

1. Which of the following best describes the Object Oriented Paradigm?

- a) A programming paradigm focused on data structures and procedures
- b) A paradigm centered around objects that encapsulate data and behavior
- c) A paradigm that primarily uses functions and modules
- d) A paradigm solely based on procedural programming

Answer: b) A paradigm centered around objects that encapsulate data and behavior

Explanation: The Object Oriented Paradigm is centered around objects, which are instances of classes that encapsulate data and behavior together.

2. What is the fundamental unit of Object Oriented Programming (OOP)?

- a) Module
- b) Function
- c) Object
- d) Variable

Answer: c) Object

Explanation: Objects are the basic units of OOP, encapsulating data and behavior.

3. Which principle of OOP promotes the idea of bundling data and methods that operate on that data within one unit?

- a) Inheritance
- b) Encapsulation

- c) Polymorphism
- d) Abstraction

Answer: b) Encapsulation

Explanation: Encapsulation refers to the bundling of data and methods that operate on that data within one unit (i.e., the object).

4. In OOP, what does the term 'inheritance' refer to?

- a) The ability of an object to take on multiple forms
- b) The process of creating a new class from an existing class
- c) The hiding of internal state and requiring all interactions to occur through well-defined interfaces
- d) The ability of an object to access methods of another object

Answer: b) The process of creating a new class from an existing class

Explanation: Inheritance allows a new class (derived class or subclass) to inherit properties and behavior from an existing class (base class or superclass).

5. Which OOP principle allows different classes to be treated as objects of the same type through a common interface?

- a) Abstraction
- b) Encapsulation
- c) Inheritance
- d) Polymorphism

Answer: d) Polymorphism

Explanation: Polymorphism allows objects of different classes to be treated as objects of the same type through a common interface, enabling flexibility and reusability.

6. What is the first stage of the Software Development Life Cycle (SDLC)?

- a) Implementation
- b) Design
- c) Testing
- d) Requirement Analysis

Answer: d) Requirement Analysis

Explanation: Requirement Analysis is the initial stage of SDLC where requirements are gathered and analyzed.

7. Which SDLC model is characterized by a linear and sequential approach, with each phase dependent on the deliverables of the previous one?

- a) Agile
- b) Waterfall
- c) Spiral
- d) RAD (Rapid Application Development)

Answer: b) Waterfall

Explanation: The Waterfall model follows a linear and sequential approach, where each phase

depends on the deliverables of the previous one.

8. Which architectural model divides an application into three interconnected parts: Model, View, and Controller?

- a) Model-View-Controller (MVC)
- b) Service-Oriented Architecture (SOA)
- c) Component-Based Architecture (CBA)
- d) Client-Server Architecture

Answer: a) Model-View-Controller (MVC)

Explanation: The MVC architectural pattern divides an application into three interconnected parts: Model (data), View (presentation), and Controller (business logic).

9. Which architectural model emphasizes the reusability of software components as individual, self-contained units?

- a) Model-View-Controller (MVC)
- b) Service-Oriented Architecture (SOA)
- c) Component-Based Architecture (CBA)
- d) Event-Driven Architecture (EDA)

Answer: c) Component-Based Architecture (CBA)

Explanation: Component-Based Architecture focuses on breaking down software into reusable, self-contained units called components.

10. In which stage of the SDLC are software requirements documented and analyzed to ensure they are clear, complete, and feasible?

- a) Design
- b) Implementation
- c) Requirement Analysis
- d) Testing

Answer: c) Requirement Analysis

Explanation: Requirement Analysis stage involves documenting and analyzing software requirements to ensure clarity, completeness, and feasibility before proceeding with design and development.

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