



F.Y. B.C.A.

Paper No	Title of the Paper	Total Marks	Passing Standard	Total Teaching Hours
BCA101	Business Communication	100	40	3 hrs. per week * 30 weeks = 90 hrs.
BCA102	PC Software	100	40	3 hrs. per week * 30 weeks = 90 hrs.
BCA103	Introduction to Programming Language	100	40	3 hrs. per week * 30 weeks = 90 hrs.
BCA104	Computer Organization	100	40	3 hrs. per week * 30 weeks = 90 hrs.
BCA105	RDBMS-I	100	40	3 hrs. per week * 30 weeks = 90 hrs.
BCA106	Mathematics	100	40	3 hrs. per week * 30 weeks = 90 hrs.
BCA107	Practical	100	40	6 hrs. per week * 30 weeks = 180 hrs.



First Year B.C.A.

ENGLISH

Paper – 101 Business Communication

Total Marks :

100

Objectives:

- 1) To understand the concept, process and importance of communication.
- 2) To gain knowledge of media of communication.
- 3) To develop skills of effective communication - both written and oral.
- 4) To make students familiar with information technology.
- 5) To familiarize the students with the Short Story form in Literature

Unit	Detail Syllabus
1	<p><u>Introduction to Business Communication: Type and Methods:</u> Meaning and Definition of Communication – Process of Communication – Forms of Communication – Objectives of Communication - Upward Communication- Downward Communication - Written - Oral – Horizontal – Vertical - Formal – Informal- Grapevine – Consensus -Merits and limitations of each type- Network of Communication – Barriers to Communication – Overcoming Barriers to Communication - Telex - Facsimile(Fax) - E-mail - Voice mail - Internet Multimedia - Teleconferencing –Audio Conferencing- Video Conferencing - SMS - Telephone Answering Machine – blog, social media, website, Advantages and limitations of these types.</p>
2	<p><u>Business Terms & Theory of ‘Drafting of business letters’ :</u> a) C.O.D.; C.W.O.; C.I.F.; F.O.B.; F.O.R.; E&O.E.; Cartage; Freight; Excise Duty; Custom Duty; V.A.T.; Proforma Invoice; Invoice; Trade Mark; Hypothecation; Ex- Warehouse; Debit note; Credit Note; Pilferage; Demurrage; Power of Attorney; Consignment; Bill of Lading; Bonded Warehouse; Certificate of Origin b) Lay –out of a business letter- Appearance of a business letter- Styles and Format of a business letter - Features of a Letter of Inquiry — Solicited letter of Inquiry – Unsolicited letter of inquiry – Replies to inquiries</p>
3	<p><u>Letter of Orders & Cancellation of Orders; Complaints and Adjustments:</u> Features of an Order Letter- Drafting of Order Letter- Acknowledgement of an Order Letter- Executing Orders (Fully/partially) – Demanding Extension of time Substitute Offers; Firm Offers; Cancellation of Orders. Letters of Complaints – Drafting an Effective Letter of Complaint – Attitude to Complaints – Replies to Complaints – Adjustment Policies – Characteristics of a well Drafted Adjustment Letter.</p>
4	<p><u>Application Writing & Cover letters for Jobs</u> Features of an Application Letter – Solicited Application Letters – Unsolicited Application Letters – Resume and C.V. Formats.</p>
5	<p><u>Selected Short Stories</u> 1. A Cup of Tea - Katherine Mansfield 2. The Post Master - Rabindranath Tagore 3. How Much Land Does A Man Need? - Leo Tolstoy 4. A True Story - Mark Twain 5. Blow Up With The Ship - Wilkie Collins 6. The Mother - Somerset Maugham The above six stories are selected from ‘Twelve Short Stories’, Edited by C.S.Sharma, Oxford University Press, New Delhi, Print edition 2002</p>



Recommended Books:

- 1) Business Communication - K. K. Sinha - Galgotia Publishing Company, New Delhi.
- 2) Media and Communication Management - C. S. Rayudu - Himalaya Publishing House, Bombay.
- 3) Essentials of Business Communication - Rajendra Pal and J. S. Korhalli - Sultan Chand & Sons, New Delhi.
- 4) Business Communication – Rai & Rai, Himaliya Publishing House, Mumbai
- 5) Business Communication – Homai Pradhan, Bhende D.S., Thakur Vijaya
- 6) Business Communication (Principles, Methods and Techniques) Nirmal Singh - Deep & Deep Publications Pvt. Ltd., New Delhi.
- 7) Business Communication - Dr. S.V. Kadvekar, Prin. Dr. C. N. Rawal and Prof. Ravindra Kothavade - Diamond Publications, Pune.
- 8) Business Correspondence and Report Writing - R. C. Sharma, Krishna Mohan - Tata McGraw- Hill Publishing Company Limited, New Delhi.
- 9) Business Communication and Organisational Management – Rohini Aggrawal – Taxman
- 10) Business Communication Strategies – Monipally Mathukutty M.- Tata McGraw –Hill Publishing Company Limited, New Delhi.
- 11) Handbook of Communication – Narula Uma
- 12) A Handbook of Commercial Correspondence – A . Ashley – Oxford University Press
- 13) Business Communication and Organisational and Management – C.B.Gupta
- 14) Comprehensive Business Communication – Saroj Karnik, P.P.Mehta,- P.V.Kulkarni



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Paper – 102 PC Software
100

Total Marks :

Unit	Detailed Syllabus	Marks
Unit 1	<p>Introduction</p> <ul style="list-style-type: none">♣ Introduction to personal computers, Characteristics of computer, types of computer♣ Overview of Basic Operating System, Introduction to Windows operating system♣ Windows Environment – Desk top ,file, folders, icons, Window explorer, control panel, Windows Accessories♣ Editors – Note pad, Word pad.	20
Unit 2	<p>Word Processing</p> <ul style="list-style-type: none">♣ Introduction to word processing, Examples of some popular WP packages.♣ Uses of word processors - Creation, editing, formatting of Documents. Global Search & Replacement of text.♣ Special page setup and printing features♣ Mail merge Facilities♣ Spelling checker, Table facility, Templates, advanced features.♣ Inserting Pictures, Drawing and Equation, Macros.	20
Unit 3	<p>Spreadsheet-I</p> <ul style="list-style-type: none">♣ Introduction to Spreadsheet, Examples of some popular Spreadsheet packages.♣ Building Spreadsheet using formulas, conditional calculations, and built-in functions, Examples of "What If "analysis.♣ Use of Conditional Formatting through formula or in-built function, Writing macros	20
Unit 4	<p>Spreadsheet –II</p> <ul style="list-style-type: none">♣ Data sorting, Data searching, filtration, validation, group, ungroup.♣ Graph-plotting facilities.♣ Using externally created data files in the spreadsheet packages.♣ Protection facility, Pivot Tables, Operation on tables.♣ Macros with its all options (Creating , running and Saving in the worksheet)	20
Unit 5	<p>Presentation Tools</p> <ul style="list-style-type: none">♣ Preparing the presentation and Formatting Slides.♣ Slide transition & adding special effects♣ Inserting Pictures, Sound and Chart and other objects.♣ Slide Design♣ Animation in Slide	20

Reference / Text-Books / Additional Reading :

1. Office-2007- BPB Publication
2. Office-2007 Bible : John Walenbach, Herb Tyson
3. Teach yourself Visually MS office 2007 – sherry kinkoph



First Year B.C.A.

Paper – 103 Introduction to Programming Language

Total Marks : 100

Unit	Detailed Syllabus	Marks
Unit 1	Programming Language Fundamentals <ul style="list-style-type: none">♣ Flowchart and Algorithm♣ Types of programming language♣ Concept of Editor, Compiler, Interpreter, Translator, Assembler♣ Getting started with C: Structure of C program, Compilations & linking C program♣ Character Set, Tokens, Identifier, Data Type, Variable and Constant	20
Unit 2	Programming Constructs <ul style="list-style-type: none">♣ Formatted Input and output statements♣ Operators♣ Decision making and Branching (If, if-else, switch etc)♣ Looping construct (While loop, Do...While loop, For loop etc)♣ Break, Continue, go to and exit	20
Unit 3	Array and string handling <ul style="list-style-type: none">♣ Introduction of array♣ 1-D,2-D,3-D Array Declaration and initialization♣ 1-D,2-D,3-D Array Programming♣ Searching & Sorting in 1-D Array♣ Working with string	20
Unit 4	Function & Pointer <ul style="list-style-type: none">♣ Basic concept of user defined function♣ Types of function♣ Types of variable and storage class♣ Call by value, call by reference, recursion♣ Built-in Function : math's, input, output, character, string function etc♣ Pointer and their characteristics, pointer arithmetic, passing pointer to function♣ Array and pointer, String and pointer	20
Unit 5	Structure , Union & Files <ul style="list-style-type: none">♣ Structure Declaration, initialization, creating and accessing structure variable♣ Structure and Pointer♣ Array of structure, nesting of structure, structure as function argument.♣ Working with union♣ File Handling – Types of files, Declaration of file, file related functions like fopen(), fclose(), fseek(), ftell(), fscanf(), fprintf(), rewind(), fgetc(), fputc(), fgets(), fputs(), fwrite(), fread()	20

Reference / Text-Books / Additional Reading :

1. Programming in ANSI 'C' – Balaguruswamy : TMH.
2. Let Us C By Yasvant Kanitkar



First Year B.C.A.

Paper – 104 Computer Organization

Total Marks : 100

Unit	Detailed Syllabus	Marks
Unit 1	Computer Fundamentals and Peripherals <ul style="list-style-type: none">♣ Block Diagram of Computer, components♣ Input Devices: Key board, Mouse, Touch screen, Scanner, Light pen,♣ Output Devices: CRT, LCD and Plasma, Printers: Impact, Non Impact,♣ Storage Devices: Magnetic Disk, CDs, DVD, Blue-Ray Disc♣ RAM, ROM, Types of RAM and ROM	20
Unit 2	Data representation and Error Handling <ul style="list-style-type: none">♣ Number System - Binary, Octal, Hexadecimal and its arithmetic♣ Representation of Integers, floating point representation, Representation of Character, Characters codes (ASCII, EBCDIC, and UNICODE)♣ Binary Arithmetic, Conversation of number in Decimal, Binary, Octal, Hexadecimal.♣ 1's Complement, 2's Complement	20
Unit 3	Digital Circuit <ul style="list-style-type: none">♣ Introduction to Gates and Invertors, Boolean algebra and truth tables♣ Preparing truth table for given circuit, Preparing circuit for given truth table (SOP & POS);♣ Theorems and Postulates and Simplification of Boolean algebra, Gate minimization♣ Basic Digital Circuits - Encoder, Decoder, Multiplexor, De-Multiplexor, Comparators.♣ Arithmetic Circuits – Shifters, Half adder, Full adder, Binary adder- Subtractor	20
Unit 4	Memory Chips, CPU Chips and Buses <ul style="list-style-type: none">♣ Latches (RS, D), Flip-Flops (D, JK)♣ Registers♣ Counters (Ripple, Synchronous)♣ Overview of Memory chip, Step of read and write operations♣ CPU chips - 8088 Microprocessor♣ Computer Buses – Synchronous and asynchronous bus, bus arbitration, bus operation, bus oriented architecture of PC	20
Unit 5	Instructions and Execution <ul style="list-style-type: none">♣ Instruction Execution, Parallel Instruction Execution, CPU organization.♣ RISC versus CISC♣ Instruction Level Parallelism, Processor Level Parallelism♣ Instruction formats - Types of Instruction, Types of operand♣ Addressing modes	20

Reference / Text-Books / Additional Reading :

1. Tanenbaum A. S. : Structured Computer Organization, Prentice-Hall of India Pvt. Ltd.
2. V. RajaRaman : Fundamentals of Computers



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Paper – 105 RDBMS - I

Total Marks : 100

Unit	Detailed Syllabus	Marks
Unit 1	Introduction <ul style="list-style-type: none">♣ Basic concepts – Data, Information, Database, DBMS♣ Overview of RDBMS – Tables, records (rows) & fields (columns)♣ Applications of RDBMS.♣ Theoretical concepts – Entity, attribute, Tuple, Domain Set, Relationship between entities, E-R Diagrams, Normalization♣ Dr. Codd's 12 rules	20
Unit 2	Database Management System (MS-Access) <ul style="list-style-type: none">♣ Introduction to MS-Access, basic facilities provided by the MS-Access♣ Creating a table, various data types, other properties of field♣ Creating form and report using single table♣ Modifying form and report layout	20
Unit 3	Detailed look on Queries <ul style="list-style-type: none">♣ Select queries – By Design and SQL statement – on single table♣ Select queries based on multiple tables (rigorous practical exercises to be covered)♣ Insert, Update & Delete queries – Design, SQL statements, execution, How they differ from select query♣ Advanced query building♣ Automating Tasks using Macro	20
Unit 4	Relationship between tables <ul style="list-style-type: none">♣ Concept of primary Key & foreign key♣ Types of relationships : one-to-one, one-to-many, many-to-many relationship♣ Creating relationships in MS-Access♣ Study of Queries and reports based on relationships♣ Working With Forms & Reports – using multiple tables	20
Unit 5	Importing & Exporting Data <ul style="list-style-type: none">♣ Importing Data from text file, XML file, MS-Excel♣ Exporting Data to text file, XML file, MS-Excel♣ Managing Database – Taking Backups & Repair Database	20

Reference / Text-Books / Additional Reading :

1. Desai Bipin C: Introduction to database Systems, West Publishing Co.
2. Microsoft Office Access 2007 Step-by-step by Steve Lambert
3. Microsoft Office Access 2007 : The Complete Reference (With CD) 1st Edition,By: Virginia Andersen,Publisher: Tata McGraw - Hill Education (2007)
4. Microsoft Office Access 2007: Concepts and Techniques: By Thomas J. Cashman, Philip J. Pratt, Mary Z. Last

**First Year B.C.A.****Paper – 106 Mathematics****Total Marks : 100**

Unit	Detailed Syllabus	Marks
Unit-1	<ul style="list-style-type: none">♣ Sets, Relations and Functions♣ Set Operations♣ Algebra of sets♣ Finite sets and counting principle♣ Classes of sets♣ Power sets♣ Binary Relations♣ Functions – Domain, Range, One-to-one, onto and invertible	20
Unit – 2	<ul style="list-style-type: none">♣ Vectors & Matrices♣ Definition of Vectors♣ Dot product & Cross product of two vectors♣ Definition of Matrix♣ Matrix operations♣ Inverse of Matrix♣ Solution of Linear equations using Matrices: $AX = B \rightarrow X = A^{-1}B$	20
Unit – 3	<ul style="list-style-type: none">♣ Permutations, Combinations & Algorithm♣ Permutations♣ Combinations♣ Repetitions♣ What is Algorithm?♣ Writing simple algorithms	20
Unit – 4	<ul style="list-style-type: none">♣ Basic Statistical Techniques♣ What is Statistics?♣ Collection and representation of data – Frequency distribution & Graphs♣ Measures of Central Tendency and Dispersion♣ Probability Theory	20
Unit - 5	<ul style="list-style-type: none">♣ Simple Regression and correlation♣ Estimation using Regression line♣ Linear regression, Regression coefficients♣ Karl Pearson's correlation coefficient	20

Reference Books:

1. K.D. Joshi: Foundations of Discrete Mathematics, Wile Eastern Ltd.
2. Edgar G. Goodaire & Michael M Parmentar: Discrete Mathematics, Pearsion Education Asia
3. M.R.Spiegel: Vector Analysis & Introduction to Tenso Analysis (Schaum's Series McGraw Hill)
4. Statistics: Schaum's Series.

First Year B.C.A.**Paper – 107 Practical****Total Marks : 100**

Practical exercises of following theory papers are to be carried out by the students:

Title of the paper	Marks	Total Practical Hours
PC Software (BCA102)	25	45
Introduction to Programming Language (BCA103)	50	90
RDBMS-I (BCA105)	25	45
Total	100	180