Instruction to Students: Attempt any **four** questions selecting **at least 1 question** from each unit. Write answer in at least **500 words**. Each question carries **2.5** marks.

Unit I

1. What do you understand by OOP's Concepts? Explain its paradigms in detail and advantages.
2. Explain the following with the help of examples-
   a) Data Types in C++
   b) Inline Function
   c) Reference Variables

Unit II

1. Explain the concept of Constructors and Destructors in C++ with suitable examples.
2. Explain all the three access specifiers in C++ with examples

Unit III

1. What is Inheritance? Explain its types.
2. Explain compile time and run time polymorphism with example.

Unit IV

1. What is file handling in c++? Write a program to read and write the data from and to the text and binary file?
2. Explain the concept of Exception Handling in c++ with the suitable example.

S.S. Jain Subodh P. G. College, Jaipur

BCA II SEMESTER

Paper Code: BPCA202

Paper: Internet and Web Technologies

Assignment March 2025

Instructions to Students: Assignment consists of 8 questions. Students are required to attempt 4 Questions (1 from each Unit). Write questions in at least 500 Words with good presentation.

Unit-I

1. Explain Different applications of Internet?
2. Create a HTML table given below-

Columu 1	Columu 2	Columu 3
Row 1 Cell 1	Row 1 Cell 2	Row 1 Cell 3
	Row 2 Cell 2	Row 2 Cell 3
Row 3 Cell 1		

Unit-II

3. Explain Different Type of style sheet in CSS.
4. Write a short note on –
   a. HTML
   b. DHTML
   c. SGML

Unit-III

5. What are the different types of JavaScript Operators? With an example.
6. Explain various event used in Java script.

Unit-IV

7. What is a form validation? What are the major attributes of the form? Explain any six form validation components with example.
8. Explain components of Document Object Model (DOM).

S. S. Jain Subodh P.G. (Autonomous) College

BCA Sem.-II

PBCA203: Desktop Publishing (DTP)

Assignment

Instruction to Students: Attempt any **four** questions selecting **at least 1 question** from each unit. Write answer in at least **500 words**. Each question carries **2.5** marks.

Unit I

1. Explain user Interface of Page Maker. Explain with diagram.
2. Explain character specification and Paragraph specifications.

Unit II

1. What is role of brush in Photoshop? How we create a new Custom Brush?
2. Explain Rubber Stamp and pattern stamp tool with example.

Unit III

1. Explain different types of Retouching tool and Magic wand tool with example.
2. Explain different tools available in tool Box in Photoshop.

Unit IV

1. Differentiate between Raster and Vector image.
2. How we create a visiting card in Corel Draw? Explain steps with diagram.

S.S JAIN SUBODH P.G.(AUTONOMOUS) COLLEGE JAIPUR

B.C.A. II SEMESTER SESSION 2024-25
ASSIGNMENT

SUBJECT:- DMS   **Max Marks: 10**

Attempt any four questions.

Question: 1

(a) Prove that $A \oplus (A \cap B) = A - B$

(b) Define multiset and union and intersection of two multisets.

Question: 2

(a) How many integers are there between I and 1000 which are not divisible by 2, 3 and 5?

(b) Show that two equivalence classes are either identical or disjoint. .'

Question: 3

(a) Show that the compound statement $(p \vee q) \wedge (p \downarrow q)$ is a contradiction.

(b) By using truth table, Show that $(p \wedge q) \wedge r \Leftrightarrow p \wedge (q \wedge r)$
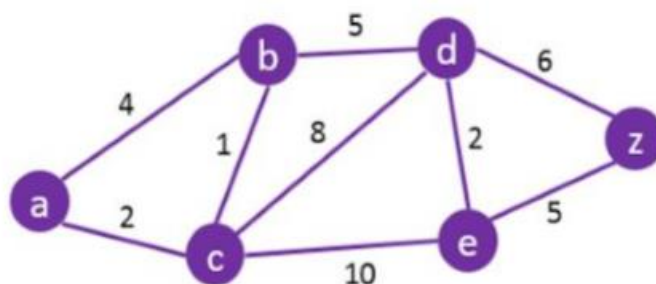
Question: 4

(a) Find the validity of the following statement

Either Mohan is criminal or Sohan is speaking truth. Sohan is not speaking truth, therefore Mohan is criminal.

(b) Show that $p \Leftrightarrow q \ and \ (p \wedge q \vee (\sim p \wedge \sim q)$ are logically equivalent.
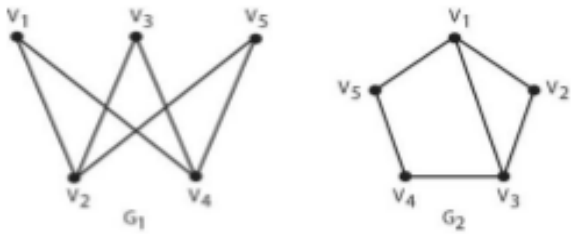
Question: 5

(a) Find the shortest path from the vertex a to vertex Z in the following weighted Graph.

(b) Prove that the complete graph with five vertices is non-planar graph.

Question: 6
Check the Isomorphism of the following graphs.

Question: 7
(a) Find the minimal spanning tree for the following weighted graph.
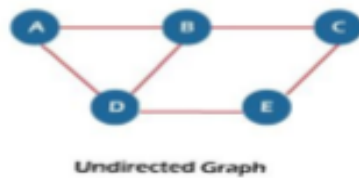

(b) Define:

(i) Rooted Tree   (ii) Binary tree
(iii) Radius and Diameter of a Tree   (iv) Spanning Tree

Question: 8

Find the adjacency matrix and the incidence matrix of the Graph given below

Undirected Graph

S. S. Jain Subodh PG (Autonomous) College, Jaipur

BCA II Semester, 2025

Operating System BPCA 401

Assignment

Attempt any four questions one from each unit.

Unit I

1. What do you understand by Operating System? Explain its paradigms in detail and advantages.
2. Explain the following with the help of examples-
   a) Process State Diagram
   b) Race Condition

Unit II

1. Explain the concept of Paging in detail.
2. Explain the following terms:
   a) Segmentation
   b) External Fragmentation

Unit III

1. What is Deadlock? How it is prevented.
2. Explain various File Allocation Methods.

Unit IV

1. Explain different types of Shells in Linux.
2. List the basic command used in Vim Editor in Linux.

S. S. Jain Subodh PG College, Jaipur (Autonomous)

BCA IV Semester

Paper Code: – PBCA402

Paper Name: PHP Programming

Assignment March 2025

Instruction to Students: Attempt any four questions selecting at least 1 question from each unit. Write answer in at least 500 words. Each question carries 2.5 marks.

UNIT - I

Explain different operators available in PHP.

Describe in detail about various data types in PHP.

UNIT - II

Explain with help of proper example about different types of array in PHP.

What are the usages of function? Explain defining, calling and returning value from   function with help of suitable example.

UNIT - III

Differentiate between GET and POST methods in PHP.

What is the difference between session and cookie? Explain with an example.

UNIT - IV

Explain various file opening mode in PHP with proper example.

How to create a connection between PHP and My SQL? Explain its step by step procedure.

S. S. Jain Subodh PG College, Jaipur (Autonomous)

BCA IV Semester

Paper Code: – PBCA403

Paper Name: Advance Database Concepts

Assignment March 2025

Instruction to Students: Attempt any **four** questions selecting **at least 1 question** from each unit. Write answer in at least **500 words**. Each question carries **2.5** marks.

Unit I

3. Explain the different Transaction States with the help of a Diagram.
4. Explain the following (**any two**)-
   a) ACID Property of Transaction
   b) Lock Based Protocol
   c) Thomas' Write Rule

Unit II

3. Explain the difference between Transaction Server and Data Server.
4. Explain the following Parallel Database architectures(**any two**)-
   a) Shared Memory
   b) Shared Disk
   c) Shared Nothing

Unit III

3. Explain the difference between 2-phase and 3-phase Commit Protocol.
4. Explain the following (**any two**)-
   a) I/O Parallelism
   b) Inter query Parallelism
   c) Intra query Parallelism

Unit IV

3. Write a PL/SQL code block to insert records from one table to another.
4. Explain the following (**any two**)-
   a) Triggers
   b) Exception Handling
   c) Cursor

S.S. Jain Subodh PG College, Jaipur (Autonomous)

BCA IV Semester

Paper Code- PBCA404

Paper Name – Data Communication and Networking

Assignment March 2025

Instructions to students: - Attempt any **four** questions selecting **at least 1 question from each unit**. Write answer in at least 500 words. Each question carries 2.5 marks.

Unit 1

Q1. (A) Define Network Architecture.

 (B) Explain Transmission Mode

Q2. What is topology? Explain all types of topologies in detail.

Unit 2

Q1. Give full explanation of Transmission Media.

Q2. (A) Define OSI MODEL. Explain Physical layer in detail.

 (B) Explain Multiplexing.

Unit 3

Q1. Explain the Network Layer routing Algorithm.

Q2. Explain any two:-

 (A) The Transport Layer

 (B) The Presentation Layer

 (C) The Session Layer

Unit 4

Q1. Differentiate between TCP/IP and OSI Reference Model in Detail.

Q2. Explain all type of protocols uses in TCP/IP Model.

S. S. JAIN SUBODH P.G COLLEGE, JAIPUR

Affiliated to University of Rajasthan, Jaipur
BCA Semester VI
Paper Code: PBCA 601
Paper Name: Ecommerce Application Development
Assignment March 2025

Instructions to Students: Assignment consist of 8 questions. Students are required to attempt 4 Questions (1 from each Unit). Write questions in atleast 500 Words with good presentation.

Max. Marks: **10**

Unit - I

1) What do you mean by Ecommerce? Explain its advantage and disadvantages.

2) Define Scope of Ecommerce and compare Traditional commerce and Ecommerce.

Unit - II

3) Explain Ecommerce Model (any two) based on Type of transactions.

4) What do you mean by Competitive advantages? Explain competitive force of Portal's model.

Unit – III

5) What is EDI? Explain all types of EDI and its standards.

6) Explain following
   a. Electronic Catalogs
   b. Digital Libraries
   c. E-governance
   d. Firewall

Unit – IV

7) Explain all types of payment systems.

8) What do you mean by Payment Gateway?

*****

S. S. Jain Subodh P.G. College, Jaipur (Autonomous)
BCA VI Semester
Paper Code: - PBCA-602
Subject: Data Warehousing & Data Mining
Assignment, March 2025

Note- Attempt four questions, one question from each unit. Write answer in at least 500 words

With a good presentation. Each question carries 7.5 marks.

Max. Marks: 30

UNIT-I

Q1. What do you mean by data warehouse? Explain its various characteristics in detail.

Q2. Describe Data Warehouse Designing approaches and its delivery Methods.

UNIT-II

Q3. Explain Database Schema. Describe various Types of database Schemas in detail.

Q4. Discuss various Partitioning methods.

UNIT-III

Q5. Explain Client Server architecture in Data Warehousing in detail.

Q6. Write short Notes on:-

a) Meta Data
b) Data Mart and its types
c) File systems.

UNIT-IV

Q7. Explain Data Mining and its characteristics in detail.

Q8. Write notes on-

a) Data Pre-processing

b) Data Mining Interface

C) Data Mining Architecture

S. S. Jain Subodh PG College, Jaipur (Autonomous)

BCA VI Semester

Paper Code: BPCA603A

Paper Name: Cyber Security

Assignment March 2025

Instruction to Students: Attempt any **four** questions selecting **at least 1** question from each unit. Write answer in at least **500 words**. Each question carries **7.5** marks.

Unit I

1. What is Cybercrime? Explain various categories of Cybercrime.
2. Explain the following (**any two**)-
   a) BOTNET
   b) Cloud Computing & Cybercrime
   c) Cyber-cafe and Cybercrime

Unit II

1. What is Phishing? How it works? Explain it.
2. Explain the following (**any two**)-
3. a) Password Cracking
   b) Spyware
   c) DoS Attack

Unit III

1. Explain the security challenges posed by Mobile devices in detail.
2. Explain the following (**any two**)-
   a) Credit Card Fraud
   b) Mobile Virus
   c) Hacking Bluetooth

Unit IV

1. What is Indian IT Act? Explain it in detail.
2. Explain the following(**any two**)-
   a) Cyber-Terrorism
   b) Digital Signature
   c) Cyber Crisis Management

S. S. Jain Subodh PG College, Jaipur (Autonomous)

BCA VI Semester

Paper Code: PBCA604A (ELECTIVE PAPER)

Paper Name: Artificial Intelligence & Expert system

Assignment March 2025

Instruction to Students: Attempt any **four** questions selecting **at least 1** question from each unit. Write answer in at least **500 words**. Each question carries **7.5** marks.

Unit I

3. What is AI ? Explain application areas of Artificial Intelligence
4. Explain the following (**any two**)-
   a) Problem characteristics
   b) Water Jug Problem using state space search
   c) Tower of Hanio Problem using state space search

Unit II

4. What is Heuristic Search method ? Explain hill climbing problem with its limitation.
5. Explain the following (**any two**)-
   a) Generate and test
   b) Best search method
   c) Predicate logic

Unit III

3. What is reasoning ? Explain different types of reasonings.
4. Explain the following
   a) Conceptual Dependency
   b) Fuzzy Logic

Unit IV

3. What is Expert system? . Explain about MYCIN in detail
4. Explain the following
   a) Knowledge Base system
   b) Discovery and Analogy