Revised Syllabus of
BACHELOR OF COMPUTER APPLICATIONS (BCA)
(Under the Faculty of Commerce)
w.e.f. Academic Year 2013-14 and onwards

1) **Objective of the Course:**

The main objective of the course is to develop different software development skills in the students with current trends in IT industry as well as Business Management and to take up student at various positions such as System Analyst, System Manager, Software Engineers, Web Design Programmers, EDP Managers, Database Administrators, Academician in different areas of computer application, Management and Information Technology Industry.

Keeping above mottos, curriculum includes extensive study of problem solving and system development, project design, development areas. The extensive practical areas of different programming environment are covered in various operating environments. It also includes versatile subjects on Entrepreneurship and Business Management.

2) **Duration of BCA Degree:**

The duration of the course is full time three years divided into three parts of six semesters.

3) **Eligibility for Admission:**

A candidate must have passed H. S. C.(10+2) in any stream or any diploma (of minimum two years duration after S. S. C.) awarded by State Board in any technical or vocational stream.

Intake Capacity: 80 students.

Duration, Teaching Schedule and Examinations:

The teaching of semester I, III and V will start from 1st July to 15th of October (14 weeks) and the teaching for the semester II, IV and VI will start from 1st Dec. to 15th March (14 weeks). There will be semester end examination in November and April for all the semester. In addition there will be internal examinations for each paper to be conducted by the respective institutes /colleges.

4) **Structure of Syllabus:**

B.C.A. Part-I (Semester- I and II)

Paper No.	Semester-I	Paper No.	Semester-II
101	Fundamentals of Computers	201	Software Packages
102	Programming in 'C' Part-I	202	Programming in 'C' Part-II
103	Principles of Management	203	Bank Management
104	Financial Accounting	204	Financial Accounting with Tally
105	Office Management And Communications	205	Principles of Marketing
106	Lab Course Based on Paper-101	206	Lab Course Based on Paper-201, 204
107	Lab Course Based on Paper-102	207	Lab Course Based on Paper-202

5) Fee Structure:

The university authorities have granted approval to the revised Fee structure of BCA (commerce) programme from the academic year 2009-10. The revised fee structure will be implemented, gradually from the academic years 2009-10, 2010-11 and 2011-12 for BCA – Part-I, BCA – Part-II and BCA – Part-III respectively.

Sr. No.	Particulars	Amount in Rs.
1	Tuition Fee (Including Computer Lab charges)	14,000.00
2	Library Fee	500.00
3	Journal & Stationary	500.00
	Total fee per student per year	15,000.00
Examination and other fee is applicable as per University norms.		

Important Note:-

The above mentioned tuition fee should be collected in two phases i.e. Rs.9500/- in the first semester and Rs.4500/- in the second semester.

It should be noted that if the college concerned has appointed full time teachers then the remaining tuition fee of Rs.4500/- be collected in second semester. Otherwise (if full time teachers are not appointed) the college concerned, should deduct Rs.1000/- from as per rules the same and collect only Rs.3500/- out of the prescribed tuition fee for second semester.

(Please refer circular No.S.U/B.O.S/B.C.A/3983 dated 01-07-2009 for more details)

6) Standard of Passing:

Rule 1 :
(1) A candidate who fails at BCA Sem-I examination will be allowed to keep terms for BCA Sem-II examination.
(2) A candidate who fails at BCA Sem-III examination will be allowed to keep terms for BCA Sem-IV examination.
(3) A candidate who fails at BCA Sem-V examination will be allowed to keep terms for BCA Sem-VI examination.

Rule 2 :
1. A candidate who fails in not more than three heads of passing including aggregate of First Year BCA (Sem.I and II), Second Year BCA (Sem.III and.IV) and Third Year BCA (Sem.V and.VI) examination will be permitted to keep terms in the higher class namely, Second Year BCA (Sem.III and IV), Third Year BCA (Sem.V and VI).

Rule 3 :
1. No candidate will be admitted to Second Year BCA (Sem-III) of the course unless he/she-
   i) passes BCA sem-I and Sem- II examination. Or
   ii) fails in not more than three heads of passing at the first year BCA Sem-I and Sem-II examination.
2. No candidate will be admitted to Third Year BCA (Sem-V) of the course unless he/she –
   i) passes BCA sem-I, Sem-II, Sem-III and Sem- IV examination. Or
   ii) passes his BCA Sem-I and BCA Sem-II examination and fails in not more than three heads of passing at the Second year BCA Sem-III and Sem-IV examination.

Rule 4 :
The class will be awarded on the basis of aggregate marks obtained by the candidate for all three years
The award of class will be as follows:

Aggregate Percentage of Marks Class
(i) Aggregate 70% and above   .... First Class with Distinction.
(ii) Aggregate 60% and above but less than 70% .... First Class
(iii) Aggregate 50% and more but less than 60% .... Second Class
(iii) Aggregate 40% and more but less than 50% .... Pass Class
(iii) Aggregate bellow 40%   .... Fail

Rule 5:
   a) There is separate head of passing for Internal and External (i.e. University theory examination).
   b) The candidate must have to secure minimum 40% of marks for passing in each head.
   c) No class will be awarded to any part of examination.
   d) Scaling down for internal examination marks up-to 20% of university theory exam.

7) **Nature of Question Paper:**
   Nature of question paper is as follows for University end semester examination
   a. Theory Examination : 80 Marks
   Duration : 3 Hrs
   Nature of Theory question paper :
   There will be Eight (8) questions of 16 Marks and out of which five (5) to be attempted. Question No.8 is compulsory and is of short type answers.
   Internal Exams: 20 Marks

Attendance	:	5 Marks
Home Assignments	:	5 Marks
Preliminary Examination	:	10 Marks

   b. Practical Examination (Lab Course):
   i. Duration of Practical Examination : 3 Hrs.(1 hr. for paper work and oral,2 hrs for live implementation of practical work)
   ii. Nature of Practical Question Paper
      There will be three questions of 15 Marks each, Out of which student have to attempt any two questions.
   iii. Distribution of marks

Total Marks:	50 Marks
Journal-	10 Marks
Oral Examination	10 Marks
Practical Examination-	30 Marks

   Practical Examination conducted by the University examination panel. There will be one external and one internal examiner appointed by university.

8) **Mini- Project**
   The Objective of the mini project is, to aware the student with current technology to be used in the IT industry. The language/platform of the mini-project to be selected from the subject studied in the previous and present semester. The Group size of maximum 4 students can do mini project.

9) **Major Software Development Project :**
   The Objective of the major project is to design and develop the live application with current technology to be used in the various industries. The Group size of maximum three students can do major project. Project Viva-Voce Examination will be conducted by the external examiner panel appointed by university.

11) **Requirements:**
   a) Core Faculty:

First Year: One Full time lecturer in Computer Application & one Lab assistant
Second Year: One Full time lecturer in Computer Application
Third Year: One Full time lecturer in Computer Application & one Lab assistant
In addition to the above three Full time faculties & two lab assistant, there shall be part time or CHB faculty for other than computer subjects.

b) Non Teaching Staff:
One Clerk and two peons.

c) Computer Lab:
Twenty computers with electricity backup facility, Internet Broadband connectivity.

d) Other Infrastructure requirements
- **Class Room:** At least 3 classrooms of seating capacity 80 students.
- **Internet:** At least 256 mbps Broadband connectivity.
- LCD projector.
- Licensed Software's as per syllabi.
- Library should have sufficient copies of books prescribed in the syllabi.
- At least two computer related journals and two research journal in Management and allied areas.
- Industrial study tour and Industry guest lectures should be organized.
- Organize placement activity for final year students.

Paper No-101
Fundamentals Of Computer

Unit 1: Introduction to Computer (15)

Introduction, Characteristics, History & Evolution, Organization of Computers, Concept of Hardware & Software, Applications of Computers in Various Fields, Computer Hardware and Software, Computer Languages – Machine Language, Assembly Language, High-level Language, Language translators: Compiler, Interpreter, Assembler, Features of Good Language.

Unit 2: Peripheral Devices (15)

Input Devices – Keying: Keyboard, Touch screen, Pointing: Mouse, digitizer, Joystick and scanning devices: Scanner, OMR, OCR, and MICR. Output Devices – Monitors (CRT, TFT, LCD, Plasma), Screen Image Projector, Printers & its types, Plotters. Memory Devices - Primary Memory & its types (RAM, ROM), Secondary memory & its types (Hard Disk, Flash Drives, Magnetic Tape, Optical Discs- CD, DVD, Blue-Ray)

Unit 3: Number Systems & Computer Codes (12)

Number System - Decimal, Binary, Octal & Hexadecimal, Conversion from One base to another base. Computer Codes - : BCD, EBCDIC, ASCII

Unit 4: Introduction to OS (18)

Meaning and Definition, Structure of O.S., Types of O.S., Functions of O.S., DOS - Internal & External commands. Windows Operating system: Components of window- Desktop, windows explorer, control panel, Managing the files and folders, Accessories: Paint, calculator and notepad.

Reference Books -

1. Computer Fundamentals by P.K.Sinha and Priti Sinha.
2. Computer fundamentals by Rajaraman.
3. Introduction to Data Processing By Prof. D. R. Patil, Pawar, Lad, Shinde (Dreamtech Publication)
5. Computer Today – Basandara
6. Computer Fundamentals, Architecture & Organisation By B. Ram
7. Information technology by D. S. Yadhav.

Paper No-102
Programming in 'C' Part-I

Unit 1: Problem Solving Methods: (15)

Problem definition, analysis. ALGORITHM: Definition, notations, characteristics of algorithm, examples on algorithm. FLOWCHARTS: Definition, features of flowcharts, symbols, examples, coding, running, debugging-types of errors (syntax, Zogical, runtime errors.)

Unit 2: Introduction to c: (15)

History, features of c language, Character set, Identifiers: variables, constants, symbolic constants, keywords. Data types, Operators: Arithmetic, relational, logical, assignment, bitwise, increment/decrement and special operators. Structure of program, Input and Output Functions.

Unit 3: Control Structures: **(15)**

Conditional statements: if, If-else nested if-else, switch statement. Loops: while, for, do..While loop, Unconditional statements: Break, continue, exit, goto statements.

Unit 4: Arrays and Strings: **(15)**

Arrays: Meaning and definition, Declaration, Initialization and types of arrays (single and multidimensional arrays). Strings: Meaning and definition, Declaration, Initialization String functions-
strlen(),strrev(),strlwr(),strupr(),strcat(),strcmp()strcpy().Handling of character array.

Reference Books -

1. The C programming Language by Ritchie and Kernighan.
2. Let us C by Y.C. Kanetkar
3. Introduction to programming using C by Prof.D.R.Patil, Pawar, Shinde and Lad(Dreamtech).
4. Programming in C by D Ravichandran.
5. C Programming by Venugopal.

Paper No-103
Principles of Management

Unit-1- Introduction to Management **(15)**

Definition of Management, nature and importance of management, Functions-Planning, Organizing, Staffing, Directing, Controlling. Levels of management, Management as a Profession, Role of Manager in Organization, Contribution of F.W. Taylor, Henry Fayol, Max Weber Elton Mayo and Peter Drucker to management theory.

Unit-2- Planning & Organizing **(15)**

Meaning, Nature and Importance and limitation of planning, Types of plans, steps in planning. Organizing :- Meaning, definition, Importance, principles of organizing. Formal & Informal organization, Virtual organization.

Unit-3- Staffing & Motivation **(15)**

Staffing:- Meaning, Definition, Characteristics, Process of Staffing, Sources of Recruitment & Scientific Selection Procedure Training & Development, Performance appraisal.

Motivation:- Meaning, definition & importance of motivation, Theories of motivation –Need Theory , Two factor theory & Theory X & Y.

Unit-4- Leading & Controlling **(15)**

Meaning, Definition, Important aspects of Leading: function, Supervision, Leadership, Challenges of Leadership, Functions of a Leader, Leadership Styles, Team Leadership.

Controlling :- Meaning, Importance, Steps in Control Process, Types of control-Feed forward control, Concurrent control & feedback control, Techniques of control

Reference Books

1. Essential of Management by Kncotz & O' Donnel.
2. Principles & practice of Management by Geeage Terry.
3. Principles & Practice of Management by Tripathis C.reddy
4. Management a global Practice-Heinz Welthrich & Harold Koontz.
5. Management –L.M.Prasad
6. Fundamentals of Management – Stepham P. Robbins
7. Principles of Management- P. Subba Rao

<center>**Paper No-104**</center>
<center>**Financial Accounting**</center>

Unit-1- Book-Keeping & Accounting:- **(15)**

Meaning, Internal & External uses of Accounting information, Accounting Concepts & Conventions, Accounting Procedure:- Transactions, Types of accounts, Rules of accounting, Source Documents:- Cash voucher, Petty Cash voucher, cash Memo, Receipt, Debit Note, Credit Note, Paying slips, withdrawals, Cheque

Unit-2 – Journal & Ledger: Journal, Subsidiary Books, Cash Book, Ledger Posting. **(15)**

Unit-3-Final Accounts: **(15)**

Preparation of Trial balance, Preparation of final Accounts of Sole Traders & Partnership firms.

Unit-4- Reconcilation and Depreciation: **(15)**

Bank Reconciliation Statement, Methods of Depreciation: Straight line Methods, Reducing Balance Method, Change in Depreciation Method.

Reference Books
1. Advance Accountancy:- M.C. Shukla & T.S. Grewal
2. Advance Accountancy:- S.C. Jain & K.L. Narang
3. Advance Accountancy:- S.M. Shukla
4. Advance Accountancy:- Maheshwari
5. Advance Accountancy:- R.L.Gupta

<center>**Paper No- 105**</center>
<center>**Office Management and Communication**</center>

Unit-1: Introduction to Office Management **(15)**

Meaning of traditional office and E-Office-Activities of office-Office Management-meaning-elements of office management-purpose, environment, means and personnel, function of office management- planning, organizing, staffing directing, motivating, co-ordinating, and controlling.

Unit-2: Location, Layout and Environment of Office **(15)**

Location of office-meaning, principles-factors affecting location-Urban versus suburban location. Office layout-meaning and objectives, factors affecting office layout-preparing the layout-relayout. Office environment-meaning-importance-elements-office lighting, ventilation and temperature control, interior decoration, furniture, freedom from noise and dust, safety, sanitary arrangement, security and secrecy.

Unit-3: Communication **(15)**

Meaning, characteristics and importance of communication-classification of communication-formal and informal communication-advantages and disadvantages-means of formal and informal communication.

Unit-4: Communication Process **(15)**

Steps in communication process-role of communication in business organization-barriers to effective communication-remedies for improving effectiveness of communication, E-communication-meaning-importance tools-benefits and limitations.

Reference Books

1. J.C. Denyar-Office Management
2. R.K.Chopra-Office Management
3. Leffingwell and Robinson-Text book of Office Management
4. George R.Terry-Office Management and Control
5. P.H.Reddy-Office Management and Communication
6. Sharma, Gupta and Nayyar-Office Management
7. Essentials of Business Communication - Rajendra Pal and J.S.Korlahalli
8. Business Communication-U.S.Rai and S.M.Rai
9. Bussiness Correspondence and Report Writing-R.C.Sharma and Krishna Mohan
10. Business Communication-Robert MaArcher, Ruth Pearson.

Paper No-106
Lab Course Based on Paper-101

- **DOS OS**
  1) Introduction ,installation and working of DOS
  2) Internal DOS Commands
  3) External DOS commands

- **WINDOWS OS**
  1. Creating folder, cut, copy, paste, managing file and folder in windows.
  2. Arrange icons, set display properties
  3. Adding and removing software and hardware
  4. Setting date and time, screen saver and appearance.
  5. Using windows accessories.(Notepad, WordPad, Paint)
  6. Settings of all control panel items
  7. Search file

Note: Minimum six assignments from DOS OS and ten assignments from WINDOWS OS to be covered.

Paper No-107
Lab Course Based on Paper-102

1. Simple programs using printf(), scanf()
2. Programs based on if statements
3. Programs using switch statement
4. Programs based on while loops
5. Programs based on for loops
6. Programs based on do loops
7. Simple program using array to find frequency of each value within an array.
8. Programs on matrices like addition, subtraction and multiplication and transpose.
9. Programs on sorting and searching methods.
10. Programs based on string handling.

Note : All programs are to be written in 'C' language and minimum 16 assignments to be covered during practical in each semester.

Unit-1: Introduction To MS-Office (10)

Introduction to software packages, Components of MS-Office, Features of MS-Office.

Unit-2: MS-Word (20)

Introduction, Menus, Shortcuts, Document types, **Working With Documents**-Opening, Saving, Closing, Editing Document, Using Toolbars, Rulers, Help, **Formatting Documents**-Setting font, paragraph, **Page Style**-Setting foot notes, page break, Line break, creating sections and frames, Inserting clip arts, pictures, Setting document styles, **Creating Tables**-Settings, borders, alignments, Merging, splitting, sorting rows and columns, **Drawing**-Inserting, drawing, formatting, grouping, ordering, rotating pictures, **Tools**-Word completion, Spell check, Macros, Mail merge, Tracking Changes, Security, Printing Documents .

Unit-3: MS-Excel (15)

Introduction, Spread sheet application, Menus, Tool bars and icons, **Spreadsheet**-Opening, saving, closing, printing file, setting margins, Converting file to different formats, spread sheet addressing, **Entering And Editing Data**- Copy, cut, paste, undo, redo, find, search, replace, filling continuous rows and columns, inserting data cells, columns, rows and sheet, **Computation Data-** Setting formula, finding total in rows and columns, **Functions Types**- Mathematical, Group, string, date and time, **Formatting Spread Sheet**- Alignment, font, border, hiding, locking, cells, highlighting values, background color, bordering and shading, **Working With Sheet**-Sorting, filtering, validation, consolidation, subtotals, **Charts**-Selecting, formatting, labeling, scaling, **Tools**- Error checking, spell check, formula auditing, tracking changes, customization .

Unit-4: MS-Power Point (15)

Introduction, Opening new presentation, Presentation templates, presentation layout, **Creating Presentation**- Setting presentation style, adding text, **Formatting**- Adding style, color, gradient fills, arranging objects, adding header and footer, slide background, slide layout, Slide Show, **Adding Graphics-**Inserting pictures, movies, tables, **Adding Effects**-Setting animation and transition effects, audio and video, Printing handouts.

Reference Books:

➢ Microsoft Office 2010 Bible- WILEY.

➢ Microsoft Office-Word 2007 inside out Microsoft Press Publication.

➢ Microsoft Office-Excel 2007 inside out Microsoft Press Publication.

➢ Step by step 2007 Microsoft Office system by Curtis Frye, Joyce Cox, Steve Lambert.

➢ Microsoft Office-Power Point 2007 Plian and simple- Nancy Muir.

Unit-1 User defined functions: (15)

Need, multi functioned program, form of a c function, return value and their type, calling a function, category of a functions, functions with array Storage classes: auto, external, static and register.

Unit- 2 Pointers: (15)

Understanding pointers, accessing address of variable, declaration and initializing pointers, pointer expression, pointer to array and functions, function call by value and by reference.

Unit- 3 Structures and Unions: (15)

Defining and processing a structure, array of structure, array within structure, structure within structure, Defining and processing a Unions.

Unit- 4 File Handling: (15)

Defining and opening a file, File opening mode- open, modify, write, Closing a file, Functions:fopen(),fclose(),fscanf(), Input/Output Operations on file: getc(), putc(), getw(), putw(), fprintf(), fscanf(), ftell(), fseek(), rewind().

Reference Books

1. Introduction to Programming Using C- A. J Pawar, R. A. Lad, S. S. Shinde, D. R. Patil(Wiley-Dreamtech)
2. Programming in ANSI C - E. Balagurusamy
3. Programming in C – Schuam outline Series
4. Let Us C – Yashwant Kanetkar

Paper No-203
Bank Management

Objectives:

1- To study and understand the nature of Bank Management
2- To be aware about recent technologies required to be adopted for efficient Banking.

Unit-1 Bank Organization: (15)

Meaning and concept of Bank Importance and Functions of Bank-Meaning and concept of Bank Management- Customer centric v/s Business Centric management-organizational set up of commercial bank-Bank organization- Role of Director, General manager- Important Provisions of and Branch manager Important Provisions of - Banking regulation Act- 1949.

Unit-2 Liquidity and credit Management- (15)

Liquidity policies- Day to Day management of the money position-Fund based credit management NPA- supervision and Follow up credit administration and monitoring of advances-Non fund based credit management-concept of Leasing and Hire purchase.

Unit-3 Investment-Portfolio and profit Management (15)

Investment practices and policies-fundamental principles of security investment-The determinants of bank profits-Management of -
  Long term & Short term Funds Capital to Risk Assets Ratio (CRAR)
  Long term and short term funds- Management of reserves-
  Risk Management.

Unit-4 Capital Management and Information Technology (15)

Banking sector reforms- Capital adequacy-E- banking, E-money and Tele Banking-Cyber Law-Management Information system.

Reference Book:-
1. Management of Indian Financial Institutions- R.M.Srivastawa.
2. Commercial Bank Management- Edward w.Reed
3. The Management of Bank funds- Roland I Robinsion
4. Development Banking- Issues and options-Vasant Desai
5. Modern Banking of India- O.P. Agarwal
6. Banking principles and operation-M.N.Gopinath

Paper No-204
Financial Accounting with Tally

Unit-1: Financial Accounting   **(15)**
Accounting of Non-trading/Non profit making organizations- Preparation of Receipts and Payments A/C, Income and Expenditure A/C and Balance /Sheet.

Unit-2: Profit and Loss Account   **(15)**
Accounting of Limited company Type of shares and Debentures, Classification of share Capital, Preparation of Profit and Loss A/C and Balance Sheet in verticle format.

Unit-3: Introduction to Tally   **(15)**
Introduction to Tally - Features of tally, creation of company, Accounts only and Accounts with, Getway of Tally, Accounts confisation, Groups and Ledgers, Voucher entry with Bill wise details Interest computation, order processing.

Unit -4: Reports   **(15)**
Reports- Profit and Loss A/C, Balance Sheet, Interest calculation. Statutory Master-VAT. computation, VAT Forms, CST Reports, TDS Repots, TCS Reports, Inventory Report, Day Book.

Reference Books-
1. Advanced Accountancy- Shukla, Grewal and Gupta
2. Advanced Accountancy- Jain and Narans
3. Advanced Accountancy- Maheshwari
4. Advanced Accountancy- L.B.Singh & V.P. Singh
5. Computerized Financial Accounting Using Tally - Rajan Chougale.

Paper No 205
Subject- Principle of Marketing

Objectives- 1. To help the students to understand the concepts of Marketing
            2. To acqudint the students with application of I.T. In Marketing.

Unit-1: Introduction to marketing   **(20)**
A) Introduction :
Meaning, & definition of Marketing, features of Marketing, Significance of marketing, core concepts of Marketing- Need, Want, Demand, Value, Satisfaction, exchange, transaction & relationship.
Modern Marketing concept, holistic marketing & green marketing. Marketing in 21st Century- Challenges & opportunities.
B) Marketing Environment- Elements in Micro & Micro environment, Analysis of their impact on Marketing function of an organization

Unit-2: **(15)**
A) Marketing Mix: - 7 P's of marketing mix- product, price, place, promotion, people process & physical evidence.
B) Marketing of Services- Meaning, Characteristics of services, problems in services Marketing, Outsourcing of I.T. services.

Unit-3: **(15)**
A) Marketing Research: - Meaning & importance, Steps in Marketing research process, Marketing Information System- concepts & components
B) E-Marketing: Concept & techniques, significance of e-Marketing in 21st Century.

Unit-4: **(10)**
A) Consumer Behavior: Meaning & significance of consumer behavior, factors affecting consumer behavior.
B) Market Segmentation: Concept & importance of marketing segmentation, Bases of Market segmentation.

Reference Books
1. Philip Kotler- Marketing Management Prentice Hall of India Pvt. Ltd. delhi (10 th edition Sept 2001)
2. Ravi Shankar- Service Marketing – The Indian Perspective, Excel Books (1998)
3. S.M. Jha- Service Marketing Himalaya publishing House , Mumbai (1994)
4. V.S. Ramaswamy & S Namakumari- Marketing Management Himalaya publishing House Mumbai.
5. William stamtor & Ajay Pandit: Marketing concepts and cases The Mc GraowHill Ltd , New Delhi
6. Amukumanr and N. Marketing Management Vikas Publishing House Pvt. Ltd. New Delhi

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Paper No-206
Lab Course Based on Paper 201, 204
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MS-Word
1. Creating & Editing Document
2. Formatting Document
3. Use of Auto-text, Autocorrect, Spelling and Grammar Tool,
4. Page Formatting, Page Border, Background,
5. Creation of MS-Word-Mail Merge, Macros, Tables.
6. Practice of Printing, page setup etc.

MS-Excel
1. Creating & Editing Worksheet, Fill Handle
2. Use Formulas and Functions
3. Preparing Charts

MS-PowerPoint
1. Creating, Manipulating & Enhancing Slides,
2. Inserting Organizational Charts, Excel Charts
3. Using Word Art
4. Putting Animations and Sounds
5. Inserting Animated Pictures
6. Inserting Recorded Sound Effect

Tally
Different sections of Gateway of Tally, Creation, alteration and deletion of company, recording transactions, creation of ledgers and groups, creation of voucher types, creation of different reports using tally software.

Note: Minimum four assignments from each unit to be covered. (i.e. sixteen assignments)

1. Programs based on user defined functions(covering categories of functions)
2. Programs based on recursion
3. Programs based on pointers(pointer arithmetic, pointer expressions)
4. Programs based on Structures(array of structures, array within structures and structure within structure)
5. Programs based on Unions
6. Programs based on File handling covering basic file operations
7. Programs based on File handling (single and multiple file handling).

Note: All programs are to be written in 'C' language and minimum 16 assignments to be covered during practical in each semester.

Equivalence of Old papers with New Papers of B.C.A. Part - I:
Semester - I

Paper No.	Name of the subject(Old)	Paper No.	Name of the subject(New)
101	Modern Operating Environment	101	Fundamentals of Computers
102	Procedure Oriented Programming in C	102	Programming in 'C' Part-I
103	* Computer Applications in Statistics	103	Principles of Management
104	Financial Accounting with Tally 9.0	104	Financial Accounting
105	Business Communication	105	Office Management And Communications
106	Lab Course I (based on paper no 101 &104)	106	Lab Course Based on Computer Paper-101
107	Lab Course II (based on paper no 102)	107	Lab Course Based on Computer Paper-102

Semester- II

Paper No.	Name of the subject(Old)	Paper No.	Name of the subject(New)
201	DBMS Through MS-Access	201	Software Packages
202	Data Structure Using C	202	Programming in 'C' Part-II
203	* Business Mathematics	203	Bank Management
204	Financial Management	204	Financial Accounting with Tally
205	Principles of Management	205	Principles of Marketing
206	Lab Course III (Based on Paper No. 201)	206	Lab Course Based on Paper-201, 204
207	Lab Course IV (Based on Paper No. 202)	207	Lab Course Based on Paper-202

* Two more attempts are to be given to the candidate for these subjects.