(FOR THE CANDIDATES ADMITTED

DURING THE ACADEMIC YEAR 2022 ONLY)   REG.NO. :

22PCS2E3

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY 2023

M.Sc. – COMPUTER SCIENCE   MAXIMUM MARKS: 50

SEMESTER   : II   TIME : 3 HOURS

OBJECT ORIENTED ANALYSIS AND DESIGN WITH UML

SECTION – A   (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
Multiple Choices   (K1)

1. Which of the below identifies the same data structure and behavior, and groups them into a class?

   a) Identity   b) Classification
   c) Inheritance   d) None of the Above

2. Object-oriented systems development is _____ centered.

   a) Object   b) Function
   c) Polymorphism   d) Parallel Computing

3. Which of the below statement(s) is/are true?

   a) UML is a general purpose modelling language.   b) UML is not a programming language.

   b) UML is linked with object oriented design and analysis.   d) All of the Above.

4. Which of the following is not a true statement connected with a static view?

   a) It emphasizes the static structure of the system using objects, attributes, operations and relationships.
   b) Static diagrams describe the state of a system from a variety of perspectives.
   c) Use-Case diagram is the UML diagrams doesn't have a static view.
   d) A static diagram describes what a piece of the system is.

5. Which of the following UML diagrams represent the structural View of the software?
   a) Class Diagram.   b) Object Diagram.
   c) Class and Object Diagram.   d) None of the Above.

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES   (K2)

6. Define Object-Oriented systems development.
7. Brief Object-oriented methodologies.
8. What is the main aim of UML?
9. What is the purpose of a state diagram?
10. What is class model?

SECTION – B **(5 X 3 = 15 MARKS)**

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.
(K3)

11. a) Brief Object-Oriented Programming (OOP) Approach.
(OR)
b) Write the advantages of OOPs.

12. a) Explain Rumbaugh Object Modeling Technique (OMT) in detail?
(OR)
b) Explain Jacobson Methodology.

13. a) What are the benefits of UML?
(OR)
b) Explain Object-oriented concepts in UML**.**

14. a) Why do we use a State Machine Diagram?
(OR)
b) Explain the notations of Sequence Diagrams.

15. a) Explain Business modeling.
(OR)
b) What is meant by the Stereotyping in UML?

SECTION – C **(5 X 5 = 25 MARKS)**

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.
(K4 (Or) K5)

16. a) Differentiate the Structured and Object-oriented analysis.
(OR)
b) Explain the about steps to Analyze and Design Object Oriented System**.**

17. a) Describe the Object-Oriented Methodology and its Stages.
(OR)
b) Explain Booch Methodology in detail with neat diagram.

18. a) Elaborate UML Views and UML Diagrams.
(OR)
b) Explain all elements of a State-chart Diagram.

19. a) Demonstrate the components and notations of an Activity diagram.
(OR)
b) Explain the UML - Use Case Diagrams with an example.

20. a) What are the various structural diagrams in UML 2.0? Explain role of each diagram in detail.
(OR)
b) Explain aggregation and composition in class diagram with examples.

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