Gondwana University, Gadchiroli

Choice Based Credit System (CBCS)
Syllabus
Of

B.Com. Computer Application
(B.Com. (C/A)) - II
(Semester – III & IV)

(Three Years Graduate Course)

Prepared by

IT and Application Board

2018-2019

BCCA III (Semester III)

Subject	Paper Code	Paper Name	Total Period# /Week	Credit	% of Assessment			
					IA	UE	Total	Min. Passing (40%)
Core Course 7	UBCCAT301	Statistics Technique And Business Mathematics-I	4	4	20	80	100	40
Core Course 8	UBCCAT302	Cost Accounting	4	2	10	40	50	40
	UBCCAT303	Data Base Management System Concept	3	2	10	40	50	
Core Course 9	UBCCAT304	Web Designing (HTML)	3	2	10	40	50	40
	UBCCAT305	Programming with 'C'	3	2	10	40	50	
Skill Enhancement Course-I	UBCCAT306	MIS and System Analysis	3	4	20	80	100	40
Core Course 10 Lab	UBCCAP307	Lab on UBCCAT303	4 Prac. Per Batch	2	20	30	50	20
	UBCCAP308	Lab on UBCCAT304 and UBCCAT305	4 Prac. Per Batch	2	20	30	50	20
Ability Enhancement Compulsory course(AECC)-III	UBCCAS309	Seminar	2	2	50	-	50	20
Non-CGPA Credit Courses(NCCC)-I	UBCCAS310	Democracy and Good Governance	2	2	-	-	-	-
Total				**24**	**170**	**380**	**550**	**220**

Note:-1) In a Group, if any student remains absent in one of the paper then candidate result will be considered as fail in that group even though he/she has scored minimum passing marks in other paper of that group. Candidate need to appear in both the papers of that group.
2) In Practical student must appear External Practical Exam conducted by University in order to clear practical exam.

BCCA - II (SEMESTER –III)

Paper–I: STATISTICS TECHNIQUE AND BUSINESS MATHEMATICS-I

[Max. Marks: 80]

Unit –I
Statistical Data Collection and Measures of Central Tendency

Meaning, Definition of Statistics, Function, Scope, Merits, Demerits, Importance of Statistics. Statistical Data Collection- Primary and Secondary Data, Methods of Data Collection, Measures of Central Tendency – Arithmetic Mean, Median, Mode, Geometric Mean, Harmonic Mean.

UNIT II
Dispersion and Skewness

Range, Quartile Deviation, Mean Deviation, Standard Deviation, Karl Pearson's and Bowley Coefficient of Skewness

UNIT III
Correlation Analysis

Simple Problems on Correlations, Two Way Method of Correlation, Concurrent Deviation Method of Correlation

UNIT IV
Business Mathematics-

Profit or Loss: - Gross profit and net profit, Discount- Cash Discount and trade Discount problem related to profit and loss.
Percentage: - Definition, Meaning, problem on percentage.

BOOKS RECOMMENDED

1. Statistics- R. S. N. Pillia and V. Bhagavathi, S. Chand and Company
2. Basic of Computer and Statistical Techniques – Dr. Rahul Sawlikar and Dr. S. B. Kishor, Das Ganu Prakashan,Nagpur – ISBN –978-81-921757-8-2
3. Statistical Methods and Computer Applications- P.N Arora, N. Guruprasad .
4. Standard Problems and Formulae of Statistics- Dr. Rahul Sawlikar and Dr.S.B.Kishor,Das Ganu Prakashan,Nagpur- ISBN- 978-93-81660-24-9
5. Fundamental of Mathematical Statistics – Gupta andKapoor, Sultan Chand and Sons Publication ISBN- 8180540049

Reference Books

1 Statistical Methods- S.P.Gupta,S. Chand and Company, New Delhi
2 Statistics, Theory, Method and Application- Sancheti and Kapoor.
3 Fundamental of Statistics – A. K. Agrawal and Sahib Singh, PHI 4TH Edition.

BCCA - II (SEMESTER –III)
Paper II: COST ACCOUNTING

[Max. Marks: 80]

Unit -1
Introduction to Cost Accounting

Meaning, Importance, Nature and Scope of Cost Accounting, Methods and Types of Costing, Distinguish between Cost Accounting and Financial Accounting, Element of Cost and Allocation. Single or Output Costing, **Problems relating to Cost-Sheet and Tender**

UNIT -II
Reconciliation Statement-

Causes of Reconciliation Needs, Reasons for difference, Reconciliation of Profits Shown by Financial Accounting and Cost Accounting.

UNIT -III
Process Costing-

Feature of Process Costing, Advantages and Disadvantages, Principle of Process Costing, Application of Process Costing, Problems on Simple Process Including Normal and Abnormal Gain and Wastage. And Joint Product Costing and Sale of By –Product.

UNIT-IV
Contract Costing-

Features, Types of Contract Costing, Certified Work, Uncertified Work, Retention Money, Profits on Incomplete Contracts, Cost-Plus Contract, Treatment of Profits and Problems on One or Two Contracts for One Year Only, Placement of Important Items in the Balance- Sheet of Contract.

BOOK RECOMMENDED

1. Cost Accounting- R. S. N. Pillia and V. Bhagavati,S.Chand and Company, New Delhi
2. Cost and Management Accounting- Dr. Rahul Sawlikar, Dr. K.B.Moharir and Dr. Pradip Ghorpade, Rajani Prakashan,Nagpur. ISBN-978-93-82683-00-1
3. Cost Accounting-M. Khan And P.K. Jain, Tata McGraw Hill ISBN – 13:978-0-07-040224-9
4. Cost Accounting- Dr. R.K.Sawlikar and Dr. R.P.Ingole, Das Ganu Prakashan, Nagpur, ISBN-978-93-81660-40-9
5. Cost Accounting- S.N.Patil and A.N.Patil, Vishwa Publishers and Distributors, Nagpur. ISBN-81-86454-34-9

Reference Books

1. Cost Accounting-M.C.Shukla,T.S.Grewal, M.P.Gupta, S.Chand and Company, New Delhi
2. Practical Costing- B.S.Khanna, I.M.Pandey,G.K.Ahuja,S.C.L.Batra,S.Chand and Company, New Delhi.
3. Cost and Management Accounting (Marathi) Dr.Kishor Moharir, Sunita Moharir, Dr. Pradip Ghorpade, Dr. Vinod Waghale, Das Ganu Prakashan, Nagpur

BCCA - II (SEMESTER –III)
Paper–III: DATA BASE MANAGEMENT SYSTEM CONCEPT
[Max. Marks: 40]

UNIT–I: Database Environment

Basic Terminology, Data Processing, Traditional and DBMS Environment, Components of DBMS, Database Approach -Objectives, Benefits, Characteristics, Advantages of DBMS. Three Tier Architecture, Data Abstraction. **Database Administration:** Role, Functions, Responsibility

UNIT–II: Data Model and Design

Data Models, Record Based Logical Model, Relational Database Structure, Normalization, Normal forms, Functional Dependency, 1NF (First Normal Form), 2NF (Second Normal Form), 3NF (Third Normal Form), Relational Algebra, Codd's Rules

UNIT–III: Working With Ms-Access

Elements of an Access database - Tables, Queries, Forms, Reports, Macros. Introduction to Ms-Access, Designing Database, Crating Database using Wizard, Working with Table. **Field types**– Auto number, Date/Time, Number, Text, Yes/No, Hyperlink. Creating Tables using Design View and Using wizard, Editing Table, Editing Records

UNIT–IV: Query and Form Designing

Query: Filtering Data, Studying different types of Queries, Specifying Criteria in Queries, Filter using multiple criteria. **Forms, Report and Macro:** Procedure to create a form, Reports and Macros

Books:

1) R. Panneerselvam," Database Management System ",PHI, 2006, ISBN : 81-203-2028-X
2) Dr. Madhulika Jain,Vinita Pillai, Shashi Singh and Satish Jain, "Introduction to Database Management", BPB, 2002, ISBN: 81-7656-638-1
3) Bioin C. Desai, " An Introduction to Database Management", GP Pub., 2006
4) Caleste Robinson, " Access 97", BPP, 1998, ISBN : 81-7029-928-4

References:

1) Abraham Silberschatz, Henry F. Korth, S. Sudarshan, "Database System Concept ", McGraw Hill, 2002, ISBN: 0-07-228363-7.
2) Dr. S.B. Kishor,"DBMS and Ms-Access", Das Ganu Prakashan, ISBN 978-93-81660-08-9
3) Sanjay Saxena, "MS Office 2007 in a Nutshell", Vikas Pub., 2011,ISBN-978-81-259-5036-3
4) Rutkosky, Seguin, Audrey, "Microsoft office 2007", BPB, ISBN-10:81-8333-228-5/13:978-81-8333-228-6

BCCA -II (SEMESTER –III)
Paper–IV: Web Designing

[Max. Marks: 40]

UNIT –I: - Introduction to Web Designing

Internet:- Introduction to Internet, Basic Internet Terms, Types of Web Sites, Internet addressing, Protocols, internet Protocols, Services of Internet, Search Engine.

Basic of HTML and Tag:-Introduction To HTML, Features of HTML, Advantages and Disadvantages of HTML, HTML Editors, Step to create and view HTML Document, Basic Structure of HTML Program.

UNIT-II: - Tags List and Linking

Nesting of Tags, Classification of HTML Tags, Block Formatting Tags

List: - Introduction to List, Unordered List, Ordered List, Definition List, Nested List, Difference Between Order and Unordered List.

Linking: - Introduction. Types of Hyperlink, Creation working with Link, Pathnames and types, Types of Linking or Anchors.

UNIT –III: - Multimedia and Tables

Embedding Multimedia:-Introduction , Image format for Internet and HTML, Comparison between .GIF and .JPEG format , Image tag ,Align Image, Embedding Inline Images and External Images, Image as Background of web page , Image as Hyperlink, Image Link code to Thumbnails, Image List, Marquee Image, Image with Paragraph.

Tables- Basic table tags and their related attributes

UNIT- IV: - Advanced HTML

Frames- Frames <Frame> and <Frameset> Tags, Form designs, Form Controls, Text Controls, Password Fields, Radio Buttons and Check Boxes, Reset and Submit buttons, Form Control Selection, Option Processing and text area.

Working with Database:-Database Management System, MS-Access and HTML, Export Ms-Access DATA to HTML.

Books:

1) Greenstein and Feinman, "Electronic Commerce", TMH,2000, TMH, ISBN-0-07-042141-2,.
2) BhushanDewan, "E-Commerce by ", S.Chand,2001, First Ed., ISBN - 81-219-2083-3,
3) Powel, "Complete Reference in HTML", 4TH Ed., TMH

References:

1) Complete HTML , BPB,2010, ISBN-13:978-0-07-070194-6.
2) C.Xavier, "Web Technology and Design",TMH,2010, ISBN-13:978-81-224-1450-9
3) Dr. S.B. Kishor, Rajani Singh, "Web Designing", Das Ganu, ISBN : 978-93-81660-05-8
4) Curt Robbins, "Learning HTML 4.0", BPB Pub., ISBN -81- 7556-481-8
5) Ivan Bayross, "Web Enabled Commercial", BPB Pub., ISBN-81-8333-008-8

BCCA - II (SEMESTER –III)
Paper–V: Programming with 'C'

[Max. Marks: 40]

UNIT–I: Arrays, String Handling

Arrays: Array Definition, Types of Arrays, Initialization of Single and Two dimension array, Writing and Reading data from an array, Bounce Checking, Searching (Linear and binary), Sorting (bubble, insertion, selection) and Merging of two arrays,
String Handling: String Manipulation using string Library functions.

UNIT–II: Function

Function: Definition, Library Function, User Defined Function, Function Prototype, Function Definition, Function Call, Type of User Defined Function, Array and function,

UNIT–III: Structure & Union

Structure: Need of Structure, Period Operator, Initializing Structure, sizeof(), Arrays of Structure, Nested Structures.
Unions: Union Concept and applications, Difference Between Structure and Union, enum.

UNIT IV: Pointer, File Management in 'c'

Pointer: Introduction to Pointer, Understanding Pointers, Declaring Pointer Variables, Pointer and Function (Call By Value and Call By Reference).
File Management in 'C': Introduction, Defining and Closing File, Input and Output Operations on Files.

Books:

1) E.Balguruswami, "Programming in ANSIC", TMH,2009,ISBN-978-0-07-064822-7/0-07-064822-0
2) RAJARAMAN, "COMPUTER PROGRAMMING IN C", PHI, 2002, ISBN-81-203-0859

References:

1) Dr.S.B.Kishor, Dr.V.Godki, S.Madhavi, "Gateway to C Programming", Lambert Pub.Germany,ISBN 9783845414744
2) K.R.VenugopalandS.R.Prasad,"MasteringC",TMH,2008,ISBN-13:978-0-07-061667-7 / 10:0-07-06-1667-1.

BCCA - II (SEMESTER –III)
Paper–VI: MIS AND SYSTEM ANALYSIS
[Max. Marks: 40]

UNIT -I

System Concept, definition, System approach, characteristics, System Elements - Input, Output. Environment Boundary Interface, feedback, Control. Types of Systems, Business system. Data vs information, information and decision making, Value of information, quality of information. Introduction to MIS, definition, need, objectives, benefits, functions, characteristics, Structure of MIS, information requirements at various levels of Management Activities.MIS vs data processing. Types of MIS: IPS, OAS, DSS, Expert system (organization, features & advantages).

UNIT -II

System Development Life Cycle (SDLC) concept & stages. Need, determining user's information requirements- Information gathering - Sources & Methods (Interviews, questionnaires, observation, document analysis). System analysis, planning approach- elements, objectives, constraints, feasibility study, Tools of data recording, DFDs, data dictionary, decision tree, decision table, cost benefit analysis.

UNIT-III

Output input design, form design, process design, process specification, file design, program design, module integration, storage requirement .selection of hardware and software, software controls, system flow chart, user view of processing, modeling input output data. Procedure design, design documentation, user feedback, Project planning & control.

UNIT-IV

Testing and Implementation

Testing: Code testing, specification testing, types of tests, verification and validation systems security and privacy, control measures, disaster recovery plan, system audit, Documentation: user's System. Operations manual, Role and qualities of system analyst as a change agent implementation - Methods of change over, transition and conversion, change management, user training. Post implementation maintenance & review.

Books

1. Elias Award, "System Analysis & Design", Golgotha Publication, 2nd Edition,
2. Edward," System Analysis & Design ", Tata McGraw Hill.
3. Rajaraman, " Analysis and Design of Information System", PHI Publication, ISBN – 8120312270
4. S.B. Kishor, "MIS and System Analysis", Das Ganu, ISBN : 978-93-81660-09-6

Reference Books:

1. Kendall & Kendall, "System Analysis & Design ",PHI Publication, 5th Edition,ISBN-8120321553
2. Dennis, "System Analysis & Design", Wiley Student Publication,3rd Ed. ISBN-9788126508808

B.Com. (C.A.) - II
SEMESTER- III
PRACTICAL -I: DATABASE MANAGEMENT SYSTEM CONCEPTS
UBCCAP307

A] Create table Student (Student_no, Student_name, and Course) in MS-ACCESS with the following details and perform following operations.

Student No.	Student Name	Course
101	Sunil	Vb
102	Anshu	Vb.Net
103	Sonam	Tally
104	Shital	Oracle

1. Use Column width as best fit.
2. Set Studentno as a Primary Key.
3. Insert at least 10 students' records.
4. Display all the students whose name begin with letter 'S'.
5. Display the query view and take out the print out.
6. Add new fields such as Fees, Date_adm ,Date_of_birth, .Address)
7. Add data to above newly fields.
8. Select Studentname, Course and Fees from student table.
9. Delete all the students who were admitted on specific date.
10. Update fees to increase it by thrice.
11. Select all the students of VB.NET paying course fees of 4000.
12. Update table by replacing the course name to TALLY wherever the course fees is 3500.
13. Delete the record where Student name is SONAM.
14. Display the studentname, studentno who was born on '14/6/1996'
15. Replace the Address of student say, ANSHU to PUNE.
16. Remove all the records where number of students is less than 2 for particular course.

B] Create the Tables in which
Stud _per_ Detail(Stud_ no, Stud_ name, Sex, date_ of _birth, Address, Ph _no) and Stud_ off_ detail(Stud_ no Course, Fees, date_ Ad m).

1. Select Stud_ Name, Address from Stud _Per _Detail and Stud _no, Course, Fees from Stud_ off_ detail .

2. Create a report view for above query.

3. Append the records of above tables Stud _Per Detail to Stud _History where Student Date _of_ Birth is

14/06/1996.

4. Print the table design view and datasheet view.

C] Create a table Donar (Donar no, Donar _name BG, Sex) by using following instruction.

1. Use Columnar Layout.
2. Use Blueprint style.
3. Give the title for Form as Donar Details Form.
4. Enter 5 records.
5. Print the Form view.

1) Demonstrate of Logical Format Tag.
2) Demonstrate of Physical (Formatting) style tag
3) Demonstration of Level of Headings
4) Demonstration of Block Alignment
5) Demonstration of ADDRESS tag.
6) Demonstrate the Font Face, Color and Size.
7) Demonstrate the <HR> Tag
8) Demonstrate the Alignment
9) Demonstrate the Scrolling tab using Mercury.
10) Demonstrate of Order List
11) DEMONSTRATE FOR INTERNAL LINKING

GONDWANA UNIVERSITY

GADCHIROLI

COURSES OFFERED

- ARTS
- COMMERCE
- SCIENCE

ARTS
1. ENGLISH
2. MARATHI
3. HINDI

COMMERCE
1. ECONOMICS
2. STATISTICS
3. ACCOUNTS

SCIENCE
1. PHYSICS
2. CHEMISTRY
3. MATHEMATICS

12) DEMONSTRATE THE USE OF TABLE

COLLEGE

COLLEGE					
FYJC			SYJC		
ARTS	COMMERCE	SCIENCE	ARTS	COMMERCE	SCIENCE
58	150	90	75	200	100

13) DEMONSTRATION OF BROWSING BY CATEGORY

BROWSE BY CATEGORY

- WINDOWS
- IT PROFESSIONALS
- HARDWARE
- ALL PRODUCTS
- OFFICE
- BUSINESS USER
- GAMES AND XBOX
- DEVLOPER
- HOME USER
- TRIAL SOFTWARE

14) PROGRAM FOR DESIGNING A SIMPLE FORM

15) Demonstrate the Master page to link another page.
16) Demonstrate link to website.
17) Demonstrate to compose mail.
18) Demonstrate to show or load inline image say sunset.jpeg
19) Demonstrate of Image Hyperlink
20) Demonstrate of Basic table.
21) Demonstration of cell padding attributes
22) Demonstration of Link in the page.
23) A HTML Program to show static linking the web page should contain Title,green background and a link which takes you to another page.

BCCA - II (SEMESTER –III)
Practical -II: Programming with 'C'
UBCCAP308

1) A Program to find addition of two numbers using user defined function.
2) A Program to display "hello friends" using user defined function.
3) A Program to find factorial of a number using user defined function.
4) A Program to find power of a number using user defined function.
5) A Program to accept the list containing 10 numbers and pass it to function to print it.
6) A Program of passing individual elements of structure to function.
7) A Program of Passing complete structure to function.
8) A Program to enter the marks of 5 subjects of 3 students and also find the total marks of each student using structure with array.
9) A program to evaluation following series.

   $e^x = 1 + x + x^2/2! + x^3/3! + x^4/4! + \text{----------} + x^n/n!$

10) A program to define and accept the element of structure
    1) Empno.
    2) Name
    3) Basic pay and display the same structure along with DA, CCAand gross salary. DA and CCA are calculated as follows.
       DA= 91% of basic salary
       CCA= RS 100/-
       consolidation.
11) A Program to find the product and division of two numbers using pointer
12) A Program to find area of circle using pointer.
13) A Program to interchange the contents of two variables using call by value.
14) A Program to swap the contents of two variables using call by reference.
15) A Program to access the array element in different ways.
16) A Program to accessing two dimensional array elements using pointer.
17) A Program to print character string.
18) A Program to demonstrate structure pointer.
19) A Program to demonstrate pointer to pointer.
20) A program to Sort the string using Pointer.
21) A function length () which count the length (number of character in the given string.)
22) A function concat () with will concatenation the string t to the end of string s.
23) A program to simulate DOS TYPE command.
24) A program to count number of characters include uppercase and lowercase latter, digits, punctuations, space, words and number of lines in given file.
25) A program to create data file "Student.dat" having fields, Rollno, Name and Address
26) A program to read and display the contents of data file "Student.dat"

BCCA - II (SEMESTER – III)
UBCAS309
Seminar

[Max. Marks: 50]

The seminar must be based on some current trends related to IT/Computer Science/Computer Application/Commerce & Management. A Student must present the PowerPoint presentation along with Seminar Report. Students are requested to follow the following guidelines while choosing & preparing their seminars.

Guidelines to BCCA Seminar

1) Name of seminar topic must be latest to the current trends and should not be repeated.
2) Seminar topic is to be approved by the departmental allocated guide before the deadline prescribed by university time-table.
3) Seminar can be given in group of Maximum 3 students.
4) Students are allowed to use graphics/animation/audio-video aids for their presentation.
5) Seminar work will be evaluated by Internal examiner.
6) Students are requested to submit their seminar reports on or before the deadline with the concern of their respective guide otherwise students will be responsible for any appropriate action.
7) Seminar Report should be submitted to department in following format,
   A printed in double line space using A4 size bond paper, with a left margin of 1.5" and right margin of 1.0" with proper spiral binding to be done. Only one copy need to be submit.
8) Students are requested to obtained necessary certificates and declaration to be duly enclosed in the report.

BCCA II (Semester IV)

Subject	Paper Code	Paper Name	Total Period# /Week	Credit	% of Assessment			
					IA	UE	Total	Min. Passing (40%)
Core Course 11	UBCCAT401	Statistics Technique And Business Mathematics-II	4	4	20	80	100	40
Core Course 12	UBCCAT402	Management Accounting	4	2	10	40	50	40
	UBCCAT403	Front End Development With Visual Basic	3	2	10	40	50	
Core Course 13	UBCCAT404	Mathematics	3	2	10	40	50	40
	UBCCAT405	Programming With C++	3	2	10	40	50	
Skill Enhancement Course (SEC)-II	UBCCAT406	Project Management	3	4	20	80	100	40
Core Course 14 Lab	UBCCAP407	Lab on UBCCAT403	4 Prac. Per Batch	2	20	30	50	20
	UBCCAP408	Lab on UBCCAT405	4 Prac. Per Batch	2	20	30	50	20
Ability Enhancement Compulsory course(AECC)-IV	UBCCAS409	Seminar	2	2	50	00	50	20
Non-CGPA Credit Courses(NCCC)-II	UBCCAS410	Environment Science	2	2	-	-	-	-
		Total		24	170	380	550	220

Note:-1) In a Group, if any student remains absent in one of the paper then candidate result will be considered as fail in that group even though he/she has scored minimum passing marks in other paper of that group. Candidate need to appear in both the papers of that group.

2) In Practical student must appear External Practical Exam conducted by University in order to clear practical exam

BCCA - II (SEMESTER –IV)

Paper–I: Statistics Technique And Business Mathematics-II

[Max. Marks: 80]

UNIT – I

Regression Analysis – Simple Problems on Regression, Mean and Standard Deviation Method, Equation Method (Including One Equation)

UNIT – II

Index Number – Laspeyre's Method, Paasche's Method, Dorbish and Bowley Method and Fisher Ideal Method

UNIT – III

Tests of Significance - Parametric Tests
Chi-Square Test – A Non Parametric Test
F-Distribution and ANOVA Table

UNIT – IV

Business Mathematics – Ratio and Proportion, Simple Interest, Compound Interest

BOOKS

1. Statistics- R. S. N. Pillia and V. Bhagavathi, S. Chand and Company
2. Basic of Computer and Statistical Techniques – Dr. Rahul Sawlikar and Dr. S. B. Kishor, Das Ganu Prakashan,Nagpur – ISBN –978-81-921757-8-2
3. Fundamental of Statistics- Elhancs D.N.
4. Statistical Analysis- Dr.Rahul Sawlikar, Payal Prakashan,Nagpur- ISBN-978-81-922554-3-9

Reference Books

1. Fundamental of Mathematical Statistics – Gupta andKapoor, Sultan Chand and Sons Publication ISBN- 8180540049
2. Statistical Methods- S.P.Gupta, S.Chand and Company, New Delhi
3. Statistics, Theory, Method and Application- Sancheti and Kapoor.
4. Fundamental of Statistics – A. K. Agrawal and Sahib Singh, PHI 4TH Edition.

BCCA - II (SEMESTER –IV)
Paper–II: Management Accounting

[Max. Marks: 80]

UNIT I

Introduction :- Meaning, Object, Nature, Advantages, Limitations of Management Accounting, Tools and Techniques of Management Accounting, Distinguish between Cost, Management and Financial Accounting. **Business Budgeting**- Meaning, Types of Budget, Flexible Budget and Problems related to Flexible Budget, Cash Budget

UNIT II

Break Even Analysis – Meaning, Need, Importance and Limitation, Computation of Profit-Volume Ratio, Break –Even-Point, Fixed Cost, Margin of Safety, Contribution, Estimated Sales for required Profit and Estimated Profit for given Sales, Changes in Sales, Variable Cost and Fixed Cost.

UNIT III

Ratio Analysis- Meaning, Nature, Significance and Limitation of Ratio Analysis. Preparation of Income and Expenditure Statement, Computation of Ratios relating to Trading and Profit and Loss Account and Balance-Sheet Ratios such as Current Ratio, Liquid Ratio, Stock to Working Capital Ratio, Debtor Turnover Ratio, Creditor Turnover Ratio, Fixed Assets Turnover Ratio.

UNIT IV

Fund Flow Statement- Meaning, Concepts, Importance and Limitation, Preparation of Schedule of Changes in Working Capital and Fund Flow Statement.

BOOKS RECOMMENDED

1. Management Accounting – R. S. N. Pillia and V. Bhagavati, S. Chand and Company, New Delhi
2. Cost and Management Accounting - Dr. Rahul Sawlikar, Dr. K.B. Moharir and Dr. Pradip Ghorpade, Rajani Prakashan,NagpurISBN-978-93-82683-00-1
3. Cost and Management Accounting- Y.R.Mahajan, Pimplapure Prakashan, Nagpur
4. Management Accounting- Dr. R.K.Sawlikar and Dr. R.P.Ingole, Das Ganu Prakashan,Nagpur.ISBN-978-93-81660-41-6

Reference Books

5. Cost and Management Accounting(Marathi) Dr.Kishor Moharir,Sunita Moharir,Dr.Pradip Ghorpade,Dr.Vinod Waghale,Das Ganu Prakashan,Nagpur
6. Cost and Management Accounting(Marathi)- Dr.Sudhir Bobhankar,Dr.Megha Kanetkar,Shri.Sainath Prakashan,Nagpur
7. Cost and Management Accounting- Shashi K.Gupta,Kalyani Publisher, New Delhi

BCCA -II (SEMESTER –IV)
Paper–III: Front End Development with Visual Basic
[Max. Marks: 40]

UNIT-I: Introduction to Visual Basic

Introduction: Integrated Development Environment (IDE) – Features, Event Driven Programming

Visual Basic Control: Form, Label, Textbox, Frame, Checkbox, Option Button, ListBox, ComboBox, Timer, Scrollbar, Picture, Image, File Controls, Artwork Control

UNIT-II: Programming Constructs and Array

Programming Constructs: Data Types, Variable, Constant, Operator, System Defined Function, Dialog Box and Creating User Interface

Control flow statement: If-Then, Select-Case, For-Next, While Wend, Do-Loop Statement. With..End With, DoEvent Statement

UNIT-III: Array and Procedure

Array: One Dimensional Array, Built-in Array Function, For. Each Loop, Arrays Types **Procedure:** Types of Procedure, Subroutine, Function, Module

ActiveX Control: Tab Strip, Status Bar, Slider, Month View, DTPicker, Common Dialog

UNIT-IV: Menus and Interface

Menus: Menu Editor, Creating Menus, Utility features provided by Menu Editor, Modifying Menu at Run Time, Pop-Up Menu, Creating Toolbar using Image List
Interface: SDI, MDI,

.**Books**:

1) Evangelos Petroutsos , "Mastering Visual Basic 6", BPB, 2005 ISBN-81-7635-269-1.
2) Dr. S.B. Kishor, "Front End Development", Das Ganu Prakashan.
3) MoelJerke, "Complete Reference Visual Basic 6",TMH, 2004, ISBN -0-07-463666-9.
4) Steve Brown, "Visual Basic 6.0 Complete", Complete Idiot‟s Books, ISBN 978-0789718129

References:

3) Peter Norton‟s , " Visual Basic 6.0" ,SAMS tec-Media,2006,ISBN-81-7635-150-4
4) Michael Halvorson, " Learn Visual Basic 6.0 Now",PHI, ISBN 0-7356-0729-X
5) Michael Vine , "Visual Basic Programming – For Absolute Beginner", PHI, ISBN: 0761535535
6) Paul Sheriff , " Teaches Visual Basic 6",PHI978-8120315624

BCCA -II (SEMESTER –IV)
Paper–IV: Mathematics

[Max. Marks: 40]

Unit I:- Sets and Logic

Fundamental:-Sets and subsets, Operations on sets, Sequences, Division in the integers, Matrices, Mathematical structures.
Logic:-Proposition and logical operations, Conditional statements, Methods of proof, Mathematical induction.

Unit II:- Mathematical Logic:-

Statement and Notation, Connectives, Normal forms, The theory of inference for the statement calculus, The predicate calculus, inference Theory of the predicate calculus.

Unit III:- Counting, Relations and Digraphs

Counting- Permutations, Combinations, The pigeonhole principle, Recurrences religions.
Relations and Digraphs:- Products sets and partitions, Relations and Digraphs, Paths in relations and digraphs, Properties of relations, Equivalence relations, Computer representation of relations and digraphs, Manipulation of relations, Transitive Closure and Warshall's algorithm.

Unit IV:- Semi groups and Groups

Semi groups and Groups: Binary operation revisited, Semi groups, Products and Quotients of semi groups, Groups, Products and quotients of groups.

Books:
1) J.P. Tremblay and R. Manohar, "Discrete Mathematical Structure with Applications to Computer Science", TMH, ISBN- 0-07-463113-6
2) Bernard Kolman, Robert C. Busby and Sharon Ross, "Discrete Mathematical Structure", PHI,ISBN- 978-81-203-3689-6

References:
1) E. Goodaire , "Discrete Mathematics with Graph theory", PHI,. ISBN- 100131679953
2) J. K. Sharma, "Discrete Mathematics", McMillan, ISBN-9780230322301

BCCA -II (SEMESTER –IV)
Paper–V: Oops Programming with C++

[Max. Marks: 40]

UNIT -I: Object Oriented Concepts, Control Structures & Function

Introduction: Basic Elements of Programming, Console I/O Operations, Function: Function Prototyping, Call and Return By Reference, Inline Function, Default and Const Arguments, Function Overloading

UNIT -II: Classes and Object

Object Oriented Methodology: Basic Concepts/Characteristics of OOP. Advantages and Application of Oops, Procedural Programming Vs OOP. Classes and Objects: Specifying a Class, Creating Objects, Private & Public Data Members and Member Functions, Defining Inline Member Functions

UNIT -III: Constructors, Destructors, Operators Overloading and Inheritance.

Constructors and Destructors: Introduction, Parameterized Constructors, Multiple Constructors in A Class, Constructors With Default Arguments, Dynamic Initialization of Objects, Copy Constructors, Dynamic Constructors, Const Objects, Destructors.

UNIT -IV: Constructors, Destructors, Operators Overloading and Inheritance.

Operators Overloading: Definition, Binary Operator (Addition and Subtraction) Overloading, Rules for Operator Overloading. Inheritance: Defining Derived Classes, Single, Multilevel Inheritance

Books:

1) K.R.Venugopal, Rajkumar, T. Ravishankar,"Mastering C++",TMH ,ISBN:0-07-463454-2
2) Dr. S.B. Kishor, "Object Oriented Programming with C++", Das Ganu Prakashan, ISBN-978-93-84336-24-0
3) Farrel,"Object-Oriented Programming using C++",Cenage Pub, ISBN: 9788131505175

References:

1) Parimala N, "Object Orientation through C++", Macmillan India Ltd. Publication, ISBN:-0333 93202-1

2) E Balagurusamy, "Object Oriented Programming with C++ ", Tata McGraw Hill Publishing Company Limited, New Delhi, ISBN:- 13- 978-07-066907-9.

BCCA -II (SEMESTER –IV)
Paper–VI: Project Management

[Max. Marks: 80]

UNIT- I: Project Management

Management Spectrum, the People, the Product, the Process, the Project, Project Manager-Role and Responsibilities, Project Estimation – Introduction, Decomposition Techniques-Software Sizing, Problem Based Estimation, Loc Based, FP Based Estimation.,

Unit – II: Project Scheduling

Basic Concepts, Project Scheduling, Basic Principles, Relationship Between People and Effect, Effort, Effort Distribution, Definition A Task Network- CPM/PERT, Gantt Chart.

UNIT –III: Microsoft Project

Introduction Microsoft Project, Menu Bar, Using the Toolbars: Using Tool Tips, Using the Standard Toolbar, Using the Formatting Toolbar, Open, Save, Save as Views, Changing to Calendar View, Changing the Look of the Calendar – (for Printing).Using the Gantt Chart View: Opening the Gantt Chart View, Using the Components of the Gantt Chart View, Moving the Border Between the Panes., Understanding the Project Information: Starting a New Project, Using the Project Information, Window.

Unit – IV : Advanced Microsoft Project

Understanding the Project Calendar: Setting up a Working Calendar, Using Default, Working Time, Creating a New Calendar, Changing Default Working Time Changing Time for,Individual Days, Entering a Shut-Down Period, Linking Your New Calendar to the Project, Understanding File Properties: Understanding Properties, Examining Properties, Using Save and Save as: Saving and Saving as, Saving a Project for the First Time, Saving for Future Up-Dates to the Project.

Books:

1) Elias M. Award, “System Analysis and Design”, Galgotia Publication
2) Newton, “Project Management Step By Step “,Pearson Publication,ISBN-9788131719152
3) Maylor, “Project Management”, 3rd Ed., Pearson Pub., ISBN-9788177580365.

References:

1) Whiteen, Bentley, Dittman, “System Analysis and Design Methods”, McGraw-Hill
2) Royce, “ Software Project Management”, Pearson Publ., ISBN- 978177583786

BCCA -II (SEMESTER –IV)
Practical-I: Front End Development with Visual Basic

1. Design a form to accept First, Middle and Last Name and display the full name (Concatenate three text box) on Label when user click on Command Button.
2. Design an application that gives five choices of colors. Design an application to choose any one color using option button and change the ForeColor of TextBox.
3. Write an application to add and remove the name of city from combo box
4. Design a VB screen, to display current time in digital format continuously after every one second and change the background color of form.
5. Build the application, which marquee the caption of Form
6. Build the application, to convert the Fahrenheit temperature selected through scrollbar value into corresponding temperature is Celsius.
7. Build a application that collects marks for five different subjects. Calculate total, If total is >= 500 display message" You are allowed" otherwise display "You are not allowed."
8. A book stall gives discount on the books as per the following conditions,

No. of Books Purchased	Discount
<=5	Nil
>5 and <=10	10%
>10 and <=15	12%
> 15	20%

   Create a form as follows to calculate the Discount
9. Build the VB application that converts a number entered into the Textbox to Octal, Hexadecimal and Decimal.
10. Build the application, to accept the password within time limit say 8 second otherwise display a message time elapsed.
11. Build the application using timer for personal appointment remainder while working with computer system.
12. Evaluate following sin(x) series

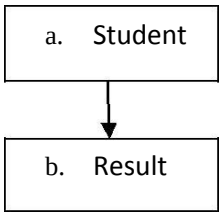
i. Sin(x) = x – x^3/3! + x^5/5! – x^7/7! + x^9/9! - …….

13. Build the application, to change the color of Frame using RGB function from the values that are set by 3 Scroll bars.
14. Build a Calculator application to perform basic arithmetic operation
15. Build the application, to accept the temperature of Number of days passed in the current month and determines the highest and average temperature.
16. Demonstrate the working of data bound controls
17. Create a data bound control application to perform various data operation using DAO Control. Assume Database Name and Table Name is Donor having 4 fields Donor_Number, Donor_Name, Date_of_Birth, Donor_Blood and Sex.
18. Create a data bound control application to perform various data operation using ADO Control. Assume Database Name and Table Name is Donor having 4 fields Donor_Number, Donor_Name, Date_of_Birth, Donor_Blood and Sex.
19. Write an application to divide the number by another and it must be able to handle any error that may arise during run time.

BCCA -II (SEMESTER –IV)
Practical-II-: Programming with 'C++'

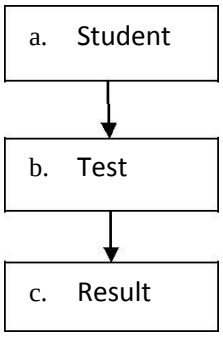
1) Write a cpp program to find roots of quadratic equations.
2) Write a cpp program that will ask for a temperature in Fahrenheit and display in Celsius.
3) Write a cpp program which accepts marks of three subjects. Calculate total & average marks and also check student is pass or fail. (if average above or equal to 50 the „Pass") .
4) Design a menu driven program using switch case which accepts two integer values and program will display menus for addition, subtraction, multiplication, division and ask user to select appropriate choice.
5) Design inline functions for add and multiply of two integer numbers.
6) Write a cpp program to overload "sum()" function for add two integers, to add three real and add three integers.
7) Write a cpp program for following series.
    i. Sin X= $X - X^3/3! + X^5/5! - X^7/7! + \ldots\ldots\ldots$
8) Write a cpp program for following.
    i. Cos X= $1 - X^2/2! + X^4/4! - X^6/6! + \ldots\ldots\ldots$
9) Design a class "Complex" with real and imaginary members also design appropriate member function to get and print complex numbers.
10) Design a class " Time" with hours and minutes as data members and to get and print data of Time class also design a sum() with object as arguments to add two objects of Time class.
11) Design a class "Employee" with appropriate members. Demonstrate array of objects.
12) Create a class " Complex" with real and imaginary members and to initialize them write
    a. overloaded constructor for i) Default constructor ii) Constructor with one parameter iii) Constructor with two parameters.
13) Create a constructor for "Integer "class with M and N as data members and constructor for initialize data members.
14) Design a class "String" with name and length as data members. Create a dynamic constructor to initialize object of any length can be created.
15) Create a class "Employee" with empno, ename, salary as data members and create Copy constructor to create objects from already created objects.
16) Write a cpp program to overload unary „++" and „- -" operator for "Sample" class with
    a. X,Y, Z of integer type.
17) Write a cpp program to overload binary „+" operator for Complex Class. (Complex class is already design).

18) Write a program to Single inheritance for following structure. Student Class (rollno, sub1, sub2) and Result class(total,avg)



19) Write a class for Multilevel Inheritance for following structure

i. Student class (rollno),Test Class(sub1,sub2), Result Class(total, avg)



20) Write a program in show () and display () function are overridden. Demonstrate use of virtual function for runtime polymorphism.
21) Write a program which demonstrates the pure virtual function.
22) Write a cpp program in which use pointer to Sample class objects are used. Demonstrate it.
23) Write a cpp program which read contents from file and counts no. vowels and consonants in a file.
24) Write a cpp program which counts no. command line arguments on command line.
25) Write a cpp program which read a file and write contents of a file without white spaces into another file.

BCCA - II (SEMESTER – IV)
Seminar

[Max. Marks: 50]

The seminar must be based on some current trends related to IT/Computer Science/Computer Application/Commerce & Management. A Student must present the PowerPoint presentation along with Seminar Report. Students are requested to follow the following guidelines while choosing & preparing their seminars.

Guidelines to BCCA Seminar

1) Name of seminar topic must be latest to the current trends and should not be repeated.

2) Seminar topic is to be approved by the departmental allocated guide before the deadline prescribed by university time-table.

3) Seminar can be given in group of Maximum 3 students.

4) Students are allowed to use graphics/animation/audio-video aids for their presentation.

5) Seminar work will be evaluated by Internal examiner.

6) Students are requested to submit their seminar reports on or before the deadline with the concern of their respective guide otherwise students will be responsible for any appropriate action.

7) Seminar Report should be submitted to department in following format,
A printed in double line space using A4 size bond paper, with a left margin of 1.5" and right margin of 1.0" with proper spiral binding to be done. Only one copy need to be submit.

8) Students are requested to obtained necessary certificates and declaration to be duly enclosed in the report.

BCCA- II (Semester- IV)
Paper: Environment Science

Syllabus and direction will be same as that of B.Sc. and visit www.unigug.org for detail