite Sets, Operation on Sets, Union, Intersection and Complements of Sets, Cartesian Product, Cardinality of Set, Simple Applications.

UNIT-II

RELATIONS AND FUNCTIONS

Properties of Relations, Equivalence Relation, Partial Order Relations, Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions, Introduction to Trigonometric, Logarithmic and Exponential Functions.

UNIT-III

PARTIAL ORDER RELATIONS AND LATTICES

Partial Order Sets, Representation of POSETS using Hasse diagram, Chains, Maximal and Minimal Point, Glb, lub, Lattices & Algebraic Systems, Principle of Duality, Basic Properties, Sub lattices, Distributed & Complemented Lattices.

UNIT-IV

FUNCTIONS OF SEVERAL VARIABLES

Partial Differentiation, Change of Variables, Chain Rule, Extrema of Functions of 2 Variables, Euler's Theorem.

UNIT-V

3D COORDINATE GEOMETRY

3D Coordinate Geometry: Coordinates in Space, Direction Cosines, Angle Between Two Lines, Projection of

Join of Two Points on a Plane, Equations of Plane, Straight Lines, Conditions for a line to lie on a plane,
Conditions for Two Lines to be Coplanar, Shortest Distance Between Two Lines, Equations of Sphere, Tangent
plane at a point on the sphere.

UNIT-VI
MULTIPLE INTEGRATION
Double Integral in Cartesian and Polar Coordinates to find Area, Change of Order of Integration, Triple Integral
to Find Volume of Simple Shapes in Cartesian Coordinates.