

BCA - SEMESTER-II													
Sl. No.	Subject Codes	Subject	Periods			Evaluation Scheme				End Semester		Total	Credit
			L	T	P	CT	TA	Total	PS	TE	PE		
1	BCA- 201	Digital Electronics & Computer Organization	3	1	0	20	10	30		70		100	4
2	BCA-202	Introduction of C ++ PROGRAMMING	3	1	0	20	10	30		70		100	4
3	BCA-203	Organization Behavior	3	0	0	20	10	30		70		100	3
4	BCA-204	Financial Accounting & Management	3	1	0	20	10	30		70		100	4
5	BCA-205	Mathematics -II	3	1	0	20	10	30		70		100	4
6	BCA- 211	DE & CO Lab	0	0	1						25		1
7	BCA-212	C ++ PROGRAMMING LAB	0	0	1						25		1
		Total										600	20

**LAB SUBJECT :-**

BCA- 211 - DE & CO Lab

BCA- 212 - C ++ PROGRAMMING LAB

<b>Subject: -</b>	<b>Subject Code</b>	<b>Max.marks</b>	<b>Credit</b>
Digital Electronics & Computer Organization	BCA-201	70	4

### **Unit-I- Logic gates and circuit**

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

### **Unit-II - Combinational Building Blocks**

Multiplexes; 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.

### Reference Books:-

1. *Digital Logic and Computer design (PHI) 1998 by M.M. Mano.*
2. *Digital Electronics (TMH) 1998 by Malvino and Leach.*

3. *Computer Organization and Architecture by William Stallings.*

<b>Subject</b>	<b>Subject Code</b>	<b>Max.marks</b>	<b>Credit</b>
Introduction of C ++ PROGRAMMING	BCA- 202	70	4

**Unit-I-** Introduction to C++

What is C++, A simple C++ Program, More C++ statements, Structure of C++ Program.

Tokens, Keywords, Identifiers and Constants, C++ data types, Variables: Declaration, Dynamic initialization of variables, Reference variables, Operators in C++: Scope resolution operator, Member differencing Operators, Memory Management Operators, Manipulators, Type cast operators, Expressions and Control Structures.

**Unit-II - Classes and Objects**

Introduction, Specifying a Class, Defining member Functions, C++ Program with Class, Nesting of Member functions, Private member functions, Memory Allocation for Objects, Static Data members, Static Member Functions, Arrays within a Class, Arrays of Objects, Objects as Function Arguments, Friendly Functions, Returning Objects.

**Unit-III – Functions**

The main () function, Function Prototyping, Call by reference, Return by reference, Inline function, Function Overloading.

**Unit-IV – Constructors, Destructors and Operator overloading**

Constructors, Parameterized Constructors, Multiple Constructors in a class, Copy constructor, Destructors. Defining Operator Overloading, Overloading Unary Operators, and Overloading Binary Operators, Type Conversions.

**Unit-V - Inheritance and Polymorphisms**

Introduction, Defining Derived Classes, Single inheritance, Multiple inheritance, Hierarchical inheritance, Multilevel inheritance, Hybrid inheritance, Virtual Base Classes, Polymorphism, static and dynamic binding, Constructor in Derived Classes, Pointers to Derived Classes, Virtual Functions, Pure Virtual Functions.

Reference Books:-

1. E. Balagurusamy - Object Oriented Programming with C++ - TMH.

<b>Subject: -</b>	<b>Subject Code</b>	<b>Max.marks</b>	<b>Credit</b>
Organization Behavior	BCA- 203	70	3

### **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 Behavioral 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 McGregers'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 Counseling.

### **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 Handling.

#### Reference Books:-

1. *Organizational Behavior Text, Cases and Games- By K.Asathappa, Himalaya Publishing House, Mumbai, Sixth Edition (2005)*
2. *Organizational Behavior Human Behavior at Work By J.W. Newstrom, Tata McGraw Hill Publishing Company Limited, New Delhi, 12th Edition (2007)*
3. *Organizational Behavior - By Fred Luthans*
4. *Organizational Behavior - By Super Robbins*
5. *Organizational Behavior - Anjali Ghanekar*

<b>Subject: -</b>	<b>Subject Code</b>	<b>Max.marks</b>	<b>Credit</b>
Financial Accounting & Management	BCA-204	70	4

### **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 Trail 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 problem, Cash flow analysis, Concepts, uses, preparation of cash flow statement, simple problem, 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

Reference Books:-

1. Maheshwari S.N., "Principles of Management Accounting", 11<sup>th</sup> Edition, Sultan Chand & Sons, 2001.
2. Shukla and Grewal, "Advanced Accounts", 14<sup>th</sup> Edition, Sultan Chand & Sons.

<b>Subject: -</b>	<b>Subject Code</b>	<b>Max.marks</b>	<b>Credit</b>
Mathematics II	BCA-205	70	4

### **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 Relation Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions, Introduction of 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.

Reference Books:-

1. Kolman, Busby and Ross, “Discrete Mathematical Structure”, PHI, 1996.
2. S.K. Sarkar, “Discrete Maths”; S. Chand & Co., 2000