MCQ: OOD

1. What does a simple name in UML Class and objects consist of?
a) Letters
b) Digits
c) Punctuation Characters
d) All Mentioned Above

2. What Does a Composite name consist of in a UML Class and object diagram?
a) Delimiter
b) Simple names
c) Digits
d) All Mentioned Above

3. A Class consists of which of these abstractions?
a) Set of the objects
b) Operations
c) Attributes
d) All Mentioned Above.

4. A class is divided into which of these compartments?
a) Name Compartment
b) Attribute Compartment
c) Operation Compartment
d) All Mentioned Above

5. What should be mentioned as attributes for conceptual modelling?
a) Initial Values
b) Names
c) All Mentioned Above
d) None of the mentioned

6. What among the following statement is true?
a) Associations may also correspond to the relation between instances of three or more classes
b) Association lines may be unlabeled, or they may show association name
c) All Mentioned Above
d) None of the mentioned

7. What is multiplicity for an association?
a) The multiplicity at the target class end of an association is the number of instances that can be associated with a single instance of source class.
b) The multiplicity at the target class end of an association is the number of instances that can be associated with a number instance of source class.
c) All of the mentioned.
d) None of the mentioned.

8. Which among these are the rules to be considered to form Class diagrams?
a) Class symbols must have at least a name compartment.
b) Compartment can be in random order.
c) Attributes and operations can be listed at any suitable place.
d) None of the mentioned.

9. Which of the following statement is true?
a) A transition is a change from one state to another
b) Transitions may be spontaneous, but usually some event triggers them
c) An event is a noteworthy occurrence at a particular time; events have no duration
d) All Mentioned Above

10. Which of the following determines the state diagram?
a) The UML notation for specifying finite automata is the state diagram
b) In state diagrams, states are represented by rounded rectangles
c) All Mentioned Above
d) None of the mentioned

11. Mid -level generation design techniques are classified into which of the following?
a) Creational Techniques
b) Transitional Techniques
c) All Mentioned Above
d) None of the mentioned

12. Why does designers look for candidate classes?
a) To model entities in charge of or involved in program tasks
b) To model things in the world that interact directly with the program
c) To model structures and collections of objects
d) All Mentioned Above

13. Which of the following is referred for the conceptual modelling?
a) Change actors to interface classes
b) Add actor domain classes
c) Convert or add controllers and coordinators
d) All Mentioned Above

14. What is the Interaction diagram?
a) Interaction diagrams are the UML notations for dynamic modeling of collaborations
b) Interaction diagrams are a central focus of engineering design
c) All Mentioned Above
d) None of the mentioned

15. What are the different interaction diagram notations does UML have?
a) A sequence diagram
b) A communication diagram

c) An interaction overview diagram
d) All Mentioned Above

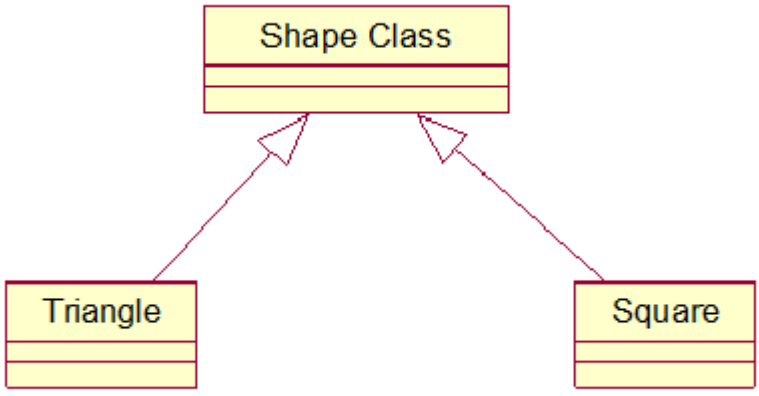
16. What is a sequence diagram?
a) A diagram that shows interacting individuals along the top of the diagram and messages passed among them arranged in temporal order down the page.
b) A diagram that shows messages superimposed on a diagram depicting collaborating individuals and the links among them.
c) A diagram that shows the change of an individual's state over time.
d) All of the mentioned.

17. What does a message mean?
a) It Passes all communications from one object to another and are represented by message arrows in sequence diagrams.
b) The message goes from the sending object's lifeline to the receiving object's lifeline.
c) It is a rectangle containing an identifier with a dashed line extending below the rectangle.
d) All of the mentioned.

18. What are the interaction fragments?
a) A fragment which is a rectangular frame with a pentagonal operation compartment in the upper left-hand corner
b) A fragment which has a marked part of an interaction specification
c) The regions resulting from these divisions will not hold the interaction fragment operations
d) All Mentioned Above

19. Which of the following UML diagrams has a static view?
a) Collaboration
b) Use Case.
c) State chart.
d) Activity.

20. What type of relationship is represented by Shape class and Square?



a) Realization
b) Generalization.

c) Aggregation.
d) Dependency.

21. Which diagram in UML shows a complete or partial view of the structure of a modeled system at a specific time?
a) Sequence diagram
b) Collaboration diagram
c) Class diagram
d) Object Diagram

22. Which of the following diagram is time oriented?
a) Collaboration
b) Sequence.
c) Activity.
d) None of the mentioned.

23. Classes and interfaces are a part of
a) Structural Things.
b) Behavioral things.
c) Grouping things.
d) Annotational things.

24. Which of the following term is best defined by the statement: “a structural relationship that specifies that objects of one thing are connected to objects of another”?
a) Association.
b) Aggregation.
c) Realization.
d) Generalization.

25.who considers diagrams as a type of Class diagram, component diagram, object diagram, and deployment diagram?

a) Structural.
b) behavioral.
c) non-behavioral.
d) nonstructural.

26._____ represented by In UML diagrams, relationship between component parts and object.

a) ordination
b) Aggregation.
c) segregation.
d) increment.

27.Which of the following is correct list of classifications of design patterns.
a) Creational, Structural and Behavioral patterns.

b) Executional, Structural and Behavioral patterns.
c) Creational, Executional and Behavioral patterns.
d)None of the above.

28. Which of the following is a design pattern?
a) Behavioral
b) Structural
c) Abstract Factory
d) All Mentioned Above

29. You want to minimize development costs by reusing methods? Which design pattern would you choose?
a) Adapter pattern
b) Singleton pattern
c) Delegation Pattern.
d) Immutable pattern.

30. The recurring aspects of designs are called design
a) Patterns.
b) documents.
c) structures.
d) methods.

31. Which pattern prevents one from creating more than one instance of a variable?
a) Factory Method
b) Singleton.
c) Observer.
d) None of the mentioned.

32. You want to avoid multiple inheritance. Which design pattern would you choose?
a) Abstraction-Occurrence Pattern
b) Player-Role Pattern.
c) General Hierarchy Pattern.
d) Singleton Pattern.

33. Which design pattern defines one-to-many dependency among objects?
a) Singleton pattern
b) Facade pattern
c) Observer Pattern
d) Factory method pattern

34. Why are Patterns important?
a) They capture expert design knowledge.
b) They make captured design accessible to both novices and other experts
c) All Mentioned Above
d) None of the mentioned

35. Which of the following Choices and standardizes patterns for a problem domain promotes software reuse and, hence, quality and productivity?
a) Promoting communication
b) Streamlining documentation
c) Increasing development efficiency
d) Supporting Software Reuse

36. What is a pattern?
a) It is a model proposed for imitation
b) It solves a software design problem
c) All Mentioned Above
d) None of the mentioned

37. Which of the following UML diagrams has a static view?
a) Collaboration
b) Use case.
c) State chart.
d) Activity.

1.(d) 11.(c) 21.(d) 31.(b)

2.(d) 12.(d) 22.(b) 32.(b)

3.(d) 13.(d) 23.(a) 33.(c)

4.(d) 14.(c) 24.(a) 34.(c)

5.(c) 15.(d) 25.(a) 35.(d)

6.(c) 16.(a) 26.(b) 36.(c)

7.(a) 17.(a) 27.(a) 37.(b)

8.(a) 18.(d) 28.(d)

9.(d) 19.(b) 29.(c)

10.(c)20.(b) 30.(a)

MCQ: OOFA

1) What is the programming style of the object-oriented conceptual model?
a) Invariant relationships
b) Algorithms
c) Classes and Objects
d) Goals, often expressed in a predicate calculus

2) The essential characteristics of an object that distinguish it from all other kinds of objects and thus provide crisply defined conceptual boundaries, relative to the perspective of the viewer is called:
a) Abstraction.
b) Modularity.
c) Hierarchy.
d) Polymorphism.

3) The process of compartmentalizing the elements of an abstraction that constitute its structure and behavior is called as
a) Hierarchy
b) Encapsulation.
c) modularity.
d) entity abstraction

4) Single inheritance, Multiple inheritance, and Aggregation comes under _____
a) Modularity
b) abstraction
c) Hierarchy.
d) None of the mentioned.

5) What is that concept in type theory in which a single name may denote objects of many different classes that are related by some common super class referred to _____
a) Monomorphism
b) Type Checking
c) Polymorphism.
d) Generalization.

6) Which of the following programming language are object oriented in nature?
a) Smalltalk and Simula.
b) FORTRAN and ALGOL.
c) C and Ada.
d) C and ALGOL.

7) Callback is an operation provided by
a) Inheritance
b) Encapsulation

c) Modularity
d) Abstraction

Note: A **callback** is a function that is passed as an argument to another function or method and is expected to be executed (or "called back") at a later time within that function or method.

8) Inheritance is an example of which type of hierarchy
a) Class Structure
b) Object structure
c) both
d) None of the mentioned

9) Superclass represents _____ abstractions
a) Generalized Abstractions
b) Specialization abstractions
c) both
d) None of the mentioned

10) Subclass represents _____ abstractions
a) Generalized abstractions
b) Specialization Abstractions
c) both
d) None of the mentioned

11)Choose the incorrect statement in terms of Objects.
a) Objects are abstractions of real-world
b) Objects can’t Manage themselves.
c) Objects encapsulate state and representation information.
d) All of the mentioned.

12)What encapsulates both data and data manipulation functions?
a) Object.
b) class.
c) Super class.
d) Sub class.

13)Which of the following is a mechanism that allows several objects in a class hierarchy to have different methods with the same name?
a) Aggregation
b) Polymorphism.
c) Inheritance.
d) All of the mentioned.

14) Which of the following points related to Object-oriented development (OOD) is true?
a) OOA is concerned with developing an object model of the application domain

b) OOD is concerned with developing an object-oriented system model to implement requirements
c) All Mentioned Above
d) None of the mentioned

15)How is generalization implemented in Object Oriented programming languages?
a) Inheritance.
b) Polymorphism.
c) Encapsulation.
d) Abstract classes.

16)Which of the following is a disadvantage of OOD?
a) Easier maintenance
b) Objects may be
understood as stand-alone entities
c) Objects are potentially reusable components
d) None Mentioned Above

17)Which of the following describes" Is-a-Relationship"?
a) Aggregation
b) Inheritance.
c) Dependency.
d) All of the mentioned.

18)Object that collects data on request rather than autonomously is known as
a) Active object
b) Passive Object
c) Multiple instance
d) None of the mentioned

19)Objects are executed
a) sequentially
b) in Parallel
c) Sequentially & Parallel
d) none of the mentioned

20)Which of the following is not needed to develop a system design from concept to detailed object-oriented design?
a) Designing system architecture
b) Developing design models
c) Specifying interfaces
d) Developing Debugging System

21)Which of the following is a dynamic model that shows how the system interacts with its environment as it is used?
a) system context model

b) Interaction Model
c) environmental model
d) both system context and interaction

22)Which of the following is a structural model that demonstrates the other systems in the environment of the system being developed?
a) System Context Model.
b) interaction model.
c) environmental model.
d) both system context and interaction.

23)Which model describes the static structure of the system using object classes and their relationships?
a) Sequence model
b) Subsystem model
c) Dynamic model
d) Structural Model

24)Which model shows the flow of object interactions?
a) Sequence Model
b) Subsystem model
c) Dynamic model
d) Both Sequence and dynamic model

25)The object _____
a) Can be passed by reference
b) Can be passed by value
c) Can be passed by Reference or Value
d) Can be passed with reference

26)Which feature may be violated if we don't use classes in a program?
a) Inheritance can't be implemented
b) Object must be used is violated
c) Encapsulation only is violated
d) Basically all Features of OOP get Violated

27)The feature by which one object can interact with another object is _____
a) Data transfer
b) Data binding
c) Message Passing
d) Message reading

28)Which among the following, for a pure OOP language, is true?
a) The language should follow 3 or more features of OOP
b) The language should follow at least 1 feature of OOP

c) The language must follow only 3 features of OOP
d) The Language must follow all the Rules of OOP.

29)Which of the following property is associated with objects?
a) State
b) Behavior
c) Identity
d) All Mentioned Above

30)A _____ is a description of a set of objects that share the same attributes, operations, relationships, and semantics.
a) Structure
b) Class.
c) Constructor.
d) Function.

31)Which of the following approach help us understand better about Real time examples, say Vehicle or Employee of an Organization?
a) Procedural approach
b) Object Oriented Approach
c) both a and b
d) none of the mentioned

32)Which of the following Paradigm is followed by Object Oriented Language Design?
a) Process oriented model
b) Data Controlling Access to Code.
c) both.
d) None of the mentioned.

33)Which of the following approach is followed by Object Oriented Language during the execution of a program?
a) Bottom-Up Approach.
b) Top-down approach.
c) both.
d) None of the mentioned.

34)Which of the following is/are advantage of using object-oriented programming?
a) Code Reusability
b) Can create more than one instance of a class without interference
c) Platform independent
d) All Mentioned Above

35)Which among the following is the main use of object?
a) to create instance of a function
b) To create instance of a program

c) To create Instance of Class
d) to create instance of structures

36)Which among the following is not a property of an object?
a) Names.
b) properties.
c) attributes.
d) identity.

37)Class is _____ abstraction.
a) Object
b) Logical.
c) Real.
d) Hypothetical.

38)Object is _____ abstraction.
a) Object
b) Logical
c) Real.
d) Hypothetical.

39) Abstraction gives higher degree of _____
a) Class usage
b) Program complexity
c) Idealized Interface
d) Unstable interface

40)Use case descriptions consist of interaction among which of the following?
a) product
b) use case
c) actor
d) Product & Actor

41)Use case description contents include _____
a) Use case name and number
b) Actors
c) Stakeholder and needs
d) All Mentioned Above

42)What are the methods in which use case descriptions can be written?
a) Actors in a use case are almost always stakeholders
b) Preconditions must be true before statement begins
c) Need list should be reviewed when writing each use case
d) All Mentioned Above

43)Which descriptions are true for the use case description format?
a) Underline text refers to another use case

b) Extensions section uses complicated numbering scheme
c) Indentation is used to make extensions easier to read
d) All Mentioned Above

44)Which diagram in UML shows a complete or partial view of the structure of a modeled system at a specific time?
a) Sequence diagram
b) Collaboration diagram
c) Class diagram
d) Object Diagram

45)Interaction Diagram is a combined term for
a) Sequence Diagram + Collaboration Diagram
b) Activity diagram + State chart diagram
c) Deployment diagram + Collaboration diagram
d) None of the mentioned

46)UML provides which of these levels of visibility that can be applied to attributes and operations?
a) Public
b) Package
c) Protected and Private
d) All Mentioned Above

Answers:

1.(c) 11.(b) 21.(b) 31.(b) 41.(d)

2.(a) 12.(a) 22.(a) 32.(b) 42.(d)

3.(b) 13.(b) 23.(d) 33.(a) 43.(d)

4.(c) 14.(c) 24.(a) 34.(d) 44.(d)

5.(c) 15.(a) 25.(c) 35.(c) 45.(a)

6.(a) 16.(d) 26.(d) 36.(a) 46.(d)

7.(d) 17.(b) 27.(c) 37.(b)

8.(a) 18.(b) 28.(d) 38.(c)

9.(a) 19.(c) 29.(d) 39.(c)

10.(b)20.(d) 30.(b) 40.(d)

MCQ: OODI

1. ___ is the process that groups data and procedures into an entity called objects.
a. Object development methodology
b. Linear programming
c. Structured programming
d. Object Oriented System Development

2. ___ technique analyzes and converts business requirements into specifications and finally into manual procedures.
a. Structured analysis
b. Structured analysis and design (SADT)
c. Object oriented analyses
d. Structured Design

3. ___ identifies the same data structure and behavior, and groups them into a class.
a. Polymorphism
b. Identity
c. Classification.
d. Inheritance.

4. We classify different objects of the program with the same properties into a class using ___.
a. Categorization.
b. Instantiation.
c. Decomposition.
d. Generalization.

5. A ___ is defined as a group of objects with the same structure and behavior.
a. Association
b. Polymorphism
c. Class.
d. Method.

6. Messages are known as ___ functions.
a. Bounded
b. Unbounded
c. Non-Specific.
d. Specific.

7. In the ___ phase the design model is built based on the analysis model.
a. System Design

b. Application
c. Object Design.
d. Analysis.

8. ___ patterns are constant and inactive.
a. non-generative.
b. anti.
c. design.
d. generative.

9. ___ relationship is indicated by a dashed line beginning at the base use case and ending with an arrow pointing to the use case.
a. Communication
b. Uses
c. Extends.
d. Association.

10. ___ deals with the static process view of a system, from the perspective of a real or prototype case.
a. Component diagram
b. Object Diagram
c. Deployment diagram
d. State diagram

11. The state of an object need not be directly observable and is ___ of the implementation.
a. Associated
b. Dependent
c. Independent.
d. Interdependent.

12.___ is a creative activity to recognize and understand the problem, its related constraints, and the methods of overcoming those problems.
a. Analysis.
b. Implementation.
c. Design.
d. Testing.

13.___ denotes the aspirations of the users and the responsibility of the system to its users.
a. UML
b. OOA
c. Use-Cases.
d. Association.

14. ___ emphasizes the key concepts and helps to identify issues and flaws in the analysis and design.
a. Scenario
b. Use-case diagram
c. Documentation.
d. Class diagram.

15. The output of object analysis is a description of the ___ and the user requirements.
a. Problem.
b. Solution.
c. Quality assurance.
d. Use cases.

16. Each iteration in the process of identifying relevant classes identifies some classes that were ___.
a. Described
b. Defined
c. Unnoticed.
d. noticed.

17. Class Responsibility Collaboration (CRC cards) is an important tool used in the ___ of object-oriented software.
a. Analysis
b. Design.
c. Development.
d. Specification.

18. The idea of the interface was introduced to solve the problem of ___.
a. Generalization
b. Dependency.
c. Multiple inheritances.
d. Association.

19. Self -delegation is a ___ an object sends to itself
a. Value
b. Attribute
c. Message.
d. Event.

20. ___ relationship hides the internal details of the superclass from the subclasses.
a. Interface
b. Inheritance.

c. Part of.
d. One too many.

21. The third phase of OOAD design deals with ___.
a. Designing view layer classes.
b. Designing attributes.
c. Designing access layer classes.
d. Refining UML class diagrams.

22. In object-oriented design it is important to describe the ___ between the associated classes in an application.
a. Protocol.
b. Function.
c. Constraint.
d. Procedure.

23. ___ constraints are true for the attached set of relationships and instances over a long period of time.
a. Invariants.
b. post-conditions.
c. Pre-conditions.
d. Primary key.

24. ___are objects that basically act as containers of data.
a. Display object
b. Value Object
c. Application structure
d. Data object

25. ___ is the layer of application functionality that encapsulates all the interactions within the database.
a. Business layer
b. Presentation layer
c. Application layer
d. Access Layer

26. ___ is a special data processing system or part of a data processing system that helps in storage, manipulation, reporting, management, and control of data.
a. Object store
b. Persistence
c. Object oriented database management system

d. Database Management System

27. In ___, a single table is used to map multiple no inheriting classes.
a. Table–class mapping
b. multi-table–inherited classes mapping
c. Table-multiple Classes Mapping
d. Table–inherited classes mapping

28. A prototype that provides only the model of the UI is a ___
a. Horizontal Prototype
b. Vertical prototype
c. Visual prototyping
d. Rapid prototyping

29. ___ interferes with the user's ability to use the conceptual model of how the application works.
a. Task automation
b. Modes.
c. prototyping
d. interface.

30. ___ testing is a process, or a series of processes, designed to ensure that the computer code does what it was designed to do and that it does not do anything unintended.
a. Software.
b. Quality.
c. Hardware.
d. Functional.

31. Identifying the use cases is one of the initial stages of:
a. User satisfaction test
b. Program development
c. Usability Testing
d. Use case design

32. Test goals and the ___ must be decided before the user satisfaction test is performed.
a. Audience.
b. Use case design.
c. Testing questionnaire.
d. Design goals.

33. Identify the approach used in system development to build information with the help of structured and modular programming.

a. Object oriented approach
b. Traditional Approach
c. Object oriented programming
d. Object technology

34. In the ___ phase the class diagram is improved by adding more details like ___ and methods used for application.
a. Analysis, testing
b. Prototyping, testing
c. Design, testing
d. Design, Attributes

35. What is an exception?
a. Problem arising during compile time
b. Problem arising during runtime.
c. Problem in syntax.
d. Problem in IDE.

36. Why do we need to handle exceptions?
a. To prevent abnormal termination of program.
b. To encourage exception prone program.
c. To avoid syntax errors.
d. To save memory.

37. An exception may arise when _____
a. Input is fixed
b. Input is some constant value of program
c. Input given is invalid.
d. Input is valid.

38. If a file that needs to be opened is not found in the target location, then _____
a. Exception will be produced.
b. Exceptions are not produced.
c. Exception might get produced because of syntax.
d. Exceptions are not produced because of logic.

39. Which are the two blocks that are used to check error and handle the error?
a. Try and catch.
b. Trying and catching.
c. Do and while.
d. Try Do and Check.

40. To catch the exceptions _____
a. An object must be created to catch the exception.
b. A variable should be created to catch the exception.
c. An array should be created to catch all the exceptions.
d. A string has to be created to store the exception.

41. Multiple catch blocks _____
a. Are mandatory for each try block
b. Can be combined into a single catch block.
c. Are not possible for a try block.
d. Can never be associated with a single try block.

42. Why do we use finally block?
a. to execute the block if exception occurred
b. to execute a code when exception has not occurred
c. to execute a code whenever required
d. To execute a code with each and every run of program

43. Uncaught exception leads to _____
a. termination of program.
b. successful execution of programs.
c. no effect on the program.
d. execution of other functions of the program starts.

1.(d) 11.(c) 21.(a) 31.(c) 41.(b)

2.(d) 12.(a) 22.(a) 32.(a) 42.(d)

3.(c) 13.(c) 23.(a) 33.(b) 43.(a)

4.(a) 14.(c) 24.(b) 34.(d)

5.(c) 15.(a) 25.(d) 35.(b)

6.(c) 16.(c) 26.(d) 36.(a)

7.(c) 17.(b) 27.(c) 37.(c)

8.(a) 18.(c) 28.(a) 38.(a)

9.(c) 19.(c) 29.(b) 39.(a)

10.(b)20.(b) 30.(a) 40.(a)