# S. S. Jain Subodh PG (Autonomous) College, Jaipur
## BCA First Semester, 2025
## Programming in C – PBCA101
## Assignment

**Instructions:**

- Assignment consist of 8 questions.
- Students are required to attempt any 4 Questions .
- Write questions in atleast 500 Words with good presentation.

## Unit I

1. What do you understand by Flowchart? Explain the various symbols used in Flowchart.
2. What is programming language and its uses? Write the programming domains.

## Unit II

3. Explain all the decision making statements with example.
4. What do you understand by looping? Explain its type with example.

## Unit III

5. Explain the term function and all its type.
6. What do you mean by Arrays? Explain all its type with syntax.

## Unit IV

7. Differentiate between structure and unions with suitable examples
8. What is pointer? Explain it with examples.

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

## BCA I SEMESTER, October 2025
## Paper Code: PBCA102

### Paper: Web Application and Development

### Assignment

**Instructions to Students:** Assignment consists of 8 questions. Students are required to attempt any 4 Questions.

### Unit-I

1. What is Internet? Explain Different applications of Internet.
2. What is internet protocol? Explain HTTP, FTP, and SMTP protocols.

### Unit-II

3. 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 | | |

4. Explain following with example.
    a. Nav
    b. hyperlink
    c. Iframe
    d. <hr> and <br>

### Unit-III

5. Explain Different Type of style sheet in CSS.
6. What is <div > tag? Explain CSS id and class selectors.

### Unit-IV

7. What are the different types of JavaScript Operators? With an example.
8. Explain various data types used in Java script.

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

Affiliated to University of Rajasthan, Jaipur
## BCA  Semester I, October 2025
## Subject:   Computer Fundamentals & Office Management
## Paper Code: PBCA- 103
### Assignment

*Attempt any 4 questions.*

### Unit- 1

Ques. 1-  What is Memory? State different types of memories. Also explain the basic organization of a Computer.

Ques. 2- Solve the following :

   a. $(651.24)_8$ --- $(?)_2$
   b. $(5764)_{10}$ --- $(?)_8$
   c. $(7051)_{16}$ --- $(?)_2$
   d. $(11110110)_2$ ---$(?)_{16}$
   e. $(7F3B)_{16}$--- $(?)_{10}$
   f. $(8750)_{10}$--- $(?)_{16}$
   g. $(CAFE27)_{16}$--- $(?)_2$
   h. $(6.54)_8$--- $(?)_{10}$.

### Unit- 2

Ques.3- What do you understand by Software in Computer? Also explain the meaning of operating system. How it works

Ques. 4- How do you explain programming languages? With Example.

### Unit-3

Ques.5- Explain different features of MS Word & Excel ? How do create a Table in MS Word in detail.

Ques.6- Explain the following:
   a. Working with single & Multiple Workbooks.
   b. Handling various formats like text, docx, pdf.
   c. Applying graphs & charts to an Excel Workbook.

### Unit-4

Ques.7- What do you understand by a PowerPoint Presentation. Explain its features

Ques-8 What do you understand by Microsoft Access. Explain its features

# S.S. Jain Subodh P.G. College

**BCA III Semester**
**Session 2025-26**
**Subject –Database Management Systems (PBCA-301)**

## ASSIGNMENT

**Note- Attempt any FOUR questions.**

### UNIT-I

Q1. Explain different architectures of DBMS with neat diagrams.

Q2. Write short notes on following-

   a) Hierarchical Model
   b) Object Oriented Model
   c) Relational Model

### UNIT-II

Q3. Differentiate between Generalization & Specialization.

Q4. Write short notes on following-

   a) Selection Operation
   b) Projection Operation
   c) Union Operation

### UNIT-III

Q5. What is Normalization? Differentiate between 3NF and BCNF with example.

Q6. Define Transaction. Explain ACID properties of Transaction.

### UNIT-IV

Q7. What is SQL? Explain SQL Data Types and Operators.

Q8. Create a table Employee with following schema and insert 5 records-

   Emp_id number(2) Primary Key,
   Emp_name varchar (10) NOT NULL,
   Designation varchar(15),
   Salary number(6),
   Deptname varchar(15)

# S. S. Jain Subodh PG (Autonomous) College, Jaipur
## BCA- III Semester
## Programming in Java (PBCA-302)
## <u>Assignment</u>

*Attempt any four questions.*

## <u>Unit- I</u>

1.  Briefly discuss various Operators of Java.

2.  Explain various features of Java.

## <u>Unit- II</u>

3.  What do you understand by Constructor? Explain with appropriate examples.

4.  Explain the Following with appropriate example:
    a.  final Keyword
    b.  abstract
    c.  static

## <u>Unit- III</u>

5.  What are Exceptions? How do we handle exceptions in java? Discuss.

6.  Describe Applet life cycle with suitable example.

## <u>Unit- IV</u>

7.  Write short note on:
    a.  JDBC Drivers
    b.  Two Tier and Three Tier Server Model

8.  What is multithreading? How do we implement multithreading in java? Explain.

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

**Affiliated to University of Rajasthan, Jaipur**
**BCA III Semester [Session 2025-26]**
**Subject – Data Structure and Algorithms (PBCA-303)**

## ASSIGNMENT

**Note: Attempt any four questions each from one unit. Each Question Carries equal marks.**

### UNIT - I

1.  What is an algorithm? What are the characteristics of an algorithm? What do you mean by efficiency of an algorithm?

2.  Write an algorithm and program to create an array of n integer elements and apply insert, delete and traverse operations on it.

### UNIT - II

3.  Write algorithms and programs for creating link list and apply operations such as traverse, insert after, insert before and delete particular element in the given link list.

4.  Write an algorithm and program to sort an array through Merge Sort technique.

### UNIT - III

5.  Write algorithm and program to perform the operations like - push, pop and show elements in a stack through array.

6.  Write algorithms and programs to perform the operations like - insert, delete and show elements in a simple queue.

### UNIT - IV

7.  Write an algorithm to create a binary search tree and perform operations like in-order, pre-order and post-order traversals of binary search tree.

8.  Write an algorithm to perform BFS and DFS operations on graphs.

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

### Affiliated to University of Rajasthan, Jaipur
### BCA III Semester [Session 2025-26]
### Subject –System Analysis & Design (PBCA-304)

## ASSIGNMENT

**Note: Attempt any four questions each from one unit. Each Question Carries equal marks.**

### UNIT-I

Q1. What is System? Explain Different types of Systems.

Q2. Explain the different steps of SDLC with a diagram.

### UNIT-II

Q3.What is feasibility study? Explain different types of feasibility studies in detail.

Q4. Write short notes on following-

a) System planning
b) System Analyst
c) Performance analysis

### UNIT-III

Q5. Discuss all the information gathering tools.

Q6. Write short notes on following-

a) Data Flow Diagram (DFD)
b) Decision Tables

### UNIT-IV

Q7. What are the different types of Testing? Explain the White Box and Black Box testing strategies.

Q8. Write short notes on following-

a) Verification and Validation
b) Types of Documentation

# S. S. JAIN SUBODH P.G. COLLEGE, JAIPUR
## Affiliated to University of Rajasthan, Jaipur
### BCA Semester V October 2025
### <u>Assignment</u>

## Subject - Computer Graphics
## Paper Code- PBCA-501

**Max. Marks**: 10

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**Instructions to the Candidates**
NOTE:  Candidates are required to answer any Four questions.  (2.5X4=10 marks)

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**UNIT – I**

Q. 1 Explain different types of monitors in detail.

Q.2  Discuss RGB, CMYK and HSV Color model.

**UNIT - II**

Q3 What is Bresenham's Line Drawing Algorithm?

Q4 What is Transformation? Explain its various types?

**UNIT - III**

Q. 5 What is Clipping? Explain Sutherland-Cohen line clipping Algorithm.

Q 6  Explain Cyrus-beck algorithm in detail.

**UNIT - IV**

Q 7 What is Digital Image Processing? Explain various File Format with example.

Q 8 Discuss followings

   (a)  Convolution
   (b)  Antialiasing
   (c)  Thresholding

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

Affiliated to University of Rajasthan, Jaipur

**BCA Semester V, October 2025**

**Subject: Software Engineering**

**Paper Code: PBCA502**

# Assignment

**Answer any four questions from each unit.**

## Unit – I

1) What do you mean by Software Engineering? Explain its Applications, Components in detail.

2) Explain Software process models.

## Unit - II

3) What is Software Project Planning? Explain is objectives and Software Sizing.

4) Explain COCOMO Model.

## Unit – III

5) Explain Software Design Objectives, Principals and Design Concepts.

6) Explain following:
   a. Software Data Design
   b. Architectural Design
   c. Procedural Design

## Unit – IV

7) Explain all the objectives and principles of Testing.

8) Explain following:
   a. White Box Testing and Black Box Testing
   b. Verification & Validation
   c. Integration Testing & System Testing

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

### Affiliated to University of Rajasthan, Jaipur
### BCA Semester V October 2025
### <u>Assignment</u>

## Subject: Dot NET Technologies

## Paper Code- PBCA503

**Max. Marks**: **30**

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**Instructions to the Candidates**
NOTE:  From each unit candidates are required to answer any two questions from any unit.  (15X2=30 marks)

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### Unit-I

1. Explain Architecture of the .Net frame work with diagram.
2. What is namespaces explain with an example?

### Unit-II

3. Explain different type of looping statements in C# with suitable examples.
4. Describe page life cycle events in detail.

### Unit-III

5. What is Sate Management in ASP.Net? Describe client side and server side techniques with suitable examples?

6. Write short note with example:

   (i) Rich Web Controls
   (II)Validation Controls

### Unit-IV

7. Explain ADO.NET Object Model with examples.

8. Write short notes on:

   (i) Databound Control

   (ii) .Net DataProviders

   (iii) ExecuteNonQuery(), ExecuteScaler(), ExecuteReader()

# S. S. Jain Subodh P.G. College, Jaipur (Autonomous)
## BCA - V Semester
### Subject: Programming in Python
### Paper Code: BPCA504

# <u>Assignment 2025</u>

**Note- Attempt four questions, one question from each unit. Write answer in at least 500 words with good presentation. Each question carries equal marks.**

**Max. Marks- 10**

## UNIT – I

1. Explain loops in python.

2. Describe data types available in python.

## UNIT – II

3. Describe important features and methods of lists and tuples.

4. Describe sets and dictionaries in detail.

## UNIT – III

5. Describe detecting and handling exceptions in python.

6. Describe Regular Expression in python.

## UNIT – IV

7. Explain various OOPs features available in python.

8. Describe inheritance and polymorphism.