

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

Assignment

B.C.A. Part-I

Subject: - PBCA101: Computer Organization

UNIT-I

1. Explain different types of generation of computers.
2. Discuss applications of computers.

UNIT-II

3. What do you mean Computer Memory? Explain Memory hierarchy in brief.
4. How many types of Computer Software? Explain each and write feature of operating system.

UNIT-III

5. Explain different types of instruction formats?
6. Write different types of computer Addressing Modes.

UNIT-IV

7. Discuss Virtual Memory and Paging system in computer architecture.
8. Explain direct memory access controller system in computer architecture?

S. S. Jain Subodh PG (Autonomous) College, Jaipur
BCA First Semester, 2024
Programming in C – PBCA102
Assignment

Attempt any two questions.

Unit I

1. What do you understand by Flowchart? Explain the various symbols used in Flowchart.
2. Explain different types of Conditional Statements in C language.

Unit II

3. What do you mean by Arrays? Explain all its type with syntax.
4. Explain the following functions with suitable example:
 - a) Strlen()
 - b) Strcpy()
 - c) Strcmp()
 - d) Strcat()

Unit III

5. Explain the term function and all its type.
6. Explain different storage classes with examples.

Unit IV

7. Differentiate between structure and unions with suitable examples
8. Explain the various functions available in file handling with suitable examples.

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

B.C.A First Semester Assignment, 2024

PBCA 103 Language and Communication

Maximum Marks: 10

1. Discuss the process and types of Listening.
2. Write short notes on:
 - a. Pronunciation
 - b. Intonation
3. Assess the importance of Presentation and discuss its types.
4. Differentiate between Seminars and Conferences.
5. Attempt writing a precis and also suggest a suitable title.

Everybody knows what a “good” man means and how he should be. Our definition of a good man is the one who does not smoke, or drink or avoids the usage of bad language. A good man is ideally expected to converse in front of men as he would in front of women. He is also expected to attend the Church regularly and have correct opinions on all subjects. He has a wholesome horror of wrong-doing and realizes that it is our painful duty to reprimand sin. He is not anticipated to have wrong thinking and has the authority to protect the young. His duties are not just restricted to the professional front but also needs to spend quality time doing good deeds. He must be patriotic and a keen believer in

military training, he should promote industry, must be sober and have virtue among wage earners and their children. He must be a role model for all and it is expected that he leads a way that the younger generation would willingly follow. Above all, of course, his “morals” in the narrow sense must be admirable. (180 words)

6. Draft a CV with a cover letter for the post of Assistant Engineer to "The Executive Director, Angel Technology, 7th floor, Noida, U.P." highlighting your skills and experiences.
7. Your state government has banned the use of plastic bags. You are Amarjeet, a reporter for The National Herald. Write a newspaper report in 100-125 words on how the ban is being ignored and what damage the indiscriminate use of plastic bags is causing to the environment.
8. Do as directed:

Put the suitable verb form:

- a. He ____ (write) that it's scorching there.
- b. I ____ (live) in Calcutta since 1930.
- c. If she ____ (board) a bus, she would have caught the train.

Change from Active to Passive Voice:

- a. The Browns have built a large house.
- b. A jellyfish stung her while she was swimming.
- c. Jane is singing the new song.

Change from Direct to Indirect Speech:

- a. Rahul told to me, “When are you leaving?”
- b. “Where do you live?” the stranger asked Aladdin.
- c. The teacher said to Shelly, “Why are you laughing?”

Identify whether the following sentences are simple, compound or complex.

- a. I did not know that this food was meant only for the staff.
- b. She is innocent, so she has appealed to the court.
- c. The sun looks amazing today.

Complete the sentences given below with the suitable determiners given in brackets.

- a. Meg used ____ sketch pens to complete her project. (this/these)
- b. I had ____ rice today. (enough/all)
- c. ____ picture was painted by Picasso. (that/those)

S.S. Jain Subodh PG (Autonomous) College, Jaipur
Academic Year 2023-24
BCA ,Semester-I
Subject- Physics
Paper II- Elementary Physics and Digital Electronics
Assignment-I

NOTE: ATTEMPT ANY TWO QUESTIONS OUT OF EIGHT QUESTIONS.

UNIT-I Electric field

- Q 1.(a) What is coulomb's law?
(b) Two equal point charges are 24cm apart. A repulsive force of 4N acts between them. Determine the magnitude of each charge.
- Q 2. Calculate the capacitance of series and parallel combination of three capacitors.

UNIT-II Magnetic field

- Q 3. Explain Biot Savart's Law and find out magnetic field inside the Solenoid.
- Q 4. Define magnetic flux. State Faraday's laws of electromagnetic induction. How do these laws explain the observations of Faraday's experiments?

UNIT-III Logic family

- Q 5.(a)Make a truth table for two inputs and write down the boolean expression.
(a) NAND gate (b) EX-OR gate (c) EX-NOR gate
(b)State and prove De Morgan's theorems.
- Q 6. Minimize the following logic functions using K-maps simplification.
(a) $Y(A,B,C,D) = \sum m(1,3,5,8,9,11,15) + \sum d(2,13)$
(b) $Y(A,B,C,D) = \pi M(3,4,5,7,9,13,14,15)$

UNIT-IV Combinational and Sequential circuits

- Q 7.Explain the construction and working of a 16:1 multiplexer.
- Q 8. Explain the truth table of a J-K flip-flop with its circuit diagram.

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BCA III Semester

Session 2024-25

Database Management System – PBCA301

Assignment

Attempt any two questions from any unit.

Unit I

Q1. Explain different Architecture of a DBMS with neat diagrams.

Q2. Write short notes on following:

- a) DDL
- b) DML
- c) DCL

Unit II

Q3. Explain Entity Relationship Model concepts in detail.

Q4. Write short notes on following:

- a) Super Key
- b) Foreign Key
- c) Composite Key

Unit III

Q5. What is Normalization? Explain Lossless Decomposition with example.

Q6. Define Transaction. Explain different Transaction States with diagram.

Unit IV

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

Q8. Write short notes on following:

- a) Aggregate Functions
- b) Update Command
- c) View

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

Attempt any two questions.

Unit- I

1. Explain different features of Java.
2. Briefly discuss various data types and operators of Java.

Unit- II

3. What do you understand by Inheritance? Discuss different types of inheritance with appropriate examples.
4. Explain the Following with appropriate example:
 - a. final Keyword
 - b. abstract
 - c. static

Unit- III

5. What are Exceptions? How do we handle exceptions in java? Discuss.
6. Describe Applet life cycle with suitable example.

Unit- IV

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.

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BCA III Semester [Session 2024-25]

Subject – Data Structure and Algorithms (PBCA-303)

ASSIGNMENT

Note: Attempt any Two Questions from any of the 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.

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BCA III Semester

Session 2024-25

Subject –System Analysis & Design (PBCA-304)

ASSIGNMENT

Note- Attempt any TWO questions from any Unit.

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

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BCA Semester V October 2024

Assignment

Subject: Dot NET Technologies

Paper Code- PBCA502

Max. Marks: 30

Instructions to the Candidates

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

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 State 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()

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BCA Semester V Sept 2024

Assignment

Subject - Computer Graphics

Paper Code- PBCA-501

Max. Marks: 30

Instructions to the Candidates

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

UNIT – I

Q. 1 What is difference between Raster and Random Scan Display.

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

UNIT - II

Q3 What is Bresenham's Line Drawing Algorithm.

Q4 Explain mid point circle drawing Algorithm in detail

UNIT - III

Q. 5 What is 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.

Q 8 Discuss followings

- (a) Antialiasing
- (b) Convolutions
- (c) Thresholding

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BCA Semester V October 2024

Assignment

Subject: Software Engineering

Paper Code: PBCA 504

Max. Marks: 30

Instructions to the Candidates

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

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 its objectives and Software Sizing.
- 4) Explain COCOMO Model.

Unit – III

- 5) Explain Software Design Objectives, Principles 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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BCA Semester V October 2024

Assignment

Subject: Programming in Python

Paper Code: PBCA 503

Max. Marks: 30

Instructions to the Candidates

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

Unit - I

- 1) Explain all string methods in python.
- 2) Explain all conditional statements in python

Unit - II

- 3) What is list? Explain all list type built in methods.
- 4) Explain special features of Tuples.

Unit – III

- 5) Explain Regular Expression. Explain some special symbols
- 6) How we detect and handled exceptions in python.

Unit – IV

- 7) Explain OOPs concepts in Python.
- 8) Differentiate between Inheritance and Polymorphism in Python.