SCHEME OF MARKS [BA/BCOM/BSC]-CA-I, II, III YEAR

Papers	Duration	Internal				Theory	Total		Practical		Grand Total
	First Year	Three Months	Six Months	Total							
				Max	Min		Max	Min	Max	Min	
I	Fundamentals of Computer and C programming	10	10	20	07	40	80	28	50	17	150
II	Office Automation and Desktop publishing					40					
	Second Year			Max	Min		Max	Min	Max	Min	
I	Object Oriented Programming (C++) & Conceptual Operating System	10	10	20	07	40	80	28	50	17	150
II	Computer Networks & Relational Database Management System					40					
	Third Year			Max	Min		Max	Min	Max	Min	
I	BA/BSC- Webpage Designing using .NET BCOM- Webpage Designing using PHP	10	10	20	07	40	80	28	50	17	150
II	Cyber Security & Software Engineering					40					

Learning outcomes of B.Sc / BA / BCom Computer Application

PLO-1. Demonstrate the ability to apply application software in an office environment.

PLO-2. Demonstrate basic level of competency in programming and logic skills.

PLO-3. Utilize web technologies.

PLO-4. Demonstrate a basic understanding of computer hardware and software.

PLO-5. Demonstrate problem-solving skills.

PLO-6. Apply logical skills to programming in a variety of languages.

PLO-7. Describe the features and functions of the categories of application software.

PLO-8. Demonstrate desk top publishing

PLO-9. Basic understanding of networking, cyber security, data base and software engineering.

Max Marks: 40   **Min Marks: 13**

Objective: The purpose of this course is to provide fundamentals of computer and give programming skills using C language.

Course Outcome: After completion of the course the student should able to know the basic concept of components of computers, peripheral devices, memory. Students also acquire knowledge and skills of programming by applying C concepts.

UNIT-I
Computer- Block diagram and characteristics of the computers Classification, Generation, types, **Input Devices:** Keyboard, Joysticks, Mouse, Light Pen, OMR, OCR, MICR, Punched Cards, barcode reader**. Output Devices:** Monitors & its types. **Printers** - Impact, Non-Impact, Plotters.

UNIT-II
Primary Memory:-RAM (Dynamic & Static), ROM (PROM, EPROM, EEPROM), Cache, Virtual. **Secondary Memory** - Magnetic- Tape & Disk, Optical disk. **Data representation of computer: Number System-** Binary, octal, decimal & hexadecimal & their inter-conversions, Arithmetic operation on binary number, Complements, Binary codes – BCD, EBCDIC, ASCII.

UNIT-III
Data communication - Computer networking basics -Types of network, topologies, Mode of communication. **Software:** Types of Software, **System Software-** Operating System, Types and functions. **Application Software**-Languages & Packages**,** concept of CUI and GUI, **Booting process:** Cold and warm booting.

UNIT-IV
Programming Languages: types of computer languages: MLL, ALL, HLL, translators. Steps for program design and development-algorithm, flowchart. **Introduction to C Language:** structure of a c program, C character set, keywords, variables and constants, data types, operators, control statements.
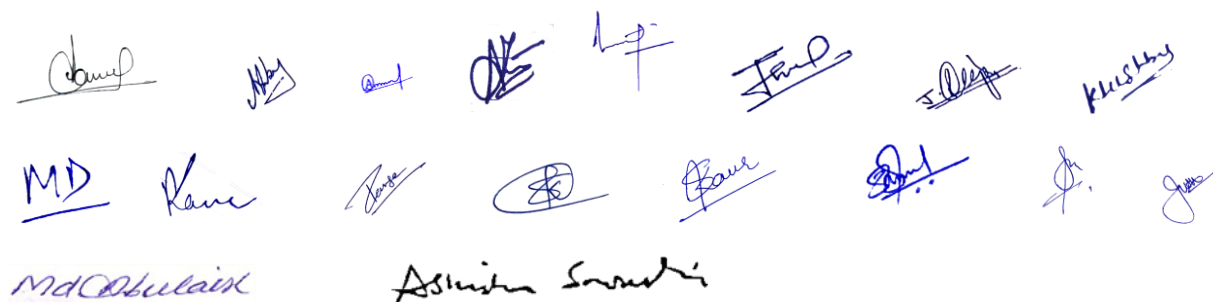
UNIT-V
Arrays (1D & 2D). **Functions in C-** User defined functions, library functions: string and mathematical functions, Recursion, Pointers and its operator (&,*), Structures, array of structures, Unions.

Text Books:-
Computer Fundamentals- P.K. Sinha BPB Publications II Edition,
C Programming: - S.S. Bhatia.
Let Us C –Yashwant Kanitekar.

Reference Books:-
Computer Fundamentals: - V. Raja Raman – Prentice Hall of India Private ltd.
O Level Module – V. K. Jain.
Preogramming in C – Balaguruswamy

List of Practicals in C Programming

1. WAP in c to find the average of any n entered number.
2. WAP in C to find the simple interest.
3. WAP in C to find Largest of Three Numbers
4. WAP to display Fibonacci Series.
5. WAP to Find Factorial of a Number without using Recursion.
6. WAP to Find Sum and Average of Three Real Numbers.
7. WAP to Print a Table of any Number.
8. WAP to Reverse a Given Number.
9. WAP to Print Even Series.
10. WAP to Print the Following Output: triangle of stars.
11. WAP to Basic salary of an employee is input through the keyboard. The DA is 25% of the basic salary while the HRA is 15% of the basic salary. Provident Fund is deducted at the rate of 10% of the gross salary (BS+DA+HRA). Program to Calculate the Net Salary.
12. WAP to Find Area of Square & Circumference of a   Circle
13. WAP to Show Call by Reference and Call by Value.
14. WAP in C to sort a list of integers using selection sorting.
15. WAP in C to search an element in a list.
16. Write a Program to convert temperature. (Fahrenheit –Centigrade and vice-versa).
17. Program to Implement *continue* Statement.
18. Program to Implement *break* Statement.
19. Program to implement two dimensional array.
20. Program to implement string functions using arrays.
21. Program to Implement Structure.
22. Program to Implement Structure with Array.

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B.A./B.Com/B.Sc. – I Year
Subject- Computer Application
Paper-II
Office Automation and Desktop Publishing

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Max Marks: 40   **Min Marks: 13**

Course Objective: To acquire the knowledge of Libre Office suit and Desktop Publishing in Linux Environment.

Course Outcome: Students are able to design and create various office and DTP applications.

UNIT-I

Introduction to Fedora:- What is Fedora, Features of Fedora operating system, Introduction of Libre Office Writer, The writer interface , working with documents, Formatting with text & pages, working with graphics, mail- merge, printing documents.

UNIT-II

Introduction of spreadsheet using Libre Office Calc:- What is Calc, spreadsheet, sheets & cells, Editing & formatting data, conditional formatting, creating formulas, Mathematical & Logical functions. **Making presentation with Libre Office Impress:-** What is Impress, starting Impress, Impress window, workspace views, create presentation using wizard, Formatting a presentation, working with graphics & animation, printing powerpoint**.**

UNIT-III

Introduction of Libre Office base:- What is database, data types, creating new database, tables, query handling & creation, Form creation, Entering data in a form. **Introduction of DTP**:- Concept of Desktop Publishing, printer used in DTP, concept of multimedia, types of multiple files.

UNIT-IV

Brief introduction of tools and options in Inkscape:- Working with different tools of Inkscape, working with (new, new from template, import , import clip art, document properties, print, clone,Find & Replace , working with layer options, fill & stroke, symbols, group & ungroup, Object to path , trace bitmap, Union ,difference ,intersection, division, put on path ,flow into frame, effects on object.
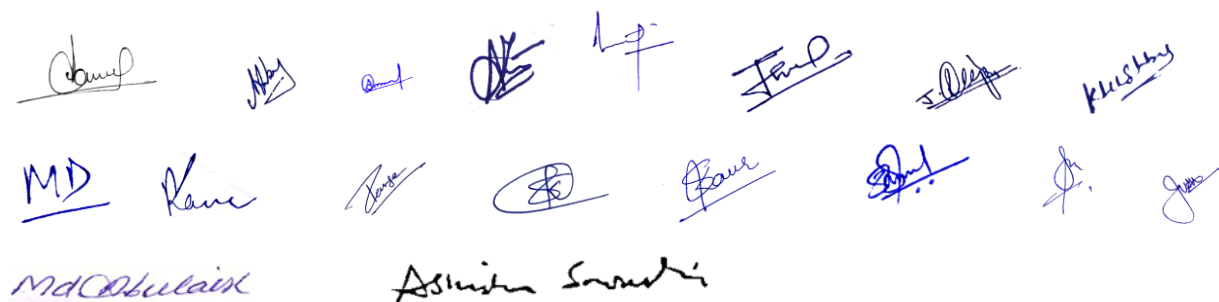
UNIT-V

Introduction of GIMP:- What is GIMP, interface of GIMP, working with tools, working of (new, create, save for web, export, print, stroke selection, feather, shrink, grow selection, modes, transformation, Flatten image, Layer group, color adjustment, blur, distort, Animation in GIMP.

Text Books:-

Libre Office 5

DTP Course:- 1. The book of GIMP by Olivier Lecarme and Karine Delvare

List of Practicals

Application Used- LibreOffice Writer

1. Write a letter to your friend for inviting him/her in your birthday party using templates.
2. Create a formatted mark sheet of your last passed examination.
3. Create a formatted "Appreciation Certificate" for the best student of the class.
4. Create and send an invitation letter to your friends for inviting them in the marriage of your elder sister/brother using Mail Merge .

Application Used- LibreOffice Calc

5. Create a formatted pay slip of an employee having fields: Employee No., Employee Name, Designation, Phone_no, Address, basic pay, DA (60% of basic), Sp. Allowance, insert 10 rows.
6. Using IF analysis find the division of the students based on their total marks I div>60%, II div 59%-45%, III div 44%-33%, fail: less than 33%.
7. Create a formatted pie chart of the following data of population of computer literacy of 4 countries. The Countries are: India 67%, Pakistan 35%, China 79%, Japan 98%.
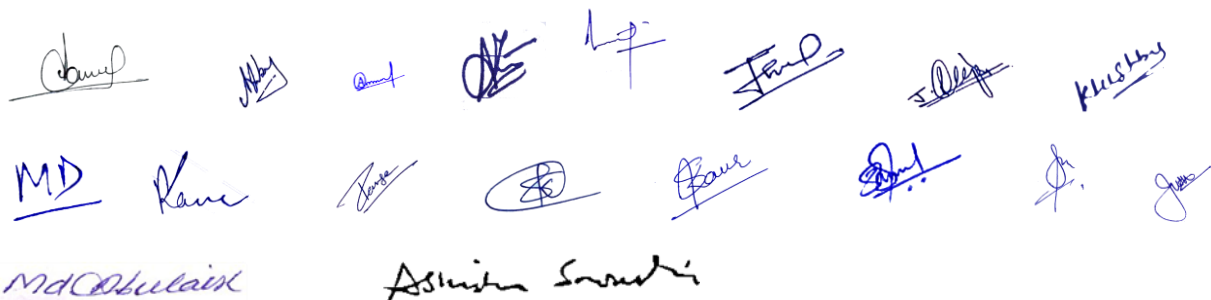
Application Used- LibreOffice Impress

8. Create a simple presentation on topic "My Hobbies" with background and slide layout.
9. Create an effective presentation on topic "My Ambition".
10. Create a presentation on any one topic of your choice based on college assembly.

Application Used- LibreOffice Base

11. Design a database name "student Information" having following fields:
    1. Table Name: Personal_Infomation: Admission No, (Auto increament & Primay Key), student Name, father's name, Mother's name, Gender, DOB, Religion, Category.
    2. Insert 5 rows in the table.
    3. Execute the following query
Display only admission no, student name from the table.

12. Create a table with name Courses_Offered: Admission No., student name, course_id (primary key), course name, subject offered. Insert 5 rows in the table and execute following queries:-
    1. Update one record of the table.
    2. Delete one row of the table.

Application Used- Inkscape

13. Design an Identity card of your college in Inkscape and write all the steps with output.
14. Design a credit card in Inkscape write all the steps with output.

15. Design a certificate of best student of the year in Inkscape.

Application Used- GIMP

16. Design an ATM card in GIMP using different layers .
17. Design a debit card of yours in GIMP .
18. Design a certificate of best performer in the class in GIMP.