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**Reg. No. :** .....

**Code No. : 8045**

**Sub. Code : BCAM 12/  
ZCAM 15**

M.C.A. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2021

First Semester

Computer Applications – Core

OBJECT ORIENTED ANALYSIS AND DESIGN  
USING UML

(For those who joined in July 2020 onwards)

Time : Three hours

Maximum : 75 marks

PART A — ( $10 \times 1 = 10$  marks)

Answer ALL questions.

Choose the correct answer :

1. Software development is \_\_\_\_\_ and always undergoing major change.
  - (a) static
  - (b) protected
  - (c) dynamic
  - (d) public

2. Software development methodology is a \_\_\_\_\_ of processes.
- (a) group (b) series  
(c) set (d) unique set
3. UML stands for \_\_\_\_\_
- (a) Unified Modeling Language  
(b) Union Method Language  
(c) Unified Method Language  
(d) Union Member Language
4. The heart of the UA is \_\_\_\_\_
- (a) Booch (b) Rumbough  
(c) Jacobson's (d) Ali
5. The Process used for determining respective project's requirements and then develop a design for the project is termed as \_\_\_\_\_
- (a) Initializing  
(b) Requirement checking  
(c) Analysis  
(d) Project Study
6. \_\_\_\_\_ is a creative activity that involves understanding the problem its associated constraints.
- (a) Modelling (b) Analysis  
(c) Design (d) Implementation

7. The connection involves direct reference to attributes or methods of another object is called as \_\_\_\_\_ Coupling.
- (a) Content
  - (b) Common
  - (c) Control
  - (d) Data
8. \_\_\_\_\_ provides a scheme for refining the subsystem or components of software systems.
- (a) Axioms
  - (b) Corollaries
  - (c) Design Patterns
  - (d) Class Design
9. \_\_\_\_\_ errors results from incorrectly constructed code.
- (a) Logic
  - (b) Syntax
  - (c) Runtime
  - (d) General
10. \_\_\_\_\_ testing assumes that the specific logic is important and must be tested to guarantee the system's proper functioning.
- (a) Black box
  - (b) White Box
  - (c) Top-down
  - (d) Bottom-up

PART B — ( $5 \times 5 = 25$  marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is an Object, state of the object? Give an example.

Or

- (b) Why do you use object orientation? List out the benefits of object orientation.

12. (a) What are the phases of OMT?

Or

- (b) Write short notes on class diagram.

13. (a) Mention the steps for finding use cases.

Or

- (b) State the three steps in CRC process.

14. (a) Differentiate good design and bad design.

Or

- (b) What are the benefits of the Access Layer Class? List the access layer tasks.

15. (a) Write short notes on : Quality Assurance.

Or

- (b) Mention the Impact of Object Orientation on Testing.

PART C — ( $5 \times 8 = 40$  marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What is Polymorphism? Why is polymorphism useful? Give an example.

Or

- (b) Discuss about Object Oriented System Development Life Cycle.

17. (a) Write the differences between design patterns and frameworks.

Or

- (b) Discuss about UML and mention the primary goal in the design of UML.

18. (a) List the guidelines for identifying super-sub relationships.

Or

- (b) How to eliminate unnecessary associations? Give examples.

19. (a) Write detail notes on Object Relational System.

Or

- (b) Discuss about Macro and Micro Level Process.

20. (a) Write Detail notes on Testing Strategies.

Or

- (b) Discuss about Usability Testing.
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