

B.Com (Computer Applications)

Syllabus (CBCS)

(w.e.f. 2019–2020)



**FACULTY OF COMMERCE
OSMANIA UNIVERSITY
HYDERABAD - 500 007 T.S.**

2019

B.COM (Computer Applications)
CBCS COURSE STRUCTURE
w.e.f. 2018-'19

Sl.No. (1)	Code (2)	Course Title (3)	HPW (5)	Credits (6)	Exam Hrs (7)	Marks (8)
SEMESTER – I						
1.	ELS1	English (First Language)	4	4		
2.	SLS1	Second Language	4	4		
3.	AECC1	a) Environmental Science/ b) Basic Computer Skills	2	2	1 ½ hrs	40U+10I
4.	DSC101	Financial Accounting-I	5	5	3 hrs	80U+20I
5.	DSC102	Business Organization and Management	5	5	3 hrs	80U+20I
6.	DSC103	Fundamentals of Information Technology	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	27	25		
SEMESTER – II						
7.	ELS2	English (First Language)	4	4		
8.	SLS2	Second Language	4	4		
9.	AECC2	a) Basic Computer Skills/ b) Environmental Science	2	2	1 ½ hrs	40U+10I
10.	DSC201	Financial Accounting-II	5	5	3 hrs	80U+20I
11.	DSC202	Business Laws	5	5	3 hrs	80U+20I
12.	DSC203	Programming with C & C++	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	27	25		
SEMESTER – III						
13.	ELS3	English (First Language)	3	3		
14.	SLS3	Second Language	3	3		
15.	SEC1	a) Principles of Insurance/ b) Foundation of Digital Marketing/ c) Fundamentals of Business Analytics	2	2	1 ½ hrs	40U+10I
16.	SEC2	a) Practice of Life Insurance/ b) Web Design & Analytics/ c) Application of Business Analytics	2	2	1 ½ hrs	40U+10I
17.	DSC301	Advanced Accounting	5	5	3 hrs	80U+20I
18.	DSC302	Business Statistics-I	5	5	3 hrs	80U+20I
19.	DSC303	Relational Database Management System	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	27	25		
SEMESTER – IV						
20.	ELS4	English (First Language)	3	3		
21.	SLS4	Second Language	3	3		
22.	SEC3	a) Practice of General Insurance/ b) Social Media Marketing c) Business Intelligence	2	2	1 ½ hrs	40U+10I
23.	SEC4	a) Regulation of Insurance Business/ b) Search Engine Optimization & Online Advertising c) Data Visualisation & Storytelling	2	2	1 ½ hrs	40U+10I

Faculty of Commerce

OU

24.	DSC401	Income Tax/Excel Foundation	5	5	3 hrs	80U+20I
25.	DSC402	Business Statistics-II	5	5	3 hrs	80U+20I
26.	DSC403	Web Technologies	3T+4P	5	1 ½ hrs	50T+35P+15I
		Total	27	25		
SEMESTER - V						
27.	ELS5	English (First Language)	3	3		
28.	SLS5	Second Language	3	3		
29.	GE	a) Business Economics / b) Advanced Aspects of Income Tax	4	4	3 hrs	80U+20I
30.	DSE501	a) Cost Accounting/ b) Financial Planning & Performance/ c) International Financial Reporting-I	5	5	3 hrs	80U+20I
31.	DSE502	a) Computerized Accounting/ b) Financial Decision Making-I/ c) International Tax & Regulation	3T+4P/ 5	5	3 hrs	50T+35P + 15I/ 80U+20I
32.	DSE503	a) Management Information Systems/ b) Ecommerce/c) Mobile Applications	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	29/27	25		
SEMESTER - VI						
33.	ELS6	English (First Language)	3	3		
34.	SLS6	Second Language	3	3		
35.	PR	Research Methodology and Project Report	2T+4R	4	1 ½ hrs	40U+10I 35R+15VV
36.	DSE601	a) Cost Control and Management Accounting/ b) Financial control/ c) International Financial Reporting-II	5	5	3 hrs	80U+20I
37.	DSE602	a) Theory and Practice of GST/ b) Financial Decision Making-II / c) International Auditing	3T+4P/ 5	5	3 hrs	50T+35P + 15I/ 80U+20I
38.	DSE603	a) Multimedia Systems/ b) Cyber Security/c) Data Analytics	3T+4P	5	1 ½ hrs	50T+35P + 15I
		Total	31/29	25		
		GRAND TOTAL	168/164	150		

ELS: English Language Skill; SLS: Second Language Skill; AEC: Ability Enhancement Compulsory Course; SEC: Skill Enhancement Course; DSC: Discipline Specific Course; DSE: Discipline Specific Elective; GE: Generic Elective; T: Theory; P: Practical; I: Internal Exam U: University Exam; PR: Project Report; VV: Viva-Voce Examination.

Note: If a student should opt for "a" in SEC in III semester, the student has to opt for "a" only in IV semester and so is the case with "b" and "c". In the case of DSE also the rule applies.

SUMMARY OF CREDITS

Sl. No.	Course Category	No. of Courses	Credits Per Course	Credits
1	English Language	6	4/3	20
2	Second Language	6	4/3	20
3	AECC	2	2	4
4	SEC	4	2	8
5	GE	1	4	4
6	Project Report	1	4	4
7	DSC	12	5	60
8	DSE	6	5	30
	TOTAL	40		150
	Commerce	24		106
CREDITS UNDER NON-CGPA		NSS/NCC/Sports/Extra Curricular	Up to 6 (2 in each year)	
		Summer Internship	Up to 4 (2 in each after I & II years)	

Paper AEC1 (a): BASIC COMPUTER SKILLS**Hours Per Week:** 2**Credits:** 2**Exam Hours:** 1 ½**Marks:** 40U+10I**Objective:** to impart a basic level understanding of working of a computer and its usage.**UNIT I: UNDERSTANDING OF COMPUTER AND WORD PROCESSING:**

Knowing computer: What is Computer, Basic Applications of Computer; Components of Computer System, Central Processing Unit (CPU), VDU, Keyboard and Mouse, Other input/output Devices, Computer Memory, Concepts of Hardware and Software; Concept of Computing, Data and Information; Applications of IECT; Connecting keyboard, mouse, monitor and printer to CPU and checking power supply.

Operating Computer using GUI Based Operating System:What is an Operating System; Basics of Popular Operating Systems; The User Interface, Using Mouse; Using right Button of the Mouse and Moving Icons on the screen, Use of Common Icons, Status Bar, Using Menu and Menu-selection, Running an Application, Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Opening and closing of different Windows; Using help; Creating Short cuts, Basics of O.S Setup; Common utilities.

Understanding Word Processing:Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.

UNIT II: SPREAD SHEET, PRESENTATION SOFTWARE & INTRODUCTION TO INTERNET, WWW AND WEB BROWSERS:

Using Spread Sheet:Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet.

Basics of presentation software: Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts.

Introduction to Internet, WWW and Web Browsers:

Introduction to Internet:Basic of Computer networks; LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting.

World Wide Web: Search Engines; Understanding URL; Domain name; IP Address; Using e-governance website.

Web Browsing: Software, Communications and collaboration: Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging; Netiquettes.

SUGGESTED READINGS:

1. Introduction to Computers, Peter Norton, McGrawHill , 2012.
2. Using Information Technology, Brian K williams, StaceyC.Sawyer, Tata McGrawHill.

Web Resources:

1. <https://online.stanford.edu/courses/soe-yccscs101-sp-computer-science-101>
2. <https://www.extension.harvard.edu/open-learning-initiative/intensive-introduction-computer-science>.

Paper DSC 101: FINANCIAL ACCOUNTING - I

Objective: To acquire conceptual knowledge of basics of accounting and preparation of final accounts of sole trader.

UNIT-I: ACCOUNTING PROCESS:

Financial Accounting: Introduction – Definition – Evolution – Functions-Advantages and Limitations –Users of Accounting Information- Branches of Accounting – Accounting Principles: Concepts and Conventions- Accounting Standards– Meaning – Importance – List of Accounting Standards issued by ASB — Accounting System- Types of Accounts – Accounting Cycle- Journal- Ledger and Trial Balance. (Including problems)

UNIT-II: SUBSIDIARY BOOKS:

Meaning –Types - Purchases Book - Purchases Returns Book - Sales Book - - Sales Returns Book - Bills Receivable Book - Bills Payable Book – Cash Book - Single Column, Two Column, Three Column and Petty Cash Book - Journal Proper.(Including problems)

UNIT-III: BANK RECONCILIATION STATEMENT:

Meaning – Need - Reasons for differences between cash book and pass book balances – Favourable and over draft balances – Ascertainment of correct cash book balance (Amended Cash Book) - Preparation of Bank Reconciliation Statement. (Including problems)

UNIT-IV: RECTIFICATION OF ERRORS AND DEPRECIATION:

Capital and Revenue Expenditure – Capital and Revenue Receipts: Meaning and Differences - Differed Revenue Expenditure. Errors and their Rectification: Types of Errors - Suspense Account – Effect of Errors on Profit. (Including problems)

Depreciation (AS-6): Meaning – Causes – Difference between Depreciation, Amortization and Depletion - Objectives of providing for depreciation – Factors affecting depreciation – Accounting Treatment – Methods of depreciation: Straight Line Method - Diminishing Balance Method (Including problems)

UNIT-V: FINAL ACCOUNTS:

Final Accounts of Sole Trader: Meaning -Uses -Preparation of Manufacturing, Trading and Profit & Loss Account and Balance Sheet – Adjustments – Closing Entries.(Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Company.
2. Principles & Practice of Accounting: R.L.Gupta&V.K.Gupta, Sultan Chand.
3. Accountancy-I: S.P. Jain & K.L Narang, Kalyani Publishers.
4. Accountancy–I: Tulasian, Tata McGraw Hill Co.
5. Introduction to Accountancy: T.S.Grewal, S.Chand and Co.
6. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheshwari, Vikas.
7. Fundamentals of Financial Accounting: Deepak Sehgil, Tax Mann Publication.
8. Financial Accounting: JawaharLal, Himalaya Publishing House.

Paper DSC 102: BUSINESS ORGANISATION AND MANAGEMENT

Objective: To acquaint the students with the basics of Commerce and Business concepts and functions, forms of Business Organization and functions of Management.

UNIT-I: INTRODUCTION AND FORMS OF BUSINESS ORGANISATIONS:

Concepts of Business, Trade, Industry and Commerce - Objectives and functions of Business –Social Responsibility of a business - Forms of Business Organization - Meaning, Characteristics, Advantages and Disadvantages of Sole Proprietorship – Meaning, Characteristics, Advantages and Disadvantages of Partnership - Kinds of Partners - Partnership Deed -Concept of Limited liability partnership – Meaning, Characteristics, Advantages and Disadvantages of Hindu Undivided Family – Meaning, Advantages and Disadvantages of Co-Operative Organization.

UNIT-II: JOINT STOCK COMPANY:

Joint Stock Company - Meaning - Definition - Characteristics - Advantages and Disadvantages - Kinds of Companies - Promotion - Stages of Promotion - Promoter - Characteristics - Kinds - Preparation of Important Documents - Memorandum of Association - Clauses - Articles of Association - Contents – Prospectus - Contents – Red herring Prospectus- Statement in lieu of Prospectus (As per Companies Act. 2013).

UNIT-III: INTRODUCTION TO FUNCTIONS OF MANAGEMENT:

Management - Meaning - Characteristics - Functions of Management - Levels of Management – Skills of Management- Scientific Management - Meaning - Definition - Objectives - Criticism – Fayol’s 14 Principles of Management .

UNIT-IV: PLANNING AND ORGANISING: Meaning - Definition - Characteristics - Types of Plans - Advantages and Disadvantages – Approaches to Planning - Management by Objectives (MBO) - Steps in MBO - Benefits –Weaknesses—Definition of Organizing-Organization-Process of Organizing - Principles of Organization - Formal and Informal Organizations - Line, Staff Organizations - Line and Staff Conflicts - Functional Organization - Span of Management - Meaning - Determining Span - Factors influencing the Span of Supervision.

UNIT-V: AUTHORITY, COORDINATION AND CONTROL:

Meaning of Authority, Power, responsibility and accountability - Delegation of Authority - Decentralization of Authority - Definition, importance, process, and principles of Coordination-techniques of Effective Coordination - Control - Meaning - Definition – Relationship between planning and control -Steps in Control – Types (post, current and pre-control) - Requirements for effective control.

SUGGESTED READINGS:

1. Business Organization & Management: Sharma Shashi K. Gupta, Kalyani Publishers
2. Business Organisation & Management: Patrick Anthony, Himalaya Publishing House
3. Business Organization & Management: Dr. Manish Gupta, PBP.
4. Organization & Management: R. D. Agarwal, McGraw Hill.
5. Modern Business Organization: S.A. Sherlekar, V.S. Sherlekar, Himalaya Publishing House
6. Business Organization & Management: C.R. Basu, Tata McGraw Hill
7. Business Organization & Management: M.C. Shukla S. Chand,
8. Business Organisation and Management: D.S. Vittal, S. Chand
9. Organizational Behaviour Text & Cases: V.S.P. Rao, Himalaya Publishing House
10. Business Organization & Management: Uma Shekaram, Tata McGraw Hill
11. Business Organization & Management: Niranjan Reddy & Surya Prakash, Vaagdevi publishers
12. Business Organisation and Management, Dr. Neeru Vasihth, Tax Mann Publications.
- 13.

Paper DSC 103: FUNDAMENTALS OF INFORMATION TECHNOLOGY**Hours Per Week:** 6 (4T+2P)**Credits:** 5**Exam Hours:** 1 ½**Marks:** 50U+35P+15I

Objective: To understand the basic concepts and terminology of information technology and to identify issues related to information security.

UNIT-I: INTRODUCTION TO COMPUTERS:

Introduction, Definition, Characteristics of computer, Evolution of Computer, Block Diagram of a computer, Generations of Computer, Classification Of Computers, Applications of Computer, Capabilities and limitations of computer.

Role of I/O devices in a computer system. **Input Units:** Keyboard, Terminals and its types. Pointing Devices, Scanners and its types, Voice Recognition Systems, Vision Input System, Touch Screen, **Output Units:** Monitors and its types. Printers: Impact Printers and its types. Non-Impact Printers and its types, Plotters, types of plotters, Sound cards, Speakers.

UNIT -II: COMPUTER ARITHMETIC & STORAGE FUNDAMENTALS:

Binary, Binary Arithmetic, Number System: Positional & Non Positional, Binary, Octal, Decimal, Hexadecimal, Converting from one number system to another.

Primary Vs Secondary Storage, Data storage & retrieval methods. **Primary Storage:** RAM ROM, PROM, EPROM, EEPROM. **Secondary Storage:** Magnetic Tapes, Magnetic Disks. Cartridge tape, hard disks, Floppy disks Optical Disks, Compact Disks, Zip Drive, Flash Drives.

UNIT-III: SOFTWARE:

Software and its needs, Types of S/W. **System Software:** Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages. **Application S/W** and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w.

UNIT-IV: OPERATING SYSTEM:

Functions, Measuring System Performance, Assemblers, Compilers and Interpreters. Batch Processing, Multiprogramming, Multi Tasking, Multiprocessing, Time Sharing, DOS, Windows, Unix/Linux.

UNIT-V: DATA COMMUNICATION:

Data, Communication, Basic Networking Devices, Communication Process, Data Transmission speed, Communication Types (modes), Data Transmission Media, Modem and its working, characteristics, Types of Networks, LAN Topologies, Computer Protocols, Concepts relating to networking.

SUGGESTED READINGS:

Computer Fundamentals: P.K. Sinha

Paper DSC 201: FINANCIAL ACCOUNTING-II

Objective: To acquire accounting knowledge of bills of exchange and other business accounting methods.

UNIT-I: BILLS OF EXCHANGE:

Bills of Exchange - Definition- Distinction between Promissory note and Bills of exchange- Accounting treatment of Trade bills: Books of Drawer and Acceptor- Honour and Dishonour of Bills- Renewal of bills- Retiring of bills under rebate- Accommodation bills.(Including problems)

UNIT-II: CONSIGNMENT ACCOUNTS:

Consignment – Meaning – Features– Proforma invoice - Account sales – Del credere commission-Accounting treatment in the books of the consignor and the consignee - Valuation of consignment stock –Treatment of Normal and abnormal Loss - Invoice of goods at a price higher than the cost price. (Including problems)

UNIT-III: JOINT VENTURE ACCOUNTS:

Joint Venture – Meaning –Features-Difference between Joint Venture and Consignment-Accounting Procedure-Methods of Keeping Records for Joint Venture Accounts-Method of Recording in co-ventures books-Separate Set of Books Method- Joint Bank Account-Memorandum Joint Venture Account (Including problems)

UNIT-IV: ACCOUNTS FROM INCOMPLETE RECORDS:

Single Entry System – Meaning -Features–Difference between Single Entry and Double Entry systems -Defects in Single Entry System - Books and accounts maintained - Ascertainment of Profit - Statement of Affairs and Conversion method (Including problems)

UNIT-V: ACCOUNTING FOR NON-PROFIT ORGANIZATIONS:

Non- Profit Organization – Meaning – Features – Receipts and Payments Account – Income and Expenditure Account – Balance Sheet(Including problems)

SUGGESTED READINGS:

1. Accountancy-I: Haneef and Mukherjee, Tata McGraw Hill Co.
2. Principles and Practice of Accounting: R.L. Gupta & V.K. Gupta, Sultan Chand & Sons.
3. Accountancy–I: Tulasian, Tata McGraw Hill Co.
4. Accountancy–I: S.P. Jain & K.L Narang, Kalyani.
5. Advanced Accountancy-I: S.N.Maheshwari&V.L.Maheswari, Vikas.
6. Advanced Accountancy: M Shrinivas& K Sreelatha Reddy, Himalaya Publishers.
7. Financial Accounting: M.N Arora, Tax Mann Publications.

Paper DSC 202: BUSINESS LAWS

Objective: To understand basics of contract act, sales of goods act, IPRs and legal provisions applicable for establishment, management and winding up of companies in India.

UNIT-I: INDIAN CONTRACT ACT:

Agreement and contract - Essentials of a valid contract - Types of contracts - Offer and Acceptance - Essentials of valid offer and acceptance - Communication and revocation of offer and acceptance – Consideration definition - Essentials of valid consideration -Modes of Discharge of a contract - Performance of Contracts - Breach of Contract - Remedies for Breach - Significance of Information Technology Act.

UNIT-II: SALE OF GOODS ACT AND CONSUMER PROTECTION ACT:

Contract of Sale: Essentials of Valid Sale - Sale and Agreement to Sell – Definition and Types of Goods - Conditions and Warranties - Caveat Emptor - Exceptions - - Unpaid Seller - Rights of Unpaid Seller. Consumer Protection Act 1986: Definitions of Consumer – Person – Goods - Service -Consumer Dispute - Consumer Protection Councils - Consumer Dispute Redressal Agencies - Appeals.

UNIT-III: INTELLECTUAL PROPERTY RIGHTS:

Trade Marks: Definition - Registration of Trade Marks - Patents: Definition - Kinds of Patents - Transfer of the Patent Rights - Rights of the Patentee - Copy Rights: Definition -- Rights of the Copyright Owner - Terms of Copy Right - Copy Rights Infringement - Other Intellectual Property Rights: Trade Secrets - Geographical Indications.

UNIT-IV: MANAGEMENT OF COMPANIES AND MEETINGS:

Director: Qualification - Disqualification - Position - Appointment - Removal – Duties and Liabilities – Loans – Remuneration – Managing Director – Corporate Social Responsibility – Corporate Governance. Meeting: Meaning – Requisites - Notice – Proxy - Agenda – Quorum – Resolutions – Minutes – Kinds – Shareholder Meetings - Statutory Meeting - Annual General Body Meeting – Extraordinary General Body Meeting – Board Meetings.

UNIT-V: WINDING UP:

Meaning – Modes of Winding Up –Winding Up by tribunal – Voluntary Winding Up – Compulsory Winding Up – Consequences of Winding Up – Removal of name of the company from Registrar of Companies – Insolvency and Bankruptcy code - 2016.

SUGGESTED READINGS:

- 1) Company Law: ND Kapoor, Sultan Chand and Co.
- 2) Company Law: Rajashree. – HPH
- 3) Business Law - Kavitha Krishna, Himalaya Publishing House
- 4) Business Laws – Dr. B. K. Hussain, Nagalakshmi - PBP
- 5) Company Law: Prof. G. Krishna Murthy, G. Kavitha, PBP
- 6) Company Law and Practice: GK Kapoor & Sanjay Dhamija, Taxmann Publication.
- 7) Company Law: Revised as per Companies Act- 2013: KC Garg et al, Kalyani Publication.
- 8) Corporate Law: PPS Gogna, S Chand.
- 9) Business Law: D.S. Vital, S Chand
- 10) Company Law: Bagrial AK, Vikas Publishing House.

Paper DSC 203:PROGRAMMING WITH C & C++

Hours Per Week: 7 (3T+4P)

Credits: 5

Exam Hours: 1 ½

Marks: 50U+35P+15I

Objective: To understand the fundamental concepts of programming in C and Object Oriented Programming using C++.

UNIT-I: INTRODUCTION TO C LANGUAGE, VARIABLES, DATA TYPES AND OPERATORS

Introduction: Types of Languages- History of C language – Basic Structure –Programming Rules – Flow charts-algorithms–Commonly used library functions - Executing the C Program - Pre-processors in “C”- Keywords & Identifiers – Constants – **Variables:** Rules for defining variables - Scope and Life of a Variable– **Data types** - Type Conversion - Formatted Input and Output operations. **Operators:** Introduction – Arithmetic – Relational – Logical – Assignment - Conditional - Special - Bitwise - Increment / Decrement operator.

UNIT-II: WORKING WITH CONTROL STATEMENTS, LOOPS

Conditional statements: Introduction - If statements - If-else statements – nested if-else – break statement-continue statement-go to statement-Switch statements. **Looping statements:** Introduction- While statements – Do-while statements - For Statements-nested loop statements.

UNIT-III: FUNCTIONS, ARRAYS AND STRINGS

Functions: Definition and declaration of functions- Function proto type-return statement- types of functions-formatted and unformatted functions. **Built in functions:** Mathematical functions - String functions - Character functions - Date functions.**User defined functions:** Introduction - Need for user defined functions - Elements of functions – Function call – call by value and call by reference - Recursive functions.**Arrays:** Introduction - Defining an array - Initializing an array –characteristics of an array- One dimensional array – Two dimensional array – Multi dimensional array. **Strings:** Introduction - Declaring and initializing string - Reading and Writing strings - String standard functions.

UNIT-IV: POINTERS, STRUCTURES AND UNIONS

Pointers: Features of pointers- Declaration of Pointers-arithmetic operations with pointers

Structures: Features of Structures - Declaring and initialization of Structures –Structure within Structure- Array of Structures- Enumerated data type-**Unions**-Definition and advantages of Unions comparison between Structure & Unions.

UNIT-V: OBJECT ORIENTED CONCEPTS USING C++

Object Oriented Programming: Introduction to Object Oriented Programming - Structure of C++ – Simple program of C++– Storage Classes-Similarities and Differences between C & C++ - Data Members-Member Functions - Object Oriented Concepts-Class-Object-Inheritance-Polymorphism-Encapsulation-Abstraction.

SUGGESTED READINGS:

1. Programming with C& C++ :IndrakantiSekhar, V.V.R.Raman&V.N.Battu, Himalaya Publishers.
2. Programming in ANSI C: Balagurusamy, McGraw Hill.
3. Mastering C: K.R. Venugopal, McGraw Hill.
4. C: The Complete Reference: H.Schildt, McGraw Hill.
5. Let Us C: Y.Kanetkar, BPB.
6. Objected Oriented Programming with C++: E. Balagurusamy, McGraw Hill.
7. Mastering C++: KR.Venugopal&R.Buyya, McGraw Hill.
8. Schaum’s Outlines: Programming with C++: by John R Hubbard.
9. Let Us C++: Y.Kanetkar, BPB.