

Seat No -

Total number of questions : 60

12249_Software Modeling and Design

Time : 1hr

Max Marks : 50

N.B

- 1) All questions are Multiple Choice Questions having single correct option.
 - 2) Attempt any 50 questions out of 60.
 - 3) Use of calculator is allowed.
 - 4) Each question carries 1 Mark.
 - 5) Specially abled students are allowed 20 minutes extra for examination.
 - 6) Do not use pencils to darken answer.
 - 7) Use only black/blue ball point pen to darken the appropriate circle.
 - 8) No change will be allowed once the answer is marked on OMR Sheet.
 - 9) Rough work shall not be done on OMR sheet or on question paper.
 - 10) Darken ONLY ONE CIRCLE for each answer.
-

Q.no 1. Which of these comes under development attribute?

- A : Maintainability
- B : Reusability
- C : Performance
- D : Maintainability & Reusability

Q.no 2. Which Test Document describes the Exit Criteria of Testing?

- A : Test Case
- B : Test Plan
- C : Test Summary Report
- D : Defect Report

Q.no 3. A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

- A : class
- B : state**
- C : actor
- D : component

Q.no 4. 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 : Encapsulation
- B : Modularity
- C : Hierarchy
- D : Abstraction**

Q.no 5. Which diagram in UML shows a complete of a modeled system at a specific time.

- A : Sequence
- B : Collaboration
- C : Class
- D : Object**

Q.no 6. Which of the below is not a valid design pattern?

- A : Singleton
- B : Factory
- C : Command
- D : Java**

Q.no 7. SDLC stands for

- A : System Development Life Cycle**
- B : Structure Design Life Cycle

C : System Design Life Cycle

D : Structure development Life Cycle

Q.no 8. What does the SOAP specification define?

A : A format for XML messaging

B : An interface to a business process

C : An Internet communications protocol

D : The payload contents for a Web service message

Q.no 9. Which of the following is not regression test case?

A : A representative sample of tests that will exercise all software functions

B : Additional tests that focus on software functions that are likely to be affected by the change

C : Tests that focus on the software components that have been changed

D : Low-level components are combined into clusters that perform a specific software sub-function

Q.no 10. Which of the following statement is true concerning objects and/or classes?

A : An object is an instance of a class.

B : A class is an instance of an object.

C : An object includes encapsulates only data.

D : A class includes encapsulates only data.

Q.no 11. What are the characteristics does a good SAD consist of?

A : Consistency, Feasibility, Adequacy

B : Completeness, Well-formedness

C : Reliability, Usability

D : Consistency, Feasibility, Adequacy, Completeness, Well-formedness

Q.no 12. Which design pattern represents a way to access all the objects in a collection?

A : Iterator pattern

B : Facade pattern

C : Builder pattern

D : Bridge pattern

Q.no 13. Single inheritance, Multiple inheritance, and Aggregation comes under which inheritance?

A : Modularity

B : Typing

C : Hierarchy

D : None of the mentioned

Q.no 14. Which is a black box testing technique appropriate to all levels of testing?

A : Acceptance testing

B : Regression testing

C : Equivalence partitioning

D : Quality assurance

Q.no 15. Which of the following diagrams is used to model business workflows?

A : Deployment diagram

B : Activity diagram

C : Use Case diagram

D : Interaction diagram

Q.no 16. The object-oriented development life cycle is which of the following?

A : Analysis, design, and implementation steps in the given order and using multiple iterations.

B : Analysis, design, and implementation steps in the given order and going through the steps no more than one time.

C : Analysis, design, and implementation steps in any order and using multiple iterations.

D : Analysis, design, and implementation steps in any order and going through the steps no more than one time.

Q.no 17. 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

Q.no 18. Which Design Pattern should you use when.... a class wants its subclasses to specify the objects it creates.

A : Bridge

B : Strategy

C : Builder

D : Factory Method

Q.no 19. Which of the following pattern works as a bridge between two incompatible interfaces?

A : Builder Pattern

B : Adapter Pattern

C : Prototype Pattern

D : Filter Pattern

Q.no 20. Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?

A : Singleton pattern

B : Chain of responsibility pattern

C : State pattern

D : Bridge pattern

Q.no 21. Test cases are designed during which of the following stages?

A : Test recording

B : Test configuration

C : Test planning

D : Test specification

Q.no 22. If a component of the overall system is functionally complete and operates within that system independently from the functionality of the SOA architectural concept? other components, it is an example of which

A : Modularity

B : Extensibility

C : Loose coupling

D : Separation of concerns

Q.no 23. What is testing process' first goal?

A : Bug prevention

B : Testing

C : Execution

D : Analyses

Q.no 24. 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

Q.no 25. Which of the following is used to model the life time of an object?

A : Use Case

B : Class

C : State Machine

D : Interface

Q.no 26. Which structure's view is orthogonal to the module and conceptual view?

- A : Module Structure
- B : Process Structure
- C : Uses Structure
- D : Data flow

Q.no 27. The fact that the same operation may apply to two or more classes is called what?

- A : Inheritance
- B : Polymorphism
- C : Encapsulation
- D : Multiple classification

Q.no 28. Which testing is an integration testing approach that is commonly used when “shrink-wrapped” software products are being developed?

- A : Regression Testing
- B : Integration testing
- C . Smoke testing
- D : Validation testing

Q.no 29. A class is divided into which of these compartments ?

- A : Name Compartment
- B : Attribute Compartment
- C : Operation Compartment
- D : All of the mentioned

Q.no 30. How do Web 2.0 applications communicate with SOA services?

- A : Both architectures use XML to ensure interoperability.
- B : Web 2.0 technologies communicate using Remote Procedure Calls (RPC) to SOA services.

C : JavaScript Object Notation (JSON) provides an efficient data format for SOA services.

D : Asynchronous JavaScript + XML (Ajax) applications can make service requests from a Web browser.

Q.no 31. Executable atomic computations are called as

A : action states

B : activity states

C : composite states

D : concurrent states

Q.no 32. The relationship between two states is called

A : transition

B : state

C : association

D : generalization

Q.no 33. Forward Engineering is possible for an Activity Diagram especially if the context of the diagram is

A : an operation

B : a workflow

C : a class

D : a use case

Q.no 34. An entity in ER Model is a real world being, which has some properties called_____.

A : Attributes

B : Relationship

C : Domain

D : path

Q.no 35. In an Activity Diagram, organizing the activities into groups is called

A : forking

B : joining

C : swimlane

D : synchronization

Q.no 36. What is a key difference between a component and a service?

A : A service is deployed once and a component is deployed many times.

B : A component is deployed once and a service is deployed many times.

C : A component has an interface and a service implements the interface.

D : A service has an interface and a component implements the interface.

Q.no 37. Software mistakes during coding are known as

A : errors

B : failures

C : bugs

D : defects

Q.no 38. which diagrams are used to distribute files, libraries, and tables across topology of the hardware

A : deployment

B : use case

C : sequence

D : collaboration

Q.no 39. What is Decision Table Testing?

A : Black Box Test Design Technique

B : White Box Test Design Technique

C : Gray Box Test Design Technique

D : Experience based Test Design Technique

Q.no 40. What is “V” Model?

A : Test Level

B : SDLC Model

C : Test Type

D : Test Design Technique

Q.no 41. Components can be represented by which of the following?

A : Component symbols

B : Stereotypes

C : Rectangular boxes

D : Component symbols & Stereotypes

Q.no 42. For showing detailed design of procedures, which one of the following OOAD artifacts is the MOST useful?

A : Interaction Diagrams

B : Activity Diagrams

C : Package Diagrams

D : State Diagrams

Q.no 43. Change event is modeled by the keyword

A : after

B : when

C : time

D : signal

Q.no 44. Which level of Entity Relationship Diagram (ERD) models all entities and relationships ?

A : Level 1

B : Level 2

C : Level 3

D : Level 4

Q.no 45. You want to minimize development cost by reusing methods? Which design pattern would you choose?

- A : Adapter Pattern
- B : Singleton Pattern
- C : Delegation pattern
- D : Immutable Pattern

Q.no 46. Which is not a type of incremental testing approach?

- A : Bottom up
- B : Top down
- C : Big-bang
- D : Functional incrimination

Q.no 47. Which of the following is wrong with respect to a thread?

- A : Threads are light weight
- B : Threads are modeled using stereotyped active classes
- C : Threads are nested inside another thread
- D : Threads can initiate a control activity

Q.no 48. 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 : Operations

Q.no 49. Which of the following are concerned with communication between objects?

- A : J2EE Design Patterns
- B : Behavioral Design Patterns
- C : Creational Design Pattern

D : Structural Design Patterns

Q.no 50. What does a component diagram consists of?

A : Components, their Relationship to the environment

B : Packages and dependency

C : Internal structure

~~D : Internal structure, Components & their Relationship to the environment~~

Q.no 51. Which model in system modelling depicts the static nature of the system ?

A : Behavioral Model

B : Context Model

C : Data Model

~~D : Structural Model~~

Q.no 52. What are the three different types of message arrows?

A : Synchronous, asynchronous

B : Self, Multiplied, instance generator

~~C : Synchronous, Asynchronous, synchronous with instance creation~~

D : asynchronous with instance creation

Q.no 53. Aggregation represents ?

A : is_a relationship

B : part_of relationship

~~C : composed_of relationship~~

D : none of above

Q.no 54. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

A : Activity diagram

B : Sequence diagram

C : Statechart diagram

D : Object diagram

Q.no 55. Which things in UML are the explanatory parts of UML models?

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 56. A link is an instance of What things

A : Generalization

B : Association

C : Dependency

D : Realization

Q.no 57. Which of the following is present in a nested concurrent state machine?

A : Initial State

B : Final State

C : History State

D : Concurrent sub state

Q.no 58. Aggregation is which of the following?

A : Expresses a part-of relationship and is a stronger form of an association relationship.

B : Expresses a part-of relationship and is a weaker form of an association relationship.

C : Expresses an is-a relationship and is a stronger form of an association relationship.

D : Expresses an is-a relationship and is a weaker form of an association relationship.

Q.no 59. Components can be represented by which of the following?

A : Component symbols,Stereotypes

B : Rectangular boxes

C : Box

D : Circle

Q.no 60. _____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at a location specified in the base.

A : Exclude

B : Extend

~~C : Include~~

D : Abstract

Q.no 1. Requirement specification is carried out

~~A : after requirements are determined~~

B : before requirements are determined

C : simultaneously with requirements determination

D : independent of requirements determination

Q.no 2. An operation can be described as_____.

A : Object

B : Class

C : Functions

~~D : Object & Class~~

Q.no 3. In which of the following mechanisms, types of all variables and expressions are fixed at compilation time.

A : Strong Typing

B : Weak Typing

~~C : Static Binding/ early binding~~

D : Dynamic Binding/ late binding

Q.no 4. Which of the following is not a likely configuration of a Client-Server System?

A : Single Client- Single Server

B : Single Client- Multiple Server System

C : Multiple Clients- Multiple Servers System

D : Multiple Clients- Single Server System

Q.no 5. Class diagrams are not useful to .

A : model simple collaborations

B : model the vocabulary of a system

C : model simple interactions

D : model a logical database schema

Q.no 6. Which structure's view shows the mapping of software onto hardware?

A : Module Structure

B : Process Structure

C : Physical Structure

D : Class Structure

Q.no 7. The recurring aspects of designs are called design

A : patterns

B : documents

C : structures

D : methods

Q.no 8. State that is active after the completion of the transition is called

A : source state

B : target state

C : history state

D : final state

Q.no 9. Which Design Pattern should you use when.... you want to access an aggregate object's contents without exposing its internal representation.

A : Iterator

B : Composite

C : Poxy

D : Bridge

Q.no 10. Which diagram shows the configuration of run-time processing elements?

A : Deployment diagram

B : Component diagram

C : Node diagram

D : ER-diagram

Q.no 11. Which of the following is not a UML diagram?

A : Class diagram

B : Object Diagram

C : Interface diagram

D : Use case model

Q.no 12. Which of the following is not real-time architectural patterns that are commonly used?

A : Asynchronous communication

B : Observe and React

C : Environmental Control

D : Process Pipeline

Q.no 13. What is normally considered as an adjunct to the coding step

A : Integration testing

B : Unit testing

C : Completion of Testing

D : Regression Testing

Q.no 14. Maintenance testing is performed using which methodology?

- A : Retesting
- B : Sanity testing
- C : Breadth test and depth test
- D : Confirmation testing

Q.no 15. Which of the following are of non-local form ?

- A : Private
- B : Protected and Packaged
- C : Public
- D : Public, Protected and Packaged

Q.no 16. Which one of the following is not a structural thing?

- A : Class
- B : Package
- C : Use case
- D : Node

Q.no 17. The scenario of a use case is graphically represented using

- A : deployment diagram
- B : sequence diagram
- C : use case diagram
- D : interaction diagram

Q.no 18. What can be requested from any object of the class to affect behavior?

- A : object
- B : attribute
- C : operation
- D : instance

Q.no 19. The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:

A : Object- Oriented Programming

B : Object- Oriented Design

C : Object- Oriented Analysis

D : Object- Oriented Parameter

Q.no 20. Exceptions are

A : internal signal

B : state

C : association

D : generalization

Q.no 21. Which type of design patterns provide a way to create objects while hiding the creation logic, rather than instantiating objects directly using new operator?

A : Creational Design Patterns

B : Structural Design Patterns

C : Behavioral Design Pattern

D : J2EE Design Patterns

Q.no 22. Which of the following pattern creates object without exposing the creation logic to the client and refer to newly created object using a common interface?

A : Factory Pattern

B : Abstract Factory Pattern

C : Singleton Pattern

D : Transfer Object Pattern

Q.no 23. Which design pattern ensures that only one object of particular class gets created?

A : Singleton pattern

B : Filter pattern

C : State pattern

D : Bridge pattern

Q.no 24. Executable non atomic computations are called as

A : action states

~~B : activity states~~

C : transitions

D : simple states

Q.no 25. Constraints can be represented in UML by

~~A : {text}~~

B : [text]

C : (text)

D : Constraint

Q.no 26. _____ defines the properties of a data object and take on one of the three different characteristics

A : data object

~~B : attributes~~

C : relationships

D : data object and attributes

Q.no 27. Which UML diagrams has a static view.

A : Collaboration

~~B : Use case~~

C : State chart

D : Activity

Q.no 28. Which of the following is not a part of bug report?

A : Test case

B : Output

C : Software Version

D : LOC

Q.no 29. Which of the following evaluates to an absolute value of Time?

A : Timing mark

B : Timing Constraint

C : Timing Expression

D : Timing Location

Q.no 30. _____ are the Testers of System Testing?

A : Developers

B : Business Analysts

C : Independent Testers

D : Customers

Q.no 31. Which type they considered Activity diagram, use case diagram, collaboration diagram, and sequence diagram?

A : non-behavioral

B : non-structural

C : structural

D : behavioral

Q.no 32. Absolute time of an event is modeled as

A : timing constraint

B : timing mark

C : timing expression

D : timing semantics

Q.no 33. Time event is modeled by the keyword

A : when

B : after

C : signal

D : change

Q.no 34. A package diagram consists of the following?

A : Package symbols

B : Groupings of Use cases, classes, components

C : Interface

D : Package symbols, Groupings of Use cases, classes & components

Q.no 35. Which three characteristics of services indicate a mature SOA environment?

A : Services are discoverable

B : Services use Web 2.0 technology

C : Services are exposed by an Enterprise Service Bus (ESB)

D : Services are composed into broader business functionality

Q.no 36. Which of the following is the way of ensuring that the tests are actually testing code?

A : Control structure testing

B : Complex path testing

C : Code coverage

D : Quality assurance of software

Q.no 37. Actors are connected to use cases only by

A : association relationship

B : generalization relationship

C : realization relationship

D : dependency relationship

Q.no 38. Which diagram in UML emphasizes the time-ordering of messages?

- A : Activity
- B : Sequence
- C : Collaboration
- D : Class

Q.no 39. Which of these are necessary requirements for Iteration mechanism?

- A : Initialize
- B : Completion Test
- C : Information Hiding
- D : Access Current

Q.no 40. A state machine whose actions are all attached to states is called

- A : Activity diagram
- B : Mealy machine
- C : Moore machine
- D : Component diagram

Q.no 41. Which of these are types of nodes used in the deployment diagram?

- A : Device
- B : Execution Environment
- C : Artifact
- D : Device & Execution Environment

Q.no 42. A typical _____ program creates some remote objects, makes references to these objects accessible, and waits for clients to invoke methods on these objects.

- A : Server
- B : Client
- C : Thread
- D : Concurrent

Q.no 43. Which of the following describes the Adapter pattern correctly?

- A : This pattern builds a complex object using simple objects and using a step by step approach.
- B : This pattern refers to creating duplicate object while keeping performance in mind.
- C : This pattern works as a bridge between two incompatible interfaces.
- D : This pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently.

Q.no 44. Which of the following is doesn't included in the component diagram?

- A : Dependency
- B : Generalization
- C : Association
- D : Aggregation

Q.no 45. The UML supports event-based modeling using _____ diagrams.

- A : Deployment
- B : Collaboration
- C : State chart
- D : Package

Q.no 46. Which of the following is black-box oriented and can be accomplished by applying the same black-box methods discussed for conventional software?

- A : Conventional testing
- B : OO system validation testing
- C : Test case design
- D : Both Conventional testing and OO system validation testing

Q.no 47. What is Cyclomatic complexity?

- A : Black box testing
- B : White box testing
- C : Yellow box testing

D : Green box testing

Q.no 48. Name an evaluation technique to assess the quality of test cases.

A : Mutation analysis

B : Validation

C : Verification

D : Performance analysis

Q.no 49. Which of these are true with respect to the message arrows?

A : The synchronous message arrow is used when a sending individual continues execution after sending the message

B : The asynchronous message arrow is used when a sending individual suspends execution after sending the message

C : The dashed arrow is used either to show the return of control from a synchronous message or to create a new entity

D : All of the mentioned

Q.no 50. What is a collection of model elements called?

A : Box

B : Dependency

C : UML packages

D : Package members

Q.no 51. Which of the following errors should not be tested when error handling is evaluated?

A : Error description is unintelligible

B : Error noted does not correspond to error encountered

C : Error condition causes system intervention prior to error handling

D : Error description provide enough information to assist in the location of the cause of the error

Q.no 52. Activities and action taken on the data are represented by circle or round-edged rectangles is called ____ .

A : Entities

B : Process

C : Data storage

D : Data flow

Q.no 53. Which among the following are not the valid notations for package and component diagram?

A : Notes

B : Box

C : Extension Mechanisms

D : Packages

Q.no 54. Which of the following describes the Creational pattern correctly?

A : This type of patterns provide a way to create objects while hiding the creation logic, rather

B : This type of patterns concern class and object composition. Concept of inheritance is used than instantiating objects directly using new operator

C : This type of pattern are specifically concerned with communication between objects.

D : This type of pattern are specifically concerned with the presentation tier

Q.no 55. A sequential state machine may have

A : at most one initial state and one final state

B : at least one initial state and one final state

C : at most one initial state more than one final state

D : more than one initial state and at most one final state

Q.no 56. What is Fault Masking?

A : Creating a test case which does not reveal a fault

B : Error condition hiding another error condition

C : Masking a fault by developer

D : Masking a fault by a tester

Q.no 57. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

A : documentation

B : flowchart

C: program specification

D : design

Q.no 58. 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

Q.no 59. In component diagrams, building block which is represented with two rectangles laid on left side is classified as

A : type of components

B : interfaces

C: dependency relationships

D : assocation

Q.no 60. can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.

A : System Analysis

B : System Data

C : System Procedure

D : System Record

Q.no 1. Single inheritance, Multiple inheritance, and Aggregation comes under which inheritance?

A : Modularity

B : Typing

C : Hierarchy

D : None of the mentioned

Q.no 2. Inside the states, the events are encountered to handle without leaving the state. This is known as

A : state machine

B : state transition

C : internal transition

D : external transition

Q.no 3. Which is a black box testing technique appropriate to all levels of testing?

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C : Tests that focus on the software components that have been changed

D : Low-level components are combined into clusters that perform a specific software sub-function

Q.no 5. Exhaustive testing is

A : always possible

B : practically possible

C : impractical but possible

D : impractical and impossible

Q.no 6. Which of the following pattern is the basis of interaction management in many web-based systems?

- A : architecture
- B : repository pattern
- C : model-view-controller
- D : different operating system

Q.no 7. Which design pattern represents a way to access all the objects in a collection?

- A : Iterator pattern
- B : Facade pattern
- C : Builder pattern
- D : Bridge pattern

Q.no 8. Which diagram evolved from a desire to develop a procedural design representation that would not allow violation of the structured constructs?

- A : State transition diagram
- B : Box diagram
- C : ER diagram
- D : Use case diagram

Q.no 9. Effective testing will reduce _____ cost.

- A : maintenance
- B : design
- C : coding
- D : documentation

Q.no 10. A collection of operations that specify the services rendered by a class or component known as

- A : Class
- B : Interaction

~~C : Interface~~

D : Collaboration

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C : Analysis, design, and implementation steps in any order and using multiple iterations.

D : Analysis, design, and implementation steps in any order and going through the steps no more than one time.

Q.no 14. The _____ enables the software engineer to develop models of the information domain and functional domain at the same time

~~A : data flow diagram~~

B : state transition diagram

C : control specification

D : activity diagram

Q.no 15. Which things are dynamic parts of UML models?

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 16. Which of these comes under development attribute?

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Q.no 17. The fact that the same operation may apply to two or more classes is called what?

A : Inheritance

B : Polymorphism

C : Encapsulation

D : Multiple classification

Q.no 18. In OOD, the attributes(data variables) and methods(operation on the data) are bundled together is called _____ .

A : Classes

B : Objects

C : Encapsulation

D : Inheritance

Q.no 19. Which of the following diagrams is used to model business workflows?

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Q.no 22. What are the three different types of message arrows?

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- B : Self, Multiplied, Instance generator
- C : Synchronous, Asynchronous, Synchronous with instance creation**
- D : None of the mentioned

Q.no 23. Which testing is an integration testing approach that is commonly used when “shrink-wrapped” software products are being developed?

- A : Regression Testing
- B : Integration testing
- C : Smoke testing**
- D : Validation testing

Q.no 24. Which of these is true with respect to interfaces?

- A : Interfaces in component diagram defines relationship between components and environment**
- B : Interfaces realized by a class or a component are required interfaces

C : Interface on which a class or component depends are called provided interfaces

D : All of the mentioned

Q.no 25. Which of the following is used to model the life time of an object?

A : Use Case

B : Class

C : State Machine

D : nterface

Q.no 26. 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

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D : Abstraction

Q.no 27. SDLC stands for

A : System Development Life Cycle

B : Structure Design Life Cycle

C : System Design Life Cycle

D : Structure development Life Cycle

Q.no 28. What is UML?

A : UML is Unified Modeling Language.

B : Graphical language for visualizing artifacts of the system.

C : Allow to create a blue print of all the aspects of the system.

D : None of the mentioned

Q.no 29. Which diagram in UML shows a complete of a modeled system at a specific time.

A : Sequence

B : Collaboration

C : Class

D : Object

Q.no 30. Which of the following statement is true concerning objects and/or classes?

A : An object is an instance of a class.

B : A class is an instance of an object.

C : An object includes encapsulates only data.

D : A class includes encapsulates only data.

Q.no 31. In Unified Modeling Language, diagrams that organize system elements into groups are classified as

A : package diagrams

B : organized diagram

C : system diagrams

D : class diagrams

Q.no 32. The principle of serial equivalence for distributed transactions says that

A : When several transactions are executed concurrently, the result should be the same as if they had been executed in sequence

B : Concurrent transactions should always be executed in sequence

C : Sequential transactions should never be executed concurrently, because of the dangers of lost updates

D : Concurrent transactions should be atomic

Q.no 33. which diagrams are used to distribute files, libraries, and tables across topology of the hardware

A : deployment

B : use case

C : sequence

D : collaboration

Q.no 34. Which structure describes units as abstraction of system's functional requirements?

A : Conceptual structure

B : Module structure

C : Physical structure

D : Calls structure

Q.no 35. 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.

Q.no 36. A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.

A : class

B : state machine

C : use case

D : activity

Q.no 37. Diagrams in unified modified language which are used to test class diagrams for accuracy purpose are called

A : deployment diagrams

B : component diagrams

C : object diagrams

D : package diagrams

Q.no 38. Which of the following is not a building block of UML?

A : Things

B : Relationships

C : Diagrams

D : pass

Q.no 39. Forward Engineering is possible for an Activity Diagram especially if the context of the diagram is

A : an operation

B : a workflow

C : a class

D : a use case

Q.no 40. In Unified Modeling Language, diagrams which captures system static structure and provide foundation for other models is called

A : deployment diagrams

B : class diagrams

C : component diagrams

D : object diagrams

Q.no 41. Which of these are included in the product overview for SAD?

A : product vision, assumptions, constraints

B : product scope

C : target markets, business requirements

D : product vision, assumptions, constraints, target markets & business requirements

Q.no 42. Which SOA architectural concept is applied as an organization combines services to perform a business process?

A : Modularity

B : Composition

C : Encapsulation

D : Separation of concerns

Q.no 43. Classes and interfaces are a part of

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 44. 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 : Operations

Q.no 45. Activity diagram is a special kind of

A : use case diagram

B : state chart diagram

C : interaction diagram

D : component diagram

Q.no 46. Which view in architectural design shows the key abstractions in the system as objects or object classes?

A : physical

B : development

C : logical

D : process

Q.no 47. Which of these are followed in case of software design process?

A : Analysis occurs at start of product design with a product idea

B : Analysis occurs at the end of engineering design with the SRS

C : Product design resolution produces the design document

D : Engineering design resolution produces the SRS

Q.no 48. Realization of a use case is specified by

A : a collaboration

B : a component

C : a node

D : an activity

Q.no 49. Why is messaging important to an SOA?

A : Messaging improves the performance of complex environments.

B : Messaging implements separation of concerns resulting in faster development.

C : Messaging facilitates communication between distributed heterogeneous environments.

D : Messaging is used to communicate between a repository and an Enterprise Service Bus

Q.no 50. is denotation for the time at which an event occurs.

A : Timing mark

B : Timing constraint

C : Timing Expression

D : Timing response

Q.no 51. The behavior of a use case is specified by

A : flow of events

B : classes

C : components

D : nodes

Q.no 52. Which model in system modelling depicts the static nature of the system ?

A : Behavioral Model

B : Context Model

C : Data Model

D : Structural Model

Q.no 53. Which of the following is present in a nested concurrent state machine?

A : Initial State

B : Final State

C : History State

D : Concurrent sub state

Q.no 54. Aggregation is which of the following?

A : Expresses a part-of relationship and is a stronger form of an association relationship.

B : Expresses a part-of relationship and is a weaker form of an association relationship.

C : Expresses an is-a relationship and is a stronger form of an association relationship.

D : Expresses an is-a relationship and is a weaker form of an association relationship.

Q.no 55. Composition is a stronger form of which of the following?

A : Aggregation

B : Encapsulation

C : Inheritance

D : All of the above.

Q.no 56. Which of the following diagram is used to model the vocabulary of a system?

A : Object Diagram

B : Activity Diagram

C : Class diagram

D : Interaction Diagram

Q.no 57. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

A : Activity diagram

B : Sequence diagram

C : Statechart diagram

D : Object diagram

Q.no 58. The object of _____ within an OO system is to design tests that have a high likelihood of uncovering plausible bugs.

- A : Fault-based testing
- B : Integration testing
- C : Use-based testing
- D : Scenario-based testing

Q.no 59. 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 : Classes are shown by circle

Q.no 60. A package diagram consists of the following?

- A : Groupings of Usecases, classes, components
- B : Interface
- C : Object & Class
- D : Sticks

Q.no 1. A class is divided into which of these compartments ?

- A : Name Compartment
- B : Attribute Compartment
- C : Operation Compartment
- D : All of the mentioned

Q.no 2. How do Web 2.0 applications communicate with SOA services?

- A : Both architectures use XML to ensure interoperability.
- B : Web 2.0 technologies communicate using Remote Procedure Calls (RPC) to SOA services.

C : JavaScript Object Notation (JSON) provides an efficient data format for SOA services.

D : Asynchronous JavaScript + XML (Ajax) applications can make service requests from a Web browser.

Q.no 3. Which Design Pattern should you use when.... you want to access an aggregate object's contents without exposing its internal representation.

A : Iterator

B : Composite

C : Poxy

D : Bridge

Q.no 4. Which of the following is not a likely configuration of a Client-Server System?

A : Single Client- Single Server

B : Single Client- Multiple Server System

C : Multiple Clients- Multiple Servers System

D : Multiple Clients- Single Server System

Q.no 5. Which of the following is not real-time architectural patterns that are commonly used?

A : Asynchronous communication

B : Observe and React

C : Environmental Control

D : Process Pipeline

Q.no 6. Executable non atomic computations are called as

A : action states

B : activity states

C : transitions

D : simple states

Q.no 7. _____ are the Testers of System Testing?

A : Developers

B : Business Analysts

C : Independent Testers

D : Customers

Q.no 8. What is normally considered as an adjunct to the coding step

A : Integration testing

B : Unit testing

C : Completion of Testing

D : Regression Testing

Q.no 9. The recurring aspects of designs are called design

A : patterns

B : documents

C : structures

D : methods

Q.no 10. State that is active after the completion of the transition is called

A : source state

B : target state

C : history state

D : final state

Q.no 11. Which design pattern ensures that only one object of particular class gets created?

A : Singleton pattern

B : Filter pattern

C : State pattern

D : Bridge pattern

Q.no 12. Which of the following pattern creates object without exposing the creation logic to the client and refer to newly created object using a common interface?

- A : Factory Pattern
- B : Abstract Factory Pattern
- C : Singleton Pattern
- D : Transfer Object Pattern

Q.no 13. Which structure's view shows the mapping of software onto hardware?

- A : Module Structure
- B : Process Structure
- C : Physical Structure
- D : Class Structure

Q.no 14. _____ defines the properties of a data object and take on one of the three different characteristics

- A : data object
- B : attributes
- C : relationships
- D : data object and attributes

Q.no 15. Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?

- A : Singleton pattern
- B : Chain of responsibility pattern
- C : State pattern
- D : Bridge pattern

Q.no 16. Which type of design patterns provide a way to create objects while hiding the creation logic, rather than instantiating objects directly using new operator?

- A : Creational Design Patterns

B : Structural Design Patterns

C : Behavioral Design Pattern

D : J2EE Design Patterns

Q.no 17. Which of the below is not a valid design pattern?

A : Singleton

B : Factory

C : Command

D : Java

Q.no 18. What are the characteristics does a good SAD consist of?

A : Consistency, Feasibility, Adequacy

B : Completeness, Well-formedness

C : Reliability, Usability

D : Consistency, Feasibility, Adequacy, Completeness, Well-formedness

Q.no 19. In which of the following mechanisms, types of all variables and expressions are fixed at compilation time.

A : Strong Typing

B : Weak Typing

C : Static Binding/ early binding

D : Dynamic Binding/ late binding

Q.no 20. Which one of the following is not a structural thing?

A : Class

B : Package

C : Use case

D : Node

Q.no 21. A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

A : class

B : state

C : actor

D : component

Q.no 22. Which of the following are of non-local form ?

A : Private

B : Protected and Packaged

C : Public

D : Public, Protected and Packaged

Q.no 23. An operation can be described as_____.

A : Object

B : Class

C : Functions

D : Object & Class

Q.no 24. The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:

A : Object- Oriented Programming

B : Object- Oriented Design

C : Object- Oriented Analysis

D : Object- Oriented Parameter

Q.no 25. 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

Q.no 26. Test cases are designed during which of the following stages?

- A : Test recording
- B : Test configuration
- C : Test planning
- D : Test specification

Q.no 27. Which Design Pattern should you use when.... a class wants its subclasses to specify the objects it creates.

- A : Bridge
- B : Strategy
- C : Builder
- D : Factory Method

Q.no 28. Which of the following is not a UML diagram?

- A : Class diagram
- B : Object Diagram
- C : Interface diagram
- D : Use case model

Q.no 29. What can be requested from any object of the class to affect behavior?

- A : object
- B : attribute
- C : operation
- D : instance

Q.no 30. Constraints can be represented in UML by

- A : {text}
- B : [text]
- C : (text)
- D : Constraint

Q.no 31. In an Activity Diagram, organizing the activities into groups is called

- A : forking
- B : joining
- C : swimlane
- D : synchronization

Q.no 32. Which level of Entity Relationship Diagram (ERD) models all entities and relationships ?

- A : Level 1
- B : Level 2
- C : Level 3
- D : Level 4

Q.no 33. What is “V” Model?

- A : Test Level
- B : SDLC Model
- C : Test Type
- D : Test Design Technique

Q.no 34. Which of the following is incorrect in deployment diagram?

- A : Communication connections between nodes are shown by communication paths
- B : Communication paths are represented by dotted lines
- C : Artifacts are deployed inside nodes where they reside and execute
- D : None of the mentioned

Q.no 35. 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

Q.no 36. For showing detailed design of procedures, which one of the following OOAD artifacts is the MOST useful?

A : Interaction Diagrams

B : Activity Diagrams

C : Package Diagrams

D : State Diagrams

Q.no 37. Which class that can have only one instance?

A : Adaptor Class

B : Proxy Class

C : Singleton Class

D : Factory class

Q.no 38. Which design pattern defines one-to-many dependency among objects?

A : Singleton pattern

B : Facade Pattern

C : Observer pattern

D : Factory method pattern

Q.no 39. Client-server architecture holds the client responsible for _____ and server is only responsible for _____.

A : Application Logic; Presentation Logic

B : Presentation Logic; Data Access Logic and Data Storage

C : Data Access Logic and Presentation Logic; Data Storage

D : Application Logic; Data Storage

Q.no 40. Which of the following view shows that the system is composed of interacting processes at run time?

A : physical

B : development

C : logical

D : process

Q.no 41. Which is not a type of incremental testing approach?

A : Bottom up

B : Top down

C : Big-bang

D : Functional incrimination

Q.no 42. Which type they considered Activity diagram, use case diagram, collaboration diagram, and sequence diagram?

A : non-behavioral

B : non-structural

C : structural

D : behavioral

Q.no 43. Which of the following is not included in Architectural design decisions?

A : type of application

B : distribution of the system

C : architectural styles

D : testing the system

Q.no 44. Which of these are necessary requirements for Iteration mechanism?

A : Initialize

B : Completion Test

C : Information Hiding

D : Access Current

Q.no 45. Which of the following is not one of the use of component diagram?

A : To model physical databases

B : To model executable releases

C : To model general view

D : To model adaptable systems

Q.no 46. A state that has substates, that is nested states, is called

A : composite state

B : history state

C : target state

D : source state

Q.no 47. Which of the following is wrong with respect to a thread?

A : Threads are light weight

B : Threads are modeled using stereotyped active classes

C : Threads are nested inside another thread

D : Threads can initiate a control activity

Q.no 48. Which of the following are concerned with communication between objects?

A : J2EE Design Patterns

B : Behavioral Design Patterns

C : Creational Design Pattern

D : Structural Design Patterns

Q.no 49. Which of the following is black-box oriented and can be accomplished by applying the same black-box methods discussed for conventional software?

A : Conventional testing

B : OO system validation testing

C : Test case design

D : Both Conventional testing and OO system validation testing

Q.no 50. Components can be represented by which of the following?

A : Component symbols

B : Stereotypes

C : Rectangular boxes

D : Component symbols & Stereotypes

Q.no 51. Which of the following errors should not be tested when error handling is evaluated?

A : Error description is unintelligible

B : Error noted does not correspond to error encountered

C : Error condition causes system intervention prior to error handling

D : Error description provide enough information to assist in the location of the cause of the error

Q.no 52. Aggregation represents ?

A : is_a relationship

B : part_of relationship

C : composed_of relationship

D : none of above

Q.no 53. What is Fault Masking?

A : Creating a test case which does not reveal a fault

B : Error condition hiding another error condition

C : Masking a fault by developer

D : Masking a fault by a tester

Q.no 54. Which things in UML are the explanatory parts of UML models?

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 55. What are the three different types of message arrows?

A : Synchronous, asynchronous

B : Self, Multiplied, instance generator

C : Synchronous, Asynchronous, synchronous with instance creation

D : asynchronous with instance creation

Q.no 56. can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.

A : System Analysis

B : System Data

C : System Procedure

D : System Record

Q.no 57. What is Six Sigma?

A : It is the most widely used strategy for statistical quality assurance

B : The “Six Sigma” refers to six standard deviations

C : It is the most widely used strategy for statistical quality assurance AND The “Six Sigma” refers to six standard deviations

D : A Formal Technical Review(FTR) guideline for quality walkthrough or inspection

Q.no 58. Components can be represented by which of the following?

A : Component symbols, Stereotypes

B : Rectangular boxes

C : Box

D : Circle

Q.no 59. In component diagrams, building block which is represented with two rectangles laid on left side is classified as

A : type of components

B : interfaces

C : dependency relationships

D : association

Q.no 60. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

- A : Activity diagram
- B : Sequence diagram
- C : Statechart diagram
- D : Object diagram

Q.no 1. The scenario of a use case is graphically represented using

- A : deployment diagram
- B : sequence diagram
- C : use case diagram
- D : interaction diagram

Q.no 2. In OOD, the attributes(data variables) and methods(operation on the data) are bundled together is called _____ .

- A : Classes
- B : Objects
- C : Encapsulation
- D : Inheritance

Q.no 3. What does the SOAP specification define?

- A : A format for XML messaging
- B : An interface to a business process
- C : An Internet communications protocol
- D : The payload contents for a Web service message

Q.no 4. 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 : Encapsulation
- B : Modularity

C : Hierarchy

D : Abstraction

Q.no 5. Which of the following diagrams is used to model business workflows?

A : Deployment diagram

B : Activity diagram

C : Use Case diagram

D : Interaction diagram

Q.no 6. The _____ enables the software engineer to develop models of the information domain and functional domain at the same time

A : data flow diagram

B : state transition diagram

C : control specification

D : activity diagram

Q.no 7. Which of these comes under development attribute?

A : Maintainability

B : Reusability

C : Performance

D : Maintainability & Reusability

Q.no 8. Which diagram evolved from a desire to develop a procedural design representation that would not allow violation of the structured constructs?

A : State transition diagram

B : Box diagram

C : ER diagram

D : Use case diagram

Q.no 9. Which design pattern represents a way to access all the objects in a collection?

A : Iterator pattern

B : Facade pattern

C : Builder pattern

D : Bridge pattern

Q.no 10. Exhaustive testing is

A : always possible

B : practically possible

~~C : impractical but possible~~

D : impractical and impossible

Q.no 11. Which diagram in UML shows a complete of a modeled system at a specific time.

A : Sequence

B : Collaboration

C : Class

~~D : Object~~

Q.no 12. Which Test Document describes the Exit Criteria of Testing?

A : Test Case

~~B : Test Plan~~

C : Test Summary Report

D : Defect Report

Q.no 13. Which of the following evaluates to an absolute value of Time?

A : Timing mark

B : Timing Constraint

~~C : Timing Expression~~

D : Timing Location

Q.no 14. What is UML?

~~A . UML is Unified Modeling Language.~~

B : Graphical language for visualizing artifacts of the system.

C : Allow to create a blue print of all the aspects of the system.

D : None of the mentioned

Q.no 15. Which diagram shows the configuration of run-time processing elements?

A : Deployment diagram

B : Component diagram

C : Node diagram

D : ER-diagram

Q.no 16. Class diagrams are not useful to .

A : model simple collaborations

B : model the vocabulary of a system

C: model simple interactions

D : model a logical database schema

Q.no 17. Which of the following is not a part of bug report?

A : Test case

B : Output

C : Software Version

D : LOC

Q.no 18. Which of the following pattern is the basis of interaction management in many web-based systems?

A : architecture

B : repository pattern

C: model-view-controller

D : different operating system

Q.no 19. Exceptions are

A : internal signal

B : state

C : association

D : generalization

Q.no 20. Requirement specification is carried out

A : after requirements are determined

B : before requirements are determined

C : simultaneously with requirements determination

D : independent of requirements determination

Q.no 21. Which UML diagrams has a static view.

A : Collaboration

B : Use case

C : State chart

D : Activity

Q.no 22. The object-oriented development life cycle is which of the following?

A : Analysis, design, and implementation steps in the given order and using multiple iterations.

B : Analysis, design, and implementation steps in the given order and going through the steps no more than one time.

C : Analysis, design, and implementation steps in any order and using multiple iterations.

D : Analysis, design, and implementation steps in any order and going through the steps no more than one time.

Q.no 23. Inside the states, the events are encountered to handle without leaving the state. This is known as

A : state machine

B : state transition

C : internal transition

D : external transition

Q.no 24. What is testing process' first goal?

A : Bug prevention

B : Testing

C : Execution

D : Analyses

Q.no 25. Which is a black box testing technique appropriate to all levels of testing?

A : Acceptance testing

B : Regression testing

C : Equivalence partitioning

D : Quality assurance

Q.no 26. Maintenance testing is performed using which methodology?

A : Retesting

B : Sanity testing

C : Breadth test and depth test

D : Confirmation testing

Q.no 27. If a component of the overall system is functionally complete and operates within that system independently from the functionality of the SOA architectural concept? other components, it is an example of which

A : Modularity

B : Extensibility

C : Loose coupling

D : Separation of concerns

Q.no 28. Which of these is true with respect to interfaces?

A : Interfaces in component diagram defines relationship between components and environment

B : Interfaces realized by a class or a component are required interfaces

C : Interface on which a class or component depends are called provided interfaces

D : All of the mentioned

Q.no 29. The fact that the same operation may apply to two or more classes is called what?

A : Inheritance

B : Polymorphism

C : Encapsulation

D : Multiple classification

Q.no 30. 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

Q.no 31. Software mistakes during coding are known as

A : errors

B : failures

C : bugs

D : defects

Q.no 32. Which of the following describes the Adapter pattern correctly?

A : This pattern builds a complex object using simple objects and using a step by step approach.

B : This pattern refers to creating duplicate object while keeping performance in mind.

C : This pattern works as a bridge between two incompatible interfaces.

D : This pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently.

Q.no 33. Change event is modeled by the keyword

A : after

B : when

C : time

D : signal

Q.no 34. which diagram is used to show interactions between messages are classified as?

A : activity

B : state chart

C : collaboration

D : object lifeline

Q.no 35. Actors are connected to use cases only by

A : association relationship

B : generalization relationship

C : realization relationship

D : dependency relationship

Q.no 36. Which among these are the common notations for deployment diagrams?

A : Artifacts and nodes

B : Stereotypes

C : Components

D : Usecase

Q.no 37. Which of the following is the way of ensuring that the tests are actually testing code?

A : Control structure testing

B : Complex path testing

C : Code coverage

D : Quality assurance of software

Q.no 38. Realization of a use case is specified by

A : a collaboration

B : a component

C : a node

D : an activity

Q.no 39. who consider diagrams as a type of Class diagram, component diagram, object diagram, and deployment diagram?

A : structural

B : behavioral

C : non-behavioral

D : non structural

Q.no 40. Which of the following is not a building block of UML?

A : Things

B : Relationships

C : Diagrams

D : pass

Q.no 41. What does a component diagram consists of?

A : Components, their Relationship to the environment

B : Packages and dependency

C : Internal structure

D : Internal structure, Components & their Relationship to the environment

Q.no 42. Which of these are types of nodes used in the deployment diagram?

A : Device

B : Execution Environment

C : Artifact

D : Device & Execution Environment

Q.no 43. Why is messaging important to an SOA?

A : Messaging improves the performance of complex environments.

B : Messaging implements separation of concerns resulting in faster development.

C : ~~Messaging facilitates communication between distributed heterogeneous environments.~~

D : Messaging is used to communicate between a repository and an Enterprise Service Bus

Q.no 44. The relationship between two states is called

A : transition

B : state

C : association

D : generalization

Q.no 45. You want to minimize development cost by reusing methods? Which design pattern would you choose?

A : Adapter Pattern

B : Singleton Pattern

C : ~~Delegation pattern~~

D : Immutable Pattern

Q.no 46. Acceptance testing is also known as

A : Grey box testing

B : White box testing

C : Alpha Testing

D : Beta testing

Q.no 47. What is Decision Table Testing?

A : Black Box Test Design Technique

B : White Box Test Design Technique

C : Gray Box Test Design Technique

D : Experience based Test Design Technique

Q.no 48. Which of the following diagram is used to model the distribution of objects?

A : Object Diagram

B : Activity Diagram

C : State Chart Diagram

D : Interaction Diagram

Q.no 49. In Unified Modeling Language, diagrams that organize system elements into groups are classified as

A : package diagrams

B : organized diagram

C : system diagrams

D : class diagrams

Q.no 50. Forward Engineering is possible for an Activity Diagram especially if the context of the diagram is

A : an operation

B : a workflow

C : a class

D : a use case

Q.no 51. The object of _____ within an OO system is to design tests that have a high likelihood of uncovering plausible bugs.

A : Fault-based testing

B : Integration testing

C : Use-based testing

D : Scenario-based testing

Q.no 52. Which of the following describes the Creational pattern correctly?

A : This type of patterns provide a way to create objects while hiding the creation logic, rather

B : This type of patterns concern class and object composition. Concept of inheritance is used to than instantiating objects directly using new opreator

C : This type of pattern are specifically concerned with communication between objects.

D : This type of pattern are specifically concerned with the presentation tier

Q.no 53. Which of the following is present in a nested concurrent state machine?

A : Initial State

B : Final State

C : History State

D : Concurrent sub state

Q.no 54. Which of the following errors should not be tested when error handling is evaluated?

A . Error description is unintelligible

B : Error noted does not correspond to error encountered

C : Error condition causes system intervention prior to error handling

D : Error description provide enough information to assist in the location of the cause of the error

Q.no 55. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

A : documentation

B : flowchart

C: program specification

D : design

Q.no 56. A link is an instance of What things

A : Generalization

B: Association

C : Dependency

D : Realization

Q.no 57. The behavior of a use case is specified by

A : flow of events

B : classes

C : components

D : nodes

Q.no 58. Aggregation is which of the following?

A : Expresses a part-of relationship and is a stronger form of an association relationship.

B : Expresses a part-of relationship and is a weaker form of an association relationship.

C : Expresses an is-a relationship and is a stronger form of an association relationship.

D : Expresses an is-a relationship and is a weaker form of an association relationship.

Q.no 59. A sequential state machine may have

A : at most one initial state and one final state

B : at least one initial state and one final state

C : at most one initial state more than one final state

D : more than one initial state and at most one final state

Q.no 60. 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

Q.no 1. Which of the following is not regression test case?

A : A representative sample of tests that will exercise all software functions

B : Additional tests that focus on software functions that are likely to be affected by the change

C : Tests that focus on the software components that have been changed

D : Low-level components are combined into clusters that perform a specific software sub-function

Q.no 2. Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?

A : Singleton pattern

B : Chain of responsibility pattern

C : State pattern

D : Bridge pattern

Q.no 3. Which of the following pattern works as a bridge between two incompatible interfaces?

A : Builder Pattern

B : Adapter Pattern

C : Prototype Pattern

D : Filter Pattern

Q.no 4. Which structure's view shows the mapping of software onto hardware?

A : Module Structure

B : Process Structure

C : Physical Structure

D : Class Structure

Q.no 5. Which of the following pattern creates object without exposing the creation logic to the client and refer to newly created object using a common interface?

A : Factory Pattern

B : Abstract Factory Pattern

C : Singleton Pattern

D : Transfer Object Pattern

Q.no 6. SDLC stands for

- A : System Development Life Cycle
- B : Structure Design Life Cycle
- C : System Design Life Cycle
- D : Structure development Life Cycle

Q.no 7. Which of the following is not a likely configuration of a Client-Server System?

- A : Single Client- Single Server
- B : Single Client- Multiple Server System
- C : Multiple Clients- Multiple Servers System
- D : Multiple Clients- Single Server System

Q.no 8. Which type of design patterns provide a way to create objects while hiding the creation logic, rather than instantiating objects directly using new operator?

- A : Creational Design Patterns
- B : Structural Design Patterns
- C : Behavioral Design Pattern
- D : J2EE Design Patterns

Q.no 9. Constraints can be represented in UML by

- A : {text}
- B : [text]
- C : (text)
- D : Constraint

Q.no 10. Which structure's view is orthogonal to the module and conceptual view?

- A : Module Structure
- B : Process Structure

C : Uses Structure

D : Data flow

Q.no 11. The recurring aspects of designs are called design

A : patterns

B : documents

C : structures

D : methods

Q.no 12. _____ defines the properties of a data object and take on one of the three different characteristics

A : data object

B : attributes

C : relationships

D : data object and attributes

Q.no 13. What can be requested from any object of the class to affect behavior?

A : object

B : attribute

C : operation

D : instance

Q.no 14. Which of the following statement is true concerning objects and/or classes?

A : An object is an instance of a class.

B : A class is an instance of an object.

C : An object includes encapsulates only data.

D : A class includes encapsulates only data.

Q.no 15. Which of the following are of non-local form ?

A : Private

B : Protected and Packaged

C : Public

D : Public, Protected and Packaged

Q.no 16. Test cases are designed during which of the following stages?

A : Test recording

B : Test configuration

C : Test planning

D : Test specification

Q.no 17. Which one of the following is not a structural thing?

A : Class

B : Package

C : Use case

D : Node

Q.no 18. A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

A : class

B : state

C : actor

D : component

Q.no 19. Which testing is an integration testing approach that is commonly used when “shrink-wrapped” software products are being developed?

A : Regression Testing

B : Integration testing

C : Smoke testing

D : Validation testing

Q.no 20. Which Design Pattern should you use when.... a class wants its subclasses to specify the objects it creates.

A : Bridge

B : Strategy

C : Builder

D . Factory Method

Q.no 21. A class is divided into which of these compartments ?

A : Name Compartment

B : Attribute Compartment

C : Operation Compartment

D : All of the mentioned

Q.no 22. Which design pattern ensures that only one object of particular class gets created?

A : Singleton pattern

B : Filter pattern

C : State pattern

D : Bridge pattern

Q.no 23. The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:

A : Object- Oriented Programming

B : Object- Oriented Design

C : Object- Oriented Analysis

D : Object- Oriented Parameter

Q.no 24. Effective testing will reduce _____ cost.

A : maintenance

B : design

C : coding

D : documentation

Q.no 25. Which Design Pattern should you use when.... you want to access an aggregate object's contents without exposing its internal representation.

- A : Iterator
- B : Composite
- C : Poxy
- D : Bridge

Q.no 26. Which of the following is not a UML diagram?

- A : Class diagram
- B : Object Diagram
- C : Interface diagram
- D : Use case model

Q.no 27. What are the characteristics does a good SAD consist of?

- A : Consistency, Feasibility, Adequacy
- B : Completeness, Well-formedness
- C : Reliability, Usability
- D : Consistency, Feasibility, Adequacy, Completeness, Well-formedness

Q.no 28. Which things are dynamic parts of UML models?

- A : Structural things
- B : Behavioral things
- C : Grouping things
- D : Annotational things

Q.no 29. _____ are the Testers of System Testing?

- A : Developers
- B : Business Analysts
- C : Independent Testers
- D : Customers

Q.no 30. Which of the following is not real-time architectural patterns that are commonly used?

A : Asynchronous communication

B : Observe and React

C : Environmental Control

D : Process Pipeline

Q.no 31. Classes and interfaces are a part of

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 32. Which of the following is black-box oriented and can be accomplished by applying the same black-box methods discussed for conventional software?

A : Conventional testing

B : OO system validation testing

C : Test case design

D : Both Conventional testing and OO system validation testing

Q.no 33. 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 : Operations

Q.no 34. A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.

A : class

B : state machine

C : use case

D : activity

Q.no 35. Activity diagram is a special kind of

A : use case diagram

B : state chart diagram

C : interaction diagram

D : component diagram

Q.no 36. A typical _____ program creates some remote objects, makes references to these objects accessible, and waits for clients to invoke methods on these objects.

A : Server

B : Client

C : Thread

D : Concurrent

Q.no 37. In Unified Modeling Language, diagrams which captures system static structure and provide foundation for other models is called

A : deployment diagrams

B : class diagrams

C : component diagrams

D : object diagrams

Q.no 38. Diagrams in unified modified language which are used to test class diagrams for accuracy purpose are called

A : deployment diagrams

B : component diagrams

C : object diagrams

D : package diagrams

Q.no 39. Which of the following is incorrect in the deployment diagram?

A : Communication connections between nodes are shown by communication paths

B : Communication paths are represented by dotted lines

C : Artifacts are deployed inside nodes where they reside and execute

D : Nodes are not useful

Q.no 40. Which structure describes units as abstraction of system's functional requirements?

A : Conceptual structure

B : Module structure

C : Physical structure

D : Calls structure

Q.no 41. is denotation for the time at which an event occurs.

A : Timing mark

B : Timing constraint

C : Timing Expression

D : Timing response

Q.no 42. A package diagram consists of the following?

A : Package symbols

B : Groupings of Use cases, classes, components

C : Interface

D : Package symbols, Groupings of Use cases, classes & components

Q.no 43. Which SOA architectural concept is applied as an organization combines services to perform a business process?

A : Modularity

B : Composition

C : Encapsulation

D : Separation of concerns

Q.no 44. Client-server architecture holds the client responsible for _____ and server is only responsible for _____.

- A : Application Logic; Presentation Logic
- B : Presentation Logic; Data Access Logic and Data Storage**
- C : Data Access Logic and Presentation Logic; Data Storage
- D : Application Logic; Data Storage

Q.no 45. Which of the following is doesn't included in the component diagram?

- A : Dependency
- B : Generalization
- C : Association
- D : Aggregation**

Q.no 46. Components can be represented by which of the following?

- A : Component symbols
- B : Stereotypes
- C : Rectangular boxes
- D : Component symbols & Stereotypes**

Q.no 47. What is a key difference between a component and a service?

- A : A service is deployed once and a component is deployed many times.
- B : A component is deployed once and a service is deployed many times.
- C : A component has an interface and a service implements the interface.
- D : A service has an interface and a component implements the interface.**

Q.no 48. An entity in ER Model is a real world being, which has some properties called _____ .

- A : Attributes**
- B : Relationship
- C : Domain

D : path

Q.no 49. In an Activity Diagram, organizing the activities into groups is called

A : forking

B : joining

C : swimlane

D : synchronization

Q.no 50. Which diagram in UML emphasizes the time-ordering of messages?

A : Activity

B : Sequence

C : Collaboration

D : Class

Q.no 51. A package diagram consists of the following?

A : Groupings of Usecases, classes, components

B : Interface

C : Object & Class

D : Sticks

Q.no 52. can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.

A : System Analysis

B : System Data

C : System Procedure

D : System Record

Q.no 53. Which among the following are not the valid notations for package and component diagram?

A : Notes

B : Box

C : Extension Mechanisms

D : Packages

Q.no 54. Which model in system modelling depicts the static nature of the system ?

A : Behavioral Model

B : Context Model

C : Data Model

~~D : Structural Model~~

Q.no 55. _____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at a location specified in the base.

A : Exclude

B : Extend

~~C : Include~~

D : Abstract

Q.no 56. What is Six Sigma?

A : It is the most widely used strategy for statistical quality assurance

B : The “Six Sigma” refers to six standard deviations

~~C : It is the most widely used strategy for statistical quality assurance AND The “Six Sigma” refers to six standard deviations~~

D : A Formal Technical Review(FTR) guideline for quality walkthrough or inspection

Q.no 57. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

A : Activity diagram

B : Sequence diagram

~~C : Statechart diagram~~

D : Object diagram

Q.no 58. What is Fault Masking?

A : Creating a test case which does not reveal a fault

B : Error condition hiding another error condition

C : Masking a fault by developer

D : Masking a fault by a tester

Q.no 59. 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 : Classes are shown by circle

Q.no 60. Components can be represented by which of the following?

A : Component symbols,Stereotypes

B : Rectangular boxes

C : Box

D : Circle

Q.no 1. What is testing process' first goal?

A : Bug prevention

B : Testing

C : Execution

D : Analyses

Q.no 2. Requirement specification is carried out

A : after requirements are determined

B : before requirements are determined

C : simultaneously with requirements determination

D : independent of requirements determination

Q.no 3. A collection of operations that specify the services rendered by a class or component known as

- A : Class
- B : Interaction
- C : Interface
- D : Collaboration

Q.no 4. An operation can be described as_____.

- A : Object
- B : Class
- C : Functions
- D : Object & Class

Q.no 5. In which of the following mechanisms, types of all variables and expressions are fixed at compilation time.

- A : Strong Typing
- B : Weak Typing
- C : Static Binding/ early binding
- D : Dynamic Binding/ late binding

Q.no 6. The fact that the same operation may apply to two or more classes is called what?

- A : Inheritance
- B : Polymorphism
- C : Encapsulation
- D : Multiple classification

Q.no 7. The object-oriented development life cycle is which of the following?

- A : Analysis, design, and implementation steps in the given order and using multiple iterations.
- B : Analysis, design, and implementation steps in the given order and going through the steps no more than one time.

C : Analysis, design, and implementation steps in any order and using multiple iterations.

D : Analysis, design, and implementation steps in any order and going through the steps no more than one time.

Q.no 8. Which of these is true with respect to interfaces?

A : Interfaces in component diagram defines relationship between components and environment

B : Interfaces realized by a class or a component are required interfaces

C : Interface on which a class or component depends are called provided interfaces

D : All of the mentioned

Q.no 9. Executable non atomic computations are called as

A : action states

B : activity states

C : transitions

D : simple states

Q.no 10. 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

Q.no 11. Which of these comes under development attribute?

A : Maintainability

B : Reusability

C : Performance

D : Maintainability & Reusability

Q.no 12. What does the SOAP specification define?

A : A format for XML messaging

B : An interface to a business process

C : An Internet communications protocol

D : The payload contents for a Web service message

Q.no 13. Which of the below is not a valid design pattern?

A : Singleton

B : Factory

C : Command

D : Java

Q.no 14. Which of the following diagrams is used to model business workflows?

A : Deployment diagram

B : Activity diagram

C : Use Case diagram

D : Interaction diagram

Q.no 15. Which Test Document describes the Exit Criteria of Testing?

A : Test Case

B : Test Plan

C : Test Summary Report

D : Defect Report

Q.no 16. 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 : Encapsulation

B : Modularity

C : Hierarchy

D : Abstraction

Q.no 17. If a component of the overall system is functionally complete and operates within that system independently from the functionality of the SOA architectural concept? other components, it is an example of which

- A : Modularity
- B : Extensibility
- C : Loose coupling
- D : Separation of concerns

Q.no 18. Which of the following is used to model the life time of an object?

- A : Use Case
- B : Class
- C : State Machine
- D : Interface

Q.no 19. Which diagram shows the configuration of run-time processing elements?

- A : Deployment diagram
- B : Component diagram
- C : Node diagram
- D : ER-diagram

Q.no 20. Which UML diagrams has a static view.

- A : Collaboration
- B : Use case
- C : State chart
- D : Activity

Q.no 21. Which is a black box testing technique appropriate to all levels of testing?

- A : Acceptance testing
- B : Regression testing

C : Equivalence partitioning

D : Quality assurance

Q.no 22. How do Web 2.0 applications communicate with SOA services?

A : Both architectures use XML to ensure interoperability.

B : Web 2.0 technologies communicate using Remote Procedure Calls (RPC) to SOA services.

C : JavaScript Object Notation (JSON) provides an efficient data format for SOA services.

D : Asynchronous JavaScript + XML (Ajax) applications can make service requests from a Web browser.

Q.no 23. What is normally considered as an adjunct to the coding step

A : Integration testing

B : Unit testing

C : Completion of Testing

D : Regression Testing

Q.no 24. Maintenance testing is performed using which methodology?

A : Retesting

B : Sanity testing

C : Breadth test and depth test

D : Confirmation testing

Q.no 25. Single inheritance, Multiple inheritance, and Aggregation comes under which inheritance?

A : Modularity

B : Typing

C : Hierarchy

D : None of the mentioned

Q.no 26. The scenario of a use case is graphically represented using

A : deployment diagram

B : sequence diagram

C : use case diagram

D : interaction diagram

Q.no 27. What is UML?

A : UML is Unified Modeling Language.

B : Graphical language for visualizing artifacts of the system.

C : Allow to create a blue print of all the aspects of the system.

D : None of the mentioned

Q.no 28. State that is active after the completion of the transition is called

A : source state

B : target state

C : history state

D : final state

Q.no 29. In OOD, the attributes(data variables) and methods(operation on the data) are bundled together is called _____ .

A : Classes

B : Objects

C : Encapsulation

D : Inheritance

Q.no 30. What are the three different types of message arrows?

A : Synchronous, Asynchronous, Asynchronous with instance creation

B : Self, Multiplied, Instance generator

C : Synchronous, Asynchronous, Synchronous with instance creation

D : None of the mentioned

Q.no 31. 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 of the mentioned~~

Q.no 32. Which view in architectural design shows the key abstractions in the system as objects or object classes?

- A : physical
- B : development
- ~~C : logical~~
- D : process

Q.no 33. which diagrams are used to distribute files, libraries, and tables across topology of the hardware

- ~~A : deployment~~
- B : use case
- C : sequence
- D : collaboration

Q.no 34. Absolute time of an event is modeled as

- ~~A : timing constraint~~
- B : timing mark
- C : timing expression
- D : timing semantics

Q.no 35. Forward Engineering is possible for an Activity Diagram especially if the context of the diagram is

- ~~A : an operation~~
- B : a workflow

C : a class

D : a use case

Q.no 36. The relationship between two states is called

A : transition

B : state

C : association

D : generalization

Q.no 37. A state machine whose actions are all attached to states is called

A : Activity diagram

B : Mealy machine

C : Moore machine

D : Component diagram

Q.no 38. Which of the following is not one of the use of component diagram?

A : To model physical databases

B : To model executable releases

C : To model general view

D : To model adaptable systems

Q.no 39. Which of these are true with respect to the message arrows?

A : The synchronous message arrow is used when a sending individual continues execution after sending the message

B : The asynchronous message arrow is used when a sending individual suspends execution after sending the message

C : The dashed arrow is used either to show the return of control from a synchronous message or to create a new entity

D : All of the mentioned

Q.no 40. It allows us to infer that different members of classes have some common characteristics.

A : Realization

B : Aggregation

C : Generalization

D : dependency

Q.no 41. Software mistakes during coding are known as

A : errors

B : failures

C : bugs

D : defects

Q.no 42. Time event is modeled by the keyword

A : when

B : after

C : signal

D : change

Q.no 43. The principle of serial equivalence for distributed transactions says that

A : When several transactions are executed concurrently, the result should be the same as if they had been executed in sequence

B : Concurrent transactions should always be executed in sequence

C : Sequential transactions should never be executed concurrently, because of the dangers of lost updates

D : Concurrent transactions should be atomic

Q.no 44. Acceptance testing is also known as

A : Grey box testing

B : White box testing

C : Alpha Testing

D : Beta testing

Q.no 45. Executable atomic computations are called as

- A : action states
- B : activity states
- C : composite states
- D : concurrent states

Q.no 46. The UML supports event-based modeling using _____ diagrams.

- A : Deployment
- B : Collaboration
- C : State chart
- D : Package

Q.no 47. Which of the following view shows that the system is composed of interacting processes at run time?

- A : physical
- B : development
- C : logical
- D : process

Q.no 48. Which of these are necessary requirements for Iteration mechanism?

- A : Initialize
- B : Completion Test
- C : Information Hiding
- D : Access Current

Q.no 49. Name an evaluation technique to assess the quality of test cases.

- A : Mutation analysis
- B : Validation
- C : Verification
- D : Performance analysis

Q.no 50. Actors are connected to use cases only by

- A : association relationship
- B : generalization relationship
- C : realization relationship
- D : dependency relationship

Q.no 51. Which of the following errors should not be tested when error handling is evaluated?

- A : Error description is unintelligible
- B : Error noted does not correspond to error encountered
- C : Error condition causes system intervention prior to error handling
- D : Error description provide enough information to assist in the location of the cause of the error

Q.no 52. A sequential state machine may have

- A : at most one initial state and one final state
- B : at least one initial state and one final state
- C : at most one initial state more than one final state
- D : more than one initial state and at most one final state

Q.no 53. Which of the following diagram is used to model the vocabulary of a system?

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- B : Activity Diagram
- C : Class diagram
- D : Interaction Diagram

Q.no 54. 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

Q.no 55. Aggregation represents ?

A : is_a relationship

B : part_of relationship

C : composed_of relationship

D : none of above

Q.no 56. What are the three different types of message arrows?

A : Synchronous, asynchronous

B : Self, Multiplied, instance generator

C : Synchronous, Asynchronous, synchronous with instance creation

D : asynchronous with instance creation

Q.no 57. Activities and action taken on the data are represented by circle or round-edged rectangles is called ____ .

A : Entities

B : Process

C : Data storage

D : Data flow

Q.no 58. Which things in UML are the explanatory parts of UML models?

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 59. The object of _____ within an OO system is to design tests that have a high likelihood of uncovering plausible bugs.

A : Fault-based testing

B : Integration testing

C : Use-based testing

D : Scenario-based testing

Q.no 60. Aggregation is which of the following?

A : Expresses a part-of relationship and is a stronger form of an association relationship.

B : Expresses a part-of relationship and is a weaker form of an association relationship.

C : Expresses an is-a relationship and is a stronger form of an association relationship.

D : Expresses an is-a relationship and is a weaker form of an association relationship.

Q.no 1. Which Design Pattern should you use when.... a class wants its subclasses to specify the objects it creates.

A : Bridge

B : Strategy

C : Builder

D : Factory Method

Q.no 2. 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

Q.no 3. Which of the following is not real-time architectural patterns that are commonly used?

A : Asynchronous communication

B : Observe and React

C : Environmental Control

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- A : data object
- ~~B : attributes~~
- C : relationships
- D : data object and attributes

Q.no 5. Exhaustive testing is

- A : always possible
- ~~B : practically possible~~
- ~~C : impractical but possible~~
- D : impractical and impossible

Q.no 6. Which of the following are of non-local form ?

- A : Private
- B : Protected and Packaged
- ~~C : Public~~
- ~~D : Public, Protected and Packaged~~

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Q.no 10. Which Design Pattern should you use when.... you want to access an aggregate object's contents without exposing its internal representation.

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B : Composite

C : Poxy

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Q.no 11. Inside the states, the events are encountered to handle without leaving the state. This is known as

A : state machine

B : state transition

C : internal transition

D : external transition

Q.no 12. SDLC stands for

A : System Development Life Cycle

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Q.no 14. Which of the following evaluates to an absolute value of Time?

A : Timing mark

B : Timing Constraint

C : Timing Expression

D : Timing Location

Q.no 15. Which design pattern represents a way to access all the objects in a collection?

A : Iterator pattern

B : Facade pattern

C : Builder pattern

D : Bridge pattern

Q.no 16. Exceptions are

A : internal signal

B : state

C : association

D : generalization

Q.no 17. Which of the following is not a part of bug report?

A : Test case

B : Output

C : Software Version

D : LOC

Q.no 18. Which of the following pattern is the basis of interaction management in many web-based systems?

A : architecture

B : repository pattern

C : model-view-controller

D : different operating system

Q.no 19. Which of the following is not a likely configuration of a Client-Server System?

A : Single Client- Single Server

B : Single Client- Multiple Server System

C : Multiple Clients- Multiple Servers System

D : Multiple Clients- Single Server System

Q.no 20. What are the characteristics does a good SAD consist of?

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C : Reliability, Usability

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Q.no 21. Which of the following pattern works as a bridge between two incompatible interfaces?

A : Builder Pattern

B : Adapter Pattern

C : Prototype Pattern

D : Filter Pattern

Q.no 22. The recurring aspects of designs are called design

A : patterns

B : documents

C : structures

D : methods

Q.no 23. Which diagram in UML shows a complete of a modeled system at a specific time.

A : Sequence

B : Collaboration

C : Class

D : Object

Q.no 24. The _____ enables the software engineer to develop models of the information domain and functional domain at the same time

A : data flow diagram

B : state transition diagram

C : control specification

D : activity diagram

Q.no 25. Which of the following pattern creates object without exposing the creation logic to the client and refer to newly created object using a common interface?

A : Factory Pattern

B : Abstract Factory Pattern

C : Singleton Pattern

D : Transfer Object Pattern

Q.no 26. A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

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B : Business Analysts

C : Independent Testers

D : Customers

Q.no 30. Constraints can be represented in UML by

A : {text}

B : [text]

C : (text)

D : Constraint

Q.no 31. Which type they considered Activity diagram, use case diagram, collaboration diagram, and sequence diagram?

A : non-behavioral

B : non-structural

C : structural

D : behavioral

Q.no 32. Which of the following is incorrect in deployment diagram?

A : Communication connections between nodes are shown by communication paths

B : Communication paths are represented by dotted lines

C : Artifacts are deployed inside nodes where they reside and execute

D : None of the mentioned

Q.no 33. Which design pattern defines one-to-many dependency among objects?

A : Singleton pattern

B : Facade Pattern

C : Observer pattern

D : Factory method pattern

Q.no 34. What is “V” Model?

A : Test Level

B : SDLC Model

C : Test Type

D : Test Design Technique

Q.no 35. 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

Q.no 36. In an Activity Diagram, organizing the activities into groups is called

A : forking

B : joining

C : swimlane

D : synchronization

Q.no 37. Which of these are included in the product overview for SAD?

A : product vision, assumptions, constraints

B : product scope

C : target markets, business requirements

~~D : product vision, assumptions, constraints, target markets & business requirements~~

Q.no 38. Which of the following diagram is used to model the distribution of objects?

A : Object Diagram

B : Activity Diagram

C : State Chart Diagram

D : Interaction Diagram

Q.no 39. Which of the following is incorrect in the deployment diagram?

A : Communication connections between nodes are shown by communication paths

~~B : Communication paths are represented by dotted lines~~

C : Artifacts are deployed inside nodes where they reside and execute

D : Nodes are not useful

Q.no 40. Which among these are the common notations for deployment diagrams?

~~A : Artifacts and nodes~~

B : Stereotypes

C : Components

D : Usecase

Q.no 41. A state that has substates, that is nested states, is called

~~A : composite state~~

B : history state

C : target state

D : source state

Q.no 42. 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.

Q.no 43. Which of the following describes the Adapter pattern correctly?

A : This pattern builds a complex object using simple objects and using a step by step approach.

B : This pattern refers to creating duplicate object while keeping performance in mind.

C : This pattern works as a bridge between two incompatible interfaces.

D : This pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently.

Q.no 44. Which of the following is wrong with respect to a thread?

A : Threads are light weight

B : Threads are modeled using stereotyped active classes

C : Threads are nested inside another thread

D : Threads can initiate a control activity

Q.no 45. What does a component diagram consists of?

A : Components, their Relationship to the environment

B : Packages and dependency

C : Internal structure

D : Internal structure, Components & their Relationship to the environment

Q.no 46. Realization of a use case is specified by

A : a collaboration

B : a component

C : a node

D : an activity

Q.no 47. What is Cyclomatic complexity?

A : Black box testing

B : White box testing

C : Yellow box testing

D : Green box testing

Q.no 48. Diagrams in unified modified language which are used to test class diagrams for accuracy purpose are called

A : deployment diagrams

B : component diagrams

C : object diagrams

D : package diagrams

Q.no 49. Change event is modeled by the keyword

A : after

B : when

C : time

D : signal

Q.no 50. Which of the following are concerned with communication between objects?

A : J2EE Design Patterns

B : Behavioral Design Patterns

C : Creational Design Pattern

D : Structural Design Patterns

Q.no 51. A link is an instance of What things

A : Generalization

B : Association

C : Dependency

D : Realization

Q.no 52. Which of the following describes the Creational pattern correctly?

A : This type of patterns provide a way to create objects while hiding the creation logic, rather

B : This type of patterns concern class and object composition. Concept of inheritance is used to than instantiating objects directly using new opreator

C : This type of pattern are specifically concerned with communication between objects.

D : This type of pattern are specifically concerned with the presentation tier

Q.no 53. A package diagram consists of the following?

A : Groupings of Usecases, classes, components

B : Interface

C : Object & Class

D : Sticks

Q.no 54. 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 : Classes are shown by circle

Q.no 55. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

A : Activity diagram

B : Sequence diagram

C : Statechart diagram

D : Object diagram

Q.no 56. Which of the following is present in a nested concurrent state machine?

A : Initial State

B : Final State

C : History State

D : Concurrent sub state

Q.no 57. In component diagrams, building block which is represented with two rectangles laid on left side is classified as

A : type of components

B : interfaces

C : dependency relationships

D : association

Q.no 58. What is Fault Masking?

A : Creating a test case which does not reveal a fault

B : Error condition hiding another error condition

C : Masking a fault by developer

D : Masking a fault by a tester

Q.no 59. _____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at a location specified in the base.

A : Exclude

B : Extend

C : Include

D : Abstract

Q.no 60. can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.

A : System Analysis

B : System Data

C : System Procedure

D : System Record

Q.no 1. 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 : Encapsulation

B : Modularity

C : Hierarchy

D : Abstraction

Q.no 2. Which things are dynamic parts of UML models?

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 3. Which testing is an integration testing approach that is commonly used when “shrink-wrapped” software products are being developed?

A : Regression Testing

B : Integration testing

C : Smoke testing

D : Validation testing

Q.no 4. An operation can be described as _____.

A : Object

B : Class

C : Functions

D : Object & Class

Q.no 5. Which Test Document describes the Exit Criteria of Testing?

A : Test Case

B : Test Plan

C : Test Summary Report

D : Defect Report

Q.no 6. If a component of the overall system is functionally complete and operates within that system independently from the functionality of the SOA architectural concept? other components, it is an example of which

- A : Modularity
- B : Extensibility
- C : Loose coupling
- D : Separation of concerns

Q.no 7. Which type of design patterns provide a way to create objects while hiding the creation logic, rather than instantiating objects directly using new operator?

- A : Creational Design Patterns
- B : Structural Design Patterns
- C : Behavioral Design Pattern
- D : J2EE Design Patterns

Q.no 8. Requirement specification is carried out

- A : after requirements are determined
- B : before requirements are determined
- C : simultaneously with requirements determination
- D : independent of requirements determination

Q.no 9. Which of the following diagrams is used to model business workflows?

- A : Deployment diagram
- B : Activity diagram
- C : Use Case diagram
- D : Interaction diagram

Q.no 10. Which of the following statement is true concerning objects and/or classes?

- A : An object is an instance of a class.
- B : A class is an instance of an object.

C : An object includes encapsulates only data.

D : A class includes encapsulates only data.

Q.no 11. The scenario of a use case is graphically represented using

A : deployment diagram

B : sequence diagram

C : use case diagram

D : interaction diagram

Q.no 12. Which of the below is not a valid design pattern?

A : Singleton

B : Factory

C : Command

D : Java

Q.no 13. State that is active after the completion of the transition is called

A : source state

B : target state

C : history state

D : final state

Q.no 14. Which of these is true with respect to interfaces?

A : Interfaces in component diagram defines relationship between components and environment

B : Interfaces realized by a class or a component are required interfaces

C : Interface on which a class or component depends are called provided interfaces

D : All of the mentioned

Q.no 15. What can be requested from any object of the class to affect behavior?

A : object

B : attribute

C : operation

D : instance

Q.no 16. Which is a black box testing technique appropriate to all levels of testing?

A : Acceptance testing

B : Regression testing

C : Equivalence partitioning

D : Quality assurance

Q.no 17. Which diagram shows the configuration of run-time processing elements?

A : Deployment diagram

B : Component diagram

C : Node diagram

D : ER-diagram

Q.no 18. The fact that the same operation may apply to two or more classes is called what?

A : Inheritance

B : Polymorphism

C : Encapsulation

D : Multiple classification

Q.no 19. A collection of operations that specify the services rendered by a class or component known as

A : Class

B : Interaction

C : Interface

D : Collaboration

Q.no 20. Which design pattern ensures that only one object of particular class gets created?

A : Singleton pattern

B : Filter pattern

C : State pattern

D : Bridge pattern

Q.no 21. In OOD, the attributes(data variables) and methods(operation on the data) are bundled together is called _____ .

A : Classes

B : Objects

C : Encapsulation

D : Inheritance

Q.no 22. A class is divided into which of these compartments ?

A : Name Compartment

B : Attribute Compartment

C : Operation Compartment

D : All of the mentioned

Q.no 23. What is normally considered as an adjunct to the coding step

A : Integration testing

B : Unit testing

C : Completion of Testing

D : Regression Testing

Q.no 24. Which of the following is used to model the life time of an object?

A : Use Case

B : Class

C : State Machine

D : nterface

Q.no 25. In which of the following mechanisms, types of all variables and expressions are fixed at compilation time.

- A : Strong Typing
- B : Weak Typing
- C : Static Binding/ early binding
- D : Dynamic Binding/ late binding

Q.no 26. What are the three different types of message arrows?

- A : Synchronous, Asynchronous, Asynchronous with instance creation
- B : Self, Multiplied, Instance generator
- C : Synchronous, Asynchronous, Synchronous with instance creation
- D : None of the mentioned

Q.no 27. What is UML?

- A : UML is Unified Modeling Language.
- B : Graphical language for visualizing artifacts of the system.
- C : Allow to create a blue print of all the aspects of the system.
- D : None of the mentioned

Q.no 28. Which structure's view is orthogonal to the module and conceptual view?

- A : Module Structure
- B : Process Structure
- C : Uses Structure
- D : Data flow

Q.no 29. Single inheritance, Multiple inheritance, and Aggregation comes under which inheritance?

- A : Modularity
- B : Typing
- C : Hierarchy

D : None of the mentioned

Q.no 30. What does the SOAP specification define?

A : A format for XML messaging

B : An interface to a business process

C : An Internet communications protocol

D : The payload contents for a Web service message

Q.no 31. What is a collection of model elements called?

A : Box

B : Dependency

C : UML packages

D : Package members

Q.no 32. Which of these are followed in case of software design process?

A : Analysis occurs at start of product design with a product idea

B : Analysis occurs at the end of engineering design with the SRS

C : Product design resolution produces the design document

D : Engineering design resolution produces the SRS

Q.no 33. For showing detailed design of procedures, which one of the following OOAD artifacts is the MOST useful?

A : Interaction Diagrams

B : Activity Diagrams

C : Package Diagrams

D : State Diagrams

Q.no 34. A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.

A : class

B : state machine

C : use case

D : activity

Q.no 35. Which SOA architectural concept is applied as an organization combines services to perform a business process?

A : Modularity

B : Composition

C : Encapsulation

D : Separation of concerns

Q.no 36. Which of the following is not one of the use of component diagram?

A : To model physical databases

B : To model executable releases

C : To model general view

D : To model adaptable systems

Q.no 37. Which structure describes units as abstraction of system's functional requirements?

A : Conceptual structure

B : Module structure

C : Physical structure

D : Calls structure

Q.no 38. Which of the following is the way of ensuring that the tests are actually testing code?

A : Control structure testing

B : Complex path testing

C : Code coverage

D : Quality assurance of software

Q.no 39. Which of these are true with respect to the message arrows?

A : The synchronous message arrow is used when a sending individual continues execution after sending the message

B : The asynchronous message arrow is used when a sending individual suspends execution after sending the message

C : The dashed arrow is used either to show the return of control from a synchronous message or to create a new entity

D : All of the mentioned

Q.no 40. _____ captures the intended behavior of a system.

A : Use Case

B : Component

C : Class

D : Interface

Q.no 41. A state machine whose actions are all attached to states is called

A : Activity diagram

B : Mealy machine

C : Moore machine

D : Component diagram

Q.no 42. 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 : Operations

Q.no 43. You want to minimize development cost by reusing methods? Which design pattern would you choose?

A : Adapter Pattern

B : Singleton Pattern

C : Delegation pattern

D : Immutable Pattern

Q.no 44. Which class that can have only one instance?

A : Adaptor Class

B : Proxy Class

C : ~~Singleton Class~~

D : Factory class

Q.no 45. Acceptance testing is also known as

A : Grey box testing

B : White box testing

C : Alpha Testing

D : Beta testing

Q.no 46. A typical _____ program creates some remote objects, makes references to these objects accessible, and waits for clients to invoke methods on these objects.

A : Server

B : Client

C : Thread

D : Concurrent

Q.no 47. which diagram is used to show interactions between messages are classified as?

A : activity

B : state chart

C : ~~collaboration~~

D : object lifeline

Q.no 48. What is a key difference between a component and a service?

A : A service is deployed once and a component is deployed many times.

B : A component is deployed once and a service is deployed many times.

C : A component has an interface and a service implements the interface.

~~D : A service has an interface and a component implements the interface.~~

Q.no 49. Time event is modeled by the keyword

A : when

~~B : after~~

C : signal

D : change

Q.no 50. Which of these are necessary requirements for Iteration mechanism?

A : Initialize

B : Completion Test

~~C : Information Hiding~~

D : Access Current

Q.no 51. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

A : documentation

B : flowchart

~~C : program specification~~

D : design

Q.no 52. Which of the following diagram is used to model the vocabulary of a system?

A : Object Diagram

B : Activity Diagram

~~C : Class diagram~~

D : Interaction Diagram

Q.no 53. Which model in system modelling depicts the static nature of the system ?

A : Behavioral Model

B : Context Model

C : Data Model

D : Structural Model

Q.no 54. 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

Q.no 55. Which things in UML are the explanatory parts of UML models?

A : Structural things

B : Behavioral things

C : Grouping things

D : Annotational things

Q.no 56. Composition is a stronger form of which of the following?

A : Aggregation

B : Encapsulation

C : Inheritance

D : All of the above.

Q.no 57. A sequential state machine may have

A : at most one initial state and one final state

B : at least one initial state and one final state

C : at most one initial state more than one final state

D : more than one initial state and at most one final state

Q.no 58. The behavior of a use case is specified by

A : flow of events

B : classes

C : components

D : nodes

Q.no 59. Which among the following are not the valid notations for package and component diagram?

A : Notes

~~B : Box~~

C : Extension Mechanisms

D : Packages

Q.no 60. Activities and action taken on the data are represented by circle or round-edged rectangles is called ____ .

A : Entities

~~B : Process~~

C : Data storage

D : Data flow

Q.no 1. Which of the following is not real-time architectural patterns that are commonly used?

~~A : Asynchronous communication~~

B : Observe and React

C : Environmental Control

D : Process Pipeline

Q.no 2. Which structure's view shows the mapping of software onto hardware?

A : Module Structure

B : Process Structure

~~C : Physical Structure~~

D : Class Structure

Q.no 3. How do Web 2.0 applications communicate with SOA services?

A : Both architectures use XML to ensure interoperability.

B : Web 2.0 technologies communicate using Remote Procedure Calls (RPC) to SOA services.

C : JavaScript Object Notation (JSON) provides an efficient data format for SOA services.

D : Asynchronous JavaScript + XML (Ajax) applications can make service requests from a Web browser.

Q.no 4. _____ defines the properties of a data object and take on one of the three different characteristics

A : data object

B : attributes

C : relationships

D : data object and attributes

Q.no 5. SDLC stands for

A : System Development Life Cycle

B : Structure Design Life Cycle

C : System Design Life Cycle

D : Structure development Life Cycle

Q.no 6. Exceptions are

A : internal signal

B : state

C : association

D : generalization

Q.no 7. Exhaustive testing is

A : always possible

B : practically possible

C : impractical but possible

D : impractical and impossible

Q.no 8. Which of the following is not a part of bug report?

A : Test case

B : Output

C : Software Version

D : LOC

Q.no 9. What is testing process' first goal?

A : Bug prevention

B : Testing

C : Execution

D : Analyses

Q.no 10. Maintenance testing is performed using which methodology?

A : Retesting

B : Sanity testing

C : Breadth test and depth test

D : Confirmation testing

Q.no 11. Which Design Pattern should you use when.... a class wants its subclasses to specify the objects it creates.

A : Bridge

B : Strategy

C : Builder

D : Factory Method

Q.no 12. The recurring aspects of designs are called design

A : patterns

B : documents

C : structures

D : methods

Q.no 13. Class diagrams are not useful to .

A : model simple collaborations

B : model the vocabulary of a system

C. model simple interactions

D : model a logical database schema

Q.no 14. Effective testing will reduce _____ cost.

A : maintenance

B : design

C : coding

D : documentation

Q.no 15. The object-oriented development life cycle is which of the following?

A : Analysis, design, and implementation steps in the given order and using multiple iterations.

B : Analysis, design, and implementation steps in the given order and going through the steps no more than one time.

C : Analysis, design, and implementation steps in any order and using multiple iterations.

D : Analysis, design, and implementation steps in any order and going through the steps no more than one time.

Q.no 16. Constraints can be represented in UML by

A : {text}

B : [text]

C : (text)

D : Constraint

Q.no 17. Which diagram in UML shows a complete of a modeled system at a specific time.

A : Sequence

B : Collaboration

C : Class

D : Object

Q.no 18. 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

Q.no 19. Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?

A : Singleton pattern

B : Chain of responsibility pattern

C : State pattern

D : Bridge pattern

Q.no 20. Which one of the following is not a structural thing?

A : Class

B : Package

C : Use case

D : Node

Q.no 21. Test cases are designed during which of the following stages?

A : Test recording

B : Test configuration

C : Test planning

D : Test specification

Q.no 22. Which diagram evolved from a desire to develop a procedural design representation that would not allow violation of the structured constructs?

A : State transition diagram

B : Box diagram

C : ER diagram

D : Use case diagram

Q.no 23. Executable non atomic computations are called as

A : action states

B : activity states

C : transitions

D : simple states

Q.no 24. 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

Q.no 25. A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

A : class

B : state

C : actor

D : component

Q.no 26. Which of the following evaluates to an absolute value of Time?

A : Timing mark

B : Timing Constraint

C : Timing Expression

D : Timing Location

Q.no 27. Which of the following pattern creates object without exposing the creation logic to the client and refer to newly created object using a common interface?

A : Factory Pattern

B : Abstract Factory Pattern

C : Singleton Pattern

D : Transfer Object Pattern

Q.no 28. Inside the states, the events are encountered to handle without leaving the state. This is known as

A : state machine

B : state transition

C : internal transition

D : external transition

Q.no 29. Which of the following is not regression test case?

A : A representative sample of tests that will exercise all software functions

B : Additional tests that focus on software functions that are likely to be affected by the change

C : Tests that focus on the software components that have been changed

D : Low-level components are combined into clusters that perform a specific software sub-function

Q.no 30. Which of the following pattern is the basis of interaction management in many web-based systems?

A : architecture

B : repository pattern

C : model-view-controller

D : different operating system

Q.no 31. In an Activity Diagram, organizing the activities into groups is called

A : forking

B : joining

C : swimlane

D : synchronization

Q.no 32. What is Cyclomatic complexity?

A : Black box testing

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Q.no 33. 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.

Q.no 34. An entity in ER Model is a real world being, which has some properties called ____ .

A : Attributes

B : Relationship

C : Domain

D : path

Q.no 35. Software mistakes during coding are known as

A : errors

B : failures

C : bugs

D : defects

Q.no 36. In Unified Modeling Language, diagrams that organize system elements into groups are classified as

- A : package diagrams
- B : organized diagram
- C : system diagrams
- D : class diagrams

Q.no 37. Which three characteristics of services indicate a mature SOA environment?

- A : Services are discoverable
- B : Services use Web 2.0 technology
- C : Services are exposed by an Enterprise Service Bus (ESB)
- D : Services are composed into broader business functionality

Q.no 38. Client-server architecture holds the client responsible for _____ and server is only responsible for _____.

- A : Application Logic; Presentation Logic
- B : Presentation Logic; Data Access Logic and Data Storage
- C : Data Access Logic and Presentation Logic; Data Storage
- D : Application Logic; Data Storage

Q.no 39. Which of these are types of nodes used in the deployment diagram?

- A : Device
- B : Execution Environment
- C : Artifact
- D : Device & Execution Environment

Q.no 40. Absolute time of an event is modeled as

- A : timing constraint
- B : timing mark
- C : timing expression

D : timing semantics

Q.no 41. Which of the following is not included in Architectural design decisions?

- A : type of application
- B : distribution of the system
- C : architectural styles
- ~~D : testing the system~~

Q.no 42. Why is messaging important to an SOA?

- A : Messaging improves the performance of complex environments.
- B : Messaging implements separation of concerns resulting in faster development.
- ~~C : Messaging facilitates communication between distributed heterogeneous environments.~~
- D : Messaging is used to communicate between a repository and an Enterprise Service Bus

Q.no 43. Which is not a type of incremental testing approach?

- A : Bottom up
- B : Top down
- ~~C . Big-bang~~
- D : Functional incrimination

Q.no 44. Which of the following is incorrect in deployment diagram?

- A : Communication connections between nodes are shown by communication paths
- ~~B : Communication paths are represented by dotted lines~~
- C : Artifacts are deployed inside nodes where they reside and execute
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C : Creational Design Pattern

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A : transition

B : state

C : association

D : generalization

Q.no 47. A package diagram consists of the following?

A : Package symbols

B : Groupings of Use cases, classes, components

C : Interface

D : Package symbols, Groupings of Use cases, classes & components

Q.no 48. It allows us to infer that different members of classes have some common characteristics.

A : Realization

B : Aggregation

C : Generalization

D : dependency

Q.no 49. Change event is modeled by the keyword

A : after

B : when

C : time

D : signal

Q.no 50. Which type they considered Activity diagram, use case diagram, collaboration diagram, and sequence diagram?

A : non-behavioral

B : non-structural

C : structural

D : behavioral

Q.no 51. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

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B : Sequence diagram

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B : Error condition hiding another error condition

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D : Masking a fault by a tester

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- A : type of components
- B : interfaces
- C : dependency relationships
- D : association

Q.no 56. Components can be represented by which of the following?

- A : Component symbols,Stereotypes
- B : Rectangular boxes
- C : Box
- D : Circle

Q.no 57. What are the three different types of message arrows?

- A : Synchronous, asynchronous
- B : Self, Multiplied, instance generator
- C . Synchronous, Asynchronous, synchronous with instance creation
- D : asynchronous with instance creation

Q.no 58. The object of _____ within an OO system is to design tests that have a high likelihood of uncovering plausible bugs.

- A : Fault-based testing
- B : Integration testing
- C : Use-based testing
- D : Scenario-based testing

Q.no 59. Aggregation is which of the following?

- A . Expresses a part-of relationship and is a stronger form of an association relationship.
- B : Expresses a part-of relationship and is a weaker form of an association relationship.
- C : Expresses an is-a relationship and is a stronger form of an association relationship.

D : Expresses an is-a relationship and is a weaker form of an association relationship.

Q.no 60. A package diagram consists of the following?

A : Groupings of Usecases, classes, components

B : Interface

C : Object & Class

D : Sticks

Multiple Choice Questions: Answer Key

Name of the Faculty: Prof G.M.Walunjkar

Name of the subject: Software Design and Modeling

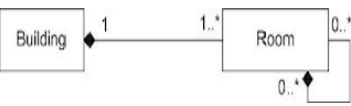
Year: BE

Branch: IT

Q. No	Description Question	Choice	Unit No.	Difficulty Level (Easy / Medium / Hard)	Blooms Taxonomy Level
1	A _____ is a physical or replaceable part of a system that conforms to and provides the realization of set of interfaces.	a. node b. object c. Component d. interface	I	Medium	2
2	SDLC stands for	a. System Design life cycle b. Software Development Life cycle c. System Development Life cycle d. None of the mentioned	I	Easy	1
3	A _____ is a physical element that exists at run time and represents a computational	a. node b. class	I	Easy	1

	resource.	c.package d.component			
4	An association indicates the relationship between _____.	a. nodes b.classes c. interfaces d.objects	I	Medium	2
5	Which of these does not affect different types of software as a whole?	a. Heterogeneity b. Flexibility c. Business and social change d. Security	I	Easy	2
6	A relationship between classes and interfaces can be viewed as _____ relationship.	a.association b.generalization c.link d.realization	I	Medium	2
7	A _____ is a condition or situation during the life of an object during which it satisfies some condition, performs some activity, or waits for some events.	a.class b.state c. activity d. specification	I	Hard	2
8	A constraint is used to _____ rules of a UML building block.	a. add b. modify c. both a and b d.none	I	Hard	3
9	The architecture of a software-intensive system can be described by ____ views.	a. One b. Six c. Three d. Five	I	Hard	4
10	The _____ view addresses the performance, scalability and throughput of the system	a.use case b. process c. implementation d. design	I	Medium	2

11	The _____ view addresses the configuration management of the system's releases	a.use case b. process c. implementation d. design	I	Easy	2
12	Models help us to_____ a system as it is or the way it is wanted.	a. Analyze b. Design c. Visualize d. Measure	I	Medium	2
13	The explanatory parts of the UML model are known as _____	a. Behavioral things b. Grouping things c. Structural things d. Annotational things	I	Medium	2
14	RUP stands for_____ created by a division of _____	a. Rational Unified Program, IBM b. Rational Unified Process, Infosys c. Rational Unified Process, Microsoft d. Rational Unified Process, IBM	I	Easy	1
15	_____ are used to create new building blocks from existing blocks.	a. Tagged Values b. Stereotypes c. Constraints d. Diagrams	I	Medium	2
16	In which phase is the scope of the project defined?	a. Inception b. Elaboration c. Construction d. Transition	I	Easy	1
17	To hide the internal implementation of an object we use ...	a) inheritance	I	Medium	2

		b) encapsulation c) polymorphism d) none of these			
18	A component diagram address the static _____ view of system.	a stuctural b. behavioral c. implementation d. none	I	Hard	3
19	If the objects focus on the problem domain, then we are concerned with _____.	a. Object Oriented Analysis b. Object Oriented Design c. Object Oriented Analysis and Design d. None of the above	I	Hard	3
20	Identify the following who presented the object modeling technique (OMT).	(a) Booch (b) Jim Rumbaugh ET AL (c) Jacobson ET AL (d) Both (a) and (b) above	I	Hard	2
21	Which of the following statements is false with respect to the diagram given below?	<p>(a) The building is composed of one or more rooms</p> <p>(b) An aggregation relationship exists between the building and the room</p> <p>(c) A room can have many rooms</p> <p>(d) There is a recursive composition in the above diagram</p>  <pre> classDiagram class Building class Room Building "1" -- "1..*" Room Room "0..*" </pre>	I	Hard	4

22	Which type of association does the following diagram depict? 	(a) aggregation (b) composition (c) specialization (d) generalization	I	Easy	1
23	Software is defined as ____ .	a. Instructions b. Data Structures c. Documents d. All of the mentioned	I	Easy	1
24	What are the signs that a software project is in trouble?	a. The product scope is poorly defined. b. Deadlines are unrealistic. c. Changes are managed poorly.	I	Hard	4
25	A class is divided into which of these compartments ?	a) Name Compartment b) Attribute Compartment c) Operation Compartment d) All of the mentioned	I	Easy	1
26	In Unified Modeling Language, diagrams which captures system static structure and provide foundation for other models is called	a) deployment diagrams b) class diagrams c) component diagrams d) object diagrams	I	Medium	2
27	Abstraction has _____ types.	a. 1 b. 4	I	Medium	2

		c. 2 d. 3			
28	What is a Software ?	a. Software is set of programs b. Software is documentation and configuration of data c. Both a and b d. None of the mentioned	I	Easy	2
29	CRC approach and noun phrase approach are used to identify ...	a) classes b) colaborators c) use cases d) object	I	Medium	2
30	Arrange the following activities for making a software product using i. Design strategy ii. Transformation into product iii. Implementation iv. Requirement gathering	a. 1, 4, 3, 2 b. 4, 3, 1, 2 c. 4, 1, 3, 2 d. 1, 3, 4, 2	I	Easy	2
31	Abstraction provide an operation named as ...	a) encapsulation b) call back c) turndown d) inheritance	I	Easy	2

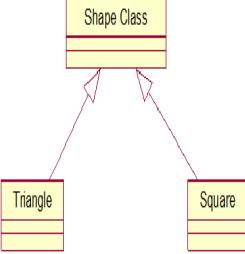
32	To distinguish between active and non-active object which property is applied?	a) abstraction b) polymorphism c) concurrency d) aggregation	I	Easy	2
33	Aggregation is ...	a) set of relationship b) composed of relationship c) part of relationship d) all of these	I	Hard	2
34	A model is a _____ of reality.	a. Complication b. Simplification c. Realization d. Generalization	I	Hard	4
35	In which principle, the models created explain the identification of a problem and	a. The Choice of Model is Important b. Levels of Precision May	I	Easy	1

	find its solution?	Differ c. The Best Models are connected to Reality d. No Single Model is Sufficient			
36	Algorithmic and object-oriented are the two common ways for modeling _____	a. Non-software Systems b. Software Systems c. Vocabulary of a System d. Client/Server System	I	Hard	3
37	_____ helps to communicate the overall system architecture unambiguously.	a. Flow charts b. Designing c. SRS d. Templates	I	Easy	2
38	_____ defines the system's actions and how different parts contribute to it.	a. Behavior b. Structure c. Model d. Use case	I	Hard	1
39	_____ can be done for both simple and complex systems.	a. Generalization n b. Specification cm, c. Modeling d. Collaboration	I	Medium	2

40	The best kind of models helps to choose _____	<p>a. Degree of detail</p> <p>b. Design view</p> <p>c. Single model</p> <p>d. Choice of model</p>	I	Hard	4
41	A set of _____ models are used to approach a complex system.	<p>a. Dependent w"</p> <p>b. Independent</p> <p>c. Both dependent and independent</p> <p>d. Different</p>	I	Medium	2
42	An Object-oriented program is structured as a community of interacting agents, called _____	<p>a. True</p> <p>b. False</p>	I	Medium	2
43	Which of the following property does not correspond to a good Software Requirements Specification (SRS) ?	<p>a. Objects</p> <p>b. Classes</p> <p>c. Functions</p> <p>d. Statements</p>	I	Easy	2
44	UML is useful to _____ a system as it is or as we want it to be.	<p>a. Visualize</p> <p>b. Specify</p> <p>c. Document</p> <p>d. All of the above</p>	I	Hard	3

45	A collection of operations that specify the services rendered by a class or component known as _____	a. Class b. Interaction c. Interface d. Collaboration	I	Medium	2
46	_____ is an abstraction of a set of functions that the system performs.	a. Class b. Interaction c. Use case d. Collaboration	I	Medium	2
47	_____ is a physical element that exists at runtime and represents a computational resource.	a. Node b. Actor c. Name d. Object	I	Medium	2
48	If the software process were based on scientific and engineering concepts, it would be easier to re-create new software than to scale an existing one.	a. True b. False	I	Easy	1
49	Which one of the following is not a structural thing?	a. Class b. Package c. Use case d. Node	I	Hard	3
50	A link is an instance of _____	a. Generalization	I	Easy	2

		b. Association c. Dependency d. Realization			
51	Which of the following is used to create new building blocks from existing blocks	a. Tagged Values b. Stereotypes c. Constraints d. Diagrams	II	Medium	2
52	All public methods in business model objects are defined directly or indirectly because of a _____ requirement.	a. Use case b. Dependency c. Association d. Sequence	II	Medium	2
53	In class diagram, inside each class what is to be printed?	a. Its name, attributes, operations and derived class b. Its name, attributes and operations c. Its name and attributes d. Its name and operations	II	Easy	1
54	Key elements of use-case diagrams are	a. People, computer b. Actors, use cases c. People, classes and objects d. Uses, cases	II	Hard	3

55	Aggregation relationship is represented in UML notation by	a. Line with solid diamond at one end b. Line with hollow diamond at one end c. Line with an arrow at one end d. Line without an arrow	II	Hard	2
56	Modality is the term used to indicate whether or not a particular data object must participate in a relationship.	a. Yes b. No	II	Hard	3
57	The maximum number of objects that can participate in a relationship is called _____ .	a. Cardinality b. Attributes c. Operations d. Transformers	II	Easy	1
58	Software Requirement Specification should come up with following features: 1) User Requirements are expressed in natural language. 2) Technical requirements are expressed in structured language, which is used inside the organization. 3) Design description should be written in Pseudo code.	a. True b. False	II	Easy	1
59	What type of relationship is represented by Shape class and Square ?  A UML class diagram illustrating generalization. At the top is a class box labeled "Shape Class". Two arrows point from it to two other class boxes below: "Triangle" on the left and "Square" on the right. Both "Triangle" and "Square" have their own internal compartments, indicating they are subclasses of "Shape Class".	a. Realization b. Generalization c. Aggregation d. Dependency	II	Medium	2
60	UML interfaces are used to _____	a. Define an API for all classes b. Program in Java, but	II	Easy	2

		not in C++ or Smalltalk c. Define executable logic to reuse across classes d. Specify required services for types of objects			
61	An actor is _____	a. A person b. A job title c. A role d. A system	II	Hard	4
62	_____ allows us to infer that different members of classes have some common characteristics.	a. Realization b. Aggregation c. Generalization d. dependency	II	Easy	1
63	Which model in system modelling depicts the static nature of the system ?	a. Behavioral Model b. Context Model c. Data Model d. Structural Model	II	Medium	2
64	Which of these software characteristics are used to determine the scope of a software project?	a. Only performance. b. Only context. c. Information objectives, function, performance d. None of the above.	II	Medium	2
65	The system icon identifies _____	a. The boundaries of the system b. The scope of the project so c. The context of the	II	Easy	1

		system d. Another system in the role of an actor			
66	The software scope identifies what the product will do and what it will not do, what the end product will contain and what it will not contain.	a. True b. False	II	Easy	1
67	Devices and other systems _____	a. May be actors b. May only receive output from a use case c. May only provide input to a use case d. Are out of scope because we are describing only one system at	II	Medium	1
68	Associations _____	a. May exist only between actors and use cases b. Identify the flow of data between actors and use cases c. Identify interactions between actors and use cases d. Identify dependencies between actors and use cases	II	Hard	3
69	Which UML diagram is shown	a. Use Case	II	Medium	2

	<p>below?</p> <pre> graph TD User((User ID)) --> BasicSalary((Basic Salary)) BasicSalary --> HRA((HRA)) BasicSalary --> System((System)) HRA --> System System --> Accountant((Accountant)) User --> BasicSalary Bonus((Bonus)) --> PenaltyFine((Penalty/Fine)) </pre>	<p>b. Collaboration Diagram c. Class Diagram d. Object Diagram</p>			
70	Which things are dynamic parts of UML models	<p>a. Structural things b. Behavioral things c. Grouping things d. Annotational things</p>	II	Easy	1
71	Use cases _____	<p>a. Identify business processes b. Identify system goals c. Describe workflow d. Prioritize system procedures</p>	II	Easy	2
72	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"?	<p>a. Association b. Aggregation c. Realization d. Generalization</p>	II	Easy	2
73	Which document is created by system analyst after the requirements are collected from Various stakeholders?	<p>a. Software requirement specification b. Software requirement validation</p>	II	Medium	2

		c. Feasibility study d. Requirement Gathering			
74	What refers to the value associated with a specific attribute of an object and to any actions or side?	a. Object b. State c. Interface d. None of the mentioned	II	Easy	1
75	In OOD, the attributes(data variables) and methods(operation on the data) are bundled together is called _____.	a. Classes b. Objects c. Encapsulation d. Inheritance	II	Medium	1
76	Which of the following are the valid relationships in Use Case Diagrams	a. Generalization b. Include c. Extend d. All of the mentioned	II	Medium	2
77	Which of the following is a building block of UML	a. Things b. Relationships c. Diagrams d. All of the mentioned	II	Medium	3
78	Classes and interfaces are a part of	a. Structural things b. Behavioral things c. Grouping things d. Annotational things	II	Hard	4
79	What can be requested from any object of the class to affect behavior?	a. object b. attribute c. operation d. instance	II	Medium	2
80	The UML was designed for describing _____	a. object-oriented systems b. architectural design c. SRS d. Both object-oriented systems and Architectural design	II	Hard	2

81	Class responsibilities are defined by	a. its attributes only b. its collaborators c. its operations only d. both its attributes and operations	II	Hard	2
82	Events occur whenever an	a. actor and the OO system exchange information b. class operation is invoked c. messages are passed between objects d. all of the above	II	Hard	2
83	The association stereotype «Extends» indicates _____	a. Delegation of part of a task to another use case b. The target use case is a subprocess of the source use cases c. A specialized form of a use case d. A deviation from the UML standard	II	Medium	2
84	For purposes of behavior modeling a state is any	a. consumer or producer of data. b. data object hierarchy. c. observable mode of behavior. d. well defined process.	II	Hard	4
85	Which of following is not a UML diagram used creating a system analysis model?	a. activity diagram b. class diagram c. dataflow diagram d. state diagram	II	Medium	2
86	Forward engineering and reverse engineering can be	a. class diagram b. stereotypes	II	Easy	1

	applicable to _____	c. tagged values d. adornments			
87	A generalized description of a collection of similar objects is a	a. class b. instance c. subclass d. super class	II	Hard	3
88	Which of the following diagram is used to model the vocabulary of a system?	a. Object Diagram b. Activity Diagram c. Class diagram d. Interaction Diagram	II	Medium	2
89	What does a simple name in UML Class and objects consists of ?	a) Letters b) Digits c) Punctuation Characters d) All of the mentioned	II	Medium	2
90	Which of the following is false?	a) A note is a dog-eared box connected to any model element by a dashed line b) The main way to extend UML is by constraints, properties, etc c) A dependency relation holds between two entities D and I where change in I does not affect D d) All of the mentioned	II	Medium	2
91	Requirements should specify 'what' but not 'how'.	a. True b. False	II	Medium	2

92	Which of the following is incorrect in reference to dependency?	a) Module D uses module I when a correct version of I must be present for D to work correctly b) Module D depends for compilation on module I c) Class I imports elements from package D d) None of the mentioned	II	Easy	1
93	Modelling is a representation of the object-oriented classes and the resultant collaborations will allow a system to function.	a. True b. False	II	Easy	1
94	_____ model static data structures.	a. Object Diagram b. Activity Diagram c. Class diagram d. Interaction Diagram	II	Easy	1
95	Requirements can be gathered from users via interviews, surveys, task analysis, brainstorming, domain analysis, prototyping, studying existing usable version of software, and by observation.	a. True b. False	II	Easy	1
96	In the requirement analysis which model depicts how the software behaves as a consequence of external events?	a. Class-Oriented models b. Scenario-based models c. Flow-oriented models d. Behavioural models	II	Easy	1
97	Which of the following describes "Is-a-Relationship" ?	a. Aggregation b. Inheritance c. Dependency d. None of the above	II	Hard	4
98	_____ model static data structures.	a. Object diagrams b. Activity diagrams c. Class diagrams	II	Easy	1

		d. Interaction diagrams			
99	Abstract class does not have its direct instance. True or False	a. True b. False	II	Easy	1
100	Forward engineering in UML is the process of transforming _____	a. a code into a model b. a code into design n c. a model into a code d. a model into test	II	Hard	4
101	UML activity diagrams are useful in representing which analysis model elements?	a. Behavioral elements b. Class-based elements c. Flow-based elements d. Scenario-based elements	III	Medium	2
102	In an Activity Diagram, organizing the activities into groups is called _____ a. forking	a. forking b. joining c. swimlane d. synchronization	III	Medium	2
103	_____ is used to represent concurrent flows in an Activity Diagram.	a. Slide bar b. Synchronization bar c. Swim lane d. Branch	III	Medium	3
104	Objects placed in an Activity Diagram are connected to the activity or transition using _____ relationship.	a. association b. generalization c. dependency d. realization	III	Hard	2
105	_____ is a path from one activity state to the next activity state.	a. Action state b. Activity state c. Transition d. Fork	III	Easy	1

106	Executable atomic computations are called as _____	a. action states b. activity states c. composite states d. concurrent states	III	Medium	4
107	Activity diagram is a special kind of _____	a. use case diagram b. state chart diagram c. interaction diagram d. component diagram	III	Medium	4
108	Executable non atomic computations are called as _____	a. action states b. activity states c. transitions d. simple states	III	Medium	3
109	which of the following is NOT present in an Activity Diagram?	a. Action States b. Objects c. Events d. Notes	III	Medium	2
110	In an Activity Diagram, transitions belongs to _____	a. trigger oriented transitions b. self transitions c. internal transitions d. completion transitions	III	Easy	1
111	_____ uses the services of the system under design to fulfill the goals.	a. Primary actor b. Supporting actor c. Offstage actor d. Secondary actor	III	Easy	2
112	Which of the following diagrams is used to model business workflows?	a. Deployment diagram b. Activity diagram c. Use Case diagram	III	Easy	1

		d. Interaction diagram			
113	The scenario of a use case is graphically represented using _____	a. deployment diagram b. sequence diagram c. use case diagram d. interaction diagram	III	Easy	1
114	A _____ is a stream of messages exchanged between objects.	a. sequence b. modeling c. transition d. objects	III	Easy	1
115	An _____ shows an interaction consisting of a set of objects and their relationships, including the messages.	a. interaction diagram b. class diagram c. use case diagram d. activity diagram	III	Easy	1
116	_____ diagram illustrates use case realizations.	a. Sequence b. Class c. use case d. Activity	III	Medium	2
117	Which of the following doesn't include in message types?	a. Call b. Return c. Send d. Delete	III	Hard	3
118	Interaction diagrams are of _____ types.	a. 1 b. 2 c. 3 d. 4	III	Easy	2
119	_____ are used to model the dynamic aspects of collaborations.	a. Sequence Diagrams b. Structural c. Interactions	III	Easy	1

		d. Messages			
120	A set of messages exchanged among a set of objects is called as _____	a. use case b. activity c. interaction d. deployment	III	Easy	1
121	Sequence of messages is emphasized by _____ diagram.	a. state chart b. sequence c. activity d. collaboration	III	Easy	1
122	_____ specifies a path to send and receive messages between two objects.	a. Link b. Sequencing c. Object d. Role	III	Easy	1
123	which diagram is used to show interactions between messages are classified as?	A) activity B) state chart C) collaboration D) object lifeline	III	Medium	3
124	_____ diagram is time-oriented?	A) Collaboration B) Sequence C) Activity D) None of the mentioned	III	Easy	1
125	which term are combined Interaction Diagram?	A) Sequence Diagram + Collaboration Diagram B) Activity Diagram + State Chart Diagram C) Deployment Diagram + Collaboration Diagram D) None of the mentioned	III	Easy	1
126	_____ can model the behavior of an individual object.	a. Class b. Use case c. State machine d. Activity	III	Easy	1

127	A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.	a. class b. state machine c. use case d. activity	III	Hard	3
128	A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.	a. class b. state c. actor d. component	III	Easy	1
129	A _____ is a relationship between two states indicating that an object in the first s will enter the second state.	a. transition b. state c. association d. generalization	III	Medium	2
130	A state that has substates, that is nested states, is called _____	a. composite state b. history state c. target state d. source state	III	Easy	1
131	Inside the states, the events are encountered to handle without leaving the state. This is known as_____	a. state machine b. state transition c. internal transition d. external transition	III	Hard	3
132	_____ is the state that is active after completion of the transition.	a. Composite state b. History state c. Target state d. Source state	III	Medium	1
133	A The relationship between two	a. transition	III	Easy	1

	states is called _____	b. state c. association d. generalization			
134	_____ are handled without causing a change in state.	a. Transitions b. Events c. Signals d. State	III	Easy	1
135	Which of the following is used to model the life time of an object?	a. Use Case b. Class c. State Machine d. Interface	III	Hard	3
136	State that is active after the completion of the transition is called _____	a. source state b. target state c. history state d. final state	III	Medium	2
137	Which of the following is present in a nested concurrent state machine?	a. Initial State b. Final State c. History State d. Concurrent sub state	III	Easy	1
138	Absolute time of an event is modeled as _____	a. timing constraint b. timing mark c. timing expression d. timing semantics	III	Easy	1
139	State chart Diagrams are needed _____	a. when a class has complex life cycle b. when the execution of scenario is to be traced c. to allocate classes and objects to modules d. to allocate processes to	III	Hard	4

		processors			
140	The state diagram	<p>a. depicts relationships between data objects</p> <p>b. depicts functions that transform the data flow</p> <p>c. indicates how data are transformed by the system</p> <p>d. indicates system reactions to external events</p>	III	Hard	3
141	Which of the following can estimate size of project directly from problem specification?	<p>a. LOC</p> <p>b. Function point Metric</p> <p>c. COCOMO</p> <p>d. COCOMO II</p>	III	Hard	3
142	_____ Which of the following is a type of UML diagram:	<p>a. Collaboration</p> <p>b. Context</p> <p>c. User Interface</p> <p>d. None of the above</p>	III	Easy	2
143	If the system is performing no function then it is in	<p>A. Clear State</p> <p>B. Initial State</p> <p>C. Final State</p> <p>D. Reset State</p>	III	Easy	1
144	The vertical dimension of a sequence diagram shows	<p>a) abstract</p> <p>b) line</p> <p>c) time</p> <p>d) messages</p>	III	Hard	3
145	The time oriented diagram include ...	a) sequence	III	Easy	1

		b) classes c) activity d) none of these			
146	In a sequence diagram, the _____ indicates when an object sends or receives a message.	(A)command line (B)focus (C)request link (D)lifeline	III	Easy	1
147	Fork and Join terms are associated with	a. Activity Diagram b. Use Case Diagram c. Class Diagram d. Object Diagram	III	Easy	1
148	Timing diagram is a special form of a sequence diagram.True or False	a. True b. False	III	Hard	3
149	Which UML diagram shows the objects participating in the interaction by their links to each other and the messages that they send to each other.	a. Class b. Object c. Activity d. Collaboration	III	Hard	3
150	Timing diagrams are used to explore the behaviors of objects throughout a given period of time	a. True b. False	III	Easy	1
151	Component diagram is used to describe the _____ between various software components of structural diagram.	a. inheritance b. dependencies c. classes d. objects	IV	Medium	2
152	Component diagrams commonly contain components, interfaces and _____	a. objects b. nodes c. relationships d. classifiers	IV	Easy	1
153	A _____ shows the configuration of run time	a. use case diagram b. component diagram	IV	Medium	2

	processing nodes and the components that live on them.	c. class diagram d. deployment diagram			
154	_____ relationship is used among nodes in deployment diagram.	a. Dependency b. Generalization c. Association d. Aggregation	IV	Medium	2
155	In deployment diagram every _____ name is unique.	a. edge b. node c. arcs d. squares	IV	Easy	1
156	In deployment diagram, a node is represented as a _____	a. cube n b. cuboids c. prism d. rectangular	IV	Easy	1
157	Component diagram is a collection of vertices and _____	a. edge b. bipartites c. arcs d. squares	IV	Hard	3
158	Which of the following is not one of the use of component diagram?	a. To model physical databases b. To model executable releases c. To model general view d. To model adaptable systems	IV	Medium	2
159	Which of the following is doesn't included in the component diagram?	a. Dependency b. Generalization c. Association d. Aggregation	IV	Easy	1

160	A _____ diagram shows the organization of a set of components and their relationship	a. component b. interface c. deployment d. architectural	IV	Medium	1
161	_____ are created as a consequence of an executing system.	a. Deployment components b. Work product components c. Execution components d. System components	IV	Hard	3
162	Source code files and data files are contained by the _____ components	a. system n b. execution c. deployment d. work product	IV	Medium	2
163	_____ form an executable system like dynamic libraries and executable's	a.Deployment components b. Work product components c. Execution components d. System components	IV	Medium	3
164	The rules and semantics of the UML can be expressed in a form known as	(a) Object modeling language (b) Object constraint language (c) Object specification language (d) Object control language	IV	Easy	1
165	OCL stands for	a. Object Constraints Language b. Object Complete	IV	Hard	3

		Language c. Object Critical Language d. None of the above			
166	Applications of OCL are	a.To specify invariants on classes and types in the class model b. To specify type invariant for Stereotypes c. To describe pre- and post conditions on Operations and Methods d. All of the Above	IV	Hard	2
167	Which is true about Axioms	a.Hypothesized from observation b.Common truth c.Always valid	IV	Easy	1
168		d.All of the Above	IV	Easy	1
169	Object Oriented Design process includes refining UML class Diagram.	a.True b.False	IV	Easy	1
170	Designing Business Layer classes includes apply design axioms to design classes,their attributes,methods,associations ,,,strctures and protocols.	a.True b.False	IV	Easy	1
171	Attributes types are	a. Single value attribute b. Multi value attribute c. Reference to another object	IV	Easy	1

		d.All of the above			
172	OCL can be used to define the class attributes.	a.True b.False	IV	Easy	1
173	Visibility can be	a.public b.protected c.private d.All above	IV	Easy	1
174	package may contain both other packages and ordinary modeling elements.	a.True b.False	IV	Easy	1
175	Table class mapping is a simple one-to-one mapping of a table to a class and the mapping of columns in a table to properties in a class.	a.True b.False	IV	Medium	2
176	In Table multiple class mapping a Single table is mapped to multiple non inheriting classes	a.True b.False	IV	Easy	1
177	In Table-inherited classes mapping a single tables maps to many classes that have common super class	a.True b.False	IV	Easy	1
178	Multi database systems (MDBS) is a database systems that resides on top of all local database systems and presents a single database illusion to its users.	a.True b.False	IV	Easy	1
179	UI design is a creative process	a.True b.False	IV	Medium	1
180	Process of designing view layer classes includes	a. Macro level UI design process b. Micro level UI design activities c. Testing usability	IV	Medium	1

		and user satisfaction d. All of the above			
181	Macro level design process includes identify the interface objects for the class	a.True b.False	IV	Medium	1
182	The OCL makes use of Collection class for describing the constraints.	a.True b.False	IV	Easy	1
183	The symbol used for package visibility is	a. + b. - c. ~ d. *	IV	Medium	1
184	The symbol used for private visibility is	a. + b. - c. ~ d. *	IV	Easy	1
185	The symbol used for protected visibility is	a.+ b.- c.* d.#	IV	Easy	1
186	Major task of access layer are	a.Translate the request b.Translate the results c. both a and b d. none	IV	Easy	1
187	Creating a relational database(schema) from existing object model is called as	a.reverse engineering b.Forward engineering c.Backward engineering d. Traditional engineering	IV	Medium	2
188	Creating a object model from an existing relational database	a.reverse engineering	IV	Easy	1

	layout is called as	b.Forward engineering c.Backward engineering d. Traditional engineering			
189	The main process in building the object relational systems is defining the relationship between table structure with classes.	a. True b.False	IV	Easy	1
190	Access layer is an intermediate layer between business layer and physical database, files,ORB, Internet.	a. True b.False	IV	Easy	1
191	The access layer classes translate any data related requests from business layer into appropriate protocol for data access.	a. True b.False	IV	Easy	1
192	The three layer architecture consists of	a.data access layer b.business layer c.View layer d.All of the above	IV	Easy	1
193	The main goal of interface view layer design process in Micro level design process is to address users needs.	a. True b.False	IV	Easy	1
194	The main goal of attribute refinement is to make all attributes suitable to elevate the system into implementation.	a. True b.False	IV	Easy	1
195	In OCL,The subclass of Collection class are	a.Self b.Sequence c.Both a and b d.None	IV	Easy	1

196	The purpose of access layer is to create, a set of classes that know how to communicate with the place where the date actually reside	a. True b.False	IV	Medium	1
197	“One person might have one or more bank accounts”. This example represents	a.Single value attribute b.Multivalue attribute c.Reference to another object d. Passive attribute type.	IV	Medium	1
198	“Names of students who enrolled for particular course” This example represents	a.Single value attribute b.Multivalue attribute c.Reference to another object d. Passive attribute type	IV	Easy	1
199	“Simplify classes and their relationships “is one of the step for designing the access layer.	a. True b.False	IV	Medium	1
200	The important characteristic of view layer objects is that they are the only exposed objects of the application with which the user can interact.	a.True b.False	IV	Easy	1
201	Patterns is...	a) It solves a software design problem b) It is a model proposed for imitation c) All of these d) None of these	V	Easy	1
202	Which of the following benefits provide patterns?	a) Increasing Development Efficiency	V	Easy	1

		b) Promoting Communication c) Streamlining Documentation d) All of these			
203	Patterns important due to...	a) They captured design accessible to novices and other experts b) They capture expert design knowledge c) None of these d) All of these	V	Medium	1
204	---- is a design pattern?	a) Structural b) Abstract Factory c) Behavioral d) All of these	V	Medium	1
205	---- design pattern defines one-to-many dependency between objects...	a) Observer pattern b) Factory Pattern c) Facade pattern d) Singleton method pattern	V	Medium	1
206	Which of the following are concerned with communication between objects?	a) J2EE Design Patterns b) Behavioral Design	V	Medium	1

		Patterns c) Creational Design Pattern d) Structural Design Patterns			
207	Which one pattern creating duplicate object?	a) Filter Pattern b) Prototype Pattern c) Bridge Pattern d) Builder Pattern	V	Medium	1
208	A visitor class is used which changes the executing algorithm of an element class...	A. Business Delegate Pattern B. Composite Entity Pattern C. Visitor Pattern D. MVC Pattern	V	Easy	1
209	Which of the following represents the structure and behavior of the pattern?	a) Consequences b) Form c) Application d) Name	V	Easy	1
210	Which design pattern suggest multiple classes?	a) Chain of responsibility pattern b) Bridge pattern	V	Easy	1

		c) Singleton pattern d) State pattern			
211	Which of the following is correct about Creational design patterns.	A - These design patterns are specifically concerned with communication between objects. B - These design patterns provide a way to create objects while hiding the creation logic, rather than instantiating objects directly using new operator. C - These design patterns concern class and object composition. Concept of inheritance is used to compose interfaces and define ways to compose objects to obtain new functionalities. D - None of the above.	V	Easy	1
212	Which of the following describes the Prototype pattern correctly?	A - This pattern builds a complex object using simple objects and using a step by step approach. B - This pattern refers to creating duplicate object while keeping performance in mind. C - This pattern works as a bridge between two	V	Medium	2

		<p>incompatible interfaces.</p> <p>D - This pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently.</p>			
213	Which of the following pattern is used when we need to decouple an abstraction from its implementation so that the two can vary independently?	<p>A - Bridge Pattern</p> <p>B - Adapter Pattern</p> <p>C - Prototype Pattern</p> <p>D - Filter Pattern</p>	V	Easy	1
214	Which of the following pattern creates a chain of receiver objects for a request?	<p>A - Proxy Pattern</p> <p>B - Chain of Responsibility Pattern</p> <p>C - Command Pattern</p> <p>D - Interpreter Pattern</p>	V	Hard	2
215	Which of the following pattern a request is wrapped under an object as command and passed to invoker object?	<p>A - Proxy Pattern</p> <p>B - Chain of Responsibility Pattern</p> <p>C - Command Pattern</p> <p>D - Interpreter Pattern</p>	V	Easy	2
216	Which of the following describes the Strategy pattern correctly?	A - In this pattern, a class behavior changes based on its state.	V	Easy	1

		<p>B - In this pattern, a null object replaces check of NULL object instance.</p> <p>C - In this pattern, a class behavior or its algorithm can be changed at run time.</p> <p>D - In this pattern, an abstract class exposes defined way(s)/template(s) to execute its methods.</p>			
217	Which of the following is true for Adapter pattern?	<p>a. An adapter or wrapper is a component that provides a new interface for an existing component</p> <p>b. An Adapter or Wrapper pattern is a broker pattern that provides a new interface for existing software so that it can be reused</p> <p>c. Adaptation for reuse is an old technique that has been used since the beginning of software development</p> <p>d. All of the mentioned</p>	V	Medium	2
218	The Adapter patterns provide object-oriented adapters in which of these varieties?	<p>a. One uses inheritance</p> <p>b. one uses delegation</p> <p>c. All of the mentioned</p> <p>d. None of the mentioned</p>	V	Easy	1
219	A class (the adapter class) may be given a new interface by an adapter class in which of these ways?	<p>a. Class Adapter pattern</p> <p>b. Object Adapter pattern</p>	V	Easy	1

		c. All of the mentioned d. None of the mentioned			
220	Which of these states about Object Adapter pattern?	a. The adapter can inherit adapter operations with appropriate semantics and pragmatics, override those with inappropriate semantics or pragmatics, and add operations needed for the new interface b. The adapter may hold a reference to the adapter and delegate must work to the adapter object c. All of the mentioned d. None of the mentioned	V	Medium	2
221	Which of the following is true for proxy pattern?	a. Has exactly the same interface as the real object b. Handles routine or illegitimate messages without accessing the real object c. Delegates messages that it cannot handle to the real object d. All of the mentioned	V	Medium	2
222	Which of the following is not followed by proxy pattern?	a. virtual proxies b. remote proxies c. access proxies d. none of the mentioned	V	Easy	1
223	Which of the following is consequence for proxy pattern?	a. The Proxy pattern makes it possible to defer expensive operations	Medium	Medium	2

		b. Provides an elegant way to treat remote objects as if they were local c. Provides a mechanism for implementing supplier access restriction (proxies) d. All of the mentioned			
224	Which of the following is true about factory method?	a. A factory method is a non-constructive operation that creates and returns objects b. Factory methods are widely used in mid-level design patterns and in programming in general c. Factory methods create new instances using constructors or cloning, without any special technique for class instantiation d. All of the mentioned	V	Easy	1
225	What are the types of factory pattern?	a. Factory Method b. Abstract Method c. All of the mentioned d. None of the mentioned	V	Medium	1
226	Which class that can have only one instance?	a. Adaptor Class b. Proxy Class c. Singleton Class d. Factory class	V	Easy	1
227	Which of the following are true for the singleton class?	a. Singleton classes should be used whenever it is important that only one class exist and that that single instance be widely accessible b. The Singleton pattern can also be used, with slight modifications, when instances greater than one are desired c. Access restrictions are usually easy to add by restricting the visibility of the factory method d. All of the mentioned	V	Medium	2
228	Which of the following are true for prototype pattern?	a. A clone is a copy of an object b. When values stored in an entity (including references) are reproduced by a shallow copy operation is said to be shallow c. In contrast, a copy operation is deep when copies are made of all references to the original composite, and references to the new entities are placed in the new composite d. All of the mentioned	V	Medium	2
229	Which of the following are consequences for command pattern?	a. Reactor patterns provide event-driven design models b. They decouple clients and targets c. Encapsulate reactions to event	V	Medium	2

		d. None of the mentioned			
230	Which GRASP pattern helps to find out answer for “Who should be responsible for creating a new instance of some class?	a. Adapter b. Protected Vairation c. Creator d. Fabircation	V	Medium	2
231	Defines an interface for creating an object, but let the subclasses decide which class to instantiate. It lets the instantiation differ to subclasses.	a. Builder b. Abstract Factory c. Factory Method d. Prototype	V	Medium	2
232	Which design pattern defines one-to-many dependency among objects?	a. Singleton pattern b. Facade Pattern c. Factory method pattern d. Observer pattern	V	Medium	1
233	The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:	a) Object- Oriented Programming b) Object- Oriented Design c) Object- Oriented Analysis d) None of the mentioned	V	Easy	1
234	GRASP stands for	a. General Responsibility Assignment Software Patterns b. General Responsibility Assignment Software	V	Easy	1

		Problem c. Great Responsibility Assignment Software Patterns d. General Relational Assignment Software Patterns			
235	The controller pattern assigns the responsibility of dealing with system events to a non-UI class that represents the overall system or a use case scenario	a.True b.False	V	Medium	1
236	Coupling is a measure of how strongly one element is connected to, has knowledge of, or relies on other elements	a.True b.False	V	Easy	1
237	High cohesion is an evaluative pattern that attempts to keep objects appropriately focused, manageable and understandable	a.True b.False	V	Easy	1
238	A pure fabrication is a class that does not represent a concept in the problem domain, specially made up to achieve low coupling, high cohesion, and the reuse potential thereof derived	a.True b.False	V	Easy	1
239	GRASP Pattern are	a.Creator b.Information Expert c.Low Coupling d.All above	V	Easy	1
240	GRASP helps us in deciding which responsibility should be assigned to which object/class.	a.True b.False	V	Easy	1
241	What is Gang of Four (GOF)?	A - Four authors of Book 'Design Patterns - Elements of Reusable	V	Medium	2

		<p>Object-Oriented Software' are known as Gang of Four (GOF).</p> <p>B - Gang of Four (GOF) is a name of a book on Design Patterns.</p> <p>C - Gang of Four (GOF) is a Design Pattern.</p> <p>D - None of the above.</p>			
242	Event handling frameworks like swing, awt use Observer Pattern.	<p>a.True</p> <p>b.False</p>	V	Medium	2
243	Which of the following pattern works as a bridge between two incompatible interfaces?	<p>A - Builder Pattern</p> <p>B - Adapter Pattern</p> <p>C - Prototype Pattern</p> <p>D - Filter Pattern</p>	V	Medium	2
244	In which of the following pattern, a class behavior changes based on its state?	<p>A - State Pattern</p> <p>B - Null Object Pattern</p> <p>C - Strategy Pattern</p> <p>D - Template Pattern</p>	V	Easy	1
245	Which GOF design pattern is applied in the code snippet below? <pre>public class PrintSpooler { private static final PrintSpooler INSTANCE = new PrintSpooler(); private PrintSpooler() {}</pre>	<p>a. PrintSpooler</p> <p>b. Spooler</p> <p>c. Singleton</p> <p>d. Factory</p>	V	Easy	1

	<pre>public static PrintSpooler getInstance() { return INSTANCE; } }</pre> <p>Select one:</p>				
246	<p>The term "Delegation" is most closer to which of the following GRASP patterns</p> <p>Select one:</p>	<p>a. Expert b. Creator c. Low Cohesion d. Controller</p>	V	Medium	1
247	<p>Which GRASP pattern answers the question "What object should have the responsibility, when you do not want to violate High Cohesion and Low Coupling, or other goals, but solutions offered by Expert are not appropriate?"</p>	<p>a. Pure Fabrication b. Indirection c. Creator d. Polymorphism</p>	V	Medium	1
248	<p>In the Publish-Subscribe messaging model, the subscribers register themselves in a topic and are notified when new messages arrive to the topic. Which pattern does most describe this model?</p>	<p>a. Adapter b. Notifier c. Observer d. Factory</p>	V	Hard	2
249	<p>Which GRASP pattern is suitable to handle alternatives based on type?</p>	<p>a. Indirection b. Pure Fabrication c. Polymorphism d. Creator</p>	V	Easy	1
250	<p>Which design pattern would you use to limit the class instantiation to one object?</p> <p>Select one:</p>	<p>a. Factory b. Singleton c. Observer d. Adapter</p>	V	Easy	1
251	<p>What makes a good architecture?</p>	<p>a. The architecture may not be the product of a single architect or a small group b. The architect should</p>	VI	Easy	1

		<p>have the technical requirements for the system and an articulated and prioritized list of qualitative properties</p> <p>c. The architecture may not be well documented d. All of the mentioned</p>			
252	Which of the following are correct statements?	<p>a. An architecture may or may not defines components b. An architecture is not dependable on requirements c. An architecture is foremost an abstraction of a system that suppresses details of the system to make it easier to understand and work with d. All of the mentioned</p>	VI	Easy	1
253	What does “Every software system has an architecture” implies?	<p>a. System itself is a component b. Architecture an exist independently of its description or specification c. All the system to be stable should posses an architecture d. None of the mentioned</p>	VI	Medium	2
254	What is architectural style?	<p>a. Architectural style is a description of component types b. It is a pattern of run-time control c. It is set of constraints on architecture d. All of the mentioned</p>	VI	Medium	2

255	Which of the following can be considered regarding client and server?	<p>a. Client and server is an architectural style</p> <p>b. Client and server may be considered as an architectural style</p> <p>c. Client and server is not an architectural style</p> <p>d. None of the mentioned</p>	VI	Medium	1
256	Which of the statements truly concludes client and server relation with architectural styles?	<p>a. They are component types and their coordination is described in terms of protocols that server uses to communicate with each of its clients</p> <p>b. Multiple client cannot exist at an instance</p> <p>c. Architecture are countless for client and server but their architectural styles are different</p> <p>d. All of the mentioned</p>	VI	Easy	1
257	What is Architecture?	<p>a. Architecture is components</p> <p>b. Architecture is connectors</p> <p>c. Architecture is constraints</p> <p>d. All of the mentioned</p>	VI	Medium	2
258	Why is Software architecture so important?	<p>a. Communication among stakeholders</p> <p>b. Early Design decisions</p> <p>c. Transferable abstraction of a system</p> <p>d. All of the mentioned</p>	VI	Medium	2
259	Which lines depict that	<p>a. An implementation</p>	VI	Hard	3

	architecture defines constraints on an implementation?	<p>exhibits an architecture if it conforms to the structural decisions described by the architecture</p> <p>b. The implementation need not be divided into prescribed components</p> <p>c. An implementation exhibits an architecture if it conforms to the structural decisions described by the architecture and the implementation must be divided into prescribed components</p> <p>d. None of the mentioned</p>			
260	Why does architecture dictates organizational structure?	<p>a. Architecture describes the structure of the system being developed which becomes engraved in the development project structure</p> <p>b. An implementation exhibits an architecture if it conforms to the structural decisions described by the architecture</p> <p>c. Architecture may not describe structure as whole</p> <p>d. None of the mentioned</p>	VI	Hard	3
261	Is it possible to make quality predictions about a system based solely on evaluation of its	<p>a. Yes</p> <p>b. No</p> <p>c. May be</p>	VI	Medium	2

	architecture?	d. None of the mentioned			
262	Which of the following are the several architectural issues for system's testability?	a. Its level of architectural documentation b. Its separation of concerns c. The degree to which the system uses information hiding d. All of the mentioned	VI	Medium	1
263	Which of the following are the main aspects for the qualities of architecture?	a. Conceptual Integrity b. Buildability c. Correctness and Completeness d. All of the mentioned	VI	Easy	1
264	What concept is followed by Conceptual integrity?	a. Architecture should do different things in different ways b. Architecture should do different things in similar ways c. Architecture should do similar things in similar ways d. None of the mentioned	VI	Medium	2
265	Which of the following are essential for the architecture to allow for the meeting of all the systems and runtime resource constraints?	a. Conceptual Integrity b. Buildability c. Correctness and Completeness d. All of the mentioned	VI	Medium	2
266	Which of the following is true?	a. Architecture is low level design b. Architecture is mid level design c. Architecture is high level design d. None of the mentioned	VI	Medium	1

267	What is Architecture of a software based on?	a. Design b. Requirements c. All of the mentioned d. None of the mentioned	VI	Medium	2
268	What does Software architecture means?	a. It is the structure or structure of systems b. It comprises of software components c. Relationship among components d. All of the mentioned	VI	Medium	2
269	Point out the wrong statement:	1. SOA provides the standards that transport the messages and makes the infrastructure to support it possible 2. SOA provides access to reusable Web services over a SMTP network 3. SOA offers access to ready-made, modular, highly optimized, and widely shareable components that can minimize developer and infrastructure costs 4. None of the mentioned	VI	Easy	1
270	Which of the following describes a message-passing taxonomy for a component-based architecture that provides services to clients upon demand ?	1. SOA 2. EBS 3. GEC 4. All of the mentioned	VI	Easy	1
271	Which of the following is used to aid for locating services in SOA ?	1. catalog service 2. data abstraction services 3. data bus 4. all of the mentioned	VI	Easy	2

272	The primary objective of component-based architecture is to ensure	a. component reusability b. security c. integrity d. coupling	VI	Easy	1
273	A component is a modular, portable, replaceable, and reusable set of well-defined functionality that encapsulates its implementation and exporting it as a higher-level interface.	a. True b.False	VI	Easy	1
274	A component can have following views –	a. object-oriented view b. conventional view c. process-related view. d. All of the Above	VI	Easy	1
275	Characteristics of Components are	a. Reusability b. Replaceable c. Extensible d. All of the above	VI	Easy	1
276	Ease of deployment is the one of the advantage of component based architecture	a. True b.False	VI	Easy	1
277	A concurrent task (process) is the execution of a sequential component of a concurrent program	a. True b.False	VI	Medium	2
278	when only one task may have access to a resource at a given time is called as	a. Critical access b. Mutual Exclusion c. Dedicated control d. Direct access	VI	Medium	2
279	A real-time system is a software system where the correct functioning of the system depends on the results produced by the system and the	a. True b.False	VI	Medium	2

	time at which these results are produced				
280	Example od real time system are	a.radar systems b. data streaming c. customer service systems d. All of the Above	VI	Medium	2
281	“Identify the stimuli to be processed and the required responses to these stimuli” is one of the step in designing Real Time system.	a.True b.False	VI	Easy	1
282	A software product line is a set of software-intensive systems that share a common, managed set of features satisfying the specific needs of a particular market segment or mission and that are developed from a common set of core assets in a prescribed way.	a.True b.False	VI	Easy	1
283	A product-line architecture (PLA) is a blue-print for creating families of related applications.	a.True b.False	VI	Easy	1
284	Product-line architectures give stakeholders tools with which ordinary product architecture can be diversified into an artifact suitable for describing related products i.e. a product line.	a.True b.False	VI	Easy	1
285	The power of product lines comes through reuse of-	a.Engineering knowledge b.Existing product architectures, styles and patterns	VI	Easy	1

		c.Pre-existing software components and connectors d. All of the Above			
286	Notions of product lines are	a. Business product lines b. Engineering product lines c. Both a and b d. None	VI	Easy	1
287	Types of Real time system are	a.Soft RTS b.Hard RTS c. both a and b d.None	VI	Easy	2
288	Elements of Web services are	a.UDDI b.WSDL c.SOAP d.All of the above	VI	Hard	4
289	Example of Web services are	a.Credit Card validation system b.Weather forecast system c.Currency converter d.All of the above	VI	Medium	2
290	In SOA broker is a middleman between clients and servers.	a.True b.False	VI	Medium	2
291	Design Principles for Service Oriented Architecture are	a.Loose Coupling	VI	Medium	2

		b.Service Contract c.Abstraction d.All above			
292	Various Client server architecture patterns are	a.Multiple Client and single service b.Multiple client and multiple services c.Multi-tier client service d.All above	VI	Medium	2
293	Layers of Abstraction architectural pattern is typically used in TCP/IP Protocol	a. True b. false	VI	Easy	1
294	Call and Return pattern is commonly used architectural pattern	a.True b.False	VI	Easy	1
295	Structural view is represented by	a. Activity diagram b. Class diagram c. State diagram d. Timing diagram	VI	Easy	2
296	Semantic models specify how to determine a systems overall properties from the properties of its parts	a.True b.False	VI	Hard	3
297	Types of Architectural viewa are	a.Structural view b.Dynamic view c.Deployment view d.All	VI	Hard	3
298	Role of connector is	a. Communicate b. Coordinate c. Cooperate d. All of the above	VI	Hard	3

299	Connectors is one of the architectural element	a.True b.False	VI	Medium	2
300	The software architect	a. Is an artifact of early analysis b. Help to identify risks c. Represents earliest design decision d. All of the Above	VI	Medium	1

Prof G. M.Walunjkar

(Software Design and Modeling -Subject Incharge)

1. What are prototypes?

- a) Prototypes is a working model of part or all of a final product
- b) Prototypes does not represent any sort of models
- c) Prototype can never consist of full size
- d) All of the mentioned

Answer: a

Explanation: Prototypes exists usually in full size, Prototype itself is a model.

2. What are the types of prototypes?

- a) Horizontal prototypes
- b) Vertical Prototypes
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: These are the types of prototypes.

3. Which of these is true for prototypes?

- a) Horizontal Prototypes does some processing apart from the required for presenting the product's user interface
- b) Vertical Prototype realizes part or all of a product's user interface
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: Horizontal prototype realizes part or all of product's user interface and vice versa)

4. What are the notations for the Use case Diagrams?

- a) Use case
- b) Actor
- c) Prototype
- d) Use case and Actor

Answer: d

Explanation: Use Case diagram consists of Use cases and Actors.

5. Which description is inappropriate?

- a) A usecase is a type of agent that interacts with a product
- b) An actor is a type of complete interaction between product and its environment
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: An actor is a type of agent that interacts with the product.

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6. Which statements are considered correct in reference to use case diagram?

- a) A scenario is an interaction between product and particular interaction
- b) A use case diagram represent a product's use cases and actors involved in each use case
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: All the statements are the respective definitions of the terms.

7. Which among the following can be heuristic for Use case diagram?

- a) Product can be made actor
- b) Never name actors with noun phrases
- c) Name Use cases with verb phrases
- d) All of the mentioned

Answer: c

Explanation: Actors are noun phrases and never make a product as an actor.

8. What is incorrect among the following?

- a) Make use cases that uniform in size and complexity
- b) Organize use cases by actor, problem domain categories or solution categories
- c) Use cases can last for more than one session

d) Achieve a stakeholder goal in a usecase

Answer: c

Explanation: Use cases should be finished in one session.

9. Use case models that can be summarized under which of this category?

- a) Usecase Diagram
- b) Usecase Description
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Use case models are summarized as usecase diagram and description.

10. Which of the following statement is true?

- a) Use case diagram is a dynamic model of interaction between product and actors in a use case
- b) Use case Description is a static model of usecase supported by a product
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: Use case description is dynamic model of interaction between product and actors in a use case.

1. The behavior of a system is modeled using _____

- a. class diagram
- b. activity diagram
- c. use case diagram
- d. interaction diagram

2. Which of the following diagrams is used to model business workflows?

- a. Deployment diagram
- b. Activity diagram
- c. Use Case diagram

d. Interaction diagram

3. The scenario of a use case is graphically represented using _____

- a. deployment diagram
- b. sequence diagram
- c. use case diagram
- d. interaction diagram

4. _____ identify high-level services provided by the system.

- a. Classes
- b. Activities
- c. Use Cases
- d. Components

5. Use case scenario is a specific sequence of _____

- a. relationships n
- b. use cases
- c. classes
- d. actions

6. A collaboration is the of _____ a use case.

- a. generalization
- b. realization
- c. inheritance
- d. association

7. Use cases are represented as _____ within the system rectangle.

- a. ellipses
- b. circles
- c. rhombus

d. rectangle

8. An _____ connects the initiating actor to the use case (ending at the use case).

- a. Arrow
- b. Line
- c. Arc
- d. Scribble

9. Animation of a model against the execution of a deployed system is an example of _____

- a. business engineering
- b. forward engineering
- c. reverse engineering
- d. temporal engineering

10. Forward Engineering is possible for an Activity Diagram especially if the context of the diagram is _____

- a. an operation
- b. a workflow
- c. a class
- d. a use case

11. Realization of a use case is specified by _____

- a. a collaboration
- b. a component
- c. a node
- d. an activity

12. _____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at a location specified in the base.

- a. Exclude
- b. Extend
- c. Include

d. Abstract

13. _____ captures the intended behavior of a system.

- a. use Case
- b. Component
- c. Class
- d. Interface

14. Forward Engineering is the process of translating _____

- a. Model to Model
- b. Code to Model
- c. Model to Code
- d. Code to Code

15. The names of use cases are generally given as _____

- a. noun phrases
- b. verb phrases
- c. adjectives
- d. adverbs

16. Actors are connected to use cases only by _____

- a. association relationship
- b. generalization relationship
- c. realization relationship
- d. dependency relationship

17. _____ represents a role that plays within a system.

- a. Use case
- b. Component
- c. Actor

d. Activity

18. The behavior of a use case is specified by _____

- a. flow of events
- b. classes
- c. components
- d. nodes

19. _____ uses the services of the system under design to fulfill the goals.

- a. Primary actor
- b. Supporting actor
- c. Offstage actor
- d. Secondary actor

20. _____ state "what must always" be true beginning a scenario in the use case.

- a. pre-conditions
- b. primary conditions
- c. post-conditions
- d. secondary conditions

21. Which of the following diagram view the whole system as a block box?

- a. Class diagram
- b. Activity diagram
- c. Use case diagram
- d. Interaction diagram

22. In an Activity Diagram, transitions belongs to _____

- a. trigger oriented transitions
- b. self transitions
- c. internal transitions
- d. completion transitions

23. which of the following is NOT present in an Activity Diagram?

- a. Action States
- b. Objects
- c. Events
- d. Notes

24. Executable non atomic computations are called as _____

- a. action states
- b. activity states
- c. transitions
- d. simple states

25. Activity diagram is a special kind of _____

- a. use case diagram
- b. state chart diagram
- c. interaction diagram
- d. component diagram

26. Executable atomic computations are called as _____

- a. action states
- b. activity states
- c. composite states
- d. concurrent states

27. _____ is a path from one activity state to the next activity state.

- a. Action state
- b. Activity state
- c. Transition
- d. Fork

28. Objects placed in an Activity Diagram are connected to the activity or transition using _____ relationship.

- a. association
- b. generalization
- c. dependency
- d. realization

29. _____ is used to represent concurrent flows in an Activity Diagram.

- a. Slide bar
- b. Synchronization bar
- c. Swim lane
- d. Branch

30. In an Activity Diagram, organizing the activities into groups is called _____

- a. forking
- b. joining
- c. swimlane
- d. synchronization

Answers:

- 1. b
- 2. b
- 3. b
- 4. c
- 5. d
- 6. b
- 7. a
- 8. a
- 9. c
- 10. a
- 11. a
- 12. c

13. a

14. c

15. b

16. a

17. c

18. a

19. a

20. a

21. c

22. d

23. c

24. b

25. b

26. a

27. c

28. a

29. b

30. c

1. _____ are used to model records of activities that describe what happened in the past/what need to be done later.

a. Events

b. Signal

c. Node

d. Object

2. _____ transitions are handled without causing a change in state.

a. Internal

b. Substates

c. Name

d. Deferred event

3. Exceptions are _____

- a. internal signal
- b. state
- c. association
- d. generalization

4. A _____ represents a named object that is dispatched asynchronously b then received by another.

- a. events
- b. signal
- c. node
- d. name

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5. A _____ is an event that represents the passage of time.

- a. events
- b. node
- c. time event
- d. signal

6. Call event represents the _____ of an operation.

- a. class
- b. use case
- c. dispatch
- d. activity

7. Time event is modeled by the keyword _____

- a. when

- b. after
- c. signal
- d. change

8. Change event is modeled by the keyword _____

- a. after
- b. when
- c. time
- d. signal

9. Exceptions are arranged in _____

- a. hierarchy
- b. sequence
- c. linear
- d. circle

10. _____ have a lot in common with plain classes.

- a. Events
- b. Node
- c. Time event
- d. Signals

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Answers:

1. Correct Answer: a

What happened in the past/what need to be done later is modeled by events.

2. Correct Answer: a

Internal transitions are handled without causing a change in state.

3. Correct Answer : a

Exceptions are an example of internal signal. It is an asynchronous event.

4. Correct Answer: b

Named object that is dispatched asynchronously by one object and then received by another is represented by signal.

5. Correct Answer: c

The passage of time is an event known as time event.

6. Correct Answer: c

A call event represents the dispatch of an operation and it is a synchronous event.

7. Correct Answer: b

Time event is modeled by using the keyword 'after' followed by some expression that evaluates to a period of time which can be simple or complex.

8. Correct Answer: b

Change event is modeled by using the keyword 'when' followed by some Boolean expression.1. Object oriented analysis and design can be handled by the one who knows UML.

a) True

b) False

Answer : b

Explanation : The Unified Modeling Language includes a set of graphic notation techniques to create visual models of object-oriented software-intensive systems.

2. At Conceptual level Class diagrams should include

- a) operations only
- b) attributes only
- c) both (a) and (b)
- d) None of the mentioned

Answer : b

Explanation : In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations, and the relationships among objects.

3. Select the statement true for activity diagrams.

- a) They can be used to discover parallel activities
- b) They are used to depict workflow for a particular business activity
- c) Activity diagram do not tell who does what and are difficult to trace back to object models
- d) All of the mentioned

Answer : d

Explanation : Activity diagrams are graphical representations of workflows of step wise activities and actions with support for choice, iteration and concurrency.

4. Constraints can be represented in UML by

- a) {text}
- b) [text]
- c) constraint
- d) None of the mentioned

Answer : a

Explanation : Constraints are represented by {text string}.

5. What is an object?

- a) An object is an instance of a class.
- b) An object includes encapsulation of data
- c) An object is not an instance of a class

Answer : a

Explanation : An object is an instance of a class.

6. What is an abstract class?

- a) A class that has direct instances, but whose descendants may have direct instances.
- b) A class that has direct instances, but whose descendants may not have direct instances.
- c) A class that has no direct instances, but whose descendants may have direct instances.

Answer : c

Explanation : An abstract type is a type in a nominative type system which cannot be instantiated directly.

7. Which of the following are the valid relationships in Use Case Diagrams

- a) Generalization
- b) Include
- c) Extend
- d) All of the mentioned

Answer : d

Explanation : Generalization, include, extend all of these are valid relationships in use case diagrams.

8. Which of the following statement(s) is true about interaction diagrams?

- a) Interaction diagrams are at their best when they deal with one main design flow and not multiple variants that can happen.

- b) Interaction diagrams are good at designing part or all of one use case's functionality across multiple objects.
- c) Interaction diagrams allow the analyst to show iteration and conditional execution for messaging between objects.
- d) All of these

Answer : d

Explanation : Interaction diagram is used to describe some type of interactions among the different elements in the model. So this interaction is a part of dynamic behaviour of the system.

9. UML interfaces are used to:

- a) specify required services for types of objects.
- b) program in Java, but not in C++ or Smalltalk.
- c) define executable logic to reuse across classes.
- d) define an API for all classes.

Answer : a

Explanation : An interface is like a template design for a class that contains no data or implementation; only definitions for methods, properties etc.

10. Referring to the attached diagram, the arrow indicates:

- a) Navigability
- b) Dependency
- c) Association
- d) Refers to

Answer : a

Explanation : The arrows describe the ways you can navigate.

11. Which of the following is a building block of UML?

- a) Things
- b) Relationships
- c) Diagrams
- d) All of the mentioned

Answer : d

Explanation : All are the building blocks of UML which are further sub-categorized.

12. Classes and interfaces are a part of

- a) Structural things
- b) Behavioral things
- c) Grouping things
- d) Annotational things

Answer : a

Explanation : Structural things are mostly static parts of a model, representing elements that are either conceptual or physical.

13.What is a collection of operations that specify a service of a class or component?

- a) Use Case
- b) Actor
- c) Interface
- d) Relationship

Answer : c

Explanation : The answer is self explanatory.

14. What is a physical element that exists at run time in UML?

- a) A node
- b) An interface
- c) An activity
- d) None of the mentioned

Answer:a

Explanation:A node represents a computational resource.

15. What can be requested from any object of the class to affect behavior?

- a) object
- b) attribute
- c) operation
- d) instance

Answer : c

Explanation : An operation is the implementation of a service that can be requested from any object of the class to affect behavior.

16. Which things are dynamic parts of UML models?

- a) Structural things
- b) Behavioral things
- c) Grouping things
- d) Annotational things

Answer : b

Explanation : These are the verbs of a model, representing behavior over time and space.

17. Which diagram in UML emphasizes the time-ordering of messages?

- a) Activity
- b) Sequence
- c) Collaboration
- d) Class

Answer : b

Explanation : This diagram is a model describing how groups of objects collaborate in some behavior over time.

18. Object diagram captures the behavior of a single use case.

- a) True
- b) False

Answer : b

Explanation : Sequence Diagram is responsible for this.

19. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

- a) Activity diagram
- b) Sequence diagram
- c) Statechart diagram
- d) Object diagram

Answer : c

Explanation : A statechart diagram shows a state machine, consisting of states, transitions, events, and activities.

20. Which diagram shows the configuration of run-time processing elements?

- a) Deployment diagram
- b) Component diagram
- c) Node diagram
- d) ER-diagram

Answer : a

Explanation : A Deployment diagram shows the configuration of run-time processing elements and the software components, processes, and objects.

21. Which things in UML are the explanatory parts of UML models?

- a) Structural things
- b) Behavioral things
- c) Grouping things
- d) Annotational things

Answer : d

Explanation : It include a note which is simply a symbol for rendering constraints and comments attached to an element or a collection of elements.

22. 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

Answer : a

Explanation : The answer is self explanatory.

23. What refers to the value associated with a specific attribute of an object and to any actions or side?

- a) Object
- b) State
- c) Interface
- d) None of the mentioned

Answer : b

Explanation : In a state chart diagram, effects occur when the attribute's value changes.

24. Which of the following UML diagrams has a static view?

- a) Collaboration
- b) Use case
- c) State chart
- d) Activity

Answer : b

Explanation : A use case diagrams captures only the functionality of the system whereas a dynamic model/view captures the functions as well as the action.

25. 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

Answer : d

Explanation : An object diagram focuses on some particular set of object instances and attributes, and the links between the instances. It is a static snapshot of a dynamic view of the system.

26. 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

Answer : a

Explanation : Interaction diagram are used to formalize the dynamic behavior of the system.

27. Structure diagrams emphasize the things that must be present in the system being modeled.

- a) True
- b) False

Answer : a

Explanation : Since structure diagrams represent the structure they are used extensively in documenting the architecture of software systems

28. h of the following diagram is time oriented?

- a) Collaboration
- b) Sequence
- c) Activity

Answer : b

Explanation : A sequence diagrams timeline along which tasks are completed

29. How many diagrams are here in Unified Modelling Language?

- a) six
- b) seven
- c) eight
- d) nine

Answer : d

Explanation : The nine UML diagrams include use-case, sequence, collaboration, activity, state-chart, deployment, class, object and component.

30. 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 a debugging system

Answer : d

Explanation : The debugging system is a part of testing phase.

31. 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

Answer : b

Explanation : The answer is self explanatory.

32. 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

Answer : a

Explanation : The context model of a system may be represented using associations. Associations simply show that there are some relationships between the entities involved in the association.

33. Which of the following come under system control?

- a) Reconfigure
- b) Shutdown
- c) Powersave
- d) All of the mentioned

Answer : d

Explanation : Functionalities are governed by the system.

34. We use _____ where various parts of system use are identified and analyzed in turn.

- a) tangible entities
- b) scenario-based analysis
- c) design-based analysis
- d) None of the mentioned

Answer : b

Explanation : Use a scenario-based analysis where various scenarios of system use are identified and analyzed in turn.

35. 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

Answer : d

Explanation : Important relationships that may be documented at this stage are generalization (inheritance) relationships, uses/used-by relationships, and composition relationships.

36. Which model shows the flow of object interactions?

- a) Sequence model
- b) Subsystem model
- c) Dynamic model
- d) Both Sequence and Dynamic model

Answer : a

Explanation : Sequence model are represented using a UML sequence or a collaboration diagram and are dynamic models

37. If the system state is Shutdown then it can respond to which of the following message?

- a) restart()
- b) reconfigure()
- c) powerSave()
- d) All of the mentioned

Answer : d

Explanation : A restart() message causes a transition to normal operation. Both the powerSave() and reconfigure() messages cause a transition to a state in which the system reconfigures itself.

38. Which message is received so that the system moves to the Testing state, then the Transmitting state, before returning to the Running state?

- a) signalStatus()
- b) remoteControl()
- c) reconfigure()
- d) reportStatus()

Answer : d

Explanation : The answer is self explanatory.

39. Open source development involves making the source code of a system publicly available.

- a) True
- b) False

Answer : a

Explanation : This means that many people can propose changes and improvements to the software.

40. Which of the following is not the primary objectives in the analysis model?

- a) describing the customer complaints
- b) establishing a basis for the creation of a software design
- c) defining a set of requirements that can be validated once the software is built
- d) None of the mentioned

Answer : d

Explanation : All the options are covered in analysis model.

41. A description of each function presented in the DFD is contained in a _____.

- a) data flow
- b) process specification
- c) control specification
- d) data store

Answer : b

Explanation : The answer is self explanatory.

42. Which diagram indicates the behaviour of the system as a consequence of external events?

- a) data flow diagram
- b) state transition diagram
- c) control specification diagram
- d) workflow diagram

Answer : b

Explanation : The state transition diagram represents the various modes of behavior (called states) of the system and the manner in which transitions are made from state to state.

43. A data model contains

- a) data object
- b) attributes
- c) relationships
- d) All of the mentioned

Answer : d

Explanation : The data model consists of three interrelated pieces of information: the data object, the attributes that describe the data object, and the relationships that connect data objects to one another.

44. _____ defines the properties of a data object and take on one of the three different characteristics.

- a) data object
- b) attributes
- c) relationships
- d) data object and attributes

Answer : b

Explanation : They can be used to name an instance of the data object, describe the instance, or make reference to another instance in another table.

45. The _____ of a relationship is 0 if there is no explicit need for the relationship to occur or the relationship is optional.

- a) modality
- b) cardinality
- c) entity
- d) structured analysis

Answer : a

Explanation : The modality is 1 if an occurrence of the relationship is mandatory, else 0 for optional relationship.

46. A _____ is a graphical representation that depicts information flow and the transforms that are applied as data moves from input to output.

- a) data flow diagram

- b) state transition diagram
- c) control specification
- d) workflow diagram

Answer : b

Explanation : The basic form of a data flow diagram, also known as a data flow graph or a bubble chart.

47. A data condition occurs whenever a data is passed to an input element followed by a processing element and the result in control output.

- a) True
- b) False

Answer : a

Explanation : Standard flow of condition check.

48. The _____ enables the software engineer to develop models of the information domain and functional domain at the same time

- a) data flow diagram
- b) state transition diagram
- c) control specification
- d) activity diagram

Answer : a

Explanation : As the DFD is refined into greater levels of detail, the analyst performs an implicit functional decomposition of the system,

thereby accomplishing the fourth operational analysis principle for function.

49. The _____ contains a state transition diagram that is a sequential specification of behavior.

- a) data flow diagram
- b) state transition diagram
- c) control specification
- d) workflow diagram

Answer : c

Explanation : The control specification(CSPEC) describes the behavior of the system, but it gives us no information about

the inner working of the processes that are activated as a result of this behavior .

50. Which of the following is not a construct?

- a) sequence
- b) condition
- c) repetition
- d) selection

Answer : d

Explanation : Sequence implements processing steps that are essential in the specification of any algorithm.

Condition provides the facility for selected processing based on some logical occurrence, and repetition allows for looping.

51. Which of the following steps is applied to develop a decision table?

- a) List all actions that can be associated with a specific procedure
- b) List all conditions during execution of the procedure.
- c) Define rules by indicating what action(s) occurs for a set of conditions.
- d) All of the mentioned

Answer : d

Explanation : A decision table includes action stub and a condition stub with a set of rules.

52. _____ is a pidgin(simplified version of a language that develops as a means of communication between two or more groups that do not have a language in common)

- a) program design language
- b) structured English
- c) pseudocode
- d) All of the mentioned

Answer : d

Explanation : The difference between PDL and a real programming language lies in the use of narrative text embedded directly within PDL statements.

53. Which of the following term is best defined by the statement:"The ability to represent local and global data is an essential element of component-level design."?

- a) Data representation
- b) Logic verification
- c) "Code-to" ability
- d) Automatic processing

Answer : a

Explanation : The answer is self explanatory.

54. A software component

- a) Implements some functionality
- b) Has explicit dependencies through provides and required interfaces
- c) Communicates through its interfaces only
- d) All of the mentioned

Answer : d

Explanation : All the options identify with features of a software component.

55. Which diagram evolved from a desire to develop a procedural design representation that would not allow violation of the structured constructs?

- a) State transition diagram
- b) Box diagram
- c) ER diagram
- d) None of the mentioned

Answer : b

Explanation : None.

56. A _____ executes the loop task first, then tests a condition and repeats the task until the condition fails.

- a) repeat until
- b) condition
- c) do while tests
- d) if then-else

Answer : a

Explanation : The answer is self explanatory.

57. Which of the following is not a characteristics of box diagram?

- a) functional domain
- b) arbitrary transfer of control is impossible
- c) recursion is easy to represent
- d) providing a notation that translates actions and conditions

Answer : d

Explanation : This functionality is covered by UML diagrams.

58. The _____ is represented as two processing boxes connected by an line (arrow) of control.

- a) Repetition
- b) Sequence
- c) Condition
- d) None of the above

Answer : b

Explanation : The answer is self explanatory.

59. Which of the following term is best defined by the statement “Notation that can be input directly into a computer-based development system offers significant benefits.”?

- a) Machine readability
- b) Maintainability
- c) Structure enforcement
- d) Overall simplicity

Answer : a

Explanation : Readability is processing input.

60. Which of the following is golden rule for interface design?

- a) Place the user in control
- b) Reduce the user's memory load
- c) Make the interface consistent
- d) All of the mentioned

Answer : d

Explanation : These golden rules actually form the basis for a set of user interface design principles that guide this important software design activity.

61. Which of the following is not a design principle that allow the user to maintain control?

- a) Provide for flexible interaction
- b) Allow user interaction to be interrupt-able and undo-able
- c) Show technical internals from the casual user
- d) Design for direct interaction with objects that appear on the screen

Answer : c

Explanation : The user interface should move the user into the virtual world of the application.

62. Which of the following is not a user interface design process?

- a) User, task, and environment analysis and modeling
- b) Interface design
- c) Knowledgeable, frequent users
- d) Interface validation

Answer : c

Explanation : These are the end user for whom the product is being built.

63. When users are involved in complex tasks, the demand on _____ can be significant.

- a) short-term memory
- b) shortcuts
- c) objects that appear on the screen
- d) all of the mentioned

Answer : a

Explanation : The interface should be designed to reduce the requirement to remember past actions and results.

64. Which of the following option is not considered by the Interface design?

- a) the design of interfaces between software components
- b) the design of interfaces between the software and human producers and consumers of information
- c) the design of the interface between two computers
- d) all of the mentioned

Answer : c

Explanation : The answer is self explanatory

65. A software might allow a user to interact via

- a) keyboard commands
- b) mouse movement
- c) voice recognition commands
- d) all of the mentioned

Answer : d

Explanation : All the mentioned input mediums are available today.

66. A software engineer designs the user interface by applying an iterative process that draws on predefined design principles.

- a) True
- b) False

Answer : a

Explanation : The statement is true.

67. What incorporates data, architectural, interface, and procedural representations of the software?

- a) design model
- b) user's model
- c) mental image
- d) system image

Answer : a

Explanation : The requirements specification may establish certain constraints that help to define the user of the system,

but the interface design is often only incidental to the design model.

68. What establishes the profile of end-users of the system?

- a) design model
- b) user's model
- c) mental image
- d) system image

Answer : b

Explanation : To build an effective user interface, all design should begin with an understanding of the intended users,

including their profiles of their age, physical abilities, education, etc.

69. What combines the outward manifestation of the computer-based system , coupled with all supporting information that describe system syntax and semantics?

- a) mental image
- b) interface design

- c) system image
- d) interface validation

Answer : c

Explanation : When the system image and the system perception are coincident, users generally feel comfortable with the software and use it effectively.

70. What do you understand by V&V in software testing?

- a) Verified Version
- b) Version Validation
- c) Verification and Validation
- d) Version Verification

Answer : c

Explanation : V&V generally refers to any activity that attempts to ensure that the software will function as required.

71. In static test techniques, behavioral and performance properties of the program are observed.

- a) True
- b) False

Answer : b

Explanation : Static Analysis Techniques are based solely on the (manual or automated) examination of project documentation of software models and code.

72. Which granularity level of testing checks the behavior of module cooperation?

- a) Unit Testing
- b) Integration Testing

- c) Acceptance Testing
- d) Regression Testing

Answer : b

Explanation : Integration testing is the phase in software testing in which individual software modules are combined and tested as a group.

73. Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults?

- a) Regression Test
- b) Smoke Test
- c) Alpha Test
- d) Beta Test

Answer : a

Explanation : Regression test seeks to uncover new software bugs in existing functional and non-functional areas of a system after changes have been made to them.

74. Which of the following is a black box testing strategy?

- a) All Statements Coverage
- b) Control Structure Coverage
- c) Cause-Effect Graphs
- d) All Paths Coverage

Answer : c

Explanation : Rest are test strategies of white box testing.

75. A set of inputs, execution preconditions and expected outcomes is known as a

- a) Test plan

- b) Test case
- c) Test document
- d) Test Suite

Answer : b

Explanation : The answer is self explanatory.

76. In which test design each input is tested at both ends of its valid range and just outside its valid range?

- a) Boundary value testing
- b) Equivalence class partitioning
- c) Boundary value testing AND Equivalence class partitioning
- d) Decision tables

Answer : a

Explanation : Boundary value analysis is a software testing technique in which tests are designed to include representatives of boundary values.

77. A white box test scales up well at different granularity levels of testing.

- a) True
- b) False

Answer : b

Explanation : A white box test is mostly applicable at unit and integration testing level.

78. When does the testing process stops?

- a) When resources (time and budget) are over
- b) When some coverage is reached
- c) When quality criterion is reached

d) Testing never ends.

Answer : c

Explanation : As software testing is an exhaustive process, when the quality assurance is established and the product is ready to be delivered, testing is stopped.

79. Which of the following is not a part of a test design document?

- a) Test Plan
- b) Test Design Specification
- c) Test Case Specification
- d) Test Log

Answer : d

Explanation : Test log is a part of testing result document.

80. Specifying a set of test cases or test paths for each item to be tested at that level is known as

- a) Test case generation
- b) Test case design
- c) ALL of the mentioned
- d) None of the mentioned

Answer : c

Explanation : The answer is self explanatory.

81. Acceptance & system test planning are a part of architectural design.

- a) True
- b) False

Answer : b

Explanation : They are a part of requirements engineering, while integration & unit test planning come under architectural design.

82. PRD stands for

- a) Product Requirement Document
- b) Project Requirement Document
- c) Product Restrictions Document
- d) None of the mentioned

Answer : a

Explanation : A product requirements document (PRD) is a document written by a company that defines a product they are making,

or the requirements for one or more new features for an existing product.

83. Reuse-based software engineering is a software engineering strategy where the development process is geared to reusing existing software.

- a) True
- b) False

Answer : a

Explanation : The answer is self explanatory.

84. The open source movement has meant that there is a huge reusable code base available at

- a) free of cost
- b) low cost
- c) high cost
- d) short period of time

Answer : b

Explanation : The open source movement has meant that there is a huge reusable code base available at low cost.

This may be in the form of program libraries or entire applications.

85. Consider the example and categorize it accordingly, “A pattern-matching system developed as part of a text-processing system may be

reused in a database management system”.

- a) Application system reuse
- b) Component reuse
- c) Object and function reuse
- d) None of the mentioned

Answer : b

Explanation : Components of an application, ranging in size from subsystems to single objects, may be reused.

86. COTS stands for

- a) Commercial Off-The-Shelf systems
- b) Commercial Off-The-Shelf states
- c) Commercial Off-The-System state
- d) None of the mentioned

Answer : a

Explanation : The answer is self explanatory.

87. COTS product reuse means

- a) Class and function libraries that implement commonly used abstractions are available for reuse.

- b) Shared components are woven into an application at different places when the program is compiled.
- c) Large-scale systems that encapsulate generic business functionality and rules are configured for an organization.
- d) Systems are developed by configuring and integrating existing application systems.

Answer : d

Explanation : The answer is self explanatory.

88. .NET are specific to which platform?

- a) Java
- b) Mac-OS
- c) Microsoft
- d) LINUX

Answer : c

Explanation : .NET Framework (pronounced dot net) is a software framework developed by Microsoft that runs primarily on Microsoft Windows.

89. Which of the following is a generic structure that is extended to create a more specific subsystem or application?

- a) Software reuse
- b) Object-oriented programming language
- c) Framework
- d) None of the mentioned

Answer : c

Explanation : Frameworks are implemented as a collection of concrete and abstract object classes in an object-oriented programming language.

90. "An ordering system may be adapted to cope with a centralized ordering process in one company and a distributed process in another." Which category the example belong to?

- a) Process specialization
- b) Platform specialization
- c) Environment specialization
- d) Functional specialization

Answer : a

Explanation : In process specialization, the system is adapted to cope with specific business processes.

91. What are generic application systems that may be designed to support a particular business type, activity, or sometimes a complete enterprise?

- a) COTS-solution systems
- b) COTS-integrated systems
- c) ERP systems
- d) Both COTS-solution and COTS-integrated systems

Answer : a

Explanation : The answer is self explanatory

92. Which of the following is not an advantages of software reuse?

- a) lower costs
- b) faster software development
- c) high effectiveness
- d) lower risks

Answer : c

Explanation : Effectiveness depends on how one reuses the existing product.

93. ERP stands for

- a) Effective Reuse Planning
- b) Enterprise Resource Planning
- c) Effective Research Planning
- d) None of the mentioned

Answer : b

Explanation : Enterprise Resource Planning systems are examples of large-scale COTS reuse.

94. Which framework class include standards and classes that support component communication and information exchange?

- a) System infrastructure frameworks
- b) Middleware integration frameworks
- c) Enterprise application frameworks
- d) MVC

Answer : b

Explanation : The answer is self explanatory.

95. Which of the following option is not provided by formal methods?

- a) providing frameworks
- b) verifying systems
- c) provide investors
- d) both providing frameworks and verifying systems

Answer : d

Explanation : A method is formal if it has a sound mathematical basis, typically given by a formal specification language.

96. _____ are statements that can be interpreted in a number of ways.

- a) Contradictions
- b) Ambiguities
- c) Vagueness
- d) Comments

Answer : a

Explanation : As the name indicates, these statements may be interpreted differently as per user.

97. What defines the circumstances in which a particular operation is valid?

- a) Contradictions
- b) Post-condition
- c) Vagueness
- d) None of the mentioned

Answer : d

Explanation : A precondition defines the circumstances in which a particular operation is valid.

98. Which of the following is a way of making a statement about the elements of a set that is true for every member of the set?

- a) Set
- b) Sequence
- c) Universal quantification
- d) both Set and Sequence

Answer : c

Explanation : The answer is self explanatory.

99. Which of the following occurs often due to the bulkiness of a system specification document?

- a) Contradictions
- b) Ambiguities
- c) Vagueness
- d) Incompleteness

Answer : c

Explanation : Achieving a high level of precision consistently is an almost impossible task.

100. The _____ of a formal specification language is often based on a syntax that is derived from standard set theory notation and predicate calculus.

- a) semantic domain
- b) syntactic domain
- c) sequence
- d) set

Answer : b

Explanation : The answer is self explanatory

101. Which of the following provides a concise, unambiguous, and consistent method for documenting system requirements?

- a) CMM
- b) ISO-9001
- c) CASE tools
- d) Formal methods

Answer : d

Explanation : Formal methods provide a concise, unambiguous, and consistent method for documenting system requirements.

102. The _____ of a specification language indicates how the language represents system requirements.

- a) semantic domain
- b) syntactic domain
- c) sequence
- d) set

Answer : a

Explanation : For example, a programming language has a set of formal semantics that enables the software developer to specify algorithms that

transform input to output.

103. Which of the following is essential for success, when formal methods are used for the first time?

- a) Expert training
- b) Consulting
- c) Pre-requisite knowledge
- d) Both Expert training and Consulting
- e) All of the mentioned

Answer : d

Explanation : The answer is self-explanatory.

104. It is generally not necessary to apply formal methods to every aspect of a major system.

- a) True
- b) False

Answer : a

Explanation : Those components that are safety critical are first choices, followed by components whose failure cannot be tolerated.

105. What are the problems with re-structuring?

- a) Loss of comments
- b) Loss of documentation
- c) Heavy computational demands
- d) All of the mentioned

Answer : b

Explanation : Restructuring doesn't help with poor modularisation where related components are dispersed throughout the code.

106. Which of the following is not a module type?

- a) Object modules
- b) Hardware modules
- c) Functional modules
- d) Process support modules

Answer : a

Explanation : Except option a all other are module types.

107. Reverse engineering of data focuses on

- a) Internal data structures
- b) Database structures
- c) ALL of the mentioned
- d) None of the mentioned

Answer : c

Explanation : None

108. Forward engineering is not necessary if an existing software product is producing the correct output.

a) True

b) False

Answer : b

Explanation : Forward engineering refers to taking a high-level model and using it to build a more complex lower-level implementation.

109. Which of the following is not an example of a business process?

a) designing a new product

b) hiring an employee

c) purchasing services

d) testing software

Answer : d

Explanation : It is a part of development phase.

110. Which of the following is a data problem?

a) hardware problem

b) record organisation problems

c) heavy computational demands

d) loss of comments

Answer : b

Explanation : Records representing the same entity may be organised differently in different programs.

111. When does one decides to re-engineer a product?

- a) when tools to support restructuring are disabled
- b) when system crashes frequently
- c) when hardware or software support becomes obsolete
- d) subsystems of a larger system require few maintenance

Answer : c

Explanation : Re-engineering involves putting in the effort to make the system easier to maintain.

112. Which of the following is not a business goal of re-engineering ?

- a) Cost reduction
- b) Time reduction
- c) Maintainability
- d) None of the mentioned

Answer : d

Explanation : No such goal is mentioned which is not a business goal, so option d is correct here.

113. Which of these benefits can be achieved when software is restructured?

- a) Higher quality programs
- b) Reduced maintenance effort
- c) Software easier to test
- d) All of the mentioned

Answer : d

Explanation : The answer is self explanatory.

114. Data re-engineering may be part of the process of migrating from a file-based system to a DBMS-based system or changing from one DBMS to another.

- a) True
- b) False

Answer : a

Explanation : Data re-engineering involves analyzing and reorganizing the data structures in a program.

115. BPR stands for

- a) Business process re-engineering
- b) Business product re-engineering
- c) Business process requirements

Answer : a

Explanation : The answer is self explanatory.

116. Source code translation is a part of which re-engineering technique?

- a) Data re-engineering
- b) Re-factoring
- c) Restructuring
- d) None of the mentioned

Answer : c

Explanation : Restructuring involves automatic conversion from unstructured to structured code.

117. What type of fault remains in the system for some period and then disappears?

- a) Permanent
- b) Transient
- c) Intermittent

Answer : b

Explanation : For example many faults in communication systems are transient in nature.

118. Which of the following approaches are used to achieve reliable systems?

- a) Fault prevention
- b) Fault removal
- c) Fault tolerance
- d) All of the mentioned

Answer : d

Explanation : All the options lead to formation of a reliable system.

119. A system maintaining its integrity while accepting a temporary halt in its operation is said to be in a state of

- a) Full Fault Tolerance
- b) Graceful Degradation
- c) Fail Soft
- d) Fail Safe

Answer : d

Explanation : The answer is self explanatory.

120. Which of the following Error Detection checks is not a part of Application detection?

- a) Hardware checks
- b) Timing checks
- c) Reversal checks
- d) Coding checks

Answer : a

Explanation : Hardware is a part of environment detection check.

121. Exception handling is a type of

- a) forward error recovery mechanism
- b) backward error recovery mechanism

Answer : a

Explanation : Exception handling is a forward error recovery mechanism, as there is no roll back to a previous state;

instead control is passed to the handler so that recovery procedures can be initiated.

122. Non-occurrence of improper alteration of information is known as

- a) Available Dependability
- b) Confidential Dependability
- c) Maintainable Dependability
- d) Integral Dependability

Answer : d

Explanation : Integrity is to keep the original content safe from alteration.

123. In N-version programming which is the independent generation of N, the value of N is

- a) greater than 1
- b) less than 1
- c) greater than 2
- d) less than 2

Answer : c

Explanation : N-version programming (NVP), also known as multiversion programming or multiple-version dissimilar software, is a method or process

in software engineering where multiple functionally equivalent programs are independently generated from the same initial specifications.

124. In Log-based fault tolerance, logs of undetermined events are saved and replayed on failure.

- a) True
- b) False

Answer : a

Explanation : The answer is self explanatory.

125. All fault-tolerant techniques rely on

- a) Integrity
- b) Dependability
- c) Redundancy

Answer : c

Explanation : All fault-tolerant techniques rely on extra elements introduced into the system to detect & recover from faults.

126. It is imperative for a communicating processes to reach consistent recovery points to avoid the _____ effect, with backward error recovery mechanism.

- a) Static
- b) Dynamic
- c) Domino
- d) Whirlpool

Answer : c

Explanation : The answer is self explanatory.

127. Which of the following is not a phase of “bath tub curve” of hardware reliability?

- a) Useful Life
- b) Burn-in
- c) Wear-out
- d) Time

Answer : d

Explanation : Time is the horizontal dimension on which the bath tub curve is built and not the phase.

128. How is reliability and failure intensity related to each other?

- a) direct relation
- b) inverse relation
- c) no relation

Answer : b

Explanation : As the reliability increases, failure intensity decreases.

129. How many product quality factors are proposed in McCall quality model?

- a) 2

- b) 3
- c) 11
- d) 8

Answer : b

Explanation : McCall quality model has three product quality factors namely: Product revision, Product operation, Product Transition .

130. Which one of the following is not a software quality model?

- a) ISO 9000
- b) McCall model
- c) Boehm model
- d) ISO 9126

Answer : a

Explanation : ISO-9000 series of standards is a set of document dealing with quality systems that can be used for quality assurance purposes.

131. What is MTTF ?

- a) Maximum time to failure
- b) Mean time to failure
- c) Minimum time to failure
- d) None of the mentioned

Answer : b

Explanation : The answer is self explanatory.

132. How is software reliability defined?

- a) time

- b) efficiency
- c) quality
- d) speed

Answer : a

Explanation : Software Reliability mainly concerned with the time component. It can be seen in various models like Basic Execution Time Model and

Logarithmic Poisson Execution Time Model.

133. Suitability, Accuracy, Interpolability and security are what type quality attribute of ISO 9126 ?

- a) Reliability
- b) Efficiency
- c) Functionality
- d) Usability

Answer : c

Explanation: All the Characteristics mentioned in the question are related to achievement of the basic purpose for which the software is being engineered,

which is functionality.

134. Time Behavior and Resource Behavior fall under which quality attribute of ISO 9126 ?

- a) Reliability
- b) Efficiency
- c) Functionality
- d) Usability

Answer : b

Explanation : The Characteristics mentioned in the question are related to the relationship between the level of performance of the software and the amount of resources used, under stated conditions.

135. NHPP stands for

- a) Non Homogeneous Poisson Product
- b) Non Hetrogeneous Poisson Product
- c) Non Hetrogeneous Poisson Process
- d) Non Homogeneous Poisson Process

Answer : d

Explanation : The answer is self explanatory.

136. The CMM model is a technique to

- a) automatically maintain the software reliability
- b) improve the software process.
- c) test the software
- d) all of the mentioned

Answer : b

Explanation : Capability Maturity Model (CMM) is a strategy for improving the software process, irrespective of the actual life cycle model used.

Artificial Intelligence Questions and Answers – Neural Networks – 1

This set of Artificial Intelligence MCQs focuses on “Neural Networks – 1”.

1. A 3-input neuron is trained to output a zero when the input is 110 and a one when the input is 111. After generalization, the output will be zero when and only when the input is:

- a) 000 or 110 or 011 or 101

- b) 010 or 100 or 110 or 101
- c) 000 or 010 or 110 or 100
- d) 100 or 111 or 101 or 001

Answer: c

Explanation: The truth table before generalization is:

Inputs Output

000 \$

001 \$

010 \$

011 \$

100 \$

101 \$

110 0

111 1

where \$ represents don't know cases and the output is random.

After generalization, the truth table becomes:

Inputs Output

000 0

001 1

010 0

011 1

100 0

101 1

110 0

111 1

2. A perceptron is:

- a) a single layer feed-forward neural network with pre-processing

- b) an auto-associative neural network
- c) a double layer auto-associative neural network
- d) a neural network that contains feedback

Answer: a

Explanation: The perceptron is a single layer feed-forward neural network. It is not an auto-associative network because it has no feedback and is not a multiple layer neural network because the pre-processing stage is not made of neurons.

3. An auto-associative network is:

- a) a neural network that contains no loops
- b) a neural network that contains feedback
- c) a neural network that has only one loop
- d) a single layer feed-forward neural network with pre-processing

Answer: b

Explanation: An auto-associative network is equivalent to a neural network that contains feedback. The number of feedback paths(loops) does not have to be one.

4. A 4-input neuron has weights 1, 2, 3 and 4. The transfer function is linear with the constant of proportionality being equal to 2. The inputs are 4, 10, 5 and 20 respectively. The output will be:

- a) 238
- b) 76
- c) 119
- d) 123

Answer: a

Explanation: The output is found by multiplying the weights with their respective inputs, summing the results and multiplying with the transfer function. Therefore:

$$\text{Output} = 2 * (1*4 + 2*10 + 3*5 + 4*20) = 238.$$

5. Which of the following is true?

- (i) On average, neural networks have higher computational rates than conventional computers.
 - (ii) Neural networks learn by example.
 - (iii) Neural networks mimic the way the human brain works.
- a) All of the mentioned are true
 - b) (ii) and (iii) are true
 - c) (i), (ii) and (iii) are true
 - d) None of the mentioned

Answer: a

Explanation: Neural networks have higher computational rates than conventional computers because a lot of the operation is done in parallel. That is not the case when the neural network is simulated on a computer. The idea behind neural nets is based on the way the human brain works. Neural nets cannot be programmed, they can only learn by examples.

6. Which of the following is true for neural networks?

- (i) The training time depends on the size of the network.
 - (ii) Neural networks can be simulated on a conventional computer.
 - (iii) Artificial neurons are identical in operation to biological ones.
- a) All of the mentioned
 - b) (ii) is true
 - c) (i) and (ii) are true
 - d) None of the mentioned

Answer: c

Explanation: The training time depends on the size of the network; the number of neuron is greater and therefore the number of possible 'states' is increased. Neural networks can be simulated on a conventional computer but the main advantage of neural networks – parallel execution – is lost. Artificial neurons are not identical in operation to the biological ones.

7. What are the advantages of neural networks over conventional computers?

- (i) They have the ability to learn by example
 - (ii) They are more fault tolerant
 - (iii) They are more suited for real time operation due to their high ‘computational’ rates
- a) (i) and (ii) are true
 - b) (i) and (iii) are true
 - c) Only (i)
 - d) All of the mentioned

Answer: d

Explanation: Neural networks learn by example. They are more fault tolerant because they are always able to respond and small changes in input do not normally cause a change in output. Because of their parallel architecture, high computational rates are achieved.

8. Which of the following is true?

Single layer associative neural networks do not have the ability to:

- (i) perform pattern recognition
 - (ii) find the parity of a picture
 - (iii) determine whether two or more shapes in a picture are connected or not
- a) (ii) and (iii) are true
 - b) (ii) is true
 - c) All of the mentioned
 - d) None of the mentioned

Answer: a

Explanation: Pattern recognition is what single layer neural networks are best at but they don't have the ability to find the parity of a picture or to determine whether two shapes are connected or not.

9. Which is true for neural networks?

- a) It has set of nodes and connections

- b) Each node computes it's weighted input
- c) Node could be in excited state or non-excited state
- d) All of the mentioned

Answer: d

Explanation: All mentioned are the characteristics of neural network.

10. Neuro software is:

- a) A software used to analyze neurons
- b) It is powerful and easy neural network
- c) Designed to aid experts in real world
- d) It is software used by Neuro surgeon

Answer: b

Explanation: None.

1. Which is the first step in the software development life cycle ?

- a) Analysis
- b) Design
- c) Problem/Opportunity Identification
- d) Development and Documentation

Answer:c

Explanation: The answer is self explanatory.

2. Which tool is use for structured designing ?

- a) Program flowchart
- b) Structure chart

c) Data-flow diagram

d) Module

Answer:b

Explanation: A Structure Chart (SC) in software engineering and organizational theory, is a chart which shows the breakdown of a system to its lowest manageable levels.

3. A step by step instruction used to solve a problem is known as

a) Sequential structure

b) A List

c) A plan

d) An Algorithm

Answer:d

Explanation: The answer is self explanatory.

4. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

a) documentation

b) flowchart

c) program specification

d) design

Answer:c

Explanation: Program specification is the definition of what a computer program is expected to do.

5. Actual programming of software code is done during the _____ step in the SDLC.

a) Maintenance and Evaluation

b) Design

- c) Analysis
- d) Development and Documentation

Answer:d

Explanation: The developer has to find in the technical documentation enough information to start coding.

6. Who designs and implement database structures.
- a) Programmers
 - b) Project managers
 - c) Technical writers
 - d) Database administrators

Answer:d

Explanation: The role of database administrators includes the development and design of database strategies, system monitoring and improving database performance and capacity, and planning for future expansion requirements.

7. _____ is the process of translating a task into a series of commands that a computer will use to perform that task.
- a) Project design
 - b) Installation
 - c) Systems analysis
 - d) Programming

Answer:d

Explanation: The answer is self explanatory.

8. Debugging is:

- a) creating program code.
- b) finding and correcting errors in the program code.
- c) identifying the task to be computerized.
- d) creating the algorithm.

Answer:

Explanation: Debugging is a methodical process of finding and reducing the number of bugs, or defects, in a computer program or a piece of electronic hardware, thus making it behave as expected.

9. In Design phase, which is the primary area of concern ?

- a) Architecture
- b) Data
- c) Interface
- d) All of the mentioned

Answer:d

Explanation: Part of the design phase is to create structural and behavioral models of the system which is covered by architecture, data and the interface of the product.

10. The importance of software design can be summarized in a single word which is:

- a) Efficiency
- b) Accuracy
- c) Quality
- d) Complexity

Answer:c

Explanation: Software functional quality reflects how well it complies with or conforms to a given design, based on functional requirements or specifications.

11. Cohesion is a qualitative indication of the degree to which a module

- a) can be written more compactly.
- b) focuses on just one thing.
- c) is able to complete its function in a timely manner.
- d) is connected to other modules and the outside world.

Answer:b

Explanation: Cohesion of a single module/component is the degree to which its responsibilities form a meaningful unit.

12. Coupling is a qualitative indication of the degree to which a module

- a) can be written more compactly.
- b) focuses on just one thing.
- c) is able to complete its function in a timely manner.
- d) is connected to other modules and the outside world.

Answer:d

Explanation: Coupling between modules/components is their degree of mutual interdependence

1. “Robustness” answers which of the following description?

- a) CASE tools be used to support the process activities
- b) Process errors are avoided or trapped before they result in product errors
- c) Defined process is acceptable and usable by the engineers responsible for producing the software
- d) Process continues in spite of unexpected problems

Answer:d

Explanation:The answer is self explanatory.

2. Process improvement is the set of activities, methods, and transformations that developers use to develop and maintain information systems.

- a) True
- b) False

Answer:b

Explanation:The definition is of a system development process.

3. “Understandability” answers which of the following description?

- a) The extent to which the process is explicitly defined
- b) Process errors are avoided or trapped before they result in product errors
- c) Defined process is acceptable and usable by the engineers responsible for producing the software product
- d) Process continues in spite of unexpected problems

Answer:a

Explanation:The answer is self explanatory.

4. How many stages are there in process improvement?

- a) three
- b) four
- c) five
- d) six

Answer:a

Explanation:Process measurement, analysis and change are the three stages.

5. In which stage of process improvement bottlenecks and weaknesses are identified?

- a) Process measurement
- b) Process analysis
- c) Process change
- d) None of the mentioned

Answer:b

Explanation:In Process analysis the current process is assessed and bottlenecks and weaknesses are identified.

6. Prototypes and 4GL business systems are categorized under which process?

- a) Informal
- b) Managed
- c) Methodical
- d) Supported

Answer:a

Explanation:Here the development team chose their own way of working.

7. The documentation of a process which records the tasks, the roles and the entities used is called

- a) Process metric
- b) Process analysis
- c) Process modelling
- d) None of the mentioned

Answer:c

Explanation:Process models may be presented from different perspectives.

8. It is always best to start process analysis with a new test model.

- a) True
- b) False

Answer:b

Explanation:It is always best to start process analysis with an existing model. People then may extend and change this.

9. What is a tangible output of an activity that is predicted in a project plan?

- a) Deliverable
- b) Activity
- c) Condition

Answer:a

Explanation:The answer is self explanatory.

10. What is often undefined and is left to the ingenuity of the project managers and engineers?

- a) Role
- b) Exception
- c) Activity
- d) Process

Answer:b

Explanation:Exceptions are often undefined and it is left to the ingenuity of the project managers and engineers to handle the exception.

11. Which of the following is not a part of process change?

- a) Introducing new practices, methods or processes
- b) Introducing new team members to existing project

- c) Introducing or removing deliverable
- d) Introducing new roles or responsibilities

Answer:b

Explanation:Adding more developers aid to process completion rather than changing it.

12. The Capability Maturity Model (CMM) is a continuous model.

- a) True
- b) False

Answer:b

Explanation:The CMM is discrete rather than continuous.

13. The CMMI assessment is based on a x-point scale. What is the value of x?

- a) 0
- b) 2
- c) 4
- d) 6

Answer:d

Explanation:Not performed, performed, managed, defined, quantitatively managed, and optimizing are the six points

9. Correct Answer: a

In modeling the exceptions, arrange the exceptions in a hierarchy.

10. Correct Answer: d

Plain classes are common with signals.

1. Object oriented analysis and design can be handled by the one who knows UML.

- a) True
- b) False

Answer : b

Explanation : The Unified Modeling Language includes a set of graphic notation techniques to create visual models of object-oriented software-intensive systems.

2. At Conceptual level Class diagrams should include

- a) operations only
- b) attributes only
- c) both (a) and (b)
- d) None of the mentioned

Answer : b

Explanation : In software engineering, a class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations, and the relationships among objects.

3. Select the statement true for activity diagrams.

- a) They can be used to discover parallel activities
- b) They are used to depict workflow for a particular business activity
- c) Activity diagram do not tell who does what and are difficult to trace back to object models
- d) All of the mentioned

Answer : d

Explanation : Activity diagrams are graphical representations of workflows of step wise activities and actions with support for choice, iteration and concurrency.

4. Constraints can be represented in UML by

- a) {text}
- b) [text] c) constraint
- d) None of the mentioned

Answer : a

Explanation : Constraints are represented by {text string}.

5. What is an object?

- a) An object is an instance of a class.
- b) An object includes encapsulation of data
- c) An object is not an instance of a class

Answer : a

Explanation : An object is an instance of a class.

6. What is an abstract class?

- a) A class that has direct instances, but whose descendants may have direct instances.
- b) A class that has direct instances, but whose descendants may not have direct instances.
- c) A class that has no direct instances, but whose descendants may have direct instances.

Answer : c

Explanation : An abstract type is a type in a nominative type system which cannot be instantiated directly.

7. Which of the following are the valid relationships in Use Case Diagrams

- a) Generalization

- b) Include
- c) Extend
- d) All of the mentioned

Answer : d

Explanation : Generalization, include, extend all of these are valid relationships in use case diagrams.

8. Which of the following statement(s) is true about interaction diagrams?

- a) Interaction diagrams are at their best when they deal with one main design flow and not multiple variants that can happen.
- b) Interaction diagrams are good at designing part or all of one use case's functionality across multiple objects.
- c) Interaction diagrams allow the analyst to show iteration and conditional execution for messaging between objects.
- d) All of these

Answer : d

Explanation : Interaction diagram is used to describe some type of interactions among the different elements in the model. So this interaction is a part of dynamic behaviour of the system.

9. UML interfaces are used to:

- a) specify required services for types of objects.
- b) program in Java, but not in C++ or Smalltalk.
- c) define executable logic to reuse across classes.
- d) define an API for all classes.

Answer : a

Explanation : An interface is like a template design for a class that contains no data or implementation; only definitions for methods, properties etc.

10. Referring to the attached diagram, the arrow indicates:

- a) Navigability
- b) Dependency
- c) Association
- d) Refers to

Answer : a

Explanation : The arrows describe the ways you can navigate.

11. Which of the following is a building block of UML?

- a) Things
- b) Relationships
- c) Diagrams
- d) All of the mentioned

Answer : d

Explanation : All are the building blocks of UML which are further sub-categorized.

12. Classes and interfaces are a part of

- a) Structural things
- b) Behavioral things
- c) Grouping things
- d) Annotational things

Answer : a

Explanation : Structural things are mostly static parts of a model, representing elements that are either conceptual or physical.

13.What is a collection of operations that specify a service of a class or component?

- a) Use Case
- b) Actor
- c) Interface
- d) Relationship

Answer : c

Explanation : The answer is self explanatory.

14. What is a physical element that exists at run time in UML?

- a) A node
- b) An interface
- c) An activity
- d) None of the mentioned

Answer:a

Explanation:A node represents a computational resource.

15. What can be requested from any object of the class to affect behavior?

- a) object
- b) attribute
- c) operation
- d) instance

Answer : c

Explanation : An operation is the implementation of a service that can be requested from any object of the class to affect behavior.

16. Which things are dynamic parts of UML models?

- a) Structural things
- b) Behavioral things
- c) Grouping things
- d) Annotational things

Answer : b

Explanation : These are the verbs of a model, representing behavior over time and space.

17. Which diagram in UML emphasizes the time-ordering of messages?

- a) Activity
- b) Sequence
- c) Collaboration
- d) Class

Answer : b

Explanation : This diagram is a model describing how groups of objects collaborate in some behavior over time.

18. Object diagram captures the behavior of a single use case.

- a) True
- b) False

Answer : b

Explanation : Sequence Diagram is responsible for this.

19. If you are working on real-time process control applications or systems that involve concurrent processing, you would use a

- a) Activity diagram
- b) Sequence diagram
- c) Statechart diagram
- d) Object diagram

Answer : c

Explanation : A statechart diagram shows a state machine, consisting of states, transitions, events, and activities.

20. Which diagram shows the configuration of run-time processing elements?

- a) Deployment diagram
- b) Component diagram
- c) Node diagram
- d) ER-diagram

Answer : a

Explanation : A Deployment diagram shows the configuration of run-time processing elements and the software components, processes, and objects.

21. Which things in UML are the explanatory parts of UML models?

- a) Structural things
- b) Behavioral things
- c) Grouping things
- d) Annotational things

Answer : d

Explanation : It include a note which is simply a symbol for rendering constraints and comments attached to an element or a collection of elements.

22. 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

Answer : a

Explanation : The answer is self explanatory.

23. What refers to the value associated with a specific attribute of an object and to any actions or side?

- a) Object
- b) State
- c) Interface
- d) None of the mentioned

Answer : b

Explanation : In a state chart diagram, effects occur when the attribute's value changes.

24. Which of the following UML diagrams has a static view?

- a) Collaboration
- b) Use case
- c) State chart
- d) Activity

Answer : b

Explanation : A use case diagrams captures only the functionality of the system whereas a dynamic model/view captures the functions as well as the action.

25. 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

Answer : d

Explanation : An object diagram focuses on some particular set of object instances and attributes, and the links between the instances. It is a static snapshot of a dynamic view of the system.

26. 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

Answer : a

Explanation : Interaction diagram are used to formalize the dynamic behavior of the system.

27. Structure diagrams emphasize the things that must be present in the system being modeled.

- a) True
- b) False

Answer : a

Explanation : Since structure diagrams represent the structure they are used extensively in documenting the architecture of software systems

28. h of the following diagram is time oriented?

- a) Collaboration
- b) Sequence
- c) Activity

Answer : b

Explanation : A sequence diagrams timeline along which tasks are completed

29. How many diagrams are here in Unified Modelling Language?

- a) six
- b) seven
- c) eight
- d) nine

Answer : d

Explanation : The nine UML diagrams include use-case, sequence, collaboration, activity, state-chart, deployment, class, object and component.

30. 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 a debugging system

Answer : d

Explanation : The debugging system is a part of testing phase.

31. 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

Answer : b

Explanation : The answer is self explanatory.

32. 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

Answer : a

Explanation : The context model of a system may be represented using associations. Associations simply show that there are some relationships between the entities involved in the association.

33. Which of the following come under system control?

- a) Reconfigure
- b) Shutdown
- c) Powersave
- d) All of the mentioned

Answer : d

Explanation : Functionalities are governed by the system.

34. We use _____ where various parts of system use are identified and analyzed in turn.

- a) tangible entities
- b) scenario-based analysis
- c) design-based analysis
- d) None of the mentioned

Answer : b

Explanation : Use a scenario-based analysis where various scenarios of system use are identified and analyzed in turn.

35. 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

Answer : d

Explanation : Important relationships that may be documented at this stage are generalization (inheritance) relationships, uses/used-by relationships, and composition relationships.

36. Which model shows the flow of object interactions?

- a) Sequence model
- b) Subsystem model
- c) Dynamic model
- d) Both Sequence and Dynamic model

Answer : a

Explanation : Sequence model are represented using a UML sequence or a collaboration diagram and are dynamic models

37. If the system state is Shutdown then it can respond to which of the following message?

- a) restart()
- b) reconfigure()
- c) powerSave()
- d) All of the mentioned

Answer : d

Explanation : A restart() message causes a transition to normal operation. Both the powerSave() and reconfigure() messages cause a transition to a state in which the system reconfigures itself.

38. Which message is received so that the system moves to the Testing state, then the Transmitting state, before returning to the Running state?

- a) signalStatus()
- b) remoteControl()
- c) reconfigure()
- d) reportStatus()

Answer : d

Explanation : The answer is self explanatory.

39. Open source development involves making the source code of a system publicly available.

- a) True
- b) False

Answer : a

Explanation : This means that many people can propose changes and improvements to the software.

40. Which of the following is not the primary objectives in the analysis model?

- a) describing the customer complaints
- b) establishing a basis for the creation of a software design
- c) defining a set of requirements that can be validated once the software is built
- d) None of the mentioned

Answer : d

Explanation : All the options are covered in analysis model.

41. A description of each function presented in the DFD is contained in a _____.

- a) data flow
- b) process specification
- c) control specification
- d) data store

Answer : b

Explanation : The answer is self explanatory.

42. Which diagram indicates the behaviour of the system as a consequence of external events?

- a) data flow diagram
- b) state transition diagram
- c) control specification diagram
- d) workflow diagram

Answer : b

Explanation : The state transition diagram represents the various modes of behavior (called states) of the system and the manner in which transitions are made from state to state.

43. A data model contains

- a) data object
- b) attributes
- c) relationships
- d) All of the mentioned

Answer : d

Explanation : The data model consists of three interrelated pieces of information: the data object, the attributes that describe the data object, and the relationships that connect data objects to one another.

44. _____ defines the properties of a data object and take on one of the three different characteristics.

- a) data object
- b) attributes
- c) relationships
- d) data object and attributes

Answer : b

Explanation : They can be used to name an instance of the data object, describe the instance, or make reference to another instance in another table.

45. The _____ of a relationship is 0 if there is no explicit need for the relationship to occur or the relationship is optional.

- a) modality
- b) cardinality
- c) entity

d) structured analysis

Answer : a

Explanation : The modality is 1 if an occurrence of the relationship is mandatory, else 0 for optional relationship.

46. A _____ is a graphical representation that depicts information flow and the transforms that are applied as data moves from input to output.

- a) data flow diagram
- b) state transition diagram
- c) control specification
- d) workflow diagram

Answer : b

Explanation : The basic form of a data flow diagram, also known as a data flow graph or a bubble chart.

47. A data condition occurs whenever a data is passed to an input element followed by a processing element and the result in control output.

- a) True
- b) False

Answer : a

Explanation : Standard flow of condition check.

48. The _____ enables the software engineer to develop models of the information domain and functional domain at the same time

- a) data flow diagram
- b) state transition diagram
- c) control specification

d) activity diagram

Answer : a

Explanation : As the DFD is refined into greater levels of detail, the analyst performs an implicit functional decomposition of the system,

thereby accomplishing the fourth operational analysis principle for function.

49. The _____ contains a state transition diagram that is a sequential specification of behavior.

- a) data flow diagram
- b) state transition diagram
- c) control specification
- d) workflow diagram

Answer : c

Explanation : The control specification(CSPEC) describes the behavior of the system, but it gives us no information about

the inner working of the processes that are activated as a result of this behavior .

50. Which of the following is not a construct?

- a) sequence
- b) condition
- c) repetition
- d) selection

Answer : d

Explanation : Sequence implements processing steps that are essential in the specification of any algorithm.

Condition provides the facility for selected processing based on some logical occurrence, and repetition allows for looping.

51. Which of the following steps is applied to develop a decision table?

- a) List all actions that can be associated with a specific procedure
- b) List all conditions during execution of the procedure.
- c) Define rules by indicating what action(s) occurs for a set of conditions.
- d) All of the mentioned

Answer : d

Explanation : A decision table includes action stub and a condition stub with a set of rules.

52. _____ is a pidgin(simplified version of a language that develops as a means of communication between two or more groups that do not have a language in common)

- a) program design language
- b) structured English
- c) pseudocode
- d) All of the mentioned

Answer : d

Explanation : The difference between PDL and a real programming language lies in the use of narrative text embedded directly within PDL statements.

53. Which of the following term is best defined by the statement:"The ability to represent local and global data is an essential element of component-level design."?

- a) Data representation
- b) Logic verification
- c) "Code-to" ability
- d) Automatic processing

Answer : a

Explanation : The answer is self explanatory.

54. A software component

- a) Implements some functionality
- b) Has explicit dependencies through provides and required interfaces
- c) Communicates through its interfaces only
- d) All of the mentioned

Answer : d

Explanation : All the options identify with features of a software component.

55. Which diagram evolved from a desire to develop a procedural design representation that would not allow violation of the structured constructs?

- a) State transition diagram
- b) Box diagram
- c) ER diagram
- d) None of the mentioned

Answer : b

Explanation : None.

56. A _____ executes the loop task first, then tests a condition and repeats the task until the condition fails.

- a) repeat until
- b) condition
- c) do while tests
- d) if then-else

Answer : a

Explanation : The answer is self explanatory.

57. Which of the following is not a characteristics of box diagram?

- a) functional domain
- b) arbitrary transfer of control is impossible
- c) recursion is easy to represent
- d) providing a notation that translates actions and conditions

Answer : d

Explanation : This functionality is covered by UML diagrams.

58. The _____ is represented as two processing boxes connected by an line (arrow) of control.

- a) Repetition
- b) Sequence
- c) Condition
- d) None of the above

Answer : b

Explanation : The answer is self explanatory.

59. Which of the following term is best defined by the statement “Notation that can be input directly into a computer-based development system offers significant benefits.”?

- a) Machine readability
- b) Maintainability
- c) Structure enforcement
- d) Overall simplicity

Answer : a

Explanation : Readability is processing input.

60. Which of the following is golden rule for interface design?

- a) Place the user in control
- b) Reduce the user's memory load
- c) Make the interface consistent
- d) All of the mentioned

Answer : d

Explanation : These golden rules actually form the basis for a set of user interface design principles that guide this important software design activity.

61. Which of the following is not a design principle that allow the user to maintain control?

- a) Provide for flexible interaction
- b) Allow user interaction to be interrupt-able and undo-able
- c) Show technical internals from the casual user
- d) Design for direct interaction with objects that appear on the screen

Answer : c

Explanation : The user interface should move the user into the virtual world of the application.

62. Which of the following is not a user interface design process?

- a) User, task, and environment analysis and modeling
- b) Interface design
- c) Knowledgeable, frequent users
- d) Interface validation

Answer : c

Explanation : These are the end user for whom the product is being built.

63. When users are involved in complex tasks, the demand on _____ can be significant.

- a) short-term memory
- b) shortcuts
- c) objects that appear on the screen
- d) all of the mentioned

Answer : a

Explanation : The interface should be designed to reduce the requirement to remember past actions and results.

64. Which of the following option is not considered by the Interface design?

- a) the design of interfaces between software components
- b) the design of interfaces between the software and human producers and consumers of information
- c) the design of the interface between two computers
- d) all of the mentioned

Answer : c

Explanation : The answer is self explanatory

65. A software might allow a user to interact via

- a) keyboard commands
- b) mouse movement
- c) voice recognition commands
- d) all of the mentioned

Answer : d

Explanation : All the mentioned input mediums are available today.

66. A software engineer designs the user interface by applying an iterative process that draws on predefined design principles.

- a) True
- b) False

Answer : a

Explanation : The statement is true.

67. What incorporates data, architectural, interface, and procedural representations of the software?

- a) design model
- b) user's model
- c) mental image
- d) system image

Answer : a

Explanation : The requirements specification may establish certain constraints that help to define the user of the system,

but the interface design is often only incidental to the design model.

68. What establishes the profile of end-users of the system?

- a) design model
- b) user's model
- c) mental image
- d) system image

Answer : b

Explanation : To build an effective user interface, all design should begin with an understanding of the intended users,

including their profiles of their age, physical abilities, education, etc.

69. What combines the outward manifestation of the computer-based system , coupled with all supporting information that describe system syntax and semantics?

- a) mental image
- b) interface design
- c) system image
- d) interface validation

Answer : c

Explanation : When the system image and the system perception are coincident, users generally feel comfortable with the software and use it effectively.

70. What do you understand by V&V in software testing?

- a) Verified Version
- b) Version Validation
- c) Verification and Validation
- d) Version Verification

Answer : c

Explanation : V&V generally refers to any activity that attempts to ensure that the software will function as required.

71. In static test techniques, behavioral and performance properties of the program are observed.

- a) True
- b) False

Answer : b

Explanation : Static Analysis Techniques are based solely on the (manual or automated) examination of project documentation of software models and code.

72. Which granularity level of testing checks the behavior of module cooperation?

- a) Unit Testing
- b) Integration Testing
- c) Acceptance Testing
- d) Regression Testing

Answer : b

Explanation : Integration testing is the phase in software testing in which individual software modules are combined and tested as a group.

73. Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults?

- a) Regression Test
- b) Smoke Test
- c) Alpha Test
- d) Beta Test

Answer : a

Explanation : Regression test seeks to uncover new software bugs in existing functional and non-functional areas of a system after changes have been made to them.

74. Which of the following is a black box testing strategy?

- a) All Statements Coverage
- b) Control Structure Coverage

- c) Cause-Effect Graphs
- d) All Paths Coverage

Answer : c

Explanation : Rest are test strategies of white box testing.

75. A set of inputs, execution preconditions and expected outcomes is known as a

- a) Test plan
- b) Test case
- c) Test document
- d) Test Suite

Answer : b

Explanation : The answer is self explanatory.

76. In which test design each input is tested at both ends of its valid range and just outside its valid range?

- a) Boundary value testing
- b) Equivalence class partitioning
- c) Boundary value testing AND Equivalence class partitioning
- d) Decision tables

Answer : a

Explanation : Boundary value analysis is a software testing technique in which tests are designed to include representatives of boundary values.

77. A white box test scales up well at different granularity levels of testing.

- a) True
- b) False

Answer : b

Explanation : A white box test is mostly applicable at unit and integration testing level.

78. When does the testing process stops?

- a) When resources (time and budget) are over
- b) When some coverage is reached
- c) When quality criterion is reached
- d) Testing never ends.

Answer : c

Explanation : As software testing is an exhaustive process, when the quality assurance is established and the product is ready to be delivered, testing is stopped.

79. Which of the following is not a part of a test design document?

- a) Test Plan
- b) Test Design Specification
- c) Test Case Specification
- d) Test Log

Answer : d

Explanation : Test log is a part of testing result document.

80. Specifying a set of test cases or test paths for each item to be tested at that level is known as

- a) Test case generation
- b) Test case design
- c) ALL of the mentioned
- d) None of the mentioned

Answer : c

Explanation : The answer is self explanatory.

81. Acceptance & system test planning are a part of architectural design.

- a) True
- b) False

Answer : b

Explanation : They are a part of requirements engineering, while integration & unit test planning come under architectural design.

82. PRD stands for

- a) Product Requirement Document
- b) Project Requirement Document
- c) Product Restrictions Document
- d) None of the mentioned

Answer : a

Explanation : A product requirements document (PRD) is a document written by a company that defines a product they are making,

or the requirements for one or more new features for an existing product.

83. Reuse-based software engineering is a software engineering strategy where the development process is geared to reusing existing software.

- a) True
- b) False

Answer : a

Explanation : The answer is self explanatory.

84. The open source movement has meant that there is a huge reusable code base available at

- a) free of cost
- b) low cost
- c) high cost
- d) short period of time

Answer : b

Explanation : The open source movement has meant that there is a huge reusable code base available at low cost.

This may be in the form of program libraries or entire applications.

85. Consider the example and categorize it accordingly, “A pattern-matching system developed as part of a text-processing system may be

reused in a database management system”.

- a) Application system reuse
- b) Component reuse
- c) Object and function reuse
- d) None of the mentioned

Answer : b

Explanation : Components of an application, ranging in size from subsystems to single objects, may be reused.

86. COTS stands for

- a) Commercial Off-The-Shelf systems
- b) Commercial Off-The-Shelf states

- c) Commercial Off-The-System state
- d) None of the mentioned

Answer : a

Explanation : The answer is self explanatory.

87. COTS product reuse means

- a) Class and function libraries that implement commonly used abstractions are available for reuse.
- b) Shared components are woven into an application at different places when the program is compiled.
- c) Large-scale systems that encapsulate generic business functionality and rules are configured for an organization.
- d) Systems are developed by configuring and integrating existing application systems.

Answer : d

Explanation : The answer is self explanatory.

88. .NET are specific to which platform?

- a) Java
- b) Mac-OS
- c) Microsoft
- d) LINUX

Answer : c

Explanation : .NET Framework (pronounced dot net) is a software framework developed by Microsoft that runs primarily on Microsoft Windows.

89. Which of the following is a generic structure that is extended to create a more specific subsystem or application?

- a) Software reuse
- b) Object-oriented programming language
- c) Framework
- d) None of the mentioned

Answer : c

Explanation : Frameworks are implemented as a collection of concrete and abstract object classes in an object-oriented programming language.

90. "An ordering system may be adapted to cope with a centralized ordering process in one company and a distributed process in another." Which category the example belong to?

- a) Process specialization
- b) Platform specialization
- c) Environment specialization
- d) Functional specialization

Answer : a

Explanation : In process specialization, the system is adapted to cope with specific business processes.

91. What are generic application systems that may be designed to support a particular business type, activity, or sometimes a complete enterprise?

- a) COTS-solution systems
- b) COTS-integrated systems
- c) ERP systems
- d) Both COTS-solution and COTS-integrated systems

Answer : a

Explanation : The answer is self explanatory

92. Which of the following is not an advantages of software reuse?

- a) lower costs
- b) faster software development
- c) high effectiveness
- d) lower risks

Answer : c

Explanation : Effectiveness depends on how one reuses the existing product.

93. ERP stands for

- a) Effective Reuse Planning
- b) Enterprise Resource Planning
- c) Effective Research Planning
- d) None of the mentioned

Answer : b

Explanation : Enterprise Resource Planning systems are examples of large-scale COTS reuse.

94. Which framework class include standards and classes that support component communication and information exchange?

- a) System infrastructure frameworks
- b) Middleware integration frameworks
- c) Enterprise application frameworks
- d) MVC

Answer : b

Explanation : The answer is self explanatory.

95. Which of the following option is not provided by formal methods?

- a) providing frameworks
- b) verifying systems
- c) provide investors
- d) both providing frameworks and verifying systems

Answer : d

Explanation : A method is formal if it has a sound mathematical basis, typically given by a formal specification language.

96. _____ are statements that can be interpreted in a number of ways.

- a) Contradictions
- b) Ambiguities
- c) Vagueness
- d) Comments

Answer : a

Explanation : As the name indicates, these statements may be interpreted differently as per user.

97. What defines the circumstances in which a particular operation is valid?

- a) Contradictions
- b) Post-condition
- c) Vagueness
- d) None of the mentioned

Answer : d

Explanation : A precondition defines the circumstances in which a particular operation is valid.

98. Which of the following is a way of making a statement about the elements of a set that is true for every member of the set?

- a) Set
- b) Sequence
- c) Universal quantification
- d) both Set and Sequence

Answer : c

Explanation : The answer is self explanatory.

99. Which of the following occurs often due to the bulkiness of a system specification document?

- a) Contradictions
- b) Ambiguities
- c) Vagueness
- d) Incompleteness

Answer : c

Explanation : Achieving a high level of precision consistently is an almost impossible task.

100. The _____ of a formal specification language is often based on a syntax that is derived from standard set theory notation and predicate calculus.

- a) semantic domain
- b) syntactic domain
- c) sequence
- d) set

Answer : b

Explanation : The answer is self explanatory

101. Which of the following provides a concise, unambiguous, and consistent method for documenting system requirements?

- a) CMM
- b) ISO-9001
- c) CASE tools
- d) Formal methods

Answer : d

Explanation : Formal methods provide a concise, unambiguous, and consistent method for documenting system requirements.

102. The _____ of a specification language indicates how the language represents system requirements.

- a) semantic domain
- b) syntactic domain
- c) sequence
- d) set

Answer : a

Explanation : For example, a programming language has a set of formal semantics that enables the software developer to specify algorithms that

transform input to output.

103. Which of the following is essential for success, when formal methods are used for the first time?

- a) Expert training
- b) Consulting
- c) Pre-requisite knowledge
- d) Both Expert training and Consulting
- e) All of the mentioned

Answer : d

Explanation : The answer is self-explanatory.

104. It is generally not necessary to apply formal methods to every aspect of a major system.

- a) True
- b) False

Answer : a

Explanation : Those components that are safety critical are first choices, followed by components whose failure cannot be tolerated.

105. What are the problems with re-structuring?

- a) Loss of comments
- b) Loss of documentation
- c) Heavy computational demands
- d) All of the mentioned

Answer : b

Explanation : Restructuring doesn't help with poor modularisation where related components are dispersed throughout the code.

106. Which of the following is not a module type?

- a) Object modules
- b) Hardware modules
- c) Functional modules
- d) Process support modules

Answer : a

Explanation : Except option a all other are module types.

107. Reverse engineering of data focuses on

- a) Internal data structures
- b) Database structures
- c) ALL of the mentioned
- d) None of the mentioned

Answer : c

Explanation : None

108. Forward engineering is not necessary if an existing software product is producing the correct output.

- a) True
- b) False

Answer : b

Explanation : Forward engineering refers to taking a high-level model and using it to build a more complex lower-level implementation.

109. Which of the following is not an example of a business process?

- a) designing a new product
- b) hiring an employee
- c) purchasing services
- d) testing software

Answer : d

Explanation : It is a part of development phase.

110. Which of the following is a data problem?

- a) hardware problem
- b) record organisation problems
- c) heavy computational demands
- d) loss of comments

Answer : b

Explanation : Records representing the same entity may be organised differently in different programs.

111. When does one decides to re-engineer a product?

- a) when tools to support restructuring are disabled
- b) when system crashes frequently
- c) when hardware or software support becomes obsolete
- d) subsystems of a larger system require few maintenance

Answer : c

Explanation : Re-engineering involves putting in the effort to make the system easier to maintain.

112. Which of the following is not a business goal of re-engineering ?

- a) Cost reduction
- b) Time reduction
- c) Maintainability
- d) None of the mentioned

Answer : d

Explanation : No such goal is mentioned which is not a business goal, so option d is correct here.

113. Which of these benefits can be achieved when software is restructured?

- a) Higher quality programs
- b) Reduced maintenance effort
- c) Software easier to test
- d) All of the mentioned

Answer : d

Explanation : The answer is self explanatory.

114. Data re-engineering may be part of the process of migrating from a file-based system to a DBMS-based system or changing from one DBMS to another.

- a) True
- b) False

Answer : a

Explanation : Data re-engineering involves analyzing and reorganizing the data structures in a program.

115. BPR stands for

- a) Business process re-engineering
- b) Business product re-engineering
- c) Business process requirements

Answer : a

Explanation : The answer is self explanatory.

116. Source code translation is a part of which re-engineering technique?

- a) Data re-engineering
- b) Re-factoring

- c) Restructuring
- d) None of the mentioned

Answer : c

Explanation : Restructuring involves automatic conversion from unstructured to structured code.

117. What type of fault remains in the system for some period and then disappears?

- a) Permanent
- b) Transient
- c) Intermittent

Answer : b

Explanation : For example many faults in communication systems are transient in nature.

118. Which of the following approaches are used to achieve reliable systems?

- a) Fault prevention
- b) Fault removal
- c) Fault tolerance
- d) All of the mentioned

Answer : d

Explanation : All the options lead to formation of a reliable system.

119. A system maintaining its integrity while accepting a temporary halt in its operation is said to be in a state of

- a) Full Fault Tolerance
- b) Graceful Degradation
- c) Fail Soft

d) Fail Safe

Answer : d

Explanation : The answer is self explanatory.

120. Which of the following Error Detection checks is not a part of Application detection?

- a) Hardware checks
- b) Timing checks
- c) Reversal checks
- d) Coding checks

Answer : a

Explanation : Hardware is a part of environment detection check.

121. Exception handling is a type of

- a) forward error recovery mechanism
- b) backward error recovery mechanism

Answer : a

Explanation : Exception handling is a forward error recovery mechanism, as there is no roll back to a previous state;

instead control is passed to the handler so that recovery procedures can be initiated.

122. Non-occurrence of improper alteration of information is known as

- a) Available Dependability
- b) Confidential Dependability
- c) Maintainable Dependability
- d) Integral Dependability

Answer : d

Explanation : Integrity is to keep the original content safe from alteration.

123. In N-version programming which is the independent generation of N, the value of N is

- a) greater than 1
- b) less than 1
- c) greater than 2
- d) less than 2

Answer : c

Explanation : N-version programming (NVP), also known as multiversion programming or multiple-version dissimilar software, is a method or process

in software engineering where multiple functionally equivalent programs are independently generated from the same initial specifications.

124. In Log-based fault tolerance, logs of undetermined events are saved and replayed on failure.

- a) True
- b) False

Answer : a

Explanation : The answer is self explanatory.

125. All fault-tolerant techniques rely on

- a) Integrity
- b) Dependability
- c) Redundancy

Answer : c

Explanation : All fault-tolerant techniques rely on extra elements introduced into the system to detect & recover from faults.

126. It is imperative for a communicating processes to reach consistent recovery points to avoid the _____ effect, with backward error recovery mechanism.

- a) Static
- b) Dynamic
- c) Domino
- d) Whirlpool

Answer : c

Explanation : The answer is self explanatory.

127. Which of the following is not a phase of “bath tub curve” of hardware reliability?

- a) Useful Life
- b) Burn-in
- c) Wear-out
- d) Time

Answer : d

Explanation : Time is the horizontal dimension on which the bath tub curve is built and not the phase.

128. How is reliability and failure intensity related to each other?

- a) direct relation
- b) inverse relation
- c) no relation

Answer : b

Explanation : As the reliability increases, failure intensity decreases.

129. How many product quality factors are proposed in McCall quality model?

- a) 2
- b) 3
- c) 11
- d) 8

Answer : b

Explanation : McCall quality model has three product quality factors namely: Product revision, Product operation, Product Transition .

130. Which one of the following is not a software quality model?

- a) ISO 9000
- b) McCall model
- c) Boehm model
- d) ISO 9126

Answer : a

Explanation : ISO-9000 series of standards is a set of document dealing with quality systems that can be used for quality assurance purposes.

131. What is MTTF ?

- a) Maximum time to failure
- b) Mean time to failure
- c) Minimum time to failure
- d) None of the mentioned

Answer : b

Explanation : The answer is self explanatory.

132. How is software reliability defined?

- a) time
- b) efficiency
- c) quality
- d) speed

Answer : a

Explanation : Software Reliability mainly concerned with the time component. It can be seen in various models like Basic Execution Time Model and

Logarithmic Poisson Execution Time Model.

133. Suitability, Accuracy, Interpolability and security are what type quality attribute of ISO 9126 ?

- a) Reliability
- b) Efficiency
- c) Functionality
- d) Usability

Answer : c

Explanation: All the Characteristics mentioned in the question are related to achievement of the basic purpose for which the software is being engineered,

which is functionality.

134. Time Behavior and Resource Behavior fall under which quality attribute of ISO 9126 ?

- a) Reliability
- b) Efficiency
- c) Functionality

d) Usability

Answer : b

Explanation : The Characteristics mentioned in the question are related to the relationship between the level of performance of the software and the amount of resources used, under stated conditions.

135. NHPP stands for

- a) Non Homogeneous Poisson Product
- b) Non Hetrogeneous Poisson Product
- c) Non Hetrogeneous Poisson Process
- d) Non Homogeneous Poisson Process

Answer : d

Explanation : The answer is self explanatory.

136. The CMM model is a technique to

- a) automatically maintain the software reliability
- b) improve the software process.
- c) test the software
- d) all of the mentioned

Answer : b

Explanation : Capability Maturity Model (CMM) is a strategy for improving the software process, irrespective of the actual life cycle model used.

This set of Artificial Intelligence MCQs focuses on “Neural Networks – 1”.

1. A 3-input neuron is trained to output a zero when the input is 110 and a one when the input is 111. After generalization, the output will be zero when and only when the input is:

- a) 000 or 110 or 011 or 101
- b) 010 or 100 or 110 or 101
- c) 000 or 010 or 110 or 100
- d) 100 or 111 or 101 or 001

Answer: c

Explanation: The truth table before generalization is:

Inputs Output

000 \$

001 \$

010 \$

011 \$

100 \$

101 \$

110 0

111 1

where \$ represents don't know cases and the output is random.

After generalization, the truth table becomes:

Inputs Output

000 0

001 1

010 0

011 1

100 0

101 1

110 0

.

2. A perceptron is:

- a) a single layer feed-forward neural network with pre-processing
- b) an auto-associative neural network
- c) a double layer auto-associative neural network
- d) a neural network that contains feedback

Answer: a

Explanation: The perceptron is a single layer feed-forward neural network. It is not an auto-associative network because it has no feedback and is not a multiple layer neural network because the pre-processing stage is not made of neurons.

3. An auto-associative network is:

- a) a neural network that contains no loops
- b) a neural network that contains feedback
- c) a neural network that has only one loop
- d) a single layer feed-forward neural network with pre-processing

Answer: b

Explanation: An auto-associative network is equivalent to a neural network that contains feedback. The number of feedback paths(loops) does not have to be one.

4. A 4-input neuron has weights 1, 2, 3 and 4. The transfer function is linear with the constant of proportionality being equal to 2. The inputs are 4, 10, 5 and 20 respectively. The output will be:

- a) 238
- b) 76
- c) 119
- d) 123

Answer: a

Explanation: The output is found by multiplying the weights with their respective inputs, summing the results and multiplying with the transfer function. Therefore:

$$\text{Output} = 2 * (1*4 + 2*10 + 3*5 + 4*20) = 238.$$

5. Which of the following is true?

- (i) On average, neural networks have higher computational rates than conventional computers.
 - (ii) Neural networks learn by example.
 - (iii) Neural networks mimic the way the human brain works.
- a) All of the mentioned are true
 - b) (ii) and (iii) are true
 - c) (i), (ii) and (iii) are true
 - d) None of the mentioned

Answer: a

Explanation: Neural networks have higher computational rates than conventional computers because a lot of the operation is done in parallel. That is not the case when the neural network is simulated on a computer. The idea behind neural nets is based on the way the human brain works. Neural nets cannot be programmed, they can only learn by examples.

6. Which of the following is true for neural networks?

- (i) The training time depends on the size of the network.
 - (ii) Neural networks can be simulated on a conventional computer.
 - (iii) Artificial neurons are identical in operation to biological ones.
- a) All of the mentioned
 - b) (ii) is true
 - c) (i) and (ii) are true
 - d) None of the mentioned

Answer: c

Explanation: The training time depends on the size of the network; the number of neuron is greater and therefore the number of possible ‘states’ is increased. Neural networks can be simulated on a conventional computer but the main advantage of neural networks – parallel execution – is lost. Artificial neurons are not identical in operation to the biological ones.

7. What are the advantages of neural networks over conventional computers?

- (i) They have the ability to learn by example
 - (ii) They are more fault tolerant
 - (iii)They are more suited for real time operation due to their high ‘computational’ rates
- a) (i) and (ii) are true
 - b) (i) and (iii) are true
 - c) Only (i)
 - d) All of the mentioned

Answer: d

Explanation: Neural networks learn by example. They are more fault tolerant because they are always able to respond and small changes in input do not normally cause a change in output. Because of their parallel architecture, high computational rates are achieved.

8. Which of the following is true?

Single layer associative neural networks do not have the ability to:

- (i) perform pattern recognition
 - (ii) find the parity of a picture
 - (iii)determine whether two or more shapes in a picture are connected or not
- a) (ii) and (iii) are true
 - b) (ii) is true
 - c) All of the mentioned
 - d) None of the mentioned

Answer: a

Explanation: Pattern recognition is what single layer neural networks are best at but they don't have the ability to find the parity of a picture or to determine whether two shapes are connected or not.

9. Which is true for neural networks?

- a) It has set of nodes and connections
- b) Each node computes its weighted input
- c) Node could be in excited state or non-excited state
- d) All of the mentioned

Answer: d

Explanation: All mentioned are the characteristics of neural network.

10. Neuro software is:

- a) A software used to analyze neurons
- b) It is powerful and easy neural network
- c) Designed to aid experts in real world
- d) It is software used by Neuro surgeon

Answer: b

Explanation: None.

1. Which is the first step in the software development life cycle ?

- a) Analysis
- b) Design
- c) Problem/Opportunity Identification
- d) Development and Documentation

Answer:c

Explanation: The answer is self explanatory.

2. Which tool is use for structured designing ?

- a) Program flowchart
- b) Structure chart
- c) Data-flow diagram
- d) Module

Answer:b

Explanation: A Structure Chart (SC) in software engineering and organizational theory, is a chart which shows the breakdown of a system to its lowest manageable levels.

3. A step by step instruction used to solve a problem is known as

- a) Sequential structure
- b) A List
- c) A plan
- d) An Algorithm

Answer:d

Explanation: The answer is self explanatory.

4. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

- a) documentation
- b) flowchart
- c) program specification
- d) design

Answer:c

Explanation: Program specification is the definition of what a computer program is expected to do.

5. Actual programming of software code is done during the _____ step in the SDLC.

- a) Maintenance and Evaluation
- b) Design
- c) Analysis
- d) Development and Documentation

Answer:d

Explanation: The developer has to find in the technical documentation enough information to start coding.

6. Who designs and implement database structures.

- a) Programmers
- b) Project managers
- c) Technical writers
- d) Database administrators

Answer:d

Explanation: The role of database administrators includes the development and design of database strategies, system monitoring and improving database performance and capacity, and planning for future expansion requirements.

7. _____ is the process of translating a task into a series of commands that a computer will use to perform that task.

- a) Project design
- b) Installation
- c) Systems analysis
- d) Programming

Answer:d

Explanation: The answer is self explanatory.

8. Debugging is:

- a) creating program code.
- b finding and correcting errors in the program code.
- c) identifying the task to be computerized.
- d) creating the algorithm.

Answer:

Explanation: Debugging is a methodical process of finding and reducing the number of bugs, or defects, in a computer program or a piece of electronic hardware, thus making it behave as expected.

9. In Design phase, which is the primary area of concern ?

- a) Architecture
- b) Data
- c) Interface
- d) All of the mentioned

Answer:d

Explanation: Part of the design phase is to create structural and behavioral models of the system which is covered by architecture, data and the interface of the product.

10. The importance of software design can be summarized in a single word which is:

- a) Efficiency
- b) Accuracy
- c) Quality

d) Complexity

Answer:c

Explanation: Software functional quality reflects how well it complies with or conforms to a given design, based on functional requirements or specifications.

11. Cohesion is a qualitative indication of the degree to which a module

- a) can be written more compactly.
- b) focuses on just one thing.
- c) is able to complete its function in a timely manner.
- d) is connected to other modules and the outside world.

Answer:b

Explanation: Cohesion of a single module/component is the degree to which its responsibilities form a meaningful unit.

12. Coupling is a qualitative indication of the degree to which a module

- a) can be written more compactly.
- b) focuses on just one thing.
- c) is able to complete its function in a timely manner.
- d) is connected to other modules and the outside world.

Answer:d

Explanation: Coupling between modules/components is their degree of mutual interdependence

1. “Robustness” answers which of the following description?

- a) CASE tools be used to support the process activities
- b) Process errors are avoided or trapped before they result in product errors

- c) Defined process is acceptable and usable by the engineers responsible for producing the software
- d) Process continues in spite of unexpected problems

Answer:d

Explanation:The answer is self explanatory.

2. Process improvement is the set of activities, methods, and transformations that developers use to develop and maintain information systems.

- a) True
- b) False

Answer:b

Explanation:The definition is of a system development process.

3. “Understandability” answers which of the following description?

- a) The extent to which the process is explicitly defined
- b) Process errors are avoided or trapped before they result in product errors
- c) Defined process is acceptable and usable by the engineers responsible for producing the software product
- d) Process continues in spite of unexpected problems

Answer:a

Explanation:The answer is self explanatory.

4. How many stages are there in process improvement?

- a) three
- b) four
- c) five
- d) six

Answer:a

Explanation:Process measurement, analysis and change are the three stages.

5. In which stage of process improvement bottlenecks and weaknesses are identified?

- a) Process measurement
- b) Process analysis
- c) Process change
- d) None of the mentioned

Answer:b

Explanation:In Process analysis the current process is assessed and bottlenecks and weaknesses are identified.

6. Prototypes and 4GL business systems are categorized under which process?

- a) Informal
- b) Managed
- c) Methodical
- d) Supported

Answer:a

Explanation:Here the development team chose their own way of working.

7. The documentation of a process which records the tasks, the roles and the entities used is called

- a) Process metric
- b) Process analysis
- c) Process modelling
- d) None of the mentioned

Answer:c

Explanation:Process models may be presented from different perspectives.

8. It is always best to start process analysis with a new test model.

- a) True
- b) False

Answer:b

Explanation:It is always best to start process analysis with an existing model. People then may extend and change this.

9. What is a tangible output of an activity that is predicted in a project plan?

- a) Deliverable
- b) Activity
- c) Condition

Answer:a

Explanation:The answer is self explanatory.

10. What is often undefined and is left to the ingenuity of the project managers and engineers?

- a) Role
- b) Exception
- c) Activity
- d) Process

Answer:b

Explanation:Exceptions are often undefined and it is left to the ingenuity of the project managers and engineers to handle the exception.

11. Which of the following is not a part of process change?

- a) Introducing new practices, methods or processes
- b) Introducing new team members to existing project
- c) Introducing or removing deliverable
- d) Introducing new roles or responsibilities

Answer:b

Explanation:Adding more developers aid to process completion rather than changing it.

12. The Capability Maturity Model (CMM) is a continuous model.

- a) True
- b) False

Answer:b

Explanation:The CMM is discrete rather than continuous.

13. The CMMI assessment is based on a x-point scale. What is the value of x?

- a) 0
- b) 2
- c) 4
- d) 6

Answer:d

Explanation:Not performed, performed, managed, defined, quantitatively managed, and optimizing are the six points

Question 1 Inheritance relationships in Use Case Diagram are represented by Mark 1 a) J – I Lines with solid triangular arrow at both ends b) C- Lines with hollow triangular arrow at one end c) ♦– Lines with hollow diamond at one end d) – Lines with solid diamond at one end Answer: b).

Question 2 Use Case diagrams are composed of? Mark 1 a) Uses, cases b) People, classes and objects c) People, computer d) Actors, use cases

Answer: d) Explanation: As per UML notation. Major components of Use cases are use-cases specifying behaviors expected from the system and the actor who will be using the system. Actors can be human or non-human.

Question 3 A use case specification contains which of the following components? Mark 1 a) Use Case Name b) Derived attributes c) Failure Conditions d) Actors 1

Answer: a), c), d) Explanation: As per UML notation. Use case specification contains a name, failure condition for every behavior and the actors. Derived attributes are part of class diagrams, where the major abstractions (classes) of a system are identified. Question HOSPITEX is a Hospital Management System. The users of this system schedules patient appointment, manages patient admission, performs patient registration, maintains hospital documents through this system. There are two types of patients in this system. Patients who visit the doctor in the outdoor with an appointment are called Out-Patient. Patients who get admitted in the hospital are called In-Patient. The following use case diagram describes the HOSPITEX system. The next set of questions(QS.4 to QS.7) are based on this diagram. •

Q 4 : Choose the correct impact on the system when in-patient hospital admission is done through the HOSPITEX. MCQ Mark 2 a) HOSPITEX will complete Patient Registration b) HOSPITEX will do Bed Allotment c) HOSPITEX will enter File Insurance Forms / Claims d) HOSPITEX will schedule Patient Appointment

Answer: b) Explanation: Considers the include relationship 2 •

Q 5: The user schedules patient appointment through HOSPITEX. What is the effect on HOSPITEX? MCQ Mark 2 a) HOSPITEX will complete Patient Admission b) HOSPITEX will complete Patient Registration for scheduling the appointment always c) HOSPITEX may complete Patient Registration for scheduling the appointment for some cases d) HOSPITEX will enter the File for Medical Reports

Answer: c) Explanation: Considers the extend relationship

• Q 6: Ragini is a receptionist, who uses HOSPITEX. She performs the following activities: 1. [Statement1:] She can do Patient Registration for all patients 2. [Statement2:] She can schedule Patient Appointment for all patients 3. [Statement3:] She can do bed allotment directly for any patient 4. [Statement4:] She can enter the File for Medical Reports for any patient Which of the above statements are valid according to the use case diagram of the HOSPITEX?

a) Statement4, Statement1 b) Statement1, Statement2 c) Statement1, Statement3 d) Statement1, Statement2, Statement3, Statement4

Answer: a), b) Explanation: Considers the actor and use case relationship

- Q 7: Who can use HOSPITEX? MCQ Mark 2 a) The Receptionist of the Hospital b) Any Staff of the Hospital c) The Patients of the Hospital d) All of the above

Answer: a) Explanation: Only receptionist interacts with the system 3

Question 8 Identify the correct statement(s) Mark 2 a) NRFC customer does not execute Open Account b) Customer executes Open Account c) Bank Employee executes Open Account d) None of the above

Answer: b), c) Explanation: As we see, the Customer and Employee executes Open Account. As the NRFC customer extends the behavior of Customer, it also executes Open Account

Question 9 Configure Access Right and Configure Parameters use cases extend Configure Program use case at extension points Modify Access Right and Modify Parameters respectively. Choose the correct diagram for the scenario. a) b) c) d) 4

Answer: c) Explanation: As per UML notation. Question The next set of questions are based on the Assignment Management System (AMS). The brief overview of AMS is "A course on Software Construction in IIT wants to manage the assignments to Students, the submissions of assignments by Students, and the evaluations of the submissions through an Assignment Management System (AMS)." (Please study the detailed specification of the AMS which has been provided to answer the following questions(Qs.10 to QS.12).)

- Q 10: Identify the passive actor/s of the system. Mark 1 a) Student b) Submission c) Instructor d) Email

Answer: b), d) Explanation: Submission and Email interact with use cases, which are initiated by the system.

• Q 11: Identify the correct relationship between actors. a) Student extends Participant b) Instructor extends Participant c) TA extends Participant d) Submission extends Participant Answer: a), b), c)
Explanation: Student, Instructor and TA all are participants, inherit the basic attributes of a participant, and also has additional attributes.

- Q 12: Use case Upload Assignment is executed by the coordinating actor TA. Identify the include use cases of this use case. Mark 1 a) Set Assign Date and Submission Date b) Email Notification c) Upload Submission d) None of the above

Answer: a), b) Explanation: When a TA uploads the Assignment, it includes setting the Assign Date, Submission Date and Email notifications to all students. 5

Question 13 Everything that is part of the system we are defining is not an actor. An actor specifies a role played by an external entity. Hence, Actor can be a: Marks: 1 a) Person b) Organization c) Database d) External system

Answer: a), b), d) Explanation: As per UML notation explained in slides from source

This set of Software Engineering Multiple Choice Questions & Answers (MCQs) focuses on “Diagrams in UML – 1”.

1. Which of the following UML diagrams has a static view?

- a) Collaboration
- b) Use case
- c) State chart
- d) Activity

Answer: b

Explanation: A use case diagrams captures only the functionality of the system whereas a dynamic model/view captures the functions as well as the action.

2. What type of core-relationship is represented by the symbol in the figure below?

- a) Aggregation
- b) Dependency
- c) Generalization
- d) Association

Answer: a

Explanation: None.

3. Which core element of UML is being shown in the figure?

- a) Node
- b) Interface
- c) Class
- d) Component

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

- a) Realization
- b) Generalization
- c) Aggregation
- d) Dependency

Answer: b

Explanation: The generalization relationship is also known as the inheritance relationship. In the figure Square is the subclass of superclass shape.

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5. 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

Answer: d

Explanation: An object diagram focuses on some particular set of object instances and attributes, and the links between the instances. It is a static snapshot of a dynamic view of the system.

6. 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

Answer: a

Explanation: Interaction diagram are used to formalize the dynamic behavior of the system.

7. Structure diagrams emphasize the things that must be present in the system being modeled.

- a) True
- b) False

Answer: a

Explanation: Since structure diagrams represent the structure they are used extensively in documenting the architecture of software systems

8. Which of the following diagram is time oriented?

- a) Collaboration

- b) Sequence
- c) Activity
- d) None of the mentioned

Answer: b

Explanation: A sequence diagrams timeline along which tasks are completed.

- 1. How many diagrams are here in Unified Modelling Language?
 - a) six
 - b) seven
 - c) eight
 - d) nine

Answer: d

Explanation: The nine UML diagrams include use-case, sequence, collaboration, activity, state-chart, deployment, class, object and component.

- 2. Which UML diagram is shown below?
 - a) Use Case
 - b) Collaboration Diagram
 - c) Class Diagram
 - d) Object Diagram

Answer: a

Explanation: None.

- 3. Which UML diagram is shown below?
 - a) Use Case
 - b) State Chart
 - c) Activity
 - d) Object Diagram

Answer: b

Explanation: None.

4. Which UML diagram is shown below?

- a) Use Case
- b) Collaboration Diagram
- c) Sequence Diagram
- d) Object Diagram

Answer: c

Explanation: None.

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5. Which UML diagram's symbols are shown below?

- a) Deployment diagram
- b) Collaboration Diagram
- c) Component Diagram
- d) Object Diagram

Answer: a

Explanation: None.

6. Which UML diagram is shown below?

- a) Deployment diagram
- b) Collaboration Diagram
- c) Object Diagram
- d) Class Diagram

Answer: d

Explanation: None.

7. Which UML diagram is shown below?

- a) Activity
- b) State chart
- c) Sequence
- d) Collaboration

Answer: a

Explanation: None.

8. Which UML diagram is shown below?

- a) Component
- b) Deployment
- c) Use Case
- d) DFD

Answer: a

Explanation: None.

Object Oriented System Design

- 1) The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:
 - a) Object- Oriented Programming
 - b) Object- Oriented Design**
 - c) Object- Oriented Analysis
 - d) None of the mentioned
- 2) 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.

3) 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) Encapsulation
- b) Modularity
- c) Hierarchy
- d) Abstraction**

4) Abstraction is classified into _____ types

- a) 4**
- b) 3
- c) 2
- d) 1

5) 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

6) Single inheritance, Multiple inheritance, and Aggregation comes under _____

- a) Modularity
- b) Typing
- c) Hierarchy**
- d) None of the mentioned

7) In which of the following mechanisms, types of all variables and expressions are fixed at compilation time.

- a) Strong Typing
- b) Weak Typing
- c) Static Binding/ early binding**
- d) Dynamic Binding/ late binding

8) In which of the following mechanisms, types of all variables and expressions are not known until runtime

- a) Strong Typing
- b) Weak Typing
- c) Static Binding/ early binding**
- d) Dynamic Binding/ late binding

9) Which of the following statements about Persistence is correct?

- a) It is the enforcement of the class of an object, such that objects of different types may not be interchanged, or at the most they may be interchanged only in very restricted ways.
- b) It is the property of an object through which its existence transcends time and/or space.
- c) It is the property that distinguishes an active object from one that is not active.**
- d) All of the mentioned

10) 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**

A _____ is an abstraction of something for the purpose of understanding it before building it.

- Mock-up
- Model
- Prototype
- All of the above**

Which of the following is the reason/s for constructing a model?

1. To test a physical entity before building it
2. To set the stage for communication between client and developer
3. For visualization or for finding alternative representations
4. For reduction of complexity in order to understand it
5. All of the above

Answer 5

Object-Oriented Modelling allows-

1. Higher productivity
2. lower maintenance cost
3. better quality can be achieved
4. All of the above

Answer 4

During the design phase, the overall _____ of the system is described.

1. Architecture
2. System flow
3. Data flow
4. None

Answer 1

The Object Oriented Modeling for building systems takes the _____ as the basis.

1. Class
2. Object
3. Model
4. Modules

Answer 2

The basic step/s of system designing using Object-Oriented Modelling is/are —

1. System Analysis

- 2. System Design
- 3. Object Design
- 4. Implementation
- 5. All of the above

Answer 5

In which of the following phase, the class objects and the interrelationships of these classes are translated and actually coded by using an object-oriented programming language?

- 1. Analysis
- 2. Design
- 3. Development
- 4. Testing

Answer 3

In which of the following phase required databases are created and the complete system is transformed into an operational one?

- 1. Analysis
- 2. Design
- 3. Implementation
- 4. None

Answer 3

The OMT consists of three related but different viewpoints each capturing important aspects of the system

- 1. The static, dynamic, and functional behaviors of the system
- 2. Analysis, Design, Coding
- 3. Real-life environment, objects, and behavior of a system
- 4. None

Answer 1

A class describes ——

1. a collection of similar objects
2. a template where basic characteristics of a set of objects are defined
3. the basic attributes and the operations of the objects of that type
4. All of the above

Answer 4

An/A _____ is a data value held by objects in a class.

1. Data
2. Functions
3. Attributes
4. None of the above

Answer 3

Which of the following is/are the characteristic/s of an object?

1. Unique identification
2. Set of attributes
3. Set of states
4. Set of operations (behavior)
5. All of the above

Answer 5

In OMT, the link is represented by a

1. Line
2. The line labeled with its name
3. Arrow labeled with its name
4. None

Answer 2

A link is a physical or conceptual connection between

1. object instances
2. Classes
3. Objects
4. None

Answer 1

Which of the following specifies how many instances of one class may relate to a single instance of an associated class

1. Link or association
2. Multiplicity
3. Relationships
4. None

To show multiplicity a solid ball is the symbol for “many”, meaning

1. zero
2. one or more
3. Zero, one or more
4. None

A hollow ball indicates “optional”, meaning _____

1. zero or one
2. One
3. Many
4. None

A line without any ball indicates _____

1. No association
2. Association
3. one-to-one association
4. None

Numbers that are written on the solid ball such as 1,2,6 indicates _____

1. 1
2. 2
3. 1 or 2 or 6

4. All of the aboveAnswer 3

The object model describes the _____ of a system.

1. static
2. structural
3. data aspects
4. Static, structural, and data aspectsAnswer 4

The dynamic model describes the _____ aspect of a system

1. temporal
2. behavioral
3. control
4. Temporal, behavioral, and controlAnswer 4

The functional model describes the _____ aspects of a system.

1. Behavioral
2. transformational
3. functional
4. All of the aboveAnswer 4

A link is a physical or conceptual connection between

1. Objects
2. object instances
3. Classes
4. All of the aboveAnswer 2

An association maybe —

1. unary
2. binary
3. ternary or n-ary
4. All of the above

Answer 4

Which of the following specifies how many instances of one class may relate to a single instance of an associated class?

1. Multiplicity
2. Association
3. Degree
4. None of the above

Answer 1

The attribute(s) is/are associated with the association is called

1. Link attribute
2. Derived attribute
3. Multi-valued attribute
4. None

Answer 1

Which of the following is a property of the links in an association?

1. Attribute
2. Link attribute
3. Degree of attribute
4. None

Answer 2

Which of the following is a name that uniquely identifies one end of an association?

1. Label name of the link
2. Role name
3. Link attribute name
4. None

Answer 2

The role name is a _____

1. Derived attribute
2. Link attribute
3. Attribute
4. All of the above

Answer 1

Which of the following indicates an ordered set of objects of an association?

1. Writing {ordered} next to the dot
2. Writing {ordered} next to the multiplicity dot
3. Writing {ordered} next to one end of the dot
4. **None**

Answer 2

A qualifier is an _____ that reduces the effective multiplicity of an association.

1. Association attribute
2. Attribute
3. Special attribute
4. **None**

Answer 3

Which of the following is the “part-whole” or “a-part-of” relationship in which objects representing the component of something are associated with an object representing the entire assembly?

1. Generalization
2. Specialization
3. Aggregation
4. **None**

Answer 3

Aggregations are drawn like associations, using a small hollow _____ — indicating the assembly end of the relationship.

1. Diamond
 2. Box
 3. Circle
 4. Triangle
- Answer 1

Aggregation can be -----

1. fixed
 2. variable
 3. recursive
 4. All of the above
- Answer 4

Inheritance is a ----- relationship between two classes.

1. “is-a”
 2. Part of
 3. Both a and b
 4. None
- Answer 1

Generalization is reverse of -----

1. Aggregation
 2. Inheritance
 3. Specialization
 4. None
- Answer 3

When a class replaces the implementation of a method that it has inherited is called -----

1. Overloading
 2. Overriding
 3. Overwriting
 4. None
- Answer 2

When a (derived) class inherits properties (data and operations) from a single base class, it is called as

1. Inheritance
2. single inheritance
3. Multilevel inheritance
4. NoneAnswer 2

When a (derived) class inherits properties (data and operations) from more than one base class, it is called —

1. Single inheritance
2. Multiple inheritances
3. Multi-level inheritance
4. NoneAnswer 2

When a (derived) class inherits properties (data and operations) from another derived class, it is called as —

1. Hierarchical inheritance
2. Multilevel inheritance
3. Multiple inheritances
4. NoneAnswer 2

When more than one (derived) class inherits properties (data and operations) from a single base class, it is called —

1. Hybrid inheritance
2. hierarchical inheritance
3. Multiple Inheritance
4. NoneAnswer 2

When more than one inheritance paths are available between two classes in the inheritance hierarchy, it is called

- 1. Multiple inheritances**
- 2. Multi-level inheritance**
- 3. Multipath inheritance**
- 4. None**

Combination of single, multiple, hierarchical, and multilevel inheritance forms

- 1. Hierarchical Inheritance**
- 2. Hybrid inheritance**
- 3. Containership**
- 4. None**

_____ describes those aspects of the system that changes with the time

- 1. Object model**
- 2. Functional model**
- 3. Dynamic model**
- 4. None of the above**

Which of the following model implement control aspects of the system?

- 1. Object model**
- 2. Dynamic model**
- 3. Functional model**
- 4. None of the above**

Which of the following models depicts states, transitions, events, and actions?

- 1. Functional model**
- 2. Dynamic model**
- 3. Object model**

4. None of the aboveAnswer 2

Which of the following models includes event trace diagrams describing scenarios?

- 1. Dynamic model**
- 2. Object model**
- 3. Function model**
- 4. All of the above**Answer 2

A/An —— is a one-way transmission of information from one object to another.

- 1. Message**
- 2. Event**
- 3. Change of event**
- 4. None of the above**Answer 2

A —— is a sequence of events that occurs during one particular execution of a system

- 1. State of the system**
- 2. Scenario**
- 3. Environment**
- 4. None of the above**Answer 2

The outcomes of dynamic modeling are ——

- 1. scenario**
- 2. event-trace diagram**
- 3. State diagram**
- 4. All of the above**Answer 4

A _____ is a sequence of events that occurs during one particular execution of a system.

1. Object
2. Scenario
3. State
4. None of the above

Answer 2

In the _____, the sequence of events and the objects exchanging events both can be shown

1. Entity Relationship Diagram
2. event-trace diagram
3. System flow diagram
4. None

Answer 2

The functional model is represented graphically with —

1. State transition diagram
2. Entity-relationship diagram
3. Data flow diagrams
4. None

Answer 3

A data dictionary is a structured repository of data

1. About data
2. About metadata
3. About important terms used in the system
4. All of the above

Answer 4

Which of the following can be an attribute with values that are unique within the table that can be used to identify the tuples of that relation?

1. Candidate key

- 2. Primary key**
 - 3. Super key**
 - 4. Foreign key**
- Answer 2

A combination of attributes when taken together have the unique identification property is called _____

- 1. Primary key**
 - 2. Composite key**
 - 3. Super key**
 - 4. All of the above**
- Answer 1

More than one attribute combination possessing the unique identification property is referred to as _____

- 1. Primary key**
 - 2. Composite key**
 - 3. Candidate key**
 - 4. Secondary key**
- Answer 2

A candidate key that is not a primary key is called a/an

- 1. Alternate key**
 - 2. Candidate key**
 - 3. Primary key**
 - 4. Foreign key**
- Answer 1

- 1. A model is a _____ of reality.
 - a. Complication
 - b. Simplification**
 - c. Realization
 - d. Generalization
- 2. Models help us to _____ a system as it is or the way it is wanted.
 - a. Analyze
 - b. Design
 - c. Visualize**

d. Measure

3. In which principle, the models created explain the identification of a problem and find its solution?

a. The Choice of Model is Important

b. Levels of Precision May Differ

c. The Best Models are connected to Reality

d. No Single Model is Sufficient

4. Algorithmic and object-oriented are the two common ways for modeling _____

a. Non-software Systems

b. Software Systems

c. Vocabulary of a System

d. Client/Server System

5. _____ helps to communicate the overall system architecture unambiguously.

a. Flow charts

b. Designing

c. SRS

d. Templates

6. _____ defines the system's actions and how different parts contribute to it.

a. Behavior

b. Structure

c. Model

d. Use case

7. _____ can be done for both simple and complex systems.

a. Generalization n

b. Specification cm,

c. Modeling

d. Collaboration

8. The best kind of models helps to choose _____

a. Degree of detail

b. Design view

c. Single model

d. Choice of model

9. A set of _____ models are used to approach a complex system.

a. Dependent w"

b. Independent

c. Both dependent and independent

d. Different

10. An Object-oriented program is structured as a community of interacting agents, called

a. Objects

b. Classes

c. Functions

d. Statements

11. UML is useful to _____ a system as it is or as we want it to be.

a. Visualize

b. Specify

c. Document

d. All of the above

12. A collection of operations that specify the services rendered by a class or component known as _____

a. Class

b. Interaction

c. Interface

d. Collaboration

13. _____ is an abstraction of a set of functions that the system performs.

a. Class

b. Interaction

c. Use case

d. Collaboration

14. _____ is a physical element that exists at runtime and represents a computational resource.

a. Node

b. Actor

c. Name

d. Object

15. Which one of the following is not a structural thing?

a. Class

b. Package

c. Use case

d. Node

16. _____ can represent the invocation of an operation, a step in a business process or an entire business process.

a. State machine

b. Interaction

c. Use case

d. Activity

17. The explanatory parts of the UML model are known as _____

a. Behavioral things

b. Grouping things

c. Structural things

d. Annotational things

18. A link is an instance of _____

a. Generalization

b. Association

c. Dependency

d. Realization

19. _____ are used to create new building blocks from existing blocks.

a. Tagged Values

b. Stereotypes

c. Constraints

d. Diagrams

20. In which phase is the scope of the project defined?

a. Inception

b. Elaboration

c. Construction

d. Transition

21. Which one of the following GOAD artifacts is the MOST useful?

a. Use cases

b. Interaction diagrams

c. Activity diagrams

d. Package diagrams

22. All public methods in business model objects are defined directly or indirectly because of a _____ requirement.

a. Use case

b. Dependency

c. Association

d. Sequence

23. UML interfaces are used to _____

a. Define an API for all classes

b. Program in Java, but not in C++ or Smalltalk

- c. Define executable logic to reuse across classes
- d. Specify required services for types of objects

24. An actor is _____

- a. A person
- b. A job title
- c. A role
- d. A system

25. The system icon identifies _____

- a. The boundaries of the system
- b. The scope of the project so
- c. The context of the system
- d. Another system in the role of an actor

26. A person may function in _____

- a. Only one role ie
- b. Many roles
- c. One role per system
- d. One role per use case

27. Devices and other systems _____

- a. May be actors
- b. May only receive output from a use case
- c. May only provide input to a use case
- d. Are out of scope because we are describing only one system at

28. Associations _____

- a. May exist only between actors and use cases
- b. Identify the flow of data between actors and use cases
- c. Identify interactions between actors and use cases
- d. Identify dependencies between actors and use cases

29. Use cases _____

- a. Identify business processes
- b. Identify system goals
- c. Describe workflow
- d. Prioritize system procedures

30. The association stereotype «Extends» indicates _____

- a. Delegation of part of a task to another use case
- b. The target use case is a subprocess of the source use cases
- c. A specialized form of a use case
- d. A deviation from the UML standard

1. Use case descriptions consist of interaction _____ ?

- a) Use case
- b) product
- c) Actor
- d) Product & Actor

Answer: d

2. Which of these statements are truly acceptable?

- a) A precondition is an assertion guaranteed to be true when the operation finishes
- b) A post-condition is an assertion guaranteed to be true when the activity or operation begins
- c) An event which causes a use case to begin is trigger
- d) None of the mentioned

Answer: c

3. What are the types of prototypes?

- a) Horizontal prototypes
- b) Vertical Prototypes

- c) All of the mentioned
- d) None of the mentioned

Answer: c

4. Diagrams which are used to distribute files, libraries, and tables across topology of hardware are called

- A. deployment diagrams
- B. use case diagrams
- C. sequence diagrams
- D. collaboration diagrams

Answer: A

5. How many views of the software can be represented through the Unified Modeling Language (UML)?

- a. Four
- b. Five
- c. Nine
- d. None of the above

Answer: b. Five

6. Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?

- a. Use case diagram
- b. Activity diagram
- c. Class diagram
- d. All of the above

Answer: a. Use case diagram

7. What are the notations for the Use case Diagrams?

- a) Use case
- b) Actor
- c) Prototype
- d) Use case and Actor

Answer: d

8. Which among the following can be heuristic for Use case diagram?

- a) The product can be made actor
- b) Never name actors with noun phrases
- c) Name Use cases with verb phrases
- d) All of the mentioned

Answer: c

10. Which of the following statements is true?

i. There are 5 views that are represented through the Unified Modelling Language (UML).

ii. These 5 views in UML are represented through 9 UML diagrams.

- a. Only i is true
- b. Only ii is true
- c. Both i and ii are true
- d. None of them is true

Answer: c. Both I and ii is true

11. UML diagram that shows the interaction between users and system, is known as

- A. Activity diagram
- B. E-R diagram
- C. Use case diagram

D. Class diagram

Answer:C

12. UML diagram that specifies sequences/ steps of operations to be performed

- A. Activity diagram
- B. Use case diagram
- C. Class diagram
- D. E-R case diagram

Answer:B

13. Which of the following statement is true?

- a) Use case diagram is a dynamic model of interaction between actors and product in a use case
- b) Use case Description is a static model of use case supported by a product
- c) All of the mentioned
- d) None of the mentioned

Answer:D

14. A UML diagram that facilitates requirements gathering and interacts between system and external users, is called as

- A. Flowchart diagram
- B. Sequence diagram
- C. Use case diagram
- D. Data flow diagram

Answer: C

Which of the following diagrams are structural diagrams? Separate the structural diagrams?

Package Diagram, Component Diagram, Sequence Diagram, Communication Diagram, Composite Structure Diagram, Class Diagram, Object Diagram, Profile Diagram, Deployment Diagram, Activity Diagram, State Machine Diagram, Interaction Overview Diagram, Use Case Diagram, Timing Diagram

- Structural UML Diagrams
 - Package Diagram
 - Composite Structure Diagram
 - Class Diagram
 - Component Diagram
 - Object Diagram
 - Profile Diagram
 - Deployment Diagram

Deployment diagram consists of _____ ?

- (A) Computational resource
- (B) Communication path in the mid of resource
- (C) Artifacts that run resource
- (D) All of the above
- (E) None of these

Answer: (D) All of the above

Select the statement that is incorrect about the deployment diagram.

- (A) path of connections among nodes are represented through communication paths
- (B) Artifacts are deployed inside nodes where they place and run
- (C) interconnection paths are shown through dotted lines
- (D) None of the mentioned
- (E) Both a and c

Answer: (C) interconnection paths are shown through dotted lines

Select which one is correct.

- (A) Artifact names and instances both are underlines
- (B) Artifacts instances and types have twin names
- (C) both a and b
- (D) All of these
- (E) None of the mentioned

Answer: (B) Artifacts instances and types have twin names

Select true about artifacts

- (A) An artifact has a spatio temporal location
- (B) An Artifact consider as a physical entity
- (C) Both a and b
- (D) only b
- (E) None of these

Answer: (C) Both a and b

Select the ways in which artifacts can be deployed

- (A) Artifact symbol can reside along with node symbol
- (B) The artifact symbol can show outside the node but be linked to it by a dependency arrow from the artifact
- (C) We can list the Artifact name inside the node symbol
- (D) All of the above
- (E) None of these

Answer (D) All of the above

Answer: d

Select which one is true?

- (A) A logical architecture is the understanding of effects like code and data files occupy and running on computational assets
- (B) A architecture of physical is the arrangement of a product's main element
- (C) A logical structure allow many elements to interact with each other
- (D) both a and b
- (E) None of the mentioned

Answer: (E) None of the mentioned

Select which are the common notations for deployment diagrams

- (A) Components
- (B) Stereotypes
- (C) Nodes and Artifacts
- (D) Both a and c
- (E) None of the above

Answer: (C) Nodes and Artifacts

Select the nodes used in the deployment diagram.

- (A) Device and Execution Environment
- (B) Execution Environment
- (C) Artifact
- (D) Device
- (E) Both a and c

Answer: (A) Device and Execution Environment

Choose the way to show nodes in a deployment diagram?

- (A) The name may be left off, specify an unnamed instance of the type
- (B) Nodes instances are highlighted identifiers of the form name: type

- (C) The type may be left off, specify a named instance along with an unspecified type
- (D) Both a and b
- (E) All of these

Answer: (E) All of these

Select the diagram that is used to model the vocabulary of a system.

- (A). Object Diagram
- (B). Activity Diagram
- (C). Both a and b
- (D). Interaction Diagram
- (E). Class diagram

Answer (E). Class diagram

Select which one is model static data structures.

- (A). Object diagrams
- (B). Class diagrams
- (C). Activity diagrams
- (D). Interaction diagrams
- (E). All of the above

Answer (B). Class diagrams

Select the engineering From the following _____ that is theoretically feasible but programmatically o restricted value.

- (A). class diagram
- (B). activity diagram
- (C). object diagram
- (D). interaction diagram
- (E), Both a and c

Answer (C). object diagram

Select where the class diagrams are not convenient

- (A). simple interactions model
- (B). the vocabulary of a system model
- (C). simple collaborations model
- (D). logical database schema model
- (E). All of the above

Answer (C). simple collaborations mode

Select from the following which is used to show one static frame in the dynamic storyboard.

- (A). Class diagram
- (B). Activity diagram
- (C). Object diagram
- (D). Interaction diagram

Answer (C). Object diagram

Select the diagrams that are used to explain data structures, and the static snapshots parts of the things place in the class diagrams.

- (A). use case
- (B). Collaboration
- (C). Object
- (D). Sequence
- (E). None of these

Answer (C) Object

Select the view which is shown by object Object diagram.

- (A). logical
- (B). dynamic
- (C). static
- (D). process
- (E). All of these

Answer (C). static

Select from the following _____ has to be reverse-engineered.

- (A). visibility
- (B). relationship
- (C). target
- (D). constraints
- (E). All of these

Answer (C). target

Which of the following diagram is used to model the distribution of objects?

- a. Object Diagram
- b. Activity Diagram
- c. State Chart Diagram
- d. Interaction Diagram

_____ select from the following in which engineering and reverse engineering can be applicable

- (A). tagged values
- (B). stereotypes
- (C). class diagram
- (D). adornments
- (E). Both a and b

Answer (C). class diagram

Which one is used to display a set of objects and their relationships?

- (A). Object diagram
- (B). Class diagram
- (C). Use case diagram
- (D). Activity diagram
- (E). All of the above

Answer (A). Object diagram

Select the structure that is model by the Objects diagram

- (A). object
- (B). class
- (C). Use Case
- (D). activity
- (E). Both A and B

Answer (A). object

Use case description consists of the following...

- (A) Actors
- (B) Number and Use case name
- (C) Need and stakeholder
- (D) Both a and b
- (E) All of the above

Answer (E) All of the above

Select the true statement from the following.

- (A) The first condition is has guaranteed to be true if the activity finishes

- (B) The next or post-condition is guaranteed to be true if the activity begins
- (C) Trigger is an event that is used to give a start to a use case to begin.
- (D) Both a and b

Answer: (C) Trigger is an event that is used to give a start to a use case to begin.
Select the true statement for the use case description format.

- (A) Underline text indicates to another use case
- (B) Extensions section utilize a complex numbering scheme
- (C) Indentation is used in a line to bring extensions easy to read
- (D) Both a and b
- (E) All of the above

Answer: (E) All of the above

Select the interaction that the use case description has.

- (A) Product and Actor
- (B) Use case
- (C) Actor
- (D) Product

Answer: (A) Product and Actor

Select the methods used by the use case to write a description.

- (A) Actors in a use case are mostly stakeholders
- (B) Preconditions always be true in advance statement start
- (C) Requires a list should be checked when writing each use case
- (D) Both A and C
- (E) All of the mentioned

Answer (E) All of the mentioned

Select the steps that are needed in use case driven iterative development?

- (A) At each loop step, one or many use cases are chosen for execution
- (B) Iteration must be followed till the system is properly ended
- (C) Iterative development formed system work gradually through analysis, design, coding, testing, and evaluation
- (D) Both a and b
- (E) All of these

Answer: (E) All of these

Select the true in context to extensions.

- (A) The flow specifies the extensions
- (B) The alternatives are known as an extension because they extend the activity flow in various direction through the branch point
- (C) Both a and b
- (D) All of the above
- (E) None of these

Answer: (D) All of the above

Select from the following which is included by the Use case Description Heuristics.

- (A) Fill up in the use case template from top to bottom
- (B) put down easy declarative sentences in the active voice
- (C) Keep away from the sequence of pace through the actors and product
- (D) Both A and C
- (E) All of the above

Answer: (E) All of the above

Select the true statement from the following statements;

- (A) Relationship help by a product are cataloged in a use case description
- (B) Interconnection are purified in use case diagram
- (C) Both a and b
- (D) All of the above
- (E) None of These

Answer: (D) All of the above

We can represent Business rules requirements with use case diagrams or not?

Answer: No

We can represent requirements related to the quality of service with use case diagrams or not?

Answer: No

We can represent requirements related to implementation constraints with use case diagrams or not?

Answer: No

We can represent non-functional requirements with use case diagrams or not?

Answer: No1.

Abstraction has _____ types.

- a) 1
- b) 2
- c) 3
- d) 4

D

2. To hide the internal implementation of an object we use ...

- a) inheritance
- b) encapsulation
- c) polymorphism
- d) none of these

B

3. The vertical dimension of a sequence diagram shows

- a) abstract
- b) line
- c) time
- d) messages

C

4. CRC approach and noun phrase approach are used to identify ...

- a) classes
- b) colaborators
- c) use cases
- d) object

A

5. Abstraction provide an operation named as ...

- a) encapsulation
- b) call back

c) turndown

d) inheritance

B

6. To distinguish between active and non-active object which property is applied?

a) abstraction

b) polymorphism

c) concurrency

d) aggregation

C

7. The [time oriented diagram](#) include ...

a) sequence

b) classes

c) activity

d) none of these

A

8. Aggregation is ...

a) set of relationship

b) composed of relationship

c) part of relationship

d) all of these

B

9. Cohesion and coupling are represented by using ...

a) structure part

b) structure effect

c) dependence matrix

d) all of these

C

10. Refinement is a process of

a) inheritance

b) collaboration

c) elaboration

d) polymorphism

C

11. SMI stands for

a) software maturity index

b) system maturity information

c) [software model](#) index

c) none of these

A

12. Group of [functionally related objects](#) is ...

a) concatenation

b) cohesion

c) coupling

d) all of these

B

in a sequence diagram, the _____ indicates when an object sends or receives a message.

- (A) command line
- (B) focus
- (C) request link
- (D) lifeline
- (C) request link

When arranging actors and objects on a sequence diagram, it is nice to list them _____.

--in order in which they participate in the sequence across the top of the diagram

A _____ describes information about an object.

-attribute

The two types of interaction diagrams are _____, and _____ diagrams.

-sequence and communication

Looping in an [activity diagram](#) is best represented using what?

-Looping in an activity diagram is best represented by Synchronizaton bars.

A decision point within an activity diagram may be shown with an activity symbol.

True/False

True

A _____ is an instantiation of a class.

-object

On an activity diagram the arrows represent what?

In activity diagram the arrows represent the flow of activities.

The focus in a sequence diagram is on _____.-

-time ordering of messages being passed between objects

The acronym CRUD stands for _____.

-create, read, update, delete

A deployment diagram is most useful for which design activity?

-Designing the duplication components

The external behavior of a system is described by _____.

-functional models

In an activity diagram, the merge symbol has the same shape as what other symbol?

-Decision symbols

On an activity diagram, which of the following is not a valid use of a synchronization bar?

-To initiate the alternative paths.

Which of the following identify high-level services provided by the system.

- a. Classes
- b. Activities
- c. Use Cases

d. Components

Answers: c

Which of the following shape connects the initiating actor to the use case (ending at the use case).

a. Arrow

b. Line

c. Arc

d. Scribble

Answers: a

Animation of a model against the execution of a deployed system is an example of which kind of engineering?

a. business engineering

b. forward engineering

c. reverse engineering

d. temporal engineering

Answers: c

Forward Engineering is possible for an Activity Diagram mainly when the context of the diagram is

a. an operation

b. a workflow

c. a class

d. a use case

Answers:a

Use case scenario is a specific sequence of which of the followings?

a. relationships n

b. use cases

c. classes

d. actions

Answers: d

We can graphically represent the scenario of a use case with the help of which kind of UML diagram?

a. deployment diagram

b. sequence diagram

c. use case diagram

d. interaction diagram

Answers: b

Uses cases are represented as which of the following shape within the system rectangle.

a. ellipses

b. circles

c. rhombus

d. rectangle

Answers: a

The behavior of a system can be modeled with the help of which kind of UML diagrams?

a. class diagram

b. activity diagram

c. use case diagram

d. interaction diagram

Answers: b

Select the best diagram to model business workflows?

- a. Deployment diagram
- b. Activity diagram
- c. Use Case diagram
- d. Interaction diagram

Answers: B

1. Use case descriptions consist of interaction among which of the following?

- a) Product
- b) Use case
- c) Actor
- d) Product & Actor

Answer: d

Explanation: Use case description is the interaction among product and actors in a use case.

2. Use case description contents include _____

- a) Use case name and number
- b) Actors
- c) Stakeholder and needs
- d) All of the mentioned

Answer: d

Explanation: Use case includes all of the contents.

3. Which of these statements are truly acceptable?

- a) A precondition is an assertion guaranteed to be true when the activity or operation finishes
- b) A post condition is an assertion guaranteed to be true when the activity or operation begins
- c) Trigger is an event which cause a use case to begin
- d) None of the mentioned

Answer: c

Explanation: Precondition is when operation begins and post condition is when operation finishes.

4. 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 in order to make extensions easier to read
- d) All of the mentioned

Answer: d

Explanation: Use case description format includes the following stated descriptions.

5. 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 of the mentioned

Answer: d

Explanation: All the statement depicts the method in which use case description can be written.

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6. What is true in context to extensions?

- a) Once the basic flow is defined, the extensions can be specified
- b) The alternatives are called extension as they extend the activity flow in a different direction from branch point
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Extension are to be defined at first and do extend the flow from branch out.

7. The Use case Description Heuristics includes which of these?

- a) Fill in the use case template from top to bottom
- b) Write simple declarative sentences in active voice
- c) Avoid sequence of steps by the actors and product
- d) All of the mentioned

Answer: d

Explanation: All of the conditions are the heuristics which are to be followed for use case description.

8. A different alternative must consists of?

- a) Different Actors
- b) Different Use cases
- c) Different Overall product functionality
- d) All of the mentioned

Answer: d

Explanation: A different alternative consists all of the mentioned different aspects.

9. Which of the following statement is true?

- a) Interactions supported by a product are cataloged in a use case description
- b) Interactions are refined in use case diagram
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: Interaction supported by a product are cataloged in use case diagram, Interaction are refined in use case description.

10. Which steps are included in use case driven iterative development?

- a) At each iteration, one or more use cases are selected for implementation
- b) Iteration should be followed until the system is complete
- c) Iterative development builds system functionality gradually through analysis, design, coding, testing and evaluation
- d) All of the mentioned

Answer: d

Explanation: All the steps are included for iterative development.

1. _____ diagrams are used to illustrate data structures, and the static snapshots instances of the things found in the class diagrams.

- a.use case
- b.Object**
- c.Collaboration
- d.Sequence

2. Object diagram is used to show the design _____ view of a system.

- a. static**
- b. dynamic
- c. logical
- d. process

3. Forward engineering and reverse engineering can be applicable to _____

- a. class diagram**
- b. stereotypes
- c. tagged values
- d. adornments

4. _____ shows a set of objects and their relationships.

- a. Class diagram**
- b. Object diagram**
- c. Use case diagram
- d. Activity diagram

5. Objects diagram is used to model the _____ structure

- a. class
- b. object**
- c. use case
- d. activity

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6. Choose the _____ which has to be reverse engineered.

- a. target**
- b. relationship
- c. visibility
- d. constraints

7. Which of the following diagram is used to model the distribution of objects?

- a. Object** Diagram
- b. Activity Diagram
- c. State Chart Diagram
- d. Interaction Diagram

8. Which of the following diagram is used to model the vocabulary of a system?

- a. Object Diagram
- b. Activity Diagram
- c. Class** diagram
- d. Interaction Diagram

9. _____ model static data structures.

- a. Object diagrams
- b. Activity diagrams
- c. Class** diagrams
- d. Interaction diagrams

10. Forward engineering of an _____ is theoretically possible but programmatically o limited value.

- a. object** diagram
- b. activity diagram
- c. class diagram
- d. interaction diagram

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11. Class diagrams are not useful to _____

- a. model simple collaborations
- b. model the vocabulary of a system
- c. **model** simple interactions
- d. model a logical database schema

12. _____ represents one static frame in the dynamic storyboard.

- a. **Object** diagram
- b. Activity diagram
- c. Class diagram
- d. Interaction diagram

13. Forward engineering in UML is the process of transforming _____

- a. a code into a model
- b. a code into design n
- c. **a** model into a code
- d. a model into test

1. _____ is a blueprint for creating an object.

- a. **Class**
- b. Dependency
- c. Generalization
- d. Tagged values

2. Class is rendered as _____

- a. square
- b. **rectangle**
- c. circle
- d. ellipse

3. CRC stands for _____

- a. Class Relationship Collaboration
- b. Class Responsibility Component
- c. **Class Responsibility Collaboration**
- d. Collaboration Relation Component

4. modeling simple collaboration are in _____ diagram

- a. **class**
- b. object

- c. use case
- d. activity

5. A _____ is a connection among things.

- a. class
- b. relationship
- c. stereotypes
- d. tagged values

6. A dependency relationship is rendered as a _____

B

7. A generalization relationship is rendered as a _____

C

8. _____ is rendered as rectangle with a dog-eared corner.

- a. Note
- b. Stereotype
- c. Tagged values
- d. Constraints

9. Graphically, a stereotype is represented as a name enclosed by _____

- a. “ ”
- b. []
- c. >> <<
- d. « »

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10. Timing requirements are captured by using _____

- a. note
- b. stereotype
- c. tagged values
- d. constraints

11. _____ diagrams are used to illustrate data structures, and the static snapshots of instances of the things found in the class diagrams.

- a. Use case
- b. Object
- c. Collaboration
- d. Sequence

12. Object diagram is used to show the _____ design view of a system.

- a. static
- b. dynamic
- c. logical
- d. process

13. _____ is a set of nodes and their relationships.

- a. Class diagram
- b. Object diagram
- c. Component diagram
- d. Deployment diagram

14. Use _____ diagrams if object life times are important to show.

- a. sequence
- b. use case
- c. collaboration
- d. state

15. Collaboration diagram is a _____ diagram.

- a. interaction
- b. class
- c. object
- d. deployment

16. Statechart diagram is used to show the _____ view of a system

- a. static
- b. dynamic

- c. logical
- d. process

17. Activity diagram shows the _____ from activity to activity within a system.

- a. sequence
- b. link
- c. flow
- d. nodes

18. The connection among the things is defined as _____

- a. class
- b. object
- c. relationship
- d. stereotypes

19. _____ shows a semantic relationship between two or more classes

- a. Dependency
- b. Generalization
- c. Association
- d. Collaboration

20. Sequence diagram shows _____ view of a system

- a. static
- b. dynamic
- c. use case
- d. sequence

- | | |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 141. | Business use-cases and actors together describe <ul style="list-style-type: none">(a) The static elements of the work in progress(b) The dynamic elements of the work in progress |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

	<ul style="list-style-type: none"> (c) The logical view of the work in progress (d) The business processes that the organization supports (e) The physical view of the work in progress.
142.	<p>Business object models describe</p> <ul style="list-style-type: none"> (a) The structure of the business (b) How the structural elements are used to fulfill the business use cases (c) Both the structure of the business and how those structural elements are used to fulfill the business use cases (d) The business view that the organization supports (e) The logical aspects of the business.
143.	<p>Which of the following statements is false?</p> <ul style="list-style-type: none"> (a) Each business use case in business model is mapped to a subsystem in the analysis model (b) Each business worker in business model is mapped to a system actor in the analysis model (c) Each business entity in business model is mapped to a class in the analysis model (d) Each object model in business model is mapped to an interaction diagram in the analysis model (e) All of the above.
144.	<p>Which of the following statements is true?</p> <ul style="list-style-type: none"> (a) A class is an encapsulation of an object (b) A class represents the hierarchy of an object

	<p>(c) A class is an instance of an object</p> <p>(d) A class is an abstract definition of an object</p> <p>(e) A class is physical object.</p>
145.	<p>Polymorphism can be described as</p> <p>(a) Hiding many different implementations behind one interface</p> <p>(b) Inheritance</p> <p>(c) Aggregation and association</p> <p>(d) Generalization</p> <p>(e) Composition.</p>
146.	<p>Which of the following phrase best represents a generalization relationship?</p> <p>(a) “Is a part of”</p> <p>(b) “Is a kind of”</p> <p>(c) “Is a replica of”</p> <p>(d) “Is composed of”</p> <p>(e) “Is related of”.</p>
147.	<p>A subclass inherits from ‘parents’ is</p> <p>(a) Attributes, links</p> <p>(b) Attributes, operations</p> <p>(c) Attributes, operations, relationships</p> <p>(d) Relationships, operations, links</p>

	(e) Methods, links.
148.	Requirement artifacts include (a) Use-case model, glossary and supplementary specification (b) Use-case model, analysis model and design model (c) Use-case model, deployment and component models (d) Activity model, glossary and deployment model (e) All of the above.
149.	What does an actor represents I in use-case model? (a) A role that a human, hardware device, or another system can play (b) The same user that can perform several acts (c) A physical user regardless of its role (d) A physical system or a hardware device together with its interfaces (e) A software product.
150.	An initial attempt at defining the pieces/parts of the system and their relationships, organizing these pieces/parts into well-defined layers with explicit dependencies is called (a) Use-case analysis (b) Architectural analysis (c) Structural analysis

	<p>(d) Dependency analysis</p> <p>(e) Documentation analysis.</p>
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Answers

141.	<p>Answer : (d)</p> <p>Reason : Business use-cases and actors together describe the business processes that the organization supports.</p>
142.	<p>Answer : (c)</p> <p>Reason : Business object models describe Both the structure of the business and how those structural elements are used to fulfill the business use cases</p>
143.	<p>Answer : (d)</p> <p>Reason : Each object model in business model is mapped to an interaction diagram in the analysis model</p>
144.	<p>Answer : (d)</p> <p>Reason : A class is an abstract definition of an object</p>
145.	<p>Answer : (a)</p> <p>Reason : Polymorphism can be described as Hiding many different implementations behind one interface.</p>
146.	<p>Answer : (b)</p> <p>Reason : “Is a kind of”_phrase best represents a generalization relationship.</p>
147.	<p>Answer : (c)</p> <p>Reason : A subclass inherits its parents' Attributes, operations, relationships</p>

148.	<p>Answer : (a) Reason : Requirement artifacts include Use-case model, glossary and supplementary specification.</p>
149.	<p>Answer : (a) Reason : In use-case model, an actor represents A role that a human, hardware device, or another system can play.</p>
150.	<p>Answer : (b) Reason : An initial attempt at defining the pieces/parts of the system and their relationships, organizing these pieces/parts into well-defined layers with explicit dependencies is called Architectural analysis.</p>

321.	<p>During which phase, database and file definitions are prepared?</p> <ul style="list-style-type: none"> (a) Initiation and planning (b) Design (c) Implementation (d) Analysis (e) Testing.
322.	<p>Which of the following techniques and notations would you find within UML?</p> <ul style="list-style-type: none"> (a) Use cases (b) Class diagrams (c) State diagrams (d) Activity diagrams (e) All of the above.

323.	<p>Which of the following extends a use case by adding new behaviors or actions?</p> <ul style="list-style-type: none"> (a) An extend relationship (b) An include relationship (c) A join relationship (d) A merge relationship (e) A sort relationship.
324.	<p>"A condition that encompasses an object's properties and the values those properties". What does the above statement describe about?</p> <ul style="list-style-type: none"> (a) Event (b) State (c) Behavior (d) Action (e) Rule.
325.	<p>Which technique hides the internal implementation details of an object from its external view?</p> <ul style="list-style-type: none"> (a) Incorporation (b) Polymorphism (c) Encapsulation (d) Generalization (e) Persistence.

326.	<p>Which of the following is the multiplicity notation that represents optional many?</p> <ul style="list-style-type: none"> (a) 0..X (b) 1..X (c) 1..1 (d) 0..* (e) 1..*.
327.	<p>What do you call when subclasses are generalized and the class they are generalized into?</p> <ul style="list-style-type: none"> (a) Super class (b) Extended class (c) Abstract class (d) Concrete class (e) Includes class.
328.	<p>How the basis of a generalization is specified on a class diagram?</p> <ul style="list-style-type: none"> (a) Extends relationship (b) Discriminator (c) Event (d) Message (e) Incriminator.

329.	<p>Which would best describe the process of replacing a method inherited from a superclass by a more specific implementation of that method in a subclass?</p> <ul style="list-style-type: none"> (a) Inheritance (b) Instance restriction (c) Encapsulation (d) Overriding (e) Overloading.
330.	<p>How is composition represented on a class diagram?</p> <ul style="list-style-type: none"> (a) A circle (b) A rounded rectangle (c) An ellipse (d) A solid diamond (e) A solid circle.

Answers

321.	<p>Answer : (c) Reason : Database and file definitions are prepared during: implementation</p>
322.	<p>Answer : (e) Reason : Use cases, class diagrams, state diagrams and Activity diagrams the following techniques and notations would you find within UML</p>

323.	<p>Answer : (a) Reason : an extend relationship adds new behaviors or actions</p>
324.	<p>Answer : (b) Reason : A condition that encompasses an object's properties and the values those properties have best describe state</p>
325.	<p>Answer : (c) Reason : The technique of hiding the internal implementation details of an object from its external view best describes encapsulation</p>
326.	<p>Answer : (d) Reason : 0..* the multiplicity notation that represents optional many</p>
327.	<p>Answer : (a) Reason : When subclasses are generalized, the class they are generalized into is called a(n) Super class</p>
328.	<p>Answer : (b) Reason : On a class diagram, the basis of a generalization is specified by a(n) discriminator</p>
329.	<p>Answer : (d) Reason : The process of replacing a method inherited from a superclass by a more specific implementation of that method in a subclass best describes overriding</p>
330.	<p>Answer : (d) Reason : a solid diamond is composition represented on a class diagram</p>

335.	<p>The method that is used to assess economic feasibility is called</p> <ul style="list-style-type: none"> (a) Analysis of the time value of money (b) Cost/benefit analysis (c) Sources and uses of funds analysis (d) Development cost analysis (e) Implementation cost analysis.
336.	<p>The major activities that make up the implementation phase are</p> <ul style="list-style-type: none"> (a) Construct software components (b) Verify, test, and convert data (c) Design and integrate the system controls (d) Train users and document the system (e) Install the system.
337.	<p>Which of the following approaches to system development develops the application architecture plan?</p> <ul style="list-style-type: none"> (a) Object-oriented engineering (b) Information engineering (c) Structured (d) Integrated development environments (e) Both (a) and (c) above.
338.	<p>The data entities from the entity-relationship diagram correspond to</p> <ul style="list-style-type: none"> (a) Data stores on the DFDs (b) Relationships in the class diagram (c) Modules of top-down programming (d) Elements of the CASE tool (e) Modules of bottom-up programming.
339.	<p>Which of the following approaches to system development uses elements which are capable of responding to messages?</p> <ul style="list-style-type: none"> (a) Structured oriented (b) Object-oriented (c) Information engineering development environments (d) Integrated (e) Agent based.

340.	Which is normally the most expensive method of fact-finding technique? (a) Building prototypes business processes (c) Reviewing existing reports users (e) All of the above.	(b) Observing (d) Interviewing
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Answers

331.	Answer : (c) Reason : Information systems that take information captured by transaction processing systems and produce reports that management needs for planning and control are called management information systems.
332.	Answer : (b) Reason : CASE stands for computer-aided system engineering.
333.	Answer : (c) Reason : An organization may require an analyst to make management decisions is NOT a reason for an effective systems analyst needs to know how an organization works.
334.	Answer : (b) Reason : Business functions is not an example of technique used to complete specific system development activities.
335.	Answer : (b) Reason : The method that is used to assess economic feasibility is called Cost/benefit analysis
336.	Answer : (c) Reason : The major activities that make up the implementation phase are design and integrate the system controls.

337.	<p>Answer : (b)</p> <p>Reason : Information engineering approaches to system development develops the application architecture plan.</p>
338.	<p>Answer : (a)</p> <p>Reason : The data entities from the entity-relationship diagram correspond to data stores on the DFDs.</p>
339.	<p>Answer : (b)</p> <p>Reason : Object-oriented approaches to system development uses elements which are capable of responding to messages.</p>
340.	<p>Answer : (d)</p> <p>Reason : Interviewing users is normally the most expensive method of fact-finding technique</p>

341.	<p>The type of prototype used during the analysis phase is the</p> <p>(a) Design prototype (b) Evolving prototype (c) Discovery prototype (d) Functioning prototype (e) Reviewing prototype.</p>
342.	<p>A review technique to test the correctness of the documents produced during analysis is called</p> <p>(a) Code reading design (b) Joint application (c) Structured walkthrough (d) Prototyping (e) Code writing.</p>
343.	<p>The figure is an example of a(n)</p> <p>(a) Context diagram fragment (b) DFD (c) Diagram Zero (d) Event-partitioned system model (e) E-R diagram.</p>

344.	<p>The techniques and models used in the Information Engineering SDLC are _____ than those used in the traditional structured analysis SDLC.</p> <ul style="list-style-type: none"> (a) Less tightly integrated (b) More tightly integrated (c) Simpler systems (d) Better suited to small (e) Better suited to large systems.
345.	<p>Concepts that are held in common between the traditional approach and the object-oriented approach include</p>
	<ul style="list-style-type: none"> (a) Processes and objects (b) Processes and messages (c) Events and processes (d) Things and events (e) Events and messages.
346.	<p>The object-oriented approach to information systems development describes activities as</p>
	<ul style="list-style-type: none"> (a) A collection of processes (b) Processes that interact with data entities (c) Processes that accept inputs and produce outputs (d) Both (a) and (b) above (e) All (a), (b) and (c) above.
347.	<p>Implementation classes are classes that</p>
	<ul style="list-style-type: none"> (a) Show implementation rules interface (b) Describe the user (c) Describe the computer nodes files (d) Identify the implemented (e) Describe the database interactions.
348.	<p>A message descriptor in a sequence diagram includes which of the following components?</p>
	<ul style="list-style-type: none"> (a) True/false condition, return-value, and activities (b) Return-value, message-name, and parameter list (c) Message-name, parameter-list, and sequence number (d) Action-expression, message-name, and parameter list (e) Return-value, parameter-list, and action-expression.

349.	The first step in designing a system with structured design is to identify which processes are internal to the system. This is done with a(n)
	(a) Function list
	(b) Event table
	(c) Automation system boundary
	(d) Use case diagram
	(e) Sequence diagram.
350.	A diagram that shows the hierarchical relationship between the modules of a computer program is called a
	(a) System flow chart
	(b) Design class
	diagram
	(c) Data flow diagram
	(d) Structure chart
	(e) E-R diagram.

Answers

341.	<p>Answer : (c)</p> <p>Reason : The type of prototype used during the analysis phase is the discovery prototype</p>
342.	<p>Answer : (c)</p> <p>Reason : A review technique to test the correctness of the documents produced during analysis is called structured walkthrough</p>
343.	<p>Answer : (b)</p> <p>Reason : DFD fragment</p>
344.	<p>Answer : (b)</p> <p>Reason : The techniques and models used in the Information Engineering SDLC are more tightly integrated than those used in the traditional structured analysis SDLC.</p>

345.	<p>Answer : (d)</p> <p>Reason : Concepts that are held in common between the traditional approach and the object-oriented approach include things and events</p>
346.	<p>Answer : (e)</p> <p>Reason : The object-oriented approach to information systems development describes activities as a collection of processes, processes that interact with data entities, processes that accept inputs and produce outputs.</p>
347.	<p>Answer : (b)</p> <p>Reason : Implementation classes are classes that describe the user interface</p>
348.	<p>Answer : (b)</p> <p>Reason : Return-value, message-name, and parameter list are message descriptor in a sequence diagram.</p>
349.	<p>Answer : (c)</p> <p>Reason : Automation system boundary is the first step in designing a system with structured design is to identify which processes are internal to the system.</p>
350.	<p>Answer : (d)</p> <p>Reason : A diagram that shows the hierarchical relationship between the modules of a computer program is called structured chart.</p>

351.	<p>A measure of the internal strength of a module in a structure chart is called</p> <p>(a) Module integrity (b) Module coupling (c) Module functionality (d) Module cohesion (e) Module compatibility.</p>
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352.	A diagram that shows the major subsystems in an object-oriented system is called a (a) System flowchart (b) Design class diagram (c) Package diagram (d) Subsystem diagram (e) Component diagrams.
353.	The designing phase includes the following activities, EXCEPT (a) Designing and integrating the network (b) Designing the application architecture (c) Designing the user interface (d) Designing the project team (e) Designing the databases.
354.	A common problem with development projects is scope creep. This refers to (a) Rating the importance of each function (b) Deferring some functions until later (c) Determining the priority of each function (d) Requests to add new functions after decisions have been finalized (e) All of the above.
355.	An association class must be created to store the attributes of a _____ relationship among two other classes. (a) One-to-one (b) One-to-many (c) Many-to-one (d) Many-to-many (e) One-to-all.
356.	Which approach to development is the most interactive and focuses more on the user and their work? (a) Modern structured analysis (b) Information engineering (c) Structured design (d) Object-oriented analysis (e) Agent-based analysis.

357.	Designing the inputs and outputs involved when the user interacts with the computer to carry out a task helps to create the				
	(a) User requirements interface	(c) User interface	(b) System		
	(d) Task boundary		(e) Database interface.		
358.	A ____ is an example of a function or requirement that is well suited to prototyping.				
	(a) Non-interactive program that automatically generates orders to suppliers				
	(b) Module that schedules deliveries using a complex cost minimization algorithm				
	(c) Program that generates thousands of electronic payments per hour				
	(d) Technical feasibility for some system functions is uncertain				
	(e) None of the above.				
359.	A set of classes that are specifically designed to be reused in a wide variety of programs, is referred to as				
	(a) Object framework	(b) Foundation classes	(c) Interface classes		
	(d) Methodology	(e) All of the above.			
360.	____ tests the interaction among components as specified during the high-level (architectural) design phase of the system development life cycle.				
	(a) Driver testing	(b) Integration testing			
	(c) System testing				
	(d) Unit testing	(e) Module testing.			

Answers

351. Answer : (d)
Reason : A measure of the internal strength of a module in a structure chart is called module cohesion.

352.	<p>Answer: (c)</p> <p>Reason : A diagram that shows the major subsystems in an object-oriented system is called a package diagram.</p>
353.	<p>Answer : (d)</p> <p>Reason : Designing the project team is not designing phase activity.</p>
354.	<p>Answer : (d)</p> <p>Reason : A common problem with development projects is scope creep. This refers to requests to add new functions after decisions have been finalized.</p>
355.	<p>Answer : (d)</p> <p>Reason : An association class must be created to store the attributes of a relationship among two other classes</p>
356.	<p>Answer : (d)</p> <p>Reason : Object-oriented analysis approach to development is the most interactive and focuses more on the user and their work</p>
357.	<p>Answer : (c)</p> <p>Reason : Designing the inputs and outputs involved when the user interacts with the computer to carry out a task helps to create the user interface</p>
358.	<p>Answer : (d)</p> <p>Reason : A technical feasibility for some system functions is unknown or uncertain is an example of a function or requirement that is well suited to prototyping.</p>
359.	<p>Answer : (a)</p> <p>Reason : A set of classes that are specifically designed to be reused in a wide variety of programs, is referred to as object framework.</p>

360.	<p>Answer : (b)</p> <p>Reason : Integration testing tests the interaction among components as specified during the high-level (architectural) design phase of the system development life cycle.</p>
------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1. Mid level generation design techniques are classified into which of the following?

- a) Creational Techniques
- b) Transitional Techniques
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

2. Which of the following can be considered true?

- a) Make a mid-level design model from scratch is for transformational technique
- b) Change another model into a mid-level design mode is for Creational technique
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: d

Explanation: Make a mid-level design model from scratch is for Creational technique and Change another model into a mid-level design mode is for Transformational technique.

3. What does Design Theme means in general?

- a) Important problem
- b) Concern and Issues
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Design Theme means in general Important problem, Concern and issues related to the problem.

4. 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 of the mentioned

[View Answer](#)

advertisement

5. After generating candidate classes, designers evaluate them and choose the best ones to include in the model using the which of the following heuristics?

- a) Discard candidates with vague names or murky responsibilities
- b) Discard candidates that do something out of scope
- c) Apply design patterns where appropriate

- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: The following heuristics are involved Discard candidates with vague names or murky responsibilities, Discard candidates that do something out of scope.

6. The next step is to evaluate the class diagram to check that all candidate classes are present and that the diagram reflects their descriptions, Designers apply which of the following heuristics to this activity?

- a) Check each class for important but overlooked attributes, operations, or associations
- b) Discard candidates that do something out of scope
- c) Apply design patterns were not appropriate
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Designers apply the following heuristics to this activity Check each class for important but overlooked attributes, operations, or associations and Apply design patterns where appropriate.

7. 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 of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the following is referred for the conceptual modelling.

8. Which of these are class diagram generation heuristics?

- a) Add classes for data types
- b) Convert or add container classes
- c) Convert or add engineering design relationships
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned steps are the heuristics for class diagram generation.

9. Which of these steps are followed for Generating Classes from Themes?

- a) Look for entities in charge of program tasks
- b) Rework candidate classes with overlapping responsibilities to divide their responsibilities cleanly
- c) Look for things about which the program stores data
- d) Look for entities in charge of program tasks, Look for things about which the program stores data

[View Answer](#)

Answer: d

Explanation: Generating Classes from Themes follows -Look for entities in charge of program tasks, Look for things about which the program stores data.

10. Which of the following is followed for Evaluating and Selecting Candidate Classes?

- a) Discard classes with vague names or murky responsibilities
- b) Discard classes will not do something out of scope
- c) Look for actors
- d) All of the mentioned

[View Answer](#)

Answer: a

Explanation: Evaluating and Selecting Candidate Classes follows- Discard classes with vague names or murky responsibilities, Discard classes that do something out of scope.

1. Detailed design is further classified into which of the following?

- a) Mid-Level Design
- b) Low-Level Design
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Detailed design is further classified as mid level and low level design.

2. Mid-level design is the activity of specifying software at the level of medium-sized components such as?

- a) Compilation units or classes
- b) Their Properties, Relationship
- c) Interaction of units
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Mid-level design is the activity of specifying software at the level of medium-sized components such as Compilation units or classes, their Properties, Relationship and Interaction of units.

3. Which of the following statement is correct?

- a) Low-level design is the activity of filling in small details at the lowest levels of abstraction
- b) Low-level design uses DeSCRIPTOR specification
- c) Mid-level design uses DeSCRIPTOR-PAID specification
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Low level design uses DeSCRIPTOR-PAID whereas Mid level design uses DeSCRIPTOR alone.

4. Which of the following is carried out for the detailed design process?

- a) Both SRS and SAD are taken as input for the detailed design stage
- b) Design alternatives are evaluated first and then Design is finalized
- c) Detailed design is the output for the process
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Design alternatives are evaluated first and then design is finalized.

5. A design document is a complete engineering design specification composed of?

- a) Software Architecture Document(SAD)
- b) Detailed Design Document(DDD)
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: A design document is a complete engineering design specification composed of Software Architecture Document(SAD) and Detailed Design Document(DDD).

advertisement

6. Which of the following statements are true?

- a) The SAD specifies a program's software architecture
- b) DDD specifies a program's detailed design
- c) There is no standard template for DDD
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: There is no standard template for DDD.

7. Which of the following consists of the DDD template?

- a) Mid level Design and Low level Design
- b) Mapping between models
- c) Detailed Design Rationale
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: The DDD template consists of which of the following Mid level Design and Low level Design, Mapping between models, Detailed Design Rationale.

8. Which of these statements states Generalization connector?

- a) A generalization connector is more like a link line between objects than an association line between classes
- b) The generalization connector always indicates that two particular classes participate in the generalization relation, as a link line shows that two objects participate in a particular relation
- c) Never place a name, role names, or multiplicities on a generalization connector
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned statements about generation connector are true.

9. Which of the following is correct?

- a) A concrete operation is an operation without a body, which cannot be called
- b) An abstract operation has a body, which can be called
- c) A concrete class is a class that cannot be instantiated
- d) None of the mentioned

[View Answer](#)

Answer: d

Explanation: All the statements are incorrect, An abstract operation is an operation without a body, which cannot be called whereas A concrete operation has a body, which can be called and An abstract class is a class that cannot be instantiated.

10. A provided interface can be shown in which of these ways?

- a) To attach the stick of an interface lollipop symbol to a class or component
- b) To connect a stereotyped class symbol representing the interface to the providing class or component using a special realization connector
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Provided Interface can be matched for both of the ways.

11. A required interface can be shown in which of the following ways?

- a) To attach the stick of an interface socket symbol to a class or component
- b) To connect the class or component requiring the interface to an interface ball with a dependency arrow
- c) To connect the class or component to a stereotyped class symbol with a dependency arrow
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: A required interface can be shown in all the three ways mentioned.

12. 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 of the mentioned

[View Answer](#)

Answer: d

Explanation: UML provides which of these levels of visibility that can be applied to attributes and operations Public, Package, Protected and Private.

13. Which of the following is correct?

- a) An attribute is a class variable when each object stores its own value for the attribute
- b) An attribute can also be an instance variable, which means that there is only one value stored for the attribute that is shared by all class instances
- c) An instance operation can be called using any object
- d) A class operation is encapsulated in a class and can be called through the class

[View Answer](#)

Answer: d

Explanation: An attribute is an instance variable when each object stores its own value for the attribute whereas an attribute can also be a class variable, which means that there is only one value stored for the attribute that is shared by all class instances and An instance operation can be called only by using instance.

14. Which of the following is true?

- a) The aggregation association represents the part-whole relation between the instances of the associated classes
- b) In a composition association, each part can be related to only a single whole at one time
- c) An association class represents a relation on the sets of instances of the classes it connects, and it also holds data and behavior the pertinent to the relation
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned statements are true.

15. Which of the following are the heuristics for the class diagram?

- a) Never place a name, role names, or multiplicities on a generalization connector
- b) Use the interface ball and socket symbols to abstract interface details and a stereotyped class symbol to show details
- c) Don't italicize interface or operation names
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned are the statements for heuristics of class diagram.

1. What does a simple name in UML Class and objects consist of?

- a) Letters
- b) Digits
- c) Punctuation Characters
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: A simple name consists of letters, digits and punctuation characters.

2. What Does a Composite name consists of in a UML Class and object diagram?

- a) Delimiter
- b) Simple names
- c) Digits
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Composite name consists of sequence of simple names and simple names already consists of digits.

3. A Class consists of which of these abstractions?

- a) Set of the objects
- b) Operations
- c) Attributes
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: A class is an abstraction of objects, operations and attributes.

4. A class is divided into which of these compartments?

- a) Name Compartment
- b) Attribute Compartment
- c) Operation Compartment
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Class is divided into 3 main compartments mentioned.

5. An attribute is a data item held by which of the following?

- a) Class
- b) Object
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Attribute is a data item held by class or object.

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6. What should be mentioned as attributes for conceptual modelling?

- a) Initial Values
- b) Names
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Initial values along with their names are used as attributes.

7. An operation can be described as?

- a) Object behavior
- b) Class behavior
- c) Functions
- d) Object & Class behavior

[View Answer](#)

Answer: d

Explanation: An operation is class and object behavior.

8. Which of these are part of the class operation specification format?

- a) name
- b) parameter list
- c) return-type list
- d) all of the mentioned

[View Answer](#)

Answer: d

Explanation: It consists of all these 3 mentioned format.

9. 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 of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: All the statements mentioned are true with respect to Notations.

10. 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

[View Answer](#)

Answer: a

Explanation: Multiplicity is number of instances associated with single instance to source class.

11. 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

[View Answer](#)

Answer: a

Explanation: Compartments can be in order, Attributes and operations must be listed one per line.

12. Which of these are the heuristics?

- a) Name classes, attributes, and roles with noun phrases
- b) Name operations and associations with verb phrases
- c) Stick to binary associations
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All the heuristic mentioned are true.

13. An object symbol is divided into what parts?

- a) Top compartment
- b) Bottom Compartment
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: An object is divided into top and bottom compartments.

6.

The term Complete for a UML has the same meaning as which of the following for an EER diagram?

- A.
Overlapping rule
- B.
Disjoint rule
- C.
Total specialization rule
- D.
Partial specialization rule

[Answer & Solution](#) [Discuss in Board](#) [Save for Later](#)

7.

A UML diagram includes which of the following?

- A.
Class name
- B.
List of attributes
- C.
List of operations
- D.
All of the above

[Answer & Solution](#) [Discuss in Board](#) [Save for Later](#)

8.

An object can have which of the following multiplicities?

- A.
Zero
- B.
One
- C.
More than one
- D.
All of the above

[Answer & Solution](#) [Discuss in Board](#) [Save for Later](#)

Answer & Solution

Answer: Option D

No explanation is given for this question [Let's Discuss on Board](#)

9.

Which of the following statement is true concerning objects and/or classes?

- A.
An object is an instance of a class.
- B.
A class is an instance of an object.
- C.
An object includes encapsulates only data.
- D.
A class includes encapsulates only data.

[Answer & Solution](#) [Discuss in Board](#) [Save for Later](#)

Answer & Solution

Answer: Option A

No explanation is given for this question [Let's Discuss on Board](#)

10.

Which of the following applies to a class rather than an object?

- A.
Query
- B.
Update
- C.
Scope
- D.
Constructor

[Answer & Solution](#) [Discuss in Board](#) [Save for Later](#)

Answer & Solution

Answer: Option C

No explanation is given for this question [Let's Discuss on Board](#)

SOFTWARE DESIGN AND MODELEING

1. Why there is a need for Software management?
 - a) Software development is complex and expensive
 - b) It is done with few people with fixed skills and abilities
 - c) It is not time consuming
 - d) None of the mentioned

[View Answer](#)

Answer: a

Explanation: Software development is carried on with group of people with varying skills.

2. Which of these is wrong in terms of definition?
 - a) Planing is formulating scheme for doing project
 - b) Organizing is directing people doing project work
 - c) Project is one time effort to achieve a particular goal for organization
 - d) Staffing is filling the positions in an organizational structure

[View Answer](#)

Answer: b

Explanation: Leading is directing people organizing is structuring entities and assigning responsibilities.

3. Which of these is not project development activity?
 - a) Planning
 - b) Organizing
 - c) Operating
 - d) Tracking

[View Answer](#)

Answer: c

Explanation: Operating is a business activity in contrast to rest of them.

4. Which of these comes under business activities?

- a) Project
- b) Operations
- c) Planning
- d) Project & Operations

[View Answer](#)

5. Which of these terms have its role in project planning?

- a) Schedule
- b) Milestone
- c) Estimation
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of these have its role for planning

1. Which of the following UML diagrams has a static view?

- a) Collaboration
- b) Use case
- c) State chart
- d) Activity

[View Answer](#)

Answer: b

Explanation: A use case diagrams captures only the functionality of the system whereas a dynamic model/view captures the functions as well as the action.

2. What type of core-relationship is represented by the symbol in the figure below?



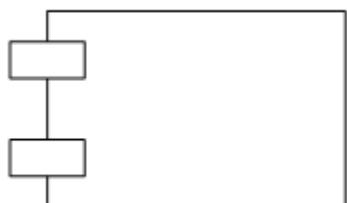
- a) Aggregation
- b) Dependency
- c) Generalization
- d) Association

[View Answer](#)

Answer: a

Explanation: None.

3. Which core element of UML is being shown in the figure?



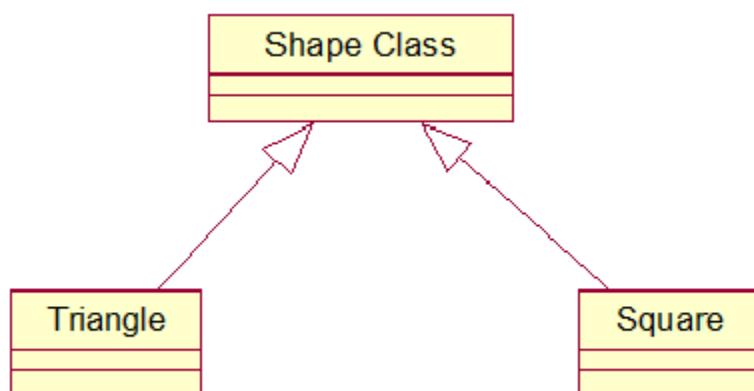
- a) Node
- b) Interface
- c) Class
- d) Component

[View Answer](#)

Answer: d

Explanation: The figure is self explanatory. A component is a modular, significant and replaceable part of the system that packages implementation and exposes a set of interfaces.

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



- a) Realization

- b) Generalization
- c) Aggregation
- d) Dependency

[View Answer](#)

Answer: b

Explanation: The generalization relationship is also known as the inheritance relationship. In the figure Square is the subclass of superclass shape.

advertisement

5. 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

[View Answer](#)

Answer: d

Explanation: An object diagram focuses on some particular set of object instances and attributes, and the links between the instances. It is a static snapshot of a dynamic view of the system.

6. 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

[View Answer](#)

Answer: a

Explanation: Interaction diagram are used to formalize the dynamic behavior of the system.

7. Structure diagrams emphasize the things that must be present in the system being modeled.

- a) True
- b) False

[View Answer](#)

Answer: a

Explanation: Since structure diagrams represent the structure they are used extensively in documenting the architecture of software systems

8. Which of the following diagram is time oriented?

- a) Collaboration
- b) Sequence
- c) Activity
- d) None of the mentioned

[View Answer](#)

Answer: b

Explanation: A sequence diagrams timeline along which tasks are completed.

Which of the following identify high-level services provided by the system.

- a. Classes
- b. Activities
- c. Use Cases
- d. Components

Answers: c

Which of the following shape connects the initiating actor to the use case (ending at the use case).

- a. Arrow
- b. Line
- c. Arc
- d. Scribble

Answers: a

Animation of a model against the execution of a deployed system is an example of which kind of engineering?

- a. business engineering
- b. forward engineering
- c. reverse engineering
- d. temporal engineering

Answers: c

Forward Engineering is possible for an Activity Diagram mainly when the context of the diagram is?

- a. an operation
- b. a workflow
- c. a class
- d. a use case

Answers:a

Use case scenario is a specific sequence of which of the followings?

- a. relationships n
- b. use cases
- c. classes
- d. actions

Answers: d

We can graphically represent the scenario of a use case with the help of which kind of UML diagram?

- a. deployment diagram
- b. sequence diagram
- c. use case diagram
- d. interaction diagram

Answers: b

Uses cases are represented as which of the following shape within the system rectangle.

- a. ellipses
- b. circles
- c. rhombus
- d. rectangle

Answers: a

The behavior of a system can be modeled with the help of which kind of UML diagrams?

- a. class diagram
- b. activity diagram
- c. use case diagram
- d. interaction diagram

Answers: b

Select the best diagram to model business workflows?

- a. Deployment diagram
- b. Activity diagram
- c. Use Case diagram
- d. Interaction diagram

Answers: B

1. _____ are used to model the dynamic aspects of collaborations.

- a. Sequence Diagrams
- b. Structural
- c. Interactions
- d. Messages

Answer :c

2. Interaction diagrams are of _____ types.

- a. 1
- b. 2
- c. 3
- d. 4

Answer B

3. In interactions, _____ specifies a path to send and receive messages between two o

- a. link
- b. node

c. sequences

d. instance

Answer:B

4. Which of the following doesn't include in message types?

- a. Call
- b. Return
- c. Send
- d. Delete

Answer:D

5. A _____ is a stream of messages exchanged between objects.

- a. sequence
- b. modeling
- c. transition
- d. objects

Answer: A

6. A set of messages exchanged among a set of objects is called as _____

- a. use case
- b. activity
- c. interaction
- d. deployment

Answer :c

An _____ shows an interaction consisting of a set of objects and their relationships, including the messages.

- a. interaction diagram
- b. class diagram
- c. use case diagram
- d. activity diagram

Answer :A

8. _____ diagram illustrates use case realizations.

- a. Sequence

- b. Class
- c. use case
- d. Activity

Answer :A

9. Forward engineering of a collaboration diagram is possible especially if the context of th diagram is

- a. a system _____
- b. a subsystem
- c. a workflow
- d. an operation

Answer: D

10. Forward engineering of a collaboration diagram is possible especially if the context of th diagram is

- a. a system _____
- b. a subsystem
- c. a workflow
- d. an operation

Answer: c

1. 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 of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Interaction Diagram are the UML notations for dynamic modeling of collaborations, a central focus of engineering design.

2. 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 of the mentioned

[View Answer](#)

Answer: d

Explanation: UML has Four different interaction diagram notations – A sequence diagram, A communication diagram, An interaction overview diagram, A timing diagram.

3. 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

[View Answer](#)

Answer: a

Explanation: A sequence diagram shows interacting individuals along the top of the diagram and messages passed among them arranged in temporal order down the page.

4. Which of the following is true about Sequence frames?

- a) A sequence diagram has a frame consisting of a rectangle with a pentagon in its upper left-hand corner
- b) The pentagon is its name compartment; the interaction is represented inside the rectangle
- c) The string in the name compartment has the form sd interaction Identifier where interaction Identifier is either a simple name or an operation specification with the same format as in a class diagram
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned statements are followed in sequence frames.

5. What is a lifeline?

- a) It is a frame consisting of a rectangle with a pentagon in its upper left-hand corner
- b) It is a rectangle containing an identifier with a dashed line extending below the rectangle
- c) It is a name compartment; the interaction is represented inside the rectangle
- d) None of the mentioned

[View Answer](#)

Answer: b

Explanation: Lifeline is a rectangle containing an identifier with a dashed line extending below the rectangle.

advertisement

6. 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

[View Answer](#)

Answer: a

Explanation: All communications from one object to another are called messages and are represented by message arrows in sequence diagrams.

7. What are the three different types of message arrows?

- a) Synchronous, asynchronous, synchronous with instance creation
- b) Self, Multiplied, instance generator
- c) Synchronous, Asynchronous, synchronous with instance creation
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: Three different types of message arrows are- Synchronous, Asynchronous, Synchronous with instance creation.

8. Which of these are true with respect to the message arrows?

- a) The synchronous message arrow is used when a sending individual continues execution after sending the message
- b) The asynchronous message arrow is used when a sending individual suspends execution after sending the message
- c) The dashed arrow is used either to show the return of control from a synchronous message or to create a new entity
- d) All of the mentioned

[View Answer](#)

Answer: c

Explanation: The asynchronous message arrow is used when a sending individual continues execution after sending the message and The synchronous message arrow is used when a sending individual suspends execution after sending the message.

9. When is the operation executing, suspended and active?

- a) An operation is executing when some process is actually running its code
- b) An operation is suspended when it sends a synchronous message and it is waiting for the message to return
- c) An operation is active when it is either executing or suspended
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned statements are true and respond to operations executing suspended and active states.

10. What is 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 of the mentioned

[View Answer](#)

Answer: d

Explanation: Interaction fragment is a fragment which is a rectangular frame with a pentagonal operation compartment in the upper left-hand corner and A fragment which has a marked part of an interaction specification.

11. Which of the following is true for optional fragments?

- a) An optional fragment is a portion of an interaction that may be done
- b) The fragment operator name is opt
- c) Optional fragments have only a single operand, which must contain a guard
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned statements are true with respect to optional fragments.

12. What is break fragment?

- a) An fragment which has one or more guarded operands whose guards are mutually exclusive—that is, at most one of them can be true at any time
- b) A fragment which has a single operand that is performed instead of the remainder of the enclosing fragment or diagram if the operand guard is true
- c) A fragment which has a single operand that may or may not have a guard
- d) None of the mentioned

[View Answer](#)

Answer: b

Explanation: A break fragment has a single operand that is performed instead of the remainder of the enclosing fragment or diagram if the operand guard is true.

13. What are the heuristics which the sequencing diagram follows?

- a) Put pairs of lifelines that interact heavily next to one another
- b) Position lifelines to make message arrows as short as possible
- c) Position lifelines to make message arrows go from left to right
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: Sequencing diagram follows all the mentioned heuristics.

1.

What are the different interaction diagram notations does UML have?

- A.) A sequence diagram
- B.) A communication diagram
- C.) A communication diagram
- D.) All of the mentioned

[Show Answer](#)

Answer: Option 'D'

All of the mentioned

2.

What is a lifeline?

- A.) It is a frame consisting of a rectangle with a pentagon in its upper left-hand corner
- B.) It is a rectangle containing an identifier with a dashed line extending below the rectangle
- C.) It is a name compartment; the interaction is represented inside the rectangle
- D.) None of the mentioned

Show Answer

Answer: Option 'B'

It is a rectangle containing an identifier with a dashed line extending below the rectangle

3.

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 of the mentioned
- D.) None of the mentioned

Show Answer

Answer: Option 'C'

All of the mentioned

4.

Which of the following is true about Sequence frames?

- A.) A sequence diagram has a frame consisting of a rectangle with a pentagon in its upper left-hand corner
- B.) The pentagon is its name compartment; the interaction is represented inside the rectangle
- C.) The string in the name compartment has the form sd interaction Identifier where interaction Identifier is either a simple name or an operation specification with the same format as in a class diagram
- D.) All of the mentioned

Show Answer

Answer: Option 'D'

All of the mentioned

5.

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

Show Answer

Answer: Option 'A'

It Passes all communications from one object to another and are represented by message arrows in sequence diagrams

1. who consider diagrams as a type of Class diagram, component diagram, object diagram, and deployment diagram?

- A) structural
- B) behavioral
- C) non-behavioral
- D) non structural

Answer:a

2. _____ are Weak entities are represented in UML diagrams by using aggregations.

- A) qualified
- B) non-qualified
- C) non-qualified
- D) qualified

Answer:d

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

- A) ordination
- B) aggregation
- C) segregation
- D) increment

Answer:b

4. which type they considered Activity diagram, use case diagram, collaboration diagram, and sequence diagram?

- A) non-behavioral
- B) non-structural
- C) structural
- D) behavioral

Answer d

General Knowledge: *How many types of UML Diagrams?*

5. which diagram is used to show interactions between messages are classified as?

- A) activity
- B) state chart
- C) collaboration
- D) object lifeline

Answer c

6. which diagrams are used to distribute files, libraries, and tables across topology of the hardware

- A) deployment
- B) use case

- C) sequence
- D) collaboration

Answer: a

7. which diagram that helps to show Dynamic aspects related to a system?

- A) sequence
- B) interaction
- C) deployment
- D) use case

Answer: b

8. simple name in UML Class and objects consist of _____.

- A) Letters
- B) Digits
- C) Punctuation Characters
- D) All of the mentioned

Answer: d

9. which of the following Composite name consists of in a UML Class and object diagram?

- A) Delimiter
- B) Simple names
- C) Digits
- D) All of the mentioned

Answer: d

10. which of these abstractions class consist?

- A) Set of the objects
- B) Operations
- C) Attributes
- D) All of the mentioned

Answer: d

11. which of these compartments divided in class?

- A) Name
- B) Attribute
- C) Operation
- D) All of the mentioned

Answer: d

12. which of the following attribute is a data item held by?

- A) Class
- B) Object
- C) All of the mentioned
- D) None of the mentioned

Answer: c

13. Mentioned as _____ attributes for conceptual modelling?

- A) Initial Values
- B) Names
- C) All of the mentioned

D) None of the mentioned

Answer: c

14. An operation can be described as _____.

- A) Object
- B) Class
- C) Functions
- D) Object & Class

Answer: d

15. _____ are part of the class operation specification format.

- A) name
- B) parameter list
- C) return-type list
- D) all of the mentioned

Answer: d

16. which among the optional statement is true?

- A) Associations may also correspond between instances of three
- B) Association lines may be unlabeled
- C) All of the mentioned
- D) None of the mentioned

Answer: c

17. Multiplicity for an association _____.

- A) association is the number of instances with a single instance
- B) association is the number of instances with a number instance
- C) All of the mentioned
- D) None of the mentioned

Answer: a

18. _____ among these are the rules to be considered to form Class diagrams.

- A) Class symbols least a name compartment
- B) The compartment can be in random order
- C) Attributes and operations can be listed
- D) None of the mentioned

Answer: a

20. these are the heuristics _____.

- A) Name classes attributes with noun phrases
- B) Name operations with verb phrases
- C) Stick to binary associations
- D) All of the mentioned

Answer: d

21. An object symbol is divided into _____ part of compartment

- A) Top
- B) Bottom
- C) All of the mentioned
- D) None of the mentioned

Answer: c

22. _____ diagram is time-oriented?

- A) Collaboration
- B) Sequence
- C) Activity
- D) None of the mentioned

Answer: b

23. which term are combined Interaction Diagram?

- A) Sequence Diagram + Collaboration Diagram
- B) Activity Diagram + State Chart Diagram
- C) Deployment Diagram + Collaboration Diagram
- D) None of the mentioned

Answer: a

24. Structure diagrams emphasize the things present system being modeled.

- A) True
- B) False

Answer: a

25. _____ diagram in UML shows a complete of a modeled system at a specific time.

- A) Sequence
- B) Collaboration
- C) Clas
- D) Object

Answer: d

26. _____ UML diagrams has a static view.

- A) Collaboration
- B) Use case
- C) State chart
- D) Activity

Answer: b

1. 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 of the mentioned

View Answer

Answer: d

Explanation: All the mentioned statements are true.

2. Every finite automaton specification must contain which of the following?

- a) Descriptions of the automaton's states in a way that allows them to be distinguished, such as by naming each one;
- b) Descriptions of transitions indicating each transition source state, its target state, and the events that trigger it;
- c) Designation of an initial state, the starting place for state transitions
- d) All of the mentioned

View Answer

Answer: d

Explanation: Every finite automaton specification contains – Descriptions of the automaton's states in a way that allows them to be distinguished, such as by naming each one; Descriptions of transitions indicating each transition source state, its target state, and the events that trigger it; and Designation of an initial state, the starting place for state transitions.

3. What does deterministic and non deterministic automation?

- a) A non-deterministic finite automaton is a finite automaton that has no spontaneous transitions and has a single transition that it must make in response to every event in each of its states
- b) A deterministic finite automaton is one with multiple transitions
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: d

Explanation: A deterministic finite automation is a finite automaton that has no spontaneous transitions and has a single transition that it must make in response to every event in each of its states and A non-deterministic finite automaton is one with multiple transitions.

4. 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 of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: All of the mentioned are true for the state diagram.

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5. Which of the following represents the State Diagram?

- a) The finite automaton initial state is designated by a special initial pseudo-state depicted as a large black dot at the tail of an arrow pointing at the initial state
- b) A finite automaton may execute forever or it may halt in a final state
- c) Transitions are represented by solid arrows labeled with one or more transition strings that describe the circumstances under which the transition is triggered and the actions that may ensue
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned are true for state diagram.

6. Which of the statements state the name compartment?

- a) The first compartment is the name compartment
- b) It contains the state name; State names are optional and may be path names
- c) The name compartment can never be omitted
- d) The first compartment is the name compartment, It contains the state name; State names are optional and may be path names

[View Answer](#)

Answer: d

Explanation: State name compartment is the first compartment that contains state name, name compartment may be omitted.

7. Which of the following is true?

- a) A state symbol without a nested state compartment represents a complex state
- b) One with a nested state compartment represents a simple state
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: d

Explanation: A state symbol without a nested state compartment represents a simple state and One with a nested state compartment represents a complex state.

8. Which of the following are composite states?

- a) A sequential composite state
- b) A concurrent composite state
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: There are two kinds of composite states -A sequential composite state and A concurrent composite state.

9. What is sequential and concurrent composite state means?

- a) A concurrent composite state contains a single state diagram composed of sub-states or inner states and the transitions between them
- b) A sequential composite state contains two or more sequential state diagrams in regions separated by dashed lines called concurrent region boundary lines
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: d

Explanation: A sequential composite state contains a single state diagram composed of sub-states or inner states and the transitions between them and A concurrent composite state contains two or more sequential state diagrams in regions separated by dashed lines called concurrent region boundary lines.

10. Sequential composite states simplify state models in two ways?

- a) They organize states into hierarchies
- b) They consolidate many transitions
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: All of the mentioned are the two ways to simplify sequential composite states

1. Which of the following states about concurrent region?

- a) It is Concurrent composite states contain two or more concurrent state diagrams separated by dashed lines
- b) The concurrent state diagrams specify finite automata that execute in parallel
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: The Concurrent region is a concurrent composite states contain two or more concurrent state diagrams separated by dashed lines and specifies finite automata that execute in parallel.

2. Which of the following are the ways to make transitions into and two ways to make transitions from concurrent composite states?

- a) A transition is made to the composite state boundary
- b) A transition into a concurrent composite state is to make a transition directly to one of its sub-states
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: There are two ways to make transitions into and two ways to make transitions from concurrent composite states, a transition is made to the composite state boundary and the second way to make a transition into a concurrent composite state is to make a transition directly to one of its sub-state.

3. Which of the following are the ways to leave concurrent composite states?

- a) Transitioning from the composite state and transitioning from individual sub-states
- b) A transition from a sub-state to an external state causes the immediate exit from each concurrent automaton's current state
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: There are two ways to leave concurrent composite states – transitioning from the composite state and transitioning from individual sub-states and a transition from a sub-state to an external state causes the immediate exit from each concurrent automaton's current state.

4. What is a Synch state?

- a) It is a counter that keeps track of transitions
- b) They are represented in state diagrams by Synch state symbols, which are small circles containing either a positive integer or an asterisk, indicating the counter's upper bound
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: A synch state is a counter that keeps track of transitions and they are represented in

state diagrams by synch state symbols, which are small circles containing either a positive integer or an asterisk, indicating the counter's upper bound.

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5. Which of the following is false about Concurrent composite states?

- a) Concurrent composite states simplify state diagrams by greatly reducing the number of states and transitions
- b) Any set of concurrent state diagrams can be converted into an equivalent sequential state diagram, but the number of states in the sequential state diagram may be as much as the product of the number of states in each of the concurrent state diagrams
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: d

Explanation: Concurrent composite states simplify state diagrams by greatly reducing the number of states and transitions and Any set of concurrent state diagrams can be converted into an equivalent sequential state diagram, but the number of states in the sequential state diagram may be as much as the product of the number of states in each of the concurrent state diagrams.

6. What is the Transition junction point?

- a) The transitions from different sources can converge to a point and transitions leaving the point symbol may disperse to different targets
- b) They are several transition arrows connected using point symbols
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: a

Explanation: The transitions from different sources can converge on a transition junction point symbol and transitions leaving the transition junction, point symbol may disperse to different targets and Several transition arrows connected using transition junction point symbols are compound transitions.

7. Which of the following represents history state?

- a) A history state is a pseudo-state that serves as a marker indicating that the sub-state last active when the composite state was exited should be re-entered
- b) The history state indicator is a circled H
- c) A history state may have a single unlabeled transition arrow emanating from it to one of its peer states
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: The history state indicator is a circled capital H and rest all are true.

8. Which of the following are the heuristics for the State diagram?

- a) Avoid concurrent composite states, especially those with synch states
- b) Designate an initial state in every concurrent region of a concurrent composite state
- c) Check that transitions to several concurrent sub-states go through a fork

d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: All of the mentioned are the heuristics followed by a state diagram.

9. What does “Designate an initial state in every concurrent region of a concurrent composite state” mean?

- a) If there are no transitions to a concurrent composite state’s boundary, then concurrent regions do not need to have initial states
- b) A transition to the composite state’s boundary could be added later, though, so initial states for each region should always be specified
- c) It is legal to transition directly to more than one sub-state of a concurrent composite state without going through a fork
- d) All of the mentioned

[View Answer](#)

Answer: d

Explanation: If there are no transitions to a concurrent composite state’s boundary, then concurrent regions do not need to have initial states and a transition to the composite state’s boundary could be added later, though, so initial states for each region should always be specified.

10. Why there is a need to “Check that transitions to several concurrent sub-states go through a fork”?

- a) State diagrams must specify deterministic finite automata, so there can be no doubt which transition to follow under every possible circumstance
- b) It is illegal to transition directly to more than one sub-state of a concurrent composite state without going through a fork
- c) All of the mentioned
- d) None of the mentioned

[View Answer](#)

Answer: b

Explanation: Check that transitions to several concurrent sub-states go through a fork because it is illegal to transition directly to more than one sub-state of a concurrent composite state without going through a fork.

What does deterministic and non deterministic automation?

- A.) A non-deterministic finite automaton is a finite automaton that has no spontaneous transitions and has a single transition that it must make in response to every event in each of its states
- B.) A deterministic finite automaton is one with multiple transitions
- C.) All of the mentioned
- D.) None of the mentioned

[Show Answer](#)

Answer: Option 'D'

A deterministic finite automation is a finite automaton that has no spontaneous transitions and has a single transition that it must make in response to every event in each of its states and A non-deterministic finite automaton is one with multiple transitions.

2.

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 of the mentioned

Show Answer

Answer: Option 'D'

All of the mentioned

3.

Every finite automaton specification must contain which of the following?

- A.) Descriptions of the automaton's states in a way that allows them to be distinguished, such as by naming each one;
- B.) Descriptions of transitions indicating each transition source state, its target state, and the events that trigger it;
- C.) Designation of an initial state, the starting place for state transitions
- D.) All of the mentioned

Show Answer

Answer: Option 'D'

All of the mentioned

4.

What is sequential and concurrent composite state means?

- A.) A concurrent composite state contains a single state diagram composed of sub-states or inner states and the transitions between them
- B.) A sequential composite state contains two or more sequential state diagrams in regions separated by dashed lines called concurrent region boundary lines
- C.) All of the mentioned
- D.) None of the mentioned

Show Answer

Answer: Option 'D'

None of the mentioned

5.

Which of the following is true?

- A.) A state symbol without a nested state compartment represents a complex state
- B.) One with a nested state compartment represents a simple state
- C.) All of the mentioned
- D.) None of the mentioned

Show Answer

Answer: Option 'D'

None of the mentioned

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6.

Sequential composite states simplify state models in two ways?

- A.) They organize states into hierarchies
- B.) They consolidate many transitions
- C.) All of the mentioned
- D.) None of the mentioned

Show Answer

Answer: Option 'C'

All of the mentioned

7.

Which of the following are composite states?

- A.) A sequential composite state
- B.) A concurrent composite state
- C.) All of the mentioned
- D.) None of the mentioned

Show Answer

Answer: Option 'C'

All of the mentioned

8.

Which of the statements state the name compartment?

- A.) The first compartment is the name compartment
- B.) It contains the state name; State names are optional and may be path names
- C.) The name compartment can never be omitted
- D.) The first compartment is the name compartment, It contains the state name; State names are optional and may be path names

Show Answer

Answer: Option 'D'

The first compartment is the name compartment, It contains the state name; State names are optional and may be path names

9.

Which of the following represents the State Diagram?

- A.) The finite automaton initial state is designated by a special initial pseudo-state depicted as a large black dot at the tail of an arrow pointing at the initial state
- B.) A finite automaton may execute forever or it may halt in a final state
- C.) Transitions are represented by solid arrows labeled with one or more transition strings that describe the circumstances under which the transition is triggered and the actions that may ensue
- D.) All of the mentioned

Show Answer

Answer: Option 'D'

All of the mentioned

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 of the mentioned
- D.) None of the mentioned

Show Answer

Answer: Option 'C'

All of the mentioned

Que. The state diagram

- a. depicts relationships between data objects
- b. depicts functions that transform the data flow
- c. indicates how data are transformed by the system
- d. indicates system reactions to external events

Answer: indicates system reactions to external event

1. Which of the following is incorrect?

- a) A Layered-style program is divided into an array of modules or layers
- b) Each layer provides services to the layer “below” and makes use of services provided by the layer “above”
- c) All of the mentioned
- d) None of the mentioned

Answer: b

Explanation: Each layer provides services to the layer “above” and makes use of services provided by the layer “below”.

2. Which of the following is correct?

- a) The dynamic structure of the Layered style is to partition software units into modular layers
- b) The static structure of the Layered style is nothing more than a constraint on interactions between layers
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: The static structure of the Layered style is to partition software units into modular layers whereas The dynamic structure of the Layered style is nothing more than a constraint on interactions between layers.

3. What is Relaxed Layered Style?

- a) Each layer can be constrained to use only the layer directly below it
- b) Sometimes this constraint is relaxed slightly to allow each layer to use all the layers below it
- c) All of the mentioned
- d) None of the mentioned

Answer: b

Explanation: Each layer can be constrained to use only the layer directly below it—this is a

Strict Layered style whereas Sometimes this constraint is relaxed slightly to allow each layer to use all the layers below it—this is a Relaxed Layered style.

4. Which of the following is correct?

- a) Module A uses Module B if a correct version of B must be present for A to execute correctly
- b) Module A calls (or invokes) module B if B triggers execution of A
- c) All of the mentioned
- d) None of the mentioned

Answer: a

Explanation: Module A uses Module B if a correct version of B must be present for A to execute correctly and Module A calls (or invokes) module B if A triggers execution of B.

5. Which of the following is true with respect to layered architecture?

- a) Each layer is allowed to depend on the layer above it being present and correct
- b) A layer may call other layers above and below it, as long as it uses them
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: Each layer is allowed to depend on the layer below it being present and correct. A layer may call other layers above and below it, as long as it does not use them.

6. What is Onion diagram illustrates?

- a) It illustrates the connection between the layers in communications protocols, such as the International Standards Organization Open Systems Interconnection (ISO OSI) model, or the layers in user interface and windowing systems, such as the X Window System
- b) It often illustrates operating system layers, with the kernel at the core
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: Onion diagram illustrates operating system layers, with the kernel at the core.

7. In particular, layers have which of the following characteristics?

- a) Layers are by definition highly cohesive, thus satisfying the Principle of Cohesion
- b) Layers doesn't support information hiding
- c) Layers are constrained to use only above layers
- d) All of the mentioned

Answer: a

Explanation: Layers are by definition highly cohesive, thus satisfying the Principle of Cohesion. Layers support information hiding. Layers are constrained to use only lower layers.

8. Which of the following is incorrect?

- a) Layered architectures are highly changeable, so this pattern can be used when changeability is an important quality attribute
- b) Layered-style programs are easy to modify because changes can be made to a layer independently of the rest of the program

- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: All of the mentioned are correct.

9. What are the drawbacks for Layers?

- a) It is often necessary to pass data through many layers, which can slow performance significantly
- b) Layers support information hiding
- c) Multi-layered programs can be hard to debug because operations tend to be implemented through a series of calls across layers
- d) None of the mentioned

Answer: c

Explanation: Layers support information hiding is an advantage and not a drawback.

10. Which of the following is correct?

- a) Layers are not strongly coupled to the layers above them
- b) Each layer is strongly coupled only to the layer immediately below it
- c) Overall Layered-style architectures are loosely coupled
- d) All of the mentioned

Answer: d

Explanation: Layers are not strongly coupled to the layers above them. If a program uses the Strict Layered style, then each layer is strongly coupled only to the layer immediately below it. As a result, overall Layered-style architectures are loosely coupled.

11. What does a simple name in UML Class and objects consist of?

- a) Letters
- b) Digits
- c) Punctuation Characters
- d) All of the mentioned

Answer: d

Explanation: A simple name consists of letters, digits and punctuation characters.

12. What Does a Composite name consists of in a UML Class and object diagram?

- a) Delimiter
- b) Simple names
- c) Digits
- d) All of the mentioned

Answer: d

Explanation: Composite name consists of sequence of simple names and simple names already consists of digits.

13. A Class consists of which of these abstractions?

- a) Set of the objects
- b) Operations

- c) Attributes
- d) All of the mentioned

Answer: d

Explanation: A class is an abstraction of objects, operations and attributes.

14. A class is divided into which of these compartments?

- a) Name Compartment
- b) Attribute Compartment
- c) Operation Compartment
- d) All of the mentioned

Answer: d

Explanation: Class is divided into 3 main compartments mentioned.

15. An attribute is a data item held by which of the following?

- a) Class
- b) Object
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Attribute is a data item held by class or object.

16. What should be mentioned as attributes for conceptual modelling?

- a) Initial Values
- b) Names
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Initial values along with their names are used as attributes.

17. An operation can be described as?

- a) Object behavior
- b) Class behavior
- c) Functions
- d) Object & Class behavior

Answer: d

Explanation: An operation is class and object behavior.

18. Which of these are part of the class operation specification format?

- a) name
- b) parameter list
- c) return-type list
- d) all of the mentioned

Answer: d

Explanation: It consists of all these 3 mentioned format.

19. 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 of the mentioned
- d) None of the mentioned

Answer: c

Explanation: All the statements mentioned are true with respect to Notations.

20. 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

Answer: a

Explanation: Multiplicity is number of instances associated with single instance to source class.

21. 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

Answer: a

Explanation: Compartments can be in order, Attributes and operations must be listed one per line.

22. Which of these are the heuristics?

- a) Name classes, attributes, and roles with noun phrases
- b) Name operations and associations with verb phrases
- c) Stick to binary associations
- d) All of the mentioned

Answer: d

Explanation: All the heuristic mentioned are true.

23. An object symbol is divided into what parts?

- a) Top compartment
- b) Bottom Compartment
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: An object is divided into top and bottom compartments.

Q. 1 is an important factor of management information system.

- A) System
- B) Data
- C) Process
- D) All

ANS: A) System

Q.3 level supply information to strategic tier for the use of top management.

- A) Operational
- B) Environmental
- C) Competitive
- D) Tactical

ANS: D) Tactical

Q.4 In a DFD external entities are represented by a

- A) Rectangle
- B) Ellipse
- C) Diamond shaped box
- D) Circle

ANS: A) Rectangle

Q.5 can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceive value in current or prospective decisions.

- A) System
- B) Information
- C) Technology
- D) Service

ANS: B) Information

Q.6 Use the new system at the same time as the old system to compare the results. This is known as

.....

- A) Procedure Writing
- B) Simultaneous processing
- C) Parallel Operation
- D) File Conversion

ANS: C) Parallel Operation

Q.7 After the design phase the document prepared is known as.....

- A) system specification
- B) performance specification
- C) design specification

D) None of these

ANS: C) design specification

Q.8 A data flow can

- A) Only emanate from an external entity
- B) Only terminate in an external entity
- C) May emanate and terminate in an external entity
- D) May either emanate or terminate in an external entity but not both

ANS: C) May emanate and terminate in an external entity

Q. 9 can be defined as most recent and perhaps the most comprehensive technique for solving computer problems.

- A) System Analysis
- B) System Data
- C) System Procedure
- D) System Record

ANS: A) System Analysis

Q.10 SDLC stands for

- A) System Development Life Cycle
- B) Structure Design Life Cycle
- C) System Design Life Cycle
- D) Structure development Life Cycle

ANS: A) System Development Life Cycle

11. Which of the following is / are the Characteristics of information?

- A) Accuracy and Relevance
- B) Form of information and Timeliness
- C) Completeness and Purpose
- D) All A, B & C

ANS: D) All A, B & C

12. The data Flow Diagram is the basic component of system

- A) Conceptual
- B) Logical
- C) Physical
- D) None of the above

ANS: B) Logical

13. Data cannot flow between two data stores because

- A) it is not allowed in DFD
- B) a data store is a passive repository of data
- C) data can get corrupted

D) they will get merged

ANS: D) they will get merged

14. The characteristics of well designed system are

- a) Practical b) Effective c) Secure d) Reliable e) Flexible f)
Economical
A) a, b, c and d
B) a, c, d and e
C) a, b, c, d and e
D) a, b, c, d, e and f

ANS: . D) a, b, c, d, e and f

15. gives defining the flow of the data through an organization or a company or series of

tasks that may or may not represent computerized processing.

- A) System process
B) System flowchart
C) System design
D) Structured System

ANS: B) System flowchart

16. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

- A. documentation
B. flowchart
C. program specification
D. design

ANS: C. program specification

17. Actual programming of software code is done during the _____ step in the SDLC.

- A. Maintenance and Evaluation
B. Design
C. Analysis
D. Development and Documentation

ANS: D. Development and Documentation

18. Enhancements, upgrades, and bug fixes are done during the _____ step in the SDLC.

- A. Maintenance and Evaluation
B. Problem/Opportunity Identification
C. Design
D. Development and Documentation

ANS: A. Maintenance and Evaluation

19. HIPO stand for

- A) Hierarchy input process output
- B) Hierarchy input plus output
- C) Hierarchy plus input process output
- D) Hierarchy input output Process

ANS: A) Hierarchy input process output

20. Advantages of system flowcharts

- A) Effective communication
- B) Effective analysis
- C) Quiesier group or relationships
- D) All A, B, C

ANS: D) All A, B, C

21. is a tabular method for describing the logic of the decisions to be taken.

- A) Decision tables
- B) Decision tree
- C) Decision Method
- D) Decision Data

ANS: A) Decision tables

22. The approach used in top?down analysis and design is

- A. to identify the top level functions by combining many smaller components into a single entity
- B. to prepare flow charts after programming has been completed
- C. to identify a top level function and then create a hierarchy of lower?level modules and components.
- D. All of the above

ANS: Option C

23. Documentation is prepared

- A. at every stage
- B. at system design
- C. at system analysis
- D. at system development

ANS: A. at every stage

24. Decision tree uses

- A. pictorial depiction of alternate conditions
- B. nodes and branches
- C. consequences of various depicted alternates
- D. All of the above

ANS: D. All of the above

25. Problem analysis is done during

- A. system design phase
- B. systems analysis phase
- C. before system test
- D. All of the above

ANS: B. systems analysis phase

26. A decision table facilitates conditions to be related to

- A. Actions
- B. Programs
- C. Tables
- D. Operation

ANS: A. Actions

27. A _____ is an outline of a process that keeps develop successful information systems

- A. System Development Life Cycle
- B. CASE tool
- C. Phased Conversion
- D. Success Factors

Ans: A. System Development Life Cycle

28. An appraisal, of a system's performance after it has been installed, is called system

- A. planning
- B. review
- C. maintenance
- D. batch Processing

ANS: B. review

29. An example of a hierarchical data structure is

- A. Array
- B. Linked list
- C. Tree
- D. All of the above

ANS: C. Tree

30. Which of the following is not a characteristic of good test data

- A. users do not participate at this preliminary stage
- B. should be comprehensive
- C. every statement should be executed
- D. All of the above

ANS: A. users do not participate at this preliminary stage

31. In the system concepts, term Integration

- A. implies structure and order
- B. refers to the manner in which each component functions with other components of the system.
- C. means that parts of the computer system depend on one another.
- D. refers to the holism of system

ANS: D. refers to the holism of system

32. The rule(s) to follow in constructing decision tables is (are):

- A. a decision should be given a name
- B. the logic of the table is independent of the sequence in which conditions rules are written, but the action takes place in the order in which the events occur.
- C. standardized language must be used consistently.
- D. All of the above

ANS: D. All of the above

33. is a group of interested components working together towards a common goal by accepting inputs and producing outputs in an organized transformation process.

- A) System
- B) Network
- C) Team
- D) System Unit

Ans: A) System

34. A rectangle in a DFD represents

- A) a process
- B) a data store
- C) an external entity
- D) an input unit

ANS: C) an external entity

35. External Entities may be a

- A) Source of input data only
- B) Source of input data or destination of results
- C) Destination of results only
- D) Repository of data

ANS: B) Source of input data or destination of results

36. The major goal of requirement determination phase of information system development is

- a) determine whether information is needed by an organization
- b) determine what information is needed by an organization
- c) determine how information needed by an organization can be provided

d) determine when information is to be given

ANS : b) determine what information is needed by an organization

37. It is necessary to prioritize information requirements of an organization at the requirements determination phase as

- a) it is always good to prioritize
- b) there are conflicting demands from users
- c) there are constraints on budgets, available time, human resource and requirement
- d) all good organization do it

ANS: c) there are constraints on budgets, available time, human resource and requirement

38. Requirement specification is carried out

- a) after requirements are determined
- b) before requirements are determined
- c) simultaneously with requirements determination
- d) independent of requirements determination

ANS: a) after requirements are determined

39. The role of a system analyst drawing up a requirements specification is similar to

- a) architect designing a building
- b) a structural engineer designing a building
- c) a contractor constructing a building
- d) the workers who construct a building

ANS: a) architect designing a building

40. It is necessary to consult the following while drawing up requirement specification

- a) only top managers
- b) only top and middle management
- c) only top, middle and operational managers
- d) top, middle and operational managers and also all who will use the system

ANS: d) top, middle and operational managers and also all who will use the system

41. In order to understand the working of an organization for which a computer based system is being designed, an analyst must

- a) look at only current work and document flow in the organization
- b) discuss with top level and middle level management only
- c) interview top, middle, line managers and also clerks who will enter data and use the system
- d) only clerical and middle level staff who have long experience in the organization and will be users of the system

ANS: c) interview top, middle, line managers and also clerks who will enter data and use the system

42. A feasibility study is carried out

- a) after final requirements specifications are drawn up
- b) during the period when requirements specifications are drawn up
- c) before the final requirements specifications are drawn up
- d) at any time

ANS: c) before the final requirements specifications are drawn up

43. The main objective of feasibility study is

- a) to assess whether it is possible to meet the requirements specifications
- b) to assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware
- c) to assist the management in implementing the desired system
- d) to remove bottlenecks in implementing the desired system

ANS: b) to assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware

44. It is necessary to carry out a feasibility study as

- a) top management cannot ensure that a project is feasible before calling a system analyst
- b) top management is not sure what they want from the system
- c) even though top management is in favour of the system, technology may not be mature for implementation
- d) all organizations do it

ANS: c) even though top management is in favour of the system, technology may not be mature for implementation

45. Feasibility study is carried out by

- a) managers of the organization
- b) system analyst in consultation with managers of the organization
- c) users of the proposed system
- d) systems designers in consultation with the prospective users of the system

ANS: b) system analyst in consultation with managers of the organization

46. Initial requirements specification is

- a) not changed till the end of the project
- b) continuously changed during project implementation
- c) only a rough indication of the requirement
- d) changed and finalized after feasibility study

ANS: c) only a rough indication of the requirement

47. Final specifications are drawn up by

- a) system analyst in consultation with the management of the organization
- b) the managers of user organization
- c) system analyst in consultation with programmers

d) system designers along with users

ANS: a) system analyst in consultation with the management of the organization

48. The main goal of arriving at a final specification is

- a) to tell the organization's managers how the system will function
- b) to tell the organization's managers what the proposed system will achieve in a language understood by them
- c) to compute the cost of implementing the system
- d) to assist in designing the system

ANS: b) to tell the organization's managers what the proposed system will achieve in a language understood by them

49. The final specifications are arrived at

- a) after feasibility study
- b) during feasibility study
- c) just before implementation phase
- d) when the system is being designed

ANS: a) after feasibility study

50. System approval criteria are specified

- a) when the final specifications are drawn up
- b) during feasibility study
- c) during the requirements specifications stage
- d) during system study stage

ANS: a) when the final specifications are drawn up

51. Hardware study is required

- a) to find out cost of computer system needed
- b) to determine the type of computer system and software tools needed to meet the final system specification
- c) to make sure that the system does not become obsolete
- d) to find how to implement the system

ANS: b) to determine the type of computer system and software tools needed to meet the final system specification

52. Hardware study is carried out

- a) after the final system is specified
- b) at the requirements specification stage
- c) before the requirements are specified
- d) whenever management decides it is necessary

ANS: a) after the final system is specified

53. System design is carried out

- a) as soon as system requirements are determined

- b) whenever a system analyst feels it is urgent
- c) after final system specifications are approved by the organization
- d) whenever the user management feels it should be done

ANS: c) after final system specifications are approved by the organization

54. The primary objective of system design is to

- a) design the programs, databases and test plan
- b) design only user interfaces
- c) implement the system
- d) find out how the system will perform

ANS: a) design the programs, databases and test plan

55. The primary objective of system implementation is

- i) to build a system prototype
 - ii) to train users to operate the system
 - iii) to implement designed system using computers
 - iv) write programs, create databases and test with live data
- i, iii b) i, ii, iii c) ii ,iii d) ii, iv

ANS: d) ii, iv

56. During system implementation the following are done

- i) programs are written and tested with operational data
 - ii) user documentation is created and users trained
 - iii) programmers are recruited and trained
 - iv) the system is tested with operational data
- a)i and iii b) ii and iii c) ii and iv d) i, ii & iv

ANS: d) i, ii & iv

57. System evaluation is carried out

- a) after the system has been operational for a reasonable time
- b) during system implementation
- c) whenever managers of user organization want it
- d) whenever operational staff want it

ANS: a) after the system has been operational for a reasonable time

58. The main objective of system evaluation is

- a) to see whether the system met specification
- b) to improve the system based on operational experience for a period
- c) to remove bugs in the programs
- d) to asses the efficiency of the system

ANS: b) to improve the system based on operational experience for a period

59. Systems are modified whenever

- a) user's requirements change

- b) new computers are introduced in the market
- c) new software tools become available in the market
- d) other similar organization modify these system

ANS: a) user's requirements change

60. The main objective of system modification is

- a) to use the latest software tools
- b) to meet the user's new/changed needs
- c) to use the latest hardware
- d) to have the most modern system

ANS: b) to meet the user's new/changed needs

61. To easily modify the existing system it is necessary to

- a) use good software tools
- b) use the best hardware available
- c) design the system which can be changed at low cost
- d) keep the programming team happy

ANS: c) design the system which can be changed at low cost

62 .It is necessary to design an information system to easily accommodate change, because

- a) new computers are introduced every year
- b) new computer languages become popular every year
- c) organizations' requirements change over a period of time
- d) systems need continuous debugging

ANS: c) organizations' requirements change over a period of time

63. Changing an operational information system is

- a) impossible
- b) expensive and done selectively
- c) never required
- d) usually done

ANS: b) expensive and done selectively

64. System analysts have to interact with

- i) managers of organizations
 - ii) users in the organization
 - iii) programming team
 - iv) data entry operator
- a)iii and iv b) i, ii and iii c) ii, iii and iv d) ii and iii

ANS: b) i, ii and iii

65. The primary responsibility of a systems analyst is to

- a) specify an information system which meets the requirements of an organization

- b) write programs to meet specifications
- c) maintain the system
- d) meet managers of the organization regularly

ANS: a) specify an information system which meets the requirements of an organization

66. The responsibilities of a system analyst include

- i) defining and prioritizing information requirement of an organization
- ii) gathering data, facts and opinions of users in an organization
- iii) drawing up specifications of the system for an organization
- iv) designing and evaluating the system

a) i and ii b) i, ii and iv c) i, ii, iii and iv d) i, ii and iii

ANS: d) i, ii and iii

67. The most important attribute of a systems analyst is

- a) excellent programming skills
- b) very good hardware designing skills
- c) very good technical management skills
- d) very good writing skills

ANS: c) very good technical management skills

68 Among the attributes of a good systems analyst the following are essential

- i) knowledge of organization
- ii) analytical mind
- iii) ability to communicate orally
- iv) excellent mathematical abilities

i and ii b) i, ii and iii c) i, ii and iv d) i, iii and iv

ANS: b) i, ii and iii

69. Among the attributes of a systems analyst the following are most important

- i) knowledge of computer systems and currently available hardware
- ii) good interpersonal relations
- iii) broad knowledge about various organizations
- iv) very good accountancy knowledge

a) i, iii and iv b) i and iii c) i, ii and iv d) i, ii and iii

ANS: d) i, ii and iii

70 . Managers in organizations should not design their own systems as

- a) systems have to interact with other systems
- b) they do not have the special skills necessary to design systems
- c) it is not their job
- d) they are always very busy

ANS: b) they do not have the special skills necessary to design systems

71. Systems analyst should use software tools in their work as

- a) all analysts use them
- b) they assist in systematic design of systems
- c) they are inexpensive
- d) they are easily available

ANS: b) they assist in systematic design of systems

72. Which of the model is used for system components?

- (a) PERT chart
- (b) Gantt chart
- (c) Organizational hierarchy chart
- (d) DFD

ANS: (d) DFD

73. Which of the following does not occur in phase - 4 of the system development life cycle (SDLC)

- A. conduct interviews
- B. train users
- C. acquire hardware and software
- D. test the new system

ANS: A. conduct interviews

74. The structure chart is

- A. a document of what has to be accomplished
- B. a statement of information processing requirement
- C. a hierarchical partitioning of the program
- D. All of the above

ANS: C. a hierarchical partitioning of the program

75. Programmers use _____ to organize and summarize the results of their problem analysis.

- A. Flowcharts
- B. Input charts
- C. HIPO
- D. Output charts

ANS: C. HIPO

76. Changes made periodically to a system, after its implementation, is known as system

- A. Analysis
- B. design
- C. development
- D. maintenance

ANS: D. maintenance

77. The first step in systems Development Life Cycle is

- A. database design
- B. system design
- C. preliminary investigation and analysis
- D. graphical user interface

ANS: C. preliminary investigation and analysis

78. Graphic representation of the control logic of processing functions or modules representing a system, is known as:

- A. Structured analysis
- B. Structured chart
- C. Structured English
- D. System Flow chart

ANS: B. Structured chart

79. An open rectangle

- A. defines a source or destination of system data
- B. identifies data flow
- C. represents a process that transforms incoming data flow(s) into outgoing data flows
- D. is a data store-data at rest, or a temporary repository of data

ANS: D. is a data store-data at rest, or a temporary repository of data

80. Difference between Decision - Tables and Decision Trees is (are)

- A. value to end user
- B. form of representation
- C. one shows the logic while other shows the process
- D. All of the above

ANS: B. form of representation

81. Coding and testing are done In a

- A. top-down manner
- B. bottom-up manner
- C. ad hoc manner
- D. cross sectional manner

ANS: A. top-down manner

82. The first step in the problem-solving process is to _____.

- A. Plan the algorithm
- B. Analyze the problem
- C. Desk-check the algorithm
- D. Evaluate and modify (if necessary) the program

ANS: B. Analyze the problem

83. All of the following tools are used for process descriptions except:

- A. structured english

- B. decision tables
- C. pseudocode
- D. data dictionaries

ANS: D. data dictionaries

84. System design aid should primarily

- A. help analyse both data and activities
- B. help in documentation
- C. help in programming
- D. generate code

ANS: A. help analyse both data and activities

85. Mistakes made in the system analysis stage show up in :

- A. implementation
- B. system design
- C. system developments
- D. All of the above

ANS: A. implementation

86. HIPO means

- A. is a forms-driven technique in which standard forms are used to document the information
- B. consists of a hierarchy chart and an associated set of input/process/ output charts
- C. captures the essence of top down decomposition.
- D. All of the above

ANS: D. All of the above

87. Which of the following activities, does not belong to the Implementation phase of the SDLC?

- A. File conversion
- B. Program testing
- C. User training
- D. All of the above

ANS: B. Program testing

88. During what phase, the requirement analysis is performed?

- A. system design phase
- B. system development phase
- C. system analysis phase
- D. system investigation phase

ANS: C. system analysis phase

89. The requirements report includes

- A. a hierarchy chart showing the top-level modules
- B. a list of alternative solutions considered

- C. a data flow diagram describing the proposed new system.
- D. All of the above

ANS: C. a data flow diagram describing the proposed new system.

90. During the system study, analysts determine manager's information needs by

- A. conducting tours of a nearby computer center
- B. asking questions
- C. showing samples of computer reports
- D. teaching short courses in programming languages

ANS: B. asking questions

91. A feasibility study

- A. includes a statement of the problems
- B. considers a single solutions
- C. both (a) and (b)
- D. a list of alternative solution considered

ANS: A. includes a statement of the problems

92. Which of the following is (are) the characteristic(s) of a system?

- A. organization
- B. Interaction
- C. Interdependence
- D. All of the above

ANS: D. All of the above

93. A graphic representation of an information system is called

- A. flow chart
- B. pictogram
- C. data flow diagram
- D. histogram

ANS: C. data flow diagram

94. In data-flow diagrams, an originator or receiver of the data is usually designated by

- A. a circle
- B. an arrow
- C. a square box
- D. a rectangle

ANS: C. a square box

95. To which phase of SDLC, is file conversion related?

- A. System Implementation
- B. System analysis
- C. System development
- D. System design

ANS: A. System Implementation

96. Which of the following is not considered as a tool at the system design phase?

- A. piechart
- B. data-flow diagram
- C. decision table
- D. systems flowchart

ANS: A. piechart

97. A Decision table

- A. represents the information flow
- B. documents rules, that select one or more actions, based on one or more conditions, from a set of possible conditions.
- C. gets an accurate picture of the system
- D. shows the decision paths

ANS: B. documents rules, that select one or more actions, based on one or more conditions, from a set of possible conditions.

98. Which are the tools not used for System Analysis

- A. System - test data
- B. Decision table
- C. Data Flow Diagram
- D. Flowcharts

ANS: A. System - test data

99. The code used for the validation purpose is known

- A. Self checking code
- B. Sequence code
- C. Alpha numeric code
- D. Group classification code

ANS: A. Self checking code

100. Problem analysis is done during

- A. system design phase
- B. systems analysis phase
- C. before system test
- D. All of the above

ANS: B. systems analysis phase

101. A data dictionary has consolidated list of data contained in

- (i) dataflows (ii) data stores
- (iii) data outputs (iv) processes
- a. (i) and (iii)

- b. (i) and (ii)
- c. (ii) and (iv)
- d. (i) and (iv)

ANS: b (i) and (ii)

102. A data dictionary is useful as

- (i) it is a documentation aid
 - (ii) it assists in designing input forms
 - (iii) it contains all data in an application including temporary data used in processes
 - (iv) it is a good idea in system design
- a. (i) and (ii)
 - b. (i) and (iv)
 - c. (i),(ii) and (iii)
 - d. (i) and (iv)

ANS : c (i),(ii) and (iii)

103. By metadata we mean

- a. very large data
- b. data about data
- c. data dictionary
- d. meaningful data

ANS: b data about data

104. A data dictionary is usually developed

- a. At requirements specification phase
- b. During feasibility analysis
- c. When DFD is developed
- d. When a database is designed

ANS: c) When DFD is developed

105 A data dictionary has information about

- a. every data element in a data flow
- b. only key data element in a data flow
- c. only important data elements in a data flow
- d. only numeric data elements in a data flow

ANS: a

106 A data element in a data dictionary may have

- a. only integer value
- b. no value
- c. only real value
- d. only decimal value

ANS: b

107. A concise code is necessarily

- a. Precise
- b. Meaningful
- c. Comprehensive
- d. Difficult

ANS: a

108. Serial numbers used as codes are

- (i) concise
 - (ii) meaningful
 - (iii) expandable
 - (iv) comprehensive
- a. i and ii
 - b. ii and iii
 - c. ii and iv
 - d. i and iii

ANS: d

109. Block codes are

- (i) concise
 - (ii) meaningful
 - (iii) expandable
 - (iv) comprehensive
- a. i and ii
 - b. ii and iii
 - c. iii and iv
 - d. i and iii

ANS: b

110. Group classification codes are

- (i) concise
 - (ii) meaningful
 - (iii) expandable
 - (iv) comprehensive
- a. i and ii
 - b. i, ii and iii
 - c. ii, iii and iv
 - d. i, ii and iv

ANS: c

111. Significant codes are

- (i) concise
- (ii) meaningful
- (iii) expandable
- (iv) comprehensive

- a. i and ii
- b. i, ii and iii
- c. ii, iii and iv
- d. i, ii and iv

ANS: c

112. In significant codes some or all parts of the code

- a..are meaningful
- b. are usable
- c. are significant
- d. represent values

ANS: d

113. Sequence numbering of records is used to

- (i)Identify each record uniquely
 - (ii)Track a missing record in a batch of records
 - (iii)Count number of records
 - (iv) Sort the records
- a. i, ii
 - b. i, ii, iii
 - c. i, ii, iii, iv
 - d. i and iv

ANS: OPTION C

114. Study involves

- a. study of an existing system
- b. System documenting the existing system.
- c. identifying current deficiencies and establishing new goals
- d. All of the above

ANS:D

115. The primary tool used in structured design is a:

- A. structure chart
- B. structure chart
- C. program flowchart
- D. module

ANS: A

116. How many steps are in the systems development life cycle (SDLC)?

- A. 4
- B. 5
- C. 6
- D. 10

ANS: A

117. The first step in the systems development life cycle (SDLC) is:

- A. Analysis.
- B. Design.
- C. Problem/Opportunity Identification.
- D. Development and Documentation.

ANS: C

118. Most modern software applications enable you to customize and automate various features using small custom-built “miniprograms” called:

- A. macros.
- B. code.
- C. routines.
- D. subroutines.

ANS:A

119. The organized process or set of steps that needs to be followed to develop an information system is known as the:

- A. analytical cycle.
- B. design cycle.
- C. program specification.
- D. system development life cycle.

ANS:D

120. The final step in the System development life cycle (SDLC)?

- A. Analysis
- B. Operational
- C. Development
- D. Design

ANS:B

121. The make-or-buy decision is associated with the _____ step in the SDLC.

- A. Problem/Opportunity Identification
- B. Design
- C. Analysis
- D. Development and Documentation

ANS: B

122. In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

- A. documentation
- B. flowchart
- C. program specification
- D. design

ANS: C

123. Actual programming of software code is done during the _____ step in the SDLC.

- A. Maintenance and Evaluation
- B. Design
- C. Analysis
- D. Development and Documentation

ANS:D

124. Enhancements, upgrades, and bug fixes are done during the _____ step in the SDLC.

- A. Maintenance and Evaluation
- B. Problem/Opportunity Identification
- C. Design
- D. Development and Documentation

ANS:A

125. The _____ determines whether the project should go forward.

- A. feasibility assessment
- B. opportunity identification
- C. system evaluation
- D. program specification

ANS:A

126. Technical writers generally provide the _____ for the new system.

- A. programs
- B. network
- C. analysis
- D. documentation

ANS:D

127. _____ design and implement database structures.

- A. Programmers
- B. Project managers
- C. Technical writers
- D. Database administrators

ANS:D

128. _____ spend most of their time in the beginning stages of the SDLC, talking with end-users, gathering information, documenting systems, and proposing solutions.

- A. Systems analysts
- B. Project managers
- C. Network engineers
- D. Database administrators

ANS:A

129. _____ manage the system development, assign staff, manage the budget and reporting, and ensure that deadlines are met.

- A. Project managers
- B. Network engineers
- C. Graphic designers
- D. Systems analysts

ANS:A

130. _____ is the process of translating a task into a series of commands that a computer will use to perform that task.

- A. Project design
- B. Installation
- C. Systems analysis
- D. Programming

ANS:D

131. Debugging is:

- A. creating program code.
- B. finding and correcting errors in the program code.
- C. identifying the task to be computerized.
- D. creating the algorithm.

ANS:B

132. Translating the problem statement into a series of sequential steps describing what the program must do is known as:

- A. coding.
- B. debugging.
- C. creating the algorithm.
- D. writing documentation.

ANS:C

133. Translating the algorithm into a programming language occurs at the _____ step of the PDLC.

- A. Debugging
- B. Coding
- C. Testing and Documentation
- D. Algorithm Development

ANS:B

134. The problem statement should include all of the following EXCEPT:

- A. input.
- B. output.
- C. processing.
- D. storage.

ANS:D

135. The problem statement includes the _____, which lists specific input numbers a program would typically expect the user to enter and precise output values that a perfect program would return for those input values.

- A. testing plan
- B. error handler
- C. IPO cycle
- D. input-output specification

ANS:A

136. The major goal of requirement determination phase of information system development is

- a) determine whether information is needed by an organization
- b) determine what information is needed by an organization
- c) determine how information needed by an organization can be provided
- d) determine when information is to be given

ANS: b

137. Information requirements of an organization can be determined by

- a) interviewing managers and users and arriving at the requirements based on consensus
- b) finding out what similar organizations do
- c) telling organization what they need based on your experience
- d) sending a questionnaire to all employees of the organization

ANS: a

138. It is necessary to prioritize information requirements of an organization at the requirements determination phase as

- a) it is always good to prioritize
- b) there are conflicting demands from users
- c) there are constraints on budgets, available time, human resource and requirement
- d) all good organization do it

ANS: c

139. Requirement specification is carried out

- a) after requirements are determined
- b) before requirements are determined
- c) simultaneously with requirements determination

d) independent of requirements determination

ANS: a

140. The code is developed with the measurable properties of an item is known

- a) Group classification code
- b) Self checking code
- c) Significant digit code
- d) Numeric code

ANS: c

141. It is necessary to consult the following while drawing up requirement specification

- a) only top managers
- b) only top and middle management
- c) only top, middle and operational managers
- d) top, middle and operational managers and also all who will use the system

ANS: d

142. In order to understand the working of an organization for which a computer based system is being designed, an analyst must

- a) look at only current work and document flow in the organization
- b) discuss with top level and middle level management only
- c) interview top, middle, line managers and also clerks who will enter data and use the system
- d) only clerical and middle level staff who have long experience in the organization and will be users of the system

ANS: c

143. A feasibility study is carried out

- a) after final requirements specifications are drawn up
- b) during the period when requirements specifications are drawn up
- c) before the final requirements specifications are drawn up
- d) at any time

ANS: c

144. The main objective of feasibility study is

- a) to assess whether it is possible to meet the requirements specifications
- b) to assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware
- c) to assist the management in implementing the desired system
- d) to remove bottlenecks in implementing the desired system

ANS: b

145. It is necessary to carry out a feasibility study as

- a) top management can not ensure that a project is feasible before calling a system analyst

- b) top management is not sure what they want from the system
- c) even though top management is in favor of the system, technology may not be mature for implementation
- d) all organizations do it

ANS: c

146. Feasibility study is carried out by

- a) managers of the organization
- b) system analyst in consultation with managers of the organization
- c) users of the proposed system
- d) systems designers in consultation with the prospective users of the system

ANS: b

147. Initial requirements specification is

- a) not changed till the end of the project
- b) continuously changed during project implementation
- c) only a rough indication of the requirement
- d) changed and finalized after feasibility study

ANS: c

148. Final specifications are drawn up by

- a) system analyst in consultation with the management of the organization
- b) the managers of user organization
- c) system analyst in consultation with programmers
- d) system designers along with users

ANS: a

149. The main goal of arriving at a final specification is

- a) to tell the organization's managers how the system will function
- b) to tell the organization's managers what the proposed system will achieve in a language understood by them
- c) to compute the cost of implementing the system
- d) to assist in designing the system

ANS: b

150. The final specifications are arrived at

- a) after feasibility study
- b) during feasibility study
- c) just before implementation phase
- d) when the system is being designed

ANS: a

151. System approval criteria are specified

- a) when the final specifications are drawn up

- b) during feasibility study
- c) during the requirements specifications stage
- d) during system study stage

ANS: a

152. System test plan is specified

- a) when the final specifications are drawn up
- b) during feasibility study
- c) during the requirements specifications stage
- d) during system study stage

ANS: a

153. Hardware study is required

- a) to find out cost of computer system needed
- b) to determine the type of computer system and software tools needed to meet the final system specification
- c) to make sure that the system does not become obsolete
- d) to find how to implement the system

ANS: b

154. Hardware study is carried out

- a) after the final system is specified
- b) at the requirements specification stage
- c) before the requirements are specified
- d) whenever management decides it is necessary

ANS: a

155. System design is carried out

- a) as soon as system requirements are determined
- b) whenever a system analyst feels it is urgent
- c) after final system specifications are approved by the organization
- d) whenever the user management feels it should be done

ANS: c

156. The primary objective of system design is to

- a) design the programs, databases and test plan
- b) design only user interfaces
- c) implement the system
- d) find out how the system will perform

ANS: a

157. The primary objective of system implementation is

- i) to build a system prototype
- ii) to train users to operate the system

- iii) to implement designed system using computers
 - iv) write programs, create databases and test with live data
- i, iii b) i, ii, iii c) ii ,iii d) ii, iv

ANS: d

158. During system implementation the following are done

- i) programs are written and tested with operational data
 - ii) user documentation is created and users trained
 - iii) programmers are recruited and trained
 - iv) the system is tested with operational data
- i and iii b) ii and iii c) ii and iv d) i, ii & iv

ANS: d

159. System evaluation is carried out

- a) after the system has been operational for a reasonable time
- b) during system implementation
- c) whenever managers of user organization want it
- d) whenever operational staff want it

ANS: a

160. The main objective of system evaluation is

- a) to see whether the system met specification
- b) to improve the system based on operational experience for a period
- c) to remove bugs in the programs
- d) to asses the efficiency of the system

ANS: b

161. Systems are modified whenever

- a) user's requirements change
- b) new computers are introduced in the market
- c) new software tools become available in the market
- d) other similar organization modify these system

ANS: a

162. The main objective of system modification is

- a) to use the latest software tools
- b) to meet the user's new/changed needs
- c) to use the latest hardware
- d) to have the most modern system

ANS: b

163. To easily modify the existing system it is necessary to

- a) use good software tools
- b) use the best hardware available c) design the system which can be changed at low cost

d) keep the programming team happy

ANS: c

164 .It is necessary to design an information system to easily accommodate change, because

- a) new computers are introduced every year
- b) new computer languages become popular every year
- c) organizations' requirements change over a period of time
- d) systems need continuous debugging

ANS: c

165. Changing an operational information system is

- a) impossible
- b) expensive and done selectively
- c) never required
- d) usually done

ANS: b

166. System analysts have to interact with

- i) managers of organizations
- ii) users in the organization
- iii) programming team
- iv) data entry operator
- iii and iv b) i, ii and iii c) ii, iii and iv d) ii and iii

ANS: b

167. The primary responsibility of a systems analyst is to

- a) specify an information system which meets the requirements of an organization
- b) write programs to meet specifications
- c) maintain the system
- d) meet managers of the organization regularly

ANS: a

168. The responsibilities of a system analyst include

- i) defining and prioritizing information requirement of an organization
- ii) gathering data, facts and opinions of users in an organization
- iii) drawing up specifications of the system for an organization
- iv) designing and evaluating the system
- a) i and ii b) i, ii and iv c) i, ii, iii and iv d) i, ii and iii

ANS: d

169. The most important attribute of a systems analyst is

- a) excellent programming skills
- b) very good hardware designing skills

- c) very good technical management skills
- d) very good writing skills

ANS: c

170 Among the attributes of a good systems analyst the following are essential

- i) knowledge of organization
 - ii) analytical mind
 - iii) ability to communicate orally
 - iv) excellent mathematical abilities
- a) i and ii b) i, ii and iii c) i, ii and iv d) i, iii and iv

ANS: b

171. Among the attributes of a systems analyst the following are most important

- i) knowledge of computer systems and currently available hardware
 - ii) good interpersonal relations
 - iii) broad knowledge about various organizations
 - iv) very good accountancy knowledge
- i, iii and iv b) i and iii c) i, ii and iv d) i, ii and iii

ANS: d

172. Managers in organizations should not design their own systems as

- a) systems have to interact with other systems
- b) they do not have the special skills necessary to design systems
- c) it is not their job
- d) they are always very busy

ANS: b

173. Systems analyst should use software tools in their work as

- a) all analysts use them
- b) they assist in systematic design of systems
- c) they are inexpensive
- d) they are easily available

ANS: b

174. Structured charts are a product of

- (A) requirements gathering
- (B) requirements analysis
- (C) design
- (D) coding

Ans: C

175. includes review of the existing procedures and information flow.

- A) Feasibility Study
- B) Feasibility report

- C) System Design
- D) System analysis

ANS: A) Feasibility Study

176. Organization chart is a type of

- A) basic chart
- B) IPO chart
- C) Hierarchical chart
- D) step chart

ANS: C) Hierarchical chart

177. refers to the collection of information pertinent to systems Project.

- A) Data transfer
- B) Data gathering
- C) Data Embedding
- D) Data Request

ANS: B) Data gathering

178. means coordinated effort, to communicate the information of the system written form.

- A) System documentation
- B) Resource required
- C) Development schedule
- D) User Document

ANS: A) System documentation

179. It specifies the structure of an organization

- A) Organization chart
- B) DFD
- C) Flowchart
- D) IPO chart

ANS: A) Organization chart

180. External Entities may be a

- A) Source of input data only
- B) Source of input data or destination of results
- C) Destination of results only
- D) Repository of data

ANS: B) Source of destination of results

181. is a group of interested components working together towards a common goal by accepting inputs and producing outputs in an organized transformation process.

- A) System

- B) Network
- C) Team
- D) System Unit

ANS: A) System

182. To create vehicle of information to provide evidence in the development process and to

monitor the process. This is one of the objectives of

- A) Analysis
- B) Design
- C) Development
- D) Documentation

ANS: D) Documentation

183. A System is no more than idea

- A) Conceptual
- B) Logical
- C) Physical
- D) All of the above

ANS: A) Conceptual

184. By an external entity we mean a

- A) Unit outside the system being designed which can be controlled by an analyst.
- B) Unit outside the system whose behavior is independent of the system being designed
- C) A unit external to the system being designed
- D) A unit which is not part of a DFD

ANS: C) A unit external being designed

185. Error report is an example of

- A) Ouput process
- B) Input process
- C) Process
- D) None of these

ANS: : A) Ouput process

186. Data store in a DFD represents.

- A) a sequential file
- B) a disk store
- C) a repository of data
- D) a random access memory

ANS: C) a repository of data

187. system consists of programs, data files and documentation

- A) Conceptual

- B) Logical
- C) Physical
- D) None of the above

ANS: C) Physical

188. is a good example of deterministic system.

- A) Life cycle
- B) Computer Program
- C) Software Program
- D) None of the above

ANS: B) Computer Program

189. The main ingredient of the report documenting the is the cost benefit analysis.

- A) System Analysis
- B) Feasibility Study
- C) System Analyst
- D) System Design

ANS: B) Feasibility Study

190. A data flow can

- A) Only a data store
- B) Only leave a data store
- C) Enter or leave a data Store
- D) Either enter or leave a data store but not both

ANS: C) Enter or leave a data Store

191. Changing the relationship with and services provided to customers in such a way that they will not think of changing suppliers is called

- A) Lock in customers
- B) Lock out customers
- C) Lock in competitors
- D) Lock out competitors

ANS: A) Lock in customers

192. can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or prospective decisions.

- A) Information
- B) Data collection
- C) Internal data
- D) Sample data

ANS: A) Information

193. Increased volume of sales is an example of Benefit. Reduction of bad debts is an example of

- A) Tangible, Intangible
- B) Tangible, Tangible
- C) Intangible, Tangible
- D) Intangible, Intangible

ANS: D) Intangible, Intangible

194. A data cannot flow between a store and

i) a store ii) a process iii) an external entity

- A) i and iii
- B) i and ii
- C) ii and iii
- D) ii

ANS: A) i and iii

195. In ISR which field indicates the purpose of job

- A) Objective
- B) Anticipated benefits
- C) Output description
- D) None of these

ANS) A) Objective

196. After Development phase, a document is prepared

- A) Program specification
- B) Design specification
- C) System specification
- D) None of these

ANS) C) System specification

197. In DFD which symbol represents the process

- A) Circle
- B) Rectangle
- C) Square
- D) Open ended rectangle

ANS) A) Circle

198. The document prepared after study phase is known as

- A) Performance specification
- B) Design specification
- C) System specification
- D) None of these

ANS) A) Performance specification

199. In which activity the management approve the requirements of the customer

- A) Study phase report
- B) Study phase review
- C) Feasibility study
- D) None of these

ANS) B) Study phase review

200. In study phase activities, which activity filled the ISR by user

- A) User review
- B) User need
- C) Initial investigation
- D) System review

ANS) B) User need

1. Why does architectural design occurs during product design?

- a) Stakeholders must be convinced that their needs will be met, which may be difficult without demonstrating how the engineers plan to build the product
- b) Product designers must judge the feasibility of their designs
- c) Project planners must have some idea about what software must be built to create schedules and allocate resources
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned factors are reason for the occurrence of architectural design during product design.

2. What kind of investments does organization have in order to make most of by the software architects in their design?

- a) Libraries
- b) Standards and guidelines
- c) Software tools
- d) All of the mentioned

Answer: d

Explanation: Organizations investment such as libraries, standards and guidelines, software tools, and people with particular skills that software architects are expected to make the most of during its design.

3. Which of the following is true?

- a) The input of architectural design process is SAD
- b) The output of architectural design process is SRS
- c) The input of architectural design process is SRS

- d) None of the mentioned

Answer: c

Explanation: The input of architectural design process is SRS and its output is SAD.

- 4. Which of these steps are followed in architectural design process?

- a) Analyze SRS
- b) Evaluate Candidate Architectures
- c) Select architecture and finalize architecture
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned steps are followed in architectural design process.

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- 5. Which of these are the content for SAD?

- a) Product Overview
- b) Architectural Models
- c) Architectural design rationale
- d) All of the mentioned

Answer: d

Explanation: Contents of SRS includes product overview, architectural models, architectural design rationale, mapping between models.

- 6. Which of these are included in the product overview for SAD?

- a) product vision, assumptions, constraints
- b) product scope
- c) target markets, business requirements
- d) product vision, assumptions, constraints, target markets & business requirements

Answer: d

Explanation: Product overview includes product vision, assumptions, constraints, target markets and business requirements.

- 7. Which amount the following is correct?

- a) Architectural models explains the main design decisions made in arriving the architecture
- b) Architectural design rationale presents architecture, using variety of models to represent different aspects or views
- c) Mapping between models says sometimes it is difficult to connect different architectural models
- d) All of the mentioned

Answer: c

Explanation: The incorrect statements are architectural modes presents architecture, using variety of models to represent different aspects or views and Architectural design rationale explains the main design decisions made in arriving the architecture.

- 8. What are the categories in which quality attributes are divided in?

- a) Development Attributes
- b) Operational Attributes
- c) Functional Attributes

d) Development & Operational Attributes

Answer: d

Explanation: Quality attributes are divided into two major categories development and operational attributes.

9. Which of these comes under development attribute?

- a) Maintainability
- b) Reusability
- c) Performance
- d) Maintainability & Reusability

Answer: d

Explanation: Maintainability, Reusability comes under Development attributes.

10. Which of these comes under operational attributes?

- a) Performance
- b) Availability
- c) Reliability
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned comes under operational attributes.

1. Which among these are the notations which are used to represent software architecture?

- a) UML activity diagram
- b) UML use case diagram
- c) UML class diagram, Interaction diagram
- d) All of the mentioned

Answer: d

Explanation: All of these are the notations which are used to represent software architectures.

2. Which of these notations are followed under type of specification as decomposition?

- a) Box and line diagrams
- b) State diagrams
- c) Sequence and communication Diagrams
- d) All of the mentioned

Answer: a

Explanation: Under the type Decomposition notations used are Box and line diagram, Class diagram, Package Diagram, Component diagram.

3. Which of the following are true?

- a) A unit's responsibilities are usually indicated by various connections and by the respective names
- b) A unit's relationships are usually indicated in part by its name and in part by the symbols used to represent it in various diagrams
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: A units responsibilities are indicated in part by its name and in part by the symbols used to represent it in various diagrams whereas a units relationship is indicated by various connections and by the respective names.

4. Interface specification as descriptions of communication includes which of the following?

- a) Syntax
- b) Semantics
- c) Pragmatics
- d) All of the mentioned

Answer: d

Explanation: Interface specification as descriptions of communication includes syntax, semantics, pragmatics.

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5. Which of the following is false about interface specifications?

- a) The syntax of communication specifies the elements of medium and the ways they may be combined to form legitimate messages
- b) The semantics of a communication medium specify the meaning of messages
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: All the mentioned statements are true and so no false statements can be extracted.

6. Which of the following is true?

- a) A precondition is an assertion must be true at the completion of an activity
- b) A post condition is an assertion must be true at the initiation of an activity
- c) An interface specification should cover syntax, semantics, pragmatics of communication between module and its environment
- d) All of the mentioned

Answer: c

Explanation: The correct statement of the incorrect ones are A precondition is an assertion must be true at the initiation of an activity whereas a post condition is an assertion must be true at the completion of an activity.

7. What is true about scenarios?

- a) Scenarios was defined as specific interaction between product and particular individuals that instantiates a use case
- b) Scenarios for quality attributes are specific interaction between a program and entity, including developers and maintainers
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: All the mentioned statements are true in context to scenarios.

8. What does box and line diagram signify?

- a) The boxes in the diagram refer to the interaction relationship between components
- b) The line in the diagram refer to the software or data store components

- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: All the mentioned are false correct one are, The boxes diagram refer to the software or data store components and The line in the diagram refer to the interaction relationship between components.

9. Which of these signifies the heuristics of Architectural specifications?

- a) Write good technical prose when specifying architectures
- b) Use a template to specify interface
- c) Keep boxes and line simple
- d) Use a template to specify interface & Write good technical prose when specifying architectures

Answer: d

Explanation: Keep boxes and line simple are the heuristic for box and line diagram and not for architectural specification

10. Which of these signifies the heuristics of Box and Line diagram?

- a) Make the box and lines simple
- b) Use symbol consistently in different diagram
- c) Use a template to specify interface
- d) Make the box and lines simple & Use symbol consistently in different diagram

Answer: d

Explanation: Use a template to specify interface is a heuristic for architectural specification.

1. Which among the following are not the valid notations for package and component diagram?

- a) Notes
- b) Box
- c) Extension Mechanisms
- d) Packages

Answer: b

Explanation: Boxes are the notations for box and line diagram.

2. Which of the following statement is false?

- a) A note is a dog-eared box connected to any model element by a dashed line
- b) The main way to extend UML is by constraints, properties, etc
- c) A dependency relation holds between two entities D and I where change in I does not affect D
- d) All of the mentioned

Answer: c

Explanation: A dependency relation holds between two entities D and I where change in I affects D.

3. Which of these depicts the true definition for the UML extensions?
- a) A constraint is a statement that must be true of the entities designated by one or more model elements
 - b) A property is a characteristic of the entity designated by a model element
 - c) A stereotype is a UML model element given more specific meaning
 - d) All of the mentioned

Answer: d

Explanation: All the mentioned statements are true definitions.

4. Which of the following is incorrect in reference to dependency?
- a) Module D uses module I when a correct version of I must be present for D to work correctly
 - b) Module D depends for compilation on module I
 - c) Class I imports elements from package D
 - d) None of the mentioned

Answer: c

Explanation: Class D imports elements from package I.

5. What is a collection of model elements called?
- a) Box
 - b) Dependency
 - c) UML packages
 - d) Package members

Answer: d

Explanation: UML Package is a collection of model elements called package members.

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6. A package diagram consists of the following?
- a) Package symbols
 - b) Groupings of Use cases, classes, components
 - c) Interface
 - d) Package symbols, Groupings of Use cases, classes & components

Answer: d

Explanation: A package diagram consists of package symbols, groupings of use cases, classes, components, etc.

7. What types of units does Component follow?
- a) Modular Unit
 - b) Replaceable Unit
 - c) Unit with well defined interface
 - d) All of the mentioned

Answer: d

Explanation: A component consists of modular, replaceable unit with well defined interface.

8. Components can be represented by which of the following?
- a) Component symbols
 - b) Stereotypes
 - c) Rectangular boxes

d) Component symbols & Stereotypes

Answer: d

Explanation: Components can be expressed by Symbols and stereotypes.

9. What does a component diagram consists of?

- a) Components, their Relationship to the environment
- b) Packages and dependency
- c) Internal structure
- d) Internal structure, Components & their Relationship to the environment

Answer: d

Explanation: Component diagram consists of components, relationship to the environment and their internal structure.

10. Which of these is true with respect to interfaces?

- a) Interfaces in component diagram defines relationship between components and environment
- b) Interfaces realized by a class or a component are required interfaces
- c) Interface on which a class or component depends are called provided interfaces
- d) All of the mentioned

Answer: a

Explanation: Interfaces realized by a class or a component are provided interfaces whereas Interfaces on which a class or component depends are called required interfaces.

11. What is a delegation connector?

- a) A delegation connector ties a component interface to one or more internal classes or components
- b) Delegation connectors are solid arrows stereotyped <>
- c) A delegation connector may also extend from an internal class to an external interface
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned options represents delegation connector and are true.

12. Which of these are diagrammatic heuristics?

- a) Use notes, constraints, properties and stereotypes to add information to UML models
- b) Use Stereotypes to name dependencies
- c) Use packages to group elements in static models
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned are the respective heuristics to be followed for the UML models diagram.

1. Which of the following statement is true?

- a) A logical architecture is the realization of product as code and data files residing and executing on computational resource
- b) A physical architecture is the configuration of product's major constituents
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: A physical architecture is the realization of product as code and data files residing and executing on computational resource whereas, A logical architecture is the configuration of product's major constituents

2. Which among these are the common notations for deployment diagrams?

- a) Artifacts and nodes
- b) Stereotypes
- c) Components
- d) All of the mentioned

Answer: a

Explanation: Artifacts and nodes are the common factors used for the deployment diagram.

3. Which of the following statement is true?

- a) A UML artifact is any physical representation of data used or produced during software development or software product operation
- b) A node is a computational resource
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: All of the mentioned options are true definitions of the notations.

4. Which of these are types of nodes used in the deployment diagram?

- a) Device
- b) Execution Environment
- c) Artifact
- d) Device & Execution Environment

Answer: d

Explanation: The two types of nodes are the Device and execution environment.

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5. Which are the ways to represent nodes in a deployment diagram?

- a) Nodes instances are underlined identifiers of the form name:type
- b) The name may be left off, indicating an unnamed instance of the type
- c) The type may be left off, indicating a named instance with an unspecified type
- d) All of the mentioned

Answer: d

Explanation: All of the above are the ways in which a node can be represented in a deployment diagram.

6. What does a deployment diagram consists of?

- a) Computational resource
- b) Communication path between resource
- c) Artifacts that execute resource
- d) All of the mentioned

Answer: d

Explanation: A deployment diagram consists of all the mentioned options.

7. Which of the following is incorrect in the deployment diagram?
- a) Communication connections between nodes are shown by communication paths
 - b) Communication paths are represented by dotted lines
 - c) Artifacts are deployed inside nodes where they reside and execute
 - d) None of the mentioned

Answer: b

Explanation: Communication paths are represented by solid lines and not dotted lines.

8. Which of these is correct?
- a) Artifacts instances and types have same names
 - b) Artifact names and instances are underlines
 - c) All of the mentioned
 - d) None of the mentioned

Answer: a

Explanation: Artifacts names are underlined but instances are not.

9. What is true about the artifacts?
- a) An Artifact is a physical entity
 - b) An artifact has spatio temporal location
 - c) All of the mentioned
 - d) None of the mentioned

Answer: c

Explanation: All of the mentioned options

10. What are the ways in which artifacts can be deployed?
- a) Artifact symbol can be placed within node symbol
 - b) The artifact symbol can appear outside the node but be attached to it by dependency arrow from the artifact
 - c) Artifact name can be listed inside the node symbol
 - d) All of the mentioned

Answer: d

Explanation: All of the above are the ways in which an artifact can be deployed.

1. Which of these are the various techniques to generate design alternatives?
- a) Determine Functional Component
 - b) Determine Component based quality attribute
 - c) Modify an existing architecture
 - d) All of the mentioned

Answer: d

Explanation: All of the mentioned options are the various techniques to generate design alternatives.

2. Which of the following truly describes the approach determining functional component?
- a) This approach is based on studying the SRS and brainstorming candidate architectural constituents responsible for coherent collections of functional and data requirements
 - b) This approach begins by forming constituent and constituent relationship to satisfy

non functional requirements

- c) This approach is used for similar program if architecture is available, it can be used as starting point
- d) This approach describes the problem

Answer: a

Explanation: Determining functional component-This approach is based on studying the SRS and brainstorming candidate architectural constituents responsible for coherent collections of functional and data requirements.

3. Functional components for a working models can be stated as which of the following?

- a) Configuring Process Start up
- b) Providing User interface
- c) Allowing user to monitor and repair the system
- d) All of the mentioned

Answer: d

Explanation: Functional components for a working model can be stated as all of the mentioned options.

4. The Nonfunctional components consist of _____

- a) Re usability
- b) Adaptability
- c) Reliability
- d) All of the mentioned

Answer: d

Explanation: Non functional components consists of all of the above steps.

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5. Which of the following statement is true?

- a) Device interface module is a software simulation of, or interface to, a real hardware device or system
- b) A virtual device is a way to design a program with complex interfaces to device or other systems
- c) The program units in the device interface module hides all details of interaction with hardware devices
- d) None of the mentioned

Answer: c

Explanation: Device interface module is a way to design a program with complex interfaces to device or other systems and A virtual device is a software simulation of, or interface to, a real hardware device or system.

6. Which of these are followed for an ideal device?

- a) Do exactly one job completely
- b) Be loosely coupled to the rest of the program
- c) Never change interface
- d) All of the mentioned

Answer: d

Explanation: For an ideal device Never change its interface.

7. Which among these best represents Coupling for an ideal device?
- a) Do exactly one job completely
 - b) Be loosely coupled to the rest of the program
 - c) Hide its Implementation
 - d) Never change its interface

Answer: b

Explanation: Be loosely coupled to the rest of the program represents Coupling for an ideal device.

8. Which among these best represents simplicity for an ideal device?
- a) Do exactly one job completely
 - b) Be loosely coupled to the rest of the program
 - c) Have a simple and consistent interface meeting the needs of the rest of the program
 - d) Never change its interface

Answer: c

Explanation: Have a simple and consistent interface meeting the needs of the rest of the program represents simplicity for an ideal device.

9. Which among these are the methods to improve software architecture?
- a) Combine Alternatives
 - b) Impose an architectural style
 - c) Apply a mid-level design pattern
 - d) All of the mentioned

Answer: d

Explanation: Methods to improve software architecture includes all of the mentioned.

10. Which among these signifies Applying mid-level design pattern?
- a) The best features of two or more design alternatives can be combined into an improved design
 - b) The approximate particular style may be improved by modifying them to fit the style exactly
 - c) The architectural styles applied at low level of abstraction
 - d) None of the mentioned

Answer: c

Explanation: Applying mid-level design pattern signifies the architectural styles applied at low level of abstraction.

1. Which of the following is associated with scenario?
- a) Product
 - b) Particular individual
 - c) Use case Instances
 - d) All of the mentioned

Answer: d

Explanation: Scenario is the interaction between product, particular individuals and use case instances.

2. What is the heuristic for scenario description?
- a) Label each scenario with descriptive phase

- b) Write simple declarative sentences that may or may not be in active form
- c) Make a principle in the interaction in the subject of each sentence describing the activity flow
- d) All of the mentioned

Answer: d

Explanation: Write simple declarative sentence in active form is the correct heuristic for scenario description.

- 3. Which are the ways in which scenarios can be described?
- a) Scenario begin when product and environment are in initial state
- b) Consists of activity flow involving product and some individuals
- c) Conclude with product and some individuals in a final state
- d) All of the mentioned

Answer: d

Explanation: Scenarios are described in three formats which are mentioned above.

- 4. Software architectures can be evaluated using which of these?
- a) Scenarios
- b) Prototyping
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Software architecture can be evaluated using scenarios and prototypes.

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- 5. What is a profile?
- a) A profile is a set of scenarios
- b) A profile is used to evaluate whether a product is likely to meet its requirement
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: A profile is a set of scenarios that are used to evaluate whether a product is likely to meet its requirements.

- 6. Which of the following is true about utility tree?
- a) A tree whose sub trees are scenarios
- b) A tree whose leaves are profiles
- c) A tree whose root is constructed with label utility
- d) All of the mentioned

Answer: c

Explanation: A utility tree is a tree whose sub trees are profiles and leaves scenarios and whose root is label with utility.

- 7. Which of these includes the methods to fill scenario below each profile name?
- a) Brain storm scenario for the profile, recording each suggestion using brief descriptive phrase
- b) Rationalize the list, Combining similar scenarios
- c) Weight each scenario according to its importance

d) All of the mentioned

Answer: d

Explanation: All of the mentioned steps are followed to include scenario below profile name.

8. How are Architectural alternatives evaluated using Scenarios?

- a) Walking through
- b) Utility tree
- c) Requirement database
- d) None of the mentioned

Answer: a

Explanation: Architectural alternatives evaluated with scenarios using utility tree.

9. What principles does prototype and scenario aim at addressing?

- a) Principle of Feasibility, Economy
- b) Principle of Adequacy, Changeability
- c) Principle of Adaptability, Reliability
- d) Principle of Feasibility, Economy, adequacy, changeability

Answer: d

Explanation: Prototype and Scenario aims at addressing principles of feasibility, economy, adequacy, changeability.

10. Which are the main selecting techniques for architectural alternatives?

- a) Pros and Cons
- b) Multidimensional Ranking
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: There are two main techniques for selecting architectural alternatives as mentioned.

1. What are the characteristics does a good SAD consist of?

- a) Consistency, Feasibility, Adequacy
- b) Completeness, Well-formedness
- c) Reliability, Usability
- d) Consistency, Feasibility, Adequacy, Completeness, Well-formedness

Answer: d

Explanation: A good SAD consists of Feasibility, Adequacy, Clarity, Completeness, Consistency, well-formedness.

2. Which of these has to be followed for a design to be feasible?

- a) The software architects must investigate their design thoroughly to ensure that it can be implemented
- b) The software architecture must specifies a program that, when built, can meet its requirements subject to constraints
- c) The software architecture notations should be used properly
- d) All of the mentioned

Answer: a

Explanation: For a Design to be feasible the software architects must investigate their design thoroughly to ensure that it can be implemented.

3. Which of these has to be followed for a design to be consistent?

- a) The software architecture must specifies a program that, when built, can meet its requirements subject to constraints
- b) The software architecture notations should be used properly
- c) A single program that can satisfy them all
- d) All of the mentioned

Answer: c

Explanation: A design is consistent if a single program that can satisfy all.

4. What is a Review?

- a) It is an examination of a work product by qualified individuals
- b) It is an evaluation of a work process by qualified teams
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: A review is an examination and evaluation of a work product or process by qualified individuals or teams.

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5. Which of these are subcategories for a review?

- a) Desk Check
- b) Walk Through
- c) Audit
- d) All of the mentioned

Answer: d

Explanation: A review is further classified as Desk-check, Walk-through, Audit and Active review.

6. What is an Active review?

- a) It is a review conducted by experts who are not members of the design team
- b) It is an informal presentation to a team of reviewers
- c) It is an examination by experts who answer questions about specific aspects of the design
- d) It is an assessment of a design by the designer

Answer: c

Explanation: An active review is an examination by experts who answer questions about specific aspects of the design.

7. Which of the options are true for an Active review?

- a) Active design reviews were developed to remedy problems with traditional reviews
- b) The review preparation phase begins with the activity Identify Review Goals, during which the designers choose a specific aspect of the software architecture that they would like to have reviewed
- c) Active review is an examination by experts who answer questions about specific aspects of the design

- d) All of the mentioned

Answer: d

Explanation: Active review follows all the above mentioned statements.

- 8. What are the different stages included in Active design review?

- a) Identify review goals
- b) Choose Reviewers
- c) Study Reviews
- d) All of the mentioned

Answer: d

Explanation: The Active design review follows all the mentioned steps.

- 9. What are the different activities for an active review process?

- a) Review Preparation
- b) Review Performance
- c) Review Completion
- d) All of the mentioned

Answer: d

Explanation: The different activities for an active review process includes all of the above mentioned.

- 10. Which of the following are true with reference to active review?

- a) The review performance phase begins when the designers and reviewers Hold an Overview Meeting
- b) The designers Study Reviews during the review completion phase
- c) Reviews can and should be used during the entire architectural design process to help catch defects as soon as possible
- d) All of the mentioned

Answer: d

Explanation: All the statements are true with reference to Active reviews.

- 1. Detailed design is further classified into which of the following?

- a) Mid-Level Design
- b) Low-Level Design
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Detailed design is further classified as mid level and low level design.

- 2. Mid-level design is the activity of specifying software at the level of medium-sized components such as?

- a) Compilation units or classes
- b) Their Properties, Relationship
- c) Interaction of units
- d) All of the mentioned

Answer: d

Explanation: Mid-level design is the activity of specifying software at the level of

medium-sized components such as Compilation units or classes, their Properties, Relationship and Interaction of units.

3. Which of the following statement is correct?

- a) Low-level design is the activity of filling in small details at the lowest levels of abstraction
- b) Low-level design uses DeSCRIPTOR specification
- c) Mid-level design uses DeSCRIPTOR-PAID specification
- d) All of the mentioned

Answer: d

Explanation: Low level design uses DeSCRIPTOR-PAID whereas Mid level design uses DeSCRIPTOR alone.

4. Which of the following is carried out for the detailed design process?

- a) Both SRS and SAD are taken as input for the detailed design stage
- b) Design alternatives are evaluated first and then Design is finalized
- c) Detailed design is the output for the process
- d) All of the mentioned

Answer: d

Explanation: Design alternatives are evaluated first and then design is finalized.

5. A design document is a complete engineering design specification composed of?

- a) Software Architecture Document(SAD)
- b) Detailed Design Document(DDD)
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: A design document is a complete engineering design specification composed of Software Architecture Document(SAD) and Detailed Design Document(DDD).

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6. Which of the following statements are true?

- a) The SAD specifies a program's software architecture
- b) DDD specifies a program's detailed design
- c) There is no standard template for DDD
- d) All of the mentioned

Answer: d

Explanation: There is no standard template for DDD.

7. Which of the following consists of the DDD template?

- a) Mid level Design and Low level Design
- b) Mapping between models
- c) Detailed Design Rationale
- d) All of the mentioned

Answer: d

Explanation: The DDD template consists of which of the following Mid level Design and Low level Design, Mapping between models, Detailed Design Rationale.

8. Which of these statements states Generalization connector?
- a) A generalization connector is more like a link line between objects than an association line between classes
 - b) The generalization connector always indicates that two particular classes participate in the generalization relation, as a link line shows that two objects participate in a particular relation
 - c) Never place a name, role names, or multiplicities on a generalization connector
 - d) All of the mentioned

Answer: d

Explanation: All of the mentioned statements about generation connector are true.

9. Which of the following is correct?
- a) A concrete operation is an operation without a body, which cannot be called
 - b) An abstract operation has a body, which can be called
 - c) A concrete class is a class that cannot be instantiated
 - d) None of the mentioned

Answer: d

Explanation: All the statements are incorrect, An abstract operation is an operation without a body, which cannot be called whereas A concrete operation has a body, which can be called and An abstract class is a class that cannot be instantiated.

10. A provided interface can be shown in which of these ways?
- a) To attach the stick of an interface lollipop symbol to a class or component
 - b) To connect a stereotyped class symbol representing the interface to the providing class or component using a special realization connector
 - c) All of the mentioned
 - d) None of the mentioned

Answer: c

Explanation: Provided Interface can be matched for both of the ways.

11. A required interface can be shown in which of the following ways?
- a) To attach the stick of an interface socket symbol to a class or component
 - b) To connect the class or component requiring the interface to an interface ball with a dependency arrow
 - c) To connect the class or component to a stereotyped class symbol with a dependency arrow
 - d) All of the mentioned

Answer: d

Explanation: A required interface can be shown in all the three ways mentioned.

12. 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 of the mentioned

Answer: d

Explanation: UML provides which of these levels of visibility that can be applied to attributes and operations Public, Package, Protected and Private.

13. Which of the following is correct?

- a) An attribute is a class variable when each object stores its own value for the attribute
- b) An attribute can also be an instance variable, which means that there is only one value stored for the attribute that is shared by all class instances
- c) An instance operation can be called using any object
- d) A class operation is encapsulated in a class and can be called through the class

Answer: d

Explanation: An attribute is an instance variable when each object stores its own value for the attribute whereas an attribute can also be a class variable, which means that there is only one value stored for the attribute that is shared by all class instances and An instance operation can be called only by using instance.

14. Which of the following is true?

- a) The aggregation association represents the part-whole relation between the instances of the associated classes
- b) In a composition association, each part can be related to only a single whole at one time
- c) An association class represents a relation on the sets of instances of the classes it connects, and it also holds data and behavior pertinent to the relation
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned statements are true.

15. Which of the following are the heuristics for the class diagram?

- a) Never place a name, role names, or multiplicities on a generalization connector
- b) Use the interface ball and socket symbols to abstract interface details and a stereotyped class symbol to show details
- c) Don't italicize interface or operation names
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned are the statements for heuristics of class diagram.

1. Mid level generation design techniques are classified into which of the following?

- a) Creational Techniques
- b) Transitional Techniques
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Mid level generation design techniques are classified as creational, transitional techniques.

2. Which of the following can be considered true?

- a) Make a mid-level design model from scratch is for transformational technique
- b) Change another model into a mid-level design mode is for Creational technique
- c) All of the mentioned
- d) None of the mentioned

Answer: d

Explanation: Make a mid-level design model from scratch is for Creational technique and Change another model into a mid-level design mode is for Transformational technique.

3. What does Design Theme means in general?

- a) Important problem
- b) Concern and Issues
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Design Theme means in general Important problem, Concern and issues related to the problem.

4. 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 of the mentioned

Answer: d

Explanation: Designers look for candidate classes to model entities in charge of or involved in program tasks, things in the world that interact directly with the program, structures and collections of objects.

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5. After generating candidate classes, designers evaluate them and choose the best ones to include in the model using the which of the following heuristics?

- a) Discard candidates with vague names or murky responsibilities
- b) Discard candidates that do something out of scope
- c) Apply design patterns where appropriate
- d) All of the mentioned

Answer: d

Explanation: The following heuristics are involved Discard candidates with vague names or murky responsibilities, Discard candidates that do something out of scope.

6. The next step is to evaluate the class diagram to check that all candidate classes are present and that the diagram reflects their descriptions, Designers apply which of the following heuristics to this activity?

- a) Check each class for important but overlooked attributes, operations, or associations
- b) Discard candidates that do something out of scope
- c) Apply design patterns were not appropriate
- d) All of the mentioned

Answer: d

Explanation: Designers apply the following heuristics to this activity Check each class for important but overlooked attributes, operations, or associations and Apply design patterns where appropriate.

7. 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 of the mentioned

Answer: d

Explanation: All of the following is referred for the conceptual modelling.

- 8. Which of these are class diagram generation heuristics?

- a) Add classes for data types
- b) Convert or add container classes
- c) Convert or add engineering design relationships
- d) All of the mentioned

Answer: d

Explanation: All of the mentioned steps are the heuristics for class diagram generation.

- 9. Which of these steps are followed for Generating Classes from Themes?

- a) Look for entities in charge of program tasks
- b) Rework candidate classes with overlapping responsibilities to divide their responsibilities cleanly
- c) Look for things about which the program stores data
- d) Look for entities in charge of program tasks, Look for things about which the program stores data

Answer: d

Explanation: Generating Classes from Themes follows -Look for entities in charge of program tasks, Look for things about which the program stores data.

- 10. Which of the following is followed for Evaluating and Selecting Candidate Classes?

- a) Discard classes with vague names or murky responsibilities
- b) Discard classes will not do something out of scope
- c) Look for actors
- d) All of the mentioned

Answer: a

Explanation: Evaluating and Selecting Candidate Classes follows- Discard classes with vague names or murky responsibilities, Discard classes that do something out of scope.

- 1. What are the types of responsibilities that occur in software engineering design?

- a) An Obligation to do something that is to carry out some tasks(operational)
- b) An Obligation to know something that is to maintain some data(data)
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: There are two types of responsibilities that occur in software engineering design operational responsibility and data responsibility.

- 2. Which of the following are true for decomposition?

- a) Responsibility driven decomposition is a technique for program decomposition in which component responsibilities are decomposed and used to generate sub-components
- b) The decomposed responsibilities are assigned to the sub-components, which can then be further decomposed
- c) All of the mentioned

d) None of the mentioned

Answer: c

Explanation: The statements mentioned are all true with respect to the true decomposition.

3. Designers can use responsibilities to make modules more cohesive and less tightly coupled in several ways such as?

- a) Assign modules at most one operational and one data responsibility
- b) Assign complementary data and operational responsibilities
- c) Make sure module responsibilities do not overlap
- d) All of the mentioned

Answer: d

Explanation: Designers can use responsibilities to make modules more cohesive and less tightly coupled in all the above mentioned ways.

4. Inheritance is a powerful design and implementation mechanism that offers which of these advantages?

- a) Inheritance captures a generalization-specialization relation between the super-class(es) and the sub-class
- b) Inheritance provides reuse of the implementations of attributes and operations in the super-class or super-classes
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Inheritance is a powerful design and implementation mechanism that offers the mentioned advantages.

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5. Heuristic for Class models include which of these?

- a) Use inheritance only when there is a generalization relationship between the sub-class and its super-class(es)
- b) Combine common attributes and operations in similar classes into a common super-class
- c) All of the mentioned
- d) None of the mentioned

Answer: a

Explanation: Heuristic for Class models includes- Use inheritance only when there is a generalization relationship between the sub-class and its super-class(es).

6. What is Delegation?

- a) The tactic where in a module en thrusts another module with responsibility is called delegation
- b) Delegation not only allows reuse without inheritance but also provides a mechanism to make software much more flexible and configurable
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: The tactic where in a module en thrusts another module with responsibility

is called delegation, Delegation not only allows reuse without inheritance but also provides a mechanism to make software much more flexible and configurable.

7. Which of the following are static modeling heuristics?

- a) State both operational and data responsibilities
- b) Assign modules at most one operational and one data responsibility
- c) Assign complementary data and operational responsibilities
- d) All of the mentioned

Answer: d

Explanation: Static modelling heuristic includes -State both operational and data responsibilities, Assign modules at most one operational and one data responsibility, Assign complementary data and operational responsibilities.

8. Designers can use responsibilities to make modules more cohesive and less tightly coupled in which of the following ways?

- a) Assign modules at most one operational and one data responsibility
- b) Assign complementary data and operational responsibilities
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: Designers can use responsibilities to make modules more cohesive and less tightly coupled in the following way – Assign modules at most one operational and one data responsibility, Assign complementary data and operational responsibilities.

9. Which of the following is operational responsibility?

- a) An Obligation to do something that is to carry out some tasks
- b) An Obligation to know something that is to maintain some data
- c) All of the mentioned
- d) None of the mentioned

Answer: a

Explanation: Operational Responsibility is an obligation to do something that is to carry out some tasks.

10. Which of the following is data responsibility?

- a) An Obligation to do something that is to carry out some tasks
- b) An Obligation to know something that is to maintain some data
- c) All of the mentioned
- d) None of the mentioned

Answer: b

Explanation: Data Responsibility is an obligation to know something that is to maintain some data.

1. What does top down process follow?

- a) The overall flow of activity during product design resolution is from higher to lower levels
- b) The overall flow of activity during product design resolution is from lower to higher levels
- c) All of the mentioned

d) None of the mentioned

Answer: a

Explanation: Top down layer focuses on higher to lower abstraction.

2. What are the most common scenarios for resolutions?

- a) Designers frequently work bottom up or skip levels of abstraction
- b) To specify some part of product design to its physical level details before others are specified
- c) All of the mentioned
- d) None of the mentioned

Answer: c

Explanation: The choices represents the most common scenarios worked out under resolution techniques.

3. Lower level of abstraction includes?

- a) Product features
- b) Functions
- c) Properties
- d) All of the mentioned

Answer: d

Explanation: Lower abstraction includes all the choices mentioned.

4. Product design is mainly?

- a) Top-down approach
- b) Bottom-up approach
- c) Top-down & Bottom-up approach
- d) None of the mentioned

Answer: a

Explanation: Product design is top down approach.

5. The user-centered design comprises of which of these principles?

- a) Stakeholder focus
- b) Empirical Evaluation
- c) Iteration
- d) All of the mentioned

Answer: d

Explanation: It includes all the following principles.

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6. Collection of stakeholder needs is called?

- a) Requirements elicitation
- b) Requirements validation
- c) Needs Elicitation
- d) Requirements & Needs elicitation

Answer: d

Explanation: Collection of stakeholders needs are called needs elicitation, needs identification, requirements elicitation.

7. Understanding Stakeholder needs are called?
- a) Needs analysis
 - b) Needs elicitation
 - c) Needs identification
 - d) All of the mentioned

Answer: a

Explanation: Understanding of these needs are called needs analysis.

8. Confirming with stakeholder that a product design satisfies their needs and desires are called?
- a) Requirements validation
 - b) Requirements elicitation
 - c) Requirements analysis
 - d) None of the mentioned

Answer: a

Explanation: It is also called as validation or requirement validation for confirming with stakeholder that a product design satisfies.

9. Stakeholder role in analyzing needs?
- a) Answer questions
 - b) Clarify project mission statement
 - c) Review and validate models and documents
 - d) Answer questions, Review and validate models and documents

Answer: d

Explanation: Clarifying project mission statement comes for analyzing product design problem.

10. Stakeholder role for Generate/Improve alternatives?
- a) Participate in generation and improvement
 - b) Answer the question
 - c) Be subject of empirical studies
 - d) All of the mentioned

Answer: a

Explanation: Generate or improving alternatives includes active participation.

Q.1. Build & Fix Model is suitable for programming exercises of _____ LOC (Line of Code).

- 1. 100-200
- 2. 200-400
- 3. 400-1000
- 4. above 1000

Answer:- (1)

Q.2. RAD stands for

1. Relative Application Development
2. Rapid Application Development
3. Rapid Application Document
4. None of the mentioned

Answer:- (3)

Q.3. Which of these software engineering activities are not a part of software processes ?

1. Software dependence
2. Software development
3. Software validation
4. Software specification

Answer:- (1)

Q.4. Which of these does not affect different types of software as a whole?

1. Heterogeneity
2. Flexibility
3. Business and social change
4. Security

Answer:- (2)

Q.5. RAD Model has

1. a) 2 phases
2. b) 3 phase
3. c) 5 phases
4. d) 6 phases

Answer:- (3)

Q.6. Which model can be selected if user is involved in all the phases of SDLC?

1. Waterfall Model
2. Prototyping Model
3. RAD Model
4. both Prototyping Model & RAD Model

Answer:- (3)

Q.7. The Incremental Model is a result of combination of elements of which two models?

1. Build & FIX Model & Waterfall Model

2. Linear Model & RAD Model
3. Linear Model & Prototyping Model
4. Waterfall Model & RAD Model

Answer:- (3)

Q.8. What is the major advantage of using Incremental Model?

1. Customer can respond to each increment
2. Easier to test and debug
3. It is used when there is a need to get a product to the market early
4. Easier to test and debug & It is used when there is a need to get a product to the market early

Answer:- (4)

Q.9. The spiral model was originally proposed by

1. IBM
2. Barry Boehm
3. Pressman
4. Royce

Answer:- (2)

Q.10. The spiral model has two dimensions namely _____ and _____

1. diagonal, angular
2. radial, perpendicular
3. radial, angular
4. diagonal, perpendicular

Answer:- (3)

Q.11. How is Incremental Model different from Spiral Model?

1. Progress can be measured for Incremental Model
2. Changing requirements can be accommodated in Incremental Model
3. Users can see the system early in Incremental Model
4. All of the mentioned

Answer:- (1)

Q.12. If you were a lead developer of a software company and you are asked to submit a project/product within a stipulated time-frame with no cost barriers, which model would you select?

1. Waterfall
2. Spiral
3. RAD
4. Incremental

Answer:- (3)

Q.13. RUP stands for_____ created by a division of _____

1. Rational Unified Program, IBM
2. Rational Unified Process, Infosys
3. Rational Unified Process, Microsoft
4. Rational Unified Process, IBM

Answer:- (4)

Q.14. Agile Software Development is based on

1. Incremental Development
2. Iterative Development
3. Linear Development
4. Both Incremental and Iterative Development

Answer:- (4)

Q.15. How many phases are there in Scrum ?

1. Two
2. Three
3. Four
4. Scrum is an agile method which means it does not have phases

Answer:- (2)

Q.16. In agile development it is more important to build software that meets the customers' needs today than worry about features that might be needed in the future.

1. True
2. False

Answer:- (1)

Q.17. Incremental development in Extreme Programming (XP) is supported through a system release once every month.

1. True
2. False

Answer:- (2)

Q.18. In XP Increments are delivered to customers every _____ weeks.

1. One
2. Two
3. Three
4. Four

Answer:- (2)

Q.19. Which four framework activities are found in the Extreme Programming(XP) ?

1. analysis, design, coding, testing
2. planning, analysis, design, coding
3. planning, design, coding, testing
4. planning, analysis, coding, testing

Answer:- (3)

Q.20. In XP an automated unit test framework is used to write tests for a new piece of functionality before that functionality itself is implemented.

1. True
2. False

Answer:- (1)

1. How many layers are present in the OO design pyramid?

- a) three
- b) four
- c) five
- d) one

Answer: b

Explanation: The four layers are: Subsystem layer, class and object layer, message layer and responsibilities layer

2. Which of the following early OOD methods incorporates both a “micro development process” and a “macro development process.” ?

- a) Booch method
- b) Rumbaugh method
- c) Wirfs-Brock method
- d) Coad and Yourdon method

Answer: a

Explanation: The macro development process includes the architectural planning and micro developments process defines rules that govern the use of operations and attributes and the domain-specific policies for memory management, error handling, and other infrastructure functions.

3. Grady Booch, James Rumbaugh, and Ivar Jacobson combined the best features of their individual object-oriented analysis into a new method for object oriented design known as

- a) HTML
- b) XML
- c) UML
- d) SGML

Answer: c

Explanation: The Unified Modeling Language (UML) has become widely used throughout the industry as the standard approach to OOD.

4. A design description of an object is known as a class

- a) instance
- b) object
- c) case
- d) both instance and object

Answer: d

Explanation: None.

advertisement

5. Which of the following is conceptually similar to objects?

- a) PACKAGE
- b) PROC
- c) PRIVATE
- d) None of the mentioned

Answer: a

Explanation: A package is a namespace that organizes a set of related classes and interfaces.

6. A design description in OOD includes

- a) Protocol Description
- b) Implementation Description
- c) Type Description
- d) both Protocol and Implementation Description

Answer: d

Explanation: None.

7. Which of the following is not an operation as per OOD algorithms and data structures?

- a) operations that manipulate data in some way
- b) operations that perform a computation
- c) operations that check for syntax errors
- d) operations that monitor an object for the occurrence of a controlling event

Answer: c

Explanation: Operations that check for syntax errors is concerned with the programming language used, so it will be handled by the compiler.

8. Throughout the OOD process, a software engineer should look for every opportunity for creating new design process.

- a) True
- b) False

Answer: b

Explanation: A software engineer should look for every opportunity to reuse existing design patterns whenever they meet the needs of the design rather than creating new ones.

1. Use case descriptions consist of interaction_____?

- a) Use case
- b) product
- c) Actor
- d) Product & Actor

Answer: d

2. Which of these statements are truly acceptable?

- a) A precondition is an assertion guaranteed to be true when the operation finishes
- b) A post-condition is an assertion guaranteed to be true when the activity or operation begins
- c) An event which causes a use case to begin is trigger
- d) None of the mentioned

Answer: c

3. What are the types of prototypes?

- a) Horizontal prototypes
- b) Vertical Prototypes
- c) All of the mentioned
- d) None of the mentioned

Answer: c

4. Diagrams which are used to distribute files, libraries, and tables across topology of hardware are called

- A. deployment diagrams
- B. use case diagrams
- C. sequence diagrams
- D. collaboration diagrams

Answer: A

5. How many views of the software can be represented through the Unified Modeling Language (UML)?

- a. Four
- b. Five
- c. Nine

d. None of the above

Answer: b. Five

6. Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?

- a. Use case diagram
- b. Activity diagram
- c. Class diagram
- d. All of the above

Answer: a. Use case diagram

7. What are the notations for the Use case Diagrams?

- a) Use case
- b) Actor
- c) Prototype
- d) Use case and Actor

Answer: d

8. Which among the following can be heuristic for Use case diagram?

- a) The product can be made actor
- b) Never name actors with noun phrases
- c) Name Use cases with verb phrases
- d) All of the mentioned

Answer: c

10. Which of the following statements is true?

i. There are 5 views that are represented through the Unified Modelling Language (UML).

ii. These 5 views in UML are represented through 9 UML diagrams.

- a. Only i is true
- b. Only ii is true
- c. Both i and ii are true
- d. None of them is true

Answer: c. Both I and ii is true

11. Use case description consists of the following...

- (A) Actors
- (B) Number and Use case name

- (C) Need and stakeholder
- (D) Both a and b
- (E) All of the above

Answer (E) All of the above

12. Select the true statement from the following.

- (A) The first condition is guaranteed to be true if the activity finishes
- (B) The next or post-condition is guaranteed to be true if the activity begins
- (C) Trigger is an event that is used to give a start to a use case to begin.
- (D) Both a and b

Answer: (C) Trigger is an event that is used to give a start to a use case to begin.

13. Select the true statement for the use case description format.

- (A) Underline text indicates to another use case
- (B) Extensions section utilize a complex numbering scheme
- (C) Indentation is used in a line to bring extensions easy to read
- (D) Both a and b
- (E) All of the above

[View Answer](#)

Answer: (E) All of the above

14. Select the interaction that the use case description has.

- (A) Product and Actor
- (B) Use case
- (C) Actor
- (D) Product

Answer: (A) Product and Actor

15. Select the methods used by the use case to write a description.

- (A) Actors in a use case are mostly stakeholders
- (B) Preconditions always be true in advance statement start
- (C) Requires a list should be checked when writing each use case
- (D) Both A and C
- (E) All of the mentioned

Answer (E) All of the mentioned

16. Select the steps that are needed in use case driven iterative development?

- (A) At each loop step, one or many use cases are chosen for execution
- (B) Iteration must be followed till the system is properly ended
- (C) Iterative development forms system work gradually through analysis, design, coding, testing, and evaluation
- (D) Both a and b
- (E) All of these

[View Answer](#)

Answer: (E) All of these

17. Select the true in context to extensions.

- (A) The flow specifies the extensions
- (B) The alternatives are known as an extension because they extend the activity flow in various direction through the branch point
- (C) Both a and b
- (D) All of the above
- (E) None of these

18. Select the diagram that is used to model the vocabulary of a system.

- (A). Object Diagram
- (B). Activity Diagram
- (C). Both a and b
- (D). Interaction Diagram
- (E). Class diagram

Answer (E). Class diagram

19. Select which one is model static data structures.

- (A). Object diagrams
- (B). Class diagrams
- (C). Activity diagrams
- (D). Interaction diagrams
- (E). All of the above

Answer (B). Class diagrams

20. Select the engineering From the following _____ that is theoretically feasible but programmatically o restricted value.

- (A). class diagram
- (B). activity diagram
- (C). object diagram
- (D). interaction diagram
- (E), Both a and c

Answer (C). object diagram

21. Select where the class diagrams are not convenient

- (A). simple interactions model
- (B). the vocabulary of a system model
- (C). simple collaborations model
- (D). logical database schema model
- (E). All of the above

Answer (C). simple collaborations mode

22. Select from the following which is used to show one static frame in the dynamic storyboard.

- (A). Class diagram
- (B). Activity diagram
- (C). Object diagram
- (D). Interaction diagram

Answer (C). Object diagram

23. Select the diagrams that are used to explain data structures, and the static snapshots parts of the things place in the class diagrams.

- (A). use case
- (B). Collaboration
- (C). Object
- (D). Sequence
- (E). None of these

Answer (C) Object

24. Select the view which is shown by object Object diagram.

- (A). logical
- (B). dynamic
- (C). static
- (D). process
- (E). All of these

Answer (C). static

25. Select from the following _____ has to be reverse-engineered.

- (A). visibility
- (B). relationship
- (C). target
- (D). constraints
- (E). All of these

Answer (C). target

26. Which of the following diagram is used to model the distribution of objects?

- a. Object Diagram
- b. Activity Diagram
- c. State Chart Diagram
- d. Interaction Diagram

27. _____ select from the following in which engineering and reverse engineering can be applicable

- (A). tagged values
- (B). stereotypes
- (C). class diagram
- (D). adornments
- (E). Both a and b

_____ can model the behavior of an individual object.

- A. Class
- B. Use case
- C. State machine
- D. Activity

ANSWER: C

A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.

- A. class
- B. state machine
- C. use case
- D. activity

ANSWER: B

A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

- A. class
- B. state
- C. actor
- D. component

ANSWER: B

A _____ is a relationship between two states indicating that an object in the first s will enter the second state.

- A. transition
- B. state
- C. association
- D. generalization

ANSWER: A

A state that has substates, that is nested states, is called _____

- A. composite state
- B. history state
- C. target state
- D. source state

ANSWER: A

Inside the states, the events are encountered to handle without leaving the state. This is known as _____

- A. state machine
- B. state transition
- C. internal transition
- D. external transition

ANSWER: C

_____ is the state that is active after completion of the transition.

- A. Composite state
- B. History state
- C. Target state
- D. Source state

ANSWER: C

A _____ describes the aspects of an object whose current behavior depends on its p

- A. class
- B. state machine
- C. use case
- D. activity

ANSWER: B

The relationship between two states is called _____

- A. transition
- B. state
- C. association
- D. generalization

ANSWER: A

_____ are handled without causing a change in state.

- A. Transitions
- B. Events
- C. Signals
- D. State

ANSWER: A

A sequential state machine may have _____

- A. at most one initial state and one final state n
- B. at least one initial state and one final state
- C. at most one initial state more than one final state
- D. more than one initial state and at most one final state

ANSWER: A

Which of the following is used to model the life time of an object?

- A. Use Case
- B. Class
- C. State Machine
- D. Interface

ANSWER: C

State that is active after the completion of the transition is called

- A. source state
- B. target state
- C. history state

D. final state

ANSWER: B

Which of the following is present in a nested concurrent state machine?

- A. Initial State
- B. Final State
- C. History State
- D. Concurrent sub state

ANSWER: D

Which of the following is wrong with respect to a thread?

- A. Threads are light weight
- B. Threads are modeled using stereotyped active classes
- C. Threads are nested inside another thread
- D. Threads can initiate a control activity

ANSWER: C

Absolute time of an event is modeled as _____

- A. timing constraint
- B. timing mark
- C. timing expression
- D. timing semantics

ANSWER: A

_____ is denotation for the time at which an event occurs.

- A. Timing mark
- B. Timing constraint
- C. Timing Expression
- D. Timing response

ANSWER: A

Which of the following evaluates to an absolute value of Time?

- A. Timing mark
- B. Timing Constraint
- C. Timing Expression
- D. Timing Location

ANSWER: C

A state machine whose actions are all attached to states is called

- A. Activity diagram
- B. Mealy machine
- C. Moore machine
- D. Component diagram

ANSWER: C

State chart Diagrams are needed _____

- A. when a class has complex life cycle
- B. when the execution of scenario is to be traced
- C. to allocate classes and objects to modules
- D. to allocate processes to processors

ANSWER: A

A model is a _____ of reality.

- A. Complication
- B. Simplification
- C. Realization
- D. Generalization

ANSWER: B

Models help us to _____ a system as it is or the way it is wanted.

- A. Analyze
- B. Design
- C. Visualize
- D. Measure

ANSWER: B

In which principle, the models created explain the identification of a problem and find its solution?

- A. The Choice of Model is Important
- B. Levels of Precision May Differ
- C. The Best Models are connected to Reality
- D. No Single Model is Sufficient

ANSWER: A

Algorithmic and object-oriented are the two common ways for modeling

- A. Non-software Systems
- B. Software Systems
- C. Vocabulary of a System
- D. Client/Server System

ANSWER: B

_____ helps to communicate the overall system architecture unambiguously.

- A. Flow charts
- B. Designing
- C. SRS
- D. Templates

ANSWER: B

_____ defines the system's actions and how different parts contribute to it.

- A. Behavior
- B. Structure
- C. Model
- D. Use case

ANSWER: A

_____ can be done for both simple and complex systems.

- A. Generalization n
- B. Specification cm,
- C. Modeling
- D. Collaboration

ANSWER: A

The best kind of models helps to choose _____

- A. Degree of detail
- B. Design view
- C. Single model
- D. Choice of model

ANSWER: A

A set of _____ models are used to approach a complex system.

- A. Dependent w"

- B. Independent
- C. Both dependent and independent
- D. Different

ANSWER: B

An Object-oriented program is structured as a community of interacting agents, called _____

- A. Objects
- B. Classes
- C. Functions
- D. Statements

ANSWER: A

UML is useful to _____ a system as it is or as we want it to be.

- A. Visualize
- B. Specify
- C. Document
- D. All of the above

ANSWER: A

A collection of operations that specify the services rendered by a class or component known as _____

- A. Class
- B. Interaction
- C. Interface
- D. Collaboration

ANSWER: D

_____ is an abstraction of a set of functions that the system performs.

- A. Class
- B. Interaction
- C. Use case
- D. Collaboration

ANSWER: C

_____ is a physical element that exists at runtime and represents a computational resource.

- A. Node
- B. Actor
- C. Name
- D. Object

ANSWER: A

Which one of the following is not a structural thing?

- A. Class
- B. Package
- C. Use case
- D. Node

ANSWER: B

_____ can represent the invocation of an operation, a step in a business p an entire business process.

- A. State machine
- B. Interaction
- C. Use case
- D. Activity

ANSWER: D

The explanatory parts of the UML model are known as _____

- A. Behavioral things
- B. Grouping things
- C. Structural things
- D. Annotational things

ANSWER: D

A link is an instance of _____

- A. Generalization
- B. Association
- C. Dependency
- D. Realization

ANSWER: B

_____ are used to create new building blocks from existing blocks.

- A. Tagged Values
- B. Stereotypes
- C. Constraints
- D. Diagrams

ANSWER: B

In which phase is the scope of the project defined?

- A. Inception
- B. Elaboration
- C. Construction
- D. Transition

ANSWER: A

Which one of the following GOAD artifacts is the MOST useful?

- A. Use cases
- B. Interaction diagrams
- C. Activity diagrams
- D. Package diagrams

ANSWER: A

All public methods in business model objects are defined directly or indirectly because of a _____ requirement.

- A. Use case
- B. Dependency
- C. Association
- D. Sequence

ANSWER: A

UML interfaces are used to _____

- A. Define an API for all classes
- B. Program in Java, but not in C++ or Smalltalk
- C. Define executable logic to reuse across classes
- D. Specify required services for types of objects

ANSWER: D

An actor is _____

- A. A person
- B. A job title
- C. A role
- D. A system

ANSWER: C

The system icon identifies _____

- A. The boundaries of the system
- B. The scope of the project so
- C. The context of the system
- D. Another system in the role of an actor

ANSWER: C

A person may function in _____

- A. Only one role le
- B. Many roles
- C. One role per system
- D. One role per use case

ANSWER: B

Devices and other systems _____

- A. May be actors
- B. May only receive output from a use case
- C. May only provide input to a use case
- D. Are out of scope because we are describing only one system at

ANSWER: A

Associations _____

- A. May exist only between actors and use cases
- B. Identify the flow of data between actors and use cases
- C. Identify interactions between actors and use cases
- D. Identify dependencies between actors and use cases

ANSWER: C

Use cases _____

- A. Identify business processes
- B. Identify system goals
- C. Describe workflow
- D. Prioritize system procedures

ANSWER: B

The association stereotype Â«ExtendsÂ» indicates _____

- A. Delegation of part of a task to another use case
- B. The target use case is a subprocess of the source use cases
- C. A specialized form of a use case
- D. A deviation from the UML standard

ANSWER: C

_____ can model the behavior of an individual object.

- A. Class
- B. Use case
- C. State machine
- D. Activity

ANSWER: C

A _____ is a behavior that specifies the sequence of states an object goes through during its lifetime in response to events.

- A. class
- B. state machine
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- D. activity

ANSWER: B

A _____ is a condition during the life of an object during which it satisfies performs some activity or waits for some event.

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- D. component

ANSWER: B

A _____ is a relationship between two states indicating that an object in the first s will enter the second state.

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ANSWER: A

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B. Class

C. State Machine

D. Interface

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B. when the execution of scenario is to be traced

C. to allocate classes and objects to modules

D. to allocate processes to processors

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Use case descriptions consist of interaction _____?

A. Use case

B. product

C. Actor

D. Product & Actor

ANSWER: D

Which of these statements are truly acceptable?

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B. A post-condition is an assertion guaranteed to be true when the activity or operation begins

C. An event which causes a use case to begin is trigger

D. None of the mentioned

ANSWER: C

What are the types of prototypes?

A. Horizontal prototypes

B. Vertical Prototypes

C. All of the mentioned

D. None of the mentioned

ANSWER: C

Diagrams which are used to distribute files, libraries, and tables across topology of hardware are called

A. deployment diagrams

B. use case diagrams

C. sequence diagrams

D. collaboration diagrams

ANSWER: A

How many views of the software can be represented through the Unified Modeling Language UML)?

A. Four

B. Five

C. Nine

D. None of the above

ANSWER: B

Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?

- A. Use case diagram
- B. Activity diagram
- C. Class diagram
- D. All of the above

ANSWER: A

What are the notations for the Use case Diagrams?

- A. Use case
- B. Actor
- C. Prototype
- D. Use case and Actor

ANSWER: D

Which among the following can be heuristic for Use case diagram?

- A. The product can be made actor
- B. Never name actors with noun phrases
- C. Name Use cases with verb phrases
- D. All of the mentioned

ANSWER: C

Which of the following statements is true, iThere are 5 views that are represented through the Unified Modelling Language UML). iiThese 5 views in UML are represented through 9 UML diagrams.

- A. Only i is true
- B. Only ii is true
- C. Both i and ii are true
- D. None of them is true

ANSWER: C

UML diagram that shows the interaction between users and system, is known as

- A. Activity diagram
- B. E-R diagram
- C. Use case diagram
- D. Class diagram

ANSWER: C

UML diagram that specifies sequences/ steps of operations to be performed

- A. Activity diagram
- B. Use case diagram
- C. Class diagram
- D. E-R case diagram

ANSWER: B

Which of the following statement is true?

- A. Use case diagram is a dynamic model of interaction between actors and product in a use case
- B. Use case Description is a static model of use case supported by a product
- C. All of the mentioned
- D. None of the mentioned

ANSWER: D

A UML diagram that facilitates requirements gathering and interacts between system and external users, is called as

- A. Flowchart diagram
- B. Sequence diagram
- C. Use case diagram
- D. Data flow diagram

ANSWER: C

Select the diagram that is used to model the vocabulary of a system.

- A. Object Diagram
- B. Activity Diagram
- C. Both a and b
- D. Interaction Diagram
- E. Class diagram

ANSWER: E

Select which one is model static data structures.

- A. Object diagrams
- B. Class diagrams
- C. Activity diagrams
- D. Interaction diagrams
- E. All of the above

ANSWER: B

Select the engineering From the following _____ that is theoretically feasible but programmatically o restricted value.

- A. class diagram
- B. activity diagram
- C. object diagram
- D. interaction diagram
- E. Both a and c

ANSWER: C

Select where the class diagrams are not convenient

- A. simple interactions model
- B. the vocabulary of a system model
- C. simple collaborations model
- D. logical database schema model
- E. All of the above

ANSWER:C

Select from the following which is used to show one static frame in the dynamic storyboard.

- A. Class diagram
- B. Activity diagram
- C. Object diagram
- D. Interaction diagram

ANSWER: C

Select the diagrams that are used to explain data structures, and the static snapshots parts of the things place in the class diagrams.

- A. use case
- B. Collaboration
- C. Object
- D. Sequence
- E. None of these

ANSWER: C

Select the view which is shown by object Object diagram.

- A. logical
- B. dynamic
- C. static
- D. process
- E. All of these

ANSWER: C

Select from the following _____ has to be reverse-engineered.

- A. visibility
- B. relationship
- C. target
- D. constraints
- E. All of these

ANSWER: C

Which of the following diagram is used to model the distribution of objects?

- A. Object Diagram
- B. Activity Diagram
- C. State Chart Diagram
- D. Interaction Diagram

ANSWER: A

_____ select from the following in which engineering and reverse engineering can be applicable

- A. tagged values
- B. stereotypes
- C. class diagram
- D. adornments
- E. Both a and b

ANSWER: C

Which one is used to display a set of objects and their relationships?

- A. Object diagram
- B. Class diagram
- C. Use case diagram
- D. Activity diagram
- E. All of the above

ANSWER: A

Select the structure that is model by the Objects diagram

- A. object
- B. class
- C. Use Case
- D. activity
- E. Both A and B

ANSWER: A

Use case description consists of the followingâ€¢

- A. Actors
- B. Number and Use case name
- C. Need and stakeholder
- D. Both a and b
- E. All of the above

ANSWER: E

Select the true statement from the following.

- A. The first condition is guaranteed to be true if the activity finishes
- B. The next or post-condition is guaranteed to be true if the activity begins
- C. Trigger is an event that is used to give a start to a use case to begin.
- D. Both a and b

ANSWER: C

Select the true statement for the use case description format.

- A. Underline text indicates to another use case
- B. Extensions section utilize a complex numbering scheme
- C. Indentation is used in a line to bring extensions easy to read
- D. Both a and b
- E. All of the above

ANSWER: E

Select the interaction that the use case description has.

- A. Product and Actor
- B. Use case

C. Actor
D. Product

ANSWER: A

Select the methods used by the use case to write a description.

- A. Actors in a use case are mostly stakeholders
- B. Preconditions always be true in advance statement start
- C. Requires a list should be checked when writing each use case
- D. Both A and C
- E. All of the mentioned

ANSWER: E

Select the steps that are needed in use case driven iterative development?

- A. At each loop step, one or many use cases are chosen for execution
- B. Iteration must be followed till the system is properly ended
- C. Iterative development formed system work gradually through analysis, design, coding, testing, and evaluation
- D. Both a and b
- E. All of these

ANSWER: E

Select the true in context to extensions.

- A. The flow specifies the extensions
- B. The alternatives are known as an extension because they extend the activity flow in various direction through the branch point
- C. Both a and b
- D. All of the above
- E. None of these

ANSWER: D

Select from the following which is included by the Use case Description Heuristics.

- A. Fill up in the use case template from top to bottom
- B. put down easy declarative sentences in the active voice
- C. Keep away from the sequence of pace through the actors and product
- D. Both A and C

E. All of the above

ANSWER: E

Select the true statement from the following statements;

A. Relationship help by a product are cataloged in a use case description

B. Interconnection are purified in use case diagram

C. Both a and b

D. All of the above

E. None of These

ANSWER: D

Use case descriptions consist of interaction among which of the following?

A. Product

B. Use case

C. Actor

D. Product & Actor

ANSWER: D

Use case description contents include _____

A. Use case name and number

B. Actors

C. Stakeholder and needs

D. All of the mentioned

ANSWER: D

Which of these statements are truly acceptable?

A. A precondition is an assertion guaranteed to be true when the activity or operation finishes

B. A post condition is an assertion guaranteed to be true when the activity or operation begins

C. Trigger is an event which cause a use case to begin

D. None of the mentioned

ANSWER: C

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 in order to make extensions easier to read

D. All of the mentioned

ANSWER: D

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 of the mentioned

ANSWER: D

What is true in context to extensions?

A. Once the basic flow is defined, the extensions can be specified

B. The alternatives are called extension as they extend the activity flow in a different direction from branch point

C. All of the mentioned

D. None of the mentioned

ANSWER: C

The Use case Description Heuristics includes which of these?

- A. Fill in the use case template from top to bottom
- B. Write simple declarative sentences in active voice
- C. Avoid sequence of steps by the actors and product
- D. All of the mentioned

ANSWER: D

A different alternative must consists of?

- A. Different Actors
- B. Different Use cases
- C. Different Overall product functionality
- D. All of the mentioned

ANSWER: D

Which of the following statement is true?

- A. Interactions supported by a product are cataloged in a use case description
- B. Interactions are refined in use case diagram
- C. All of the mentioned
- D. None of the mentioned

ANSWER: D

Which steps are included in use case driven iterative development?

- A. At each iteration, one or more use cases are selected for implementation
- B. Iteration should be followed until the system is complete
- C. Iterative development builds system functionality gradually through analysis, design, coding, testing and evaluation
- D. All of the mentioned

ANSWER: D

_____ diagrams are used to illustrate data structures, and the static snapshots instances of the things found in the class diagrams.

- A.use case
- B.Object
- C.Collaboration
- D.Sequence

ANSWER: B

Object diagram is used to show the design _____ view of a system.

- A. static
- B. dynamic
- C. logical
- D. process

ANSWER: A

Forward engineering and reverse engineering can be applicable to

- A. class diagram
- B. stereotypes
- C. tagged values
- D. adornments

ANSWER: A

_____ shows a set of objects and their relationships.

- A. Class diagram
- B. Object diagram

C. Use case diagram

D. Activity diagram

ANSWER: B

Objects diagram is used to model the _____ structure

A. class

B. object

C. use case

D. activity

ANSWER: B

Choose the _____ which has to be reverse engineered.

A. target

B. relationship

C. visibility

D. constraints

ANSWER: A

Which of the following diagram is used to model the distribution of objects?

A. Object Diagram

B. Activity Diagram

C. State Chart Diagram

D. Interaction Diagram

ANSWER: A

Which of the following diagram is used to model the vocabulary of a system?

A. Object Diagram

B. Activity Diagram

C. Class diagram

D. Interaction Diagram

ANSWER: C

_____ model static data structures.

A. Object diagrams

B. Activity diagrams

C. Class diagrams

D. Interaction diagrams

ANSWER: C

Forward engineering of an _____ is theoretically possible but programmatically o limited value.

A. object diagram

B. activity diagram

C. class diagram

D. interaction diagram

ANSWER: A

Class diagrams are not useful to _____

A. model simple collaborations

B. model the vocabulary of a system

C. model simple interactions

D. model a logical database schema

ANSWER: C

_____ represents one static frame in the dynamic storyboard.

A. Object diagram

- B. Activity diagram
- C. Class diagram
- D. Interaction diagram

ANSWER: A

Forward engineering in UML is the process of transforming _____

- A. a code into a model
- B. a code into design n
- C. a model into a code
- D. a model into test

ANSWER: C

The behavior of a system is modeled using _____

- A. class diagram
- B. activity diagram
- C. use case diagram
- D. interaction diagram

ANSWERS: B

Which of the following diagrams is used to model business workflows?

- A. Deployment diagram
- B. Activity diagram
- C. Use Case diagram
- D. Interaction diagram

ANSWERS: B

The scenario of a use case is graphically represented using _____

- A. deployment diagram
- B. sequence diagram
- C. use case diagram
- D. interaction diagram

ANSWERS: B

_____ identify high-level services provided by the system.

- A. Classes
- B. Activities
- C. Use Cases
- D. Components

ANSWERS: C

Use case scenario is a specific sequence of _____

- A. relationships n
- B. use cases
- C. classes
- D. actions

ANSWERS: D

A collaboration is the of _____ a use case.

- A. generalization
- B. realization
- C. inheritance
- D. association

ANSWERS: B

Uses cases are represented as _____ within the system rectangle.

- A. ellipses
- B. circles
- C. rhombus
- D. rectangle

ANSWERS: A

An _____ connects the initiating actor to the use case (ending at the use case).

- A. Arrow
- B. Line
- C. Arc
- D. Scribble

ANSWERS: A

Animation of a model against the execution of a deployed system is an example of _____

- A. business engineering
- B. forward engineering
- C. reverse engineering
- D. temporal engineering

ANSWERS: C

Forward Engineering is possible for an Activity Diagram especially if the context of the diagram is _____

- A. an operation
- B. a workflow
- C. a class
- D. a use case

ANSWERS: A

Realization of a use case is specified by _____

- A. a collaboration
- B. a component
- C. a node
- D. an activity

ANSWERS: A

_____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at a location specified in the base.

- A. Exclude
- B. Extend
- C. Include
- D. Abstract

ANSWERS:

_____ captures the intended behavior of a system.

- A. use Case
- B. Component
- C. Class
- D. Interface

ANSWERS: C

Forward Engineering is the process of translating _____

- A. Model to Model
- B. Code to Model
- C. Model to Code
- D. Code to Code

ANSWERS: A

The names of use cases are generally given as _____

- A. noun phrases

- B. verb phrases
 - C. adjectives
 - D. adverbs
- ANSWERS: C

Actors are connected to use cases only by _____

- A. association relationship
- B. generalization relationship
- C. realization relationship
- D. dependency relationship

ANSWERS: B

_____ represents a role that plays within a system.

- A. Use case
- B. Component
- C. Actor
- D. Activity

ANSWERS: A

The behavior of a use case is specified by _____

- A. flow of events
- B. classes
- C. components
- D. nodes

ANSWERS: C

_____ uses the services of the system under design to fulfill the goals.

- A. Primary actor
- B. Supporting actor
- C. Offstage actor
- D. Secondary actor

ANSWERS: A

_____ state "what must always" be true beginning a scenario in the use case.

- A. pre-conditions
- B. primary conditions
- C. post-conditions
- D. secondary conditions

ANSWERS: A

Which of the following diagram view the whole system as a block box?

- A. Class diagram
- B. Activity diagram
- C. Use case diagram
- D. Interaction diagram

ANSWERS: A

In an Activity Diagram, transitions belongs to _____

- A. trigger oriented transitions
- B. self transitions
- C. internal transitions
- D. completion transitions

ANSWERS: C

which of the following is NOT present in an Activity Diagram?

- A. Action States

B. Objects

C. Events

D. Notes

ANSWERS:

Executable non atomic computations are called as _____

A. action states

B. activity states

C. transitions

D. simple states

ANSWERS: D

Activity diagram is a special kind of _____

A. use case diagram

B. state chart diagram

C. interaction diagram

D. component diagram

ANSWERS: C

Executable atomic computations are called as _____

A. action states

B. activity states

C. composite states

D. concurrent states

ANSWERS: B

_____ is a path from one activity state to the next activity state.

A. Action state

B. Activity state

C. Transition

D. Fork

ANSWERS: B

Objects placed in an Activity Diagram are connected to the activity or transition using _____ relationship.

A. association

B. generalization

C. dependency

D. realization

ANSWERS: A

_____ is used to represent concurrent flows in an Activity Diagram.

A. Slide bar

B. Synchronization bar

C. Swim lane

D. Branch

ANSWERS: C

In an Activity Diagram, organizing the activities into groups is called

A. forking

B. joining

C. swimlane

D. synchronization

ANSWERS: A

Abstraction has _____ types.

- A. 1
- B. 2
- C. 3
- D. 4

ANSWER: D

To hide the internal implementation of an object we use ...

- A. inheritance
- B. encapsulation
- C. polymorphism
- D. none of these

ANSWER: B

The vertical dimension of a sequence diagram shows

- A. abstract
- B. line
- C. time
- D. messages

ANSWER: C

CRC approach and noun phrase approach are used to identify ...

- A. classes
- B. colaborators
- C. use cases
- D. object

ANSWER: A

Abstraction provide an operation named as ...

- A. encapsulation
- B. call back
- C. turndown
- D. inheritance

ANSWER: B

To distunguish between active and non-active object which property is applied?

- A. abstraction
- B. polymophism
- C. concurrency
- D. aggregation

ANSWER: C

The time oriented diagram include ...

- A. sequence
- B. classes
- C. activity
- D. none of these

ANSWER: A

Aggregation is ...

- A. set of relationship
- B. composed of relationship
- C. part of relationship
- D. all of these

ANSWER: B

Cohesion and coupling are represented by using ...

- A. structure part
- B. structure effect
- C. dependence matrix
- D. all of these

ANSWER: C

Refinement is a process of

- A. inheritance
- B. colaboration
- C. elaboration
- D. polymorphism

ANSWER: C

SMI stands for

- A. software maturity index
- B. system maturity information
- C. software model index
- C. none of these

ANSWER: A

Group of functionally related objects is ...

- A. concatenation
- B. cohesion
- C. coupling
- D. all of these

ANSWER: B

in a sequence diagram, the _____ indicates when an object sends or receives a message.

- A.command line
- B.focus
- C.request link
- D.lifeline

ANSWER: C

When arranging actors and objects on a sequence diagram, it is nice to list them _____.

A. in order in which they participate in the sequence across the top of the diagram A _____ describes information about an object.

- B. 1
- C. 2
- D. 3

ANSWER: A

The two types of interaction diagrams are _____, and _____ diagrams.

- A. sequence
- B. communication
- C. Both
- D. None

ANSWER: C

Looping in an activity diagram is best represented using what?

A. Looping in an activity diagram is best represented by Synchronization bars.

- B. 1
- C. 2
- D. 3

ANSWER: A

A decision point within an activity diagram may be shown with an activity symbol.

- A. True
- B. False
- C. Both
- D. None

ANSWER: A

A ___ is an instantiation of a class.

- A. Object
- B. Class
- C. Both
- D. None

ANSWER: A

On an activity diagram the arrows represent what?

- A. In activity diagram the arrows represent the flow of activities.
- B. 1
- C. 2
- D. 3

ANSWER: A

The focus in a sequence diagram is on ____.

- A. time ordering of messages being passed between objects
- B. 1
- C. 2
- D. 3

ANSWER: A

The acronym CRUD stands for ____.

- A. create, read, update, delete
- B. 1
- C. 2
- D. 3

ANSWER: A

A deployment diagram is most useful for which design activity?

- A. Designing the duplication components
- B. 1
- C. 2
- D. 3

ANSWER: A

The external behavior of a system is described by ____.

- A. functional models
- B. 1
- C. 2
- D. 3

ANSWER: A

In an activity diagram, the merge symbol has the same shape as what other symbol?

- A. Decision symbols
- B. 1

C. 2

D. 3

ANSWER: A

On an activity diagram, which of the following is not a valid use of a synchronization bar?

A. To initiate the alternative paths.

B. 1

C. 2

D. 3

ANSWER: A

The behavior of a system is modeled using _____

A. class diagram

B. activity diagram

C. use case diagram

D. interaction diagram

ANSWER: B

Which of the following diagrams is used to model business workflows?

A. Deployment diagram

B. Activity diagram

C. Use Case diagram

D. Interaction diagram

ANSWER: B

The scenario of a use case is graphically represented using _____

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B. sequence diagram

C. use case diagram

D. interaction diagram

ANSWER: B

_____ identify high-level services provided by the system.

A. Classes

B. Activities

C. Use Cases

D. Components

ANSWER: C

Use case scenario is a specific sequence of _____

A. relationships n

B. use cases

C. classes

D. actions

ANSWER: D

A collaboration is the of _____ a use case.

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B. realization

C. inheritance

D. association

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Uses cases are represented as _____ within the system rectangle.

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- C. rhombus
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- B. forward engineering
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_____ relationship between use cases means that the base use case explicitly incorporates the behavior of another use case at a location specified in the base.

- A. Exclude
- B. Extend
- C. Include
- D. Abstract

ANSWER: C

_____ captures the intended behavior of a system.

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- B. Component
- C. Class
- D. Interface

ANSWER: C

Forward Engineering is the process of translating _____

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- C. Model to Code
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The names of use cases are generally given as _____

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- B. verb phrases
- C. adjectives
- D. adverbs

ANSWER: C

Actors are connected to use cases only by _____

- A. association relationship
- B. generalization relationship
- C. realization relationship
- D. dependency relationship

ANSWER: B

_____ represents a role that plays within a system.

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- B. Component
- C. Actor
- D. Activity

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- B. classes
- C. components
- D. nodes

ANSWER: C

_____ uses the services of the system under design to fulfill the goals.

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- B. Supporting actor
- C. Offstage actor
- D. Secondary actor

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_____ state "what must always" be true beginning a scenario in the use case.

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Which of the following diagram view the whole system as a block box?

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- D. Interaction diagram

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- A. trigger oriented transitions
- B. self transitions
- C. internal transitions
- D. completion transitions

ANSWER: C

which of the following is NOT present in an Activity Diagram?

- A. Action States
- B. Objects
- C. Events
- D. Notes

ANSWER: C

Executable non atomic computations are called as _____

- A. action states
- B. activity states
- C. transitions
- D. simple states

ANSWER: D

Activity diagram is a special kind of _____

- A. use case diagram
- B. state chart diagram
- C. interaction diagram
- D. component diagram

ANSWER: C

Executable atomic computations are called as _____

- A. action states
- B. activity states
- C. composite states
- D. concurrent states

ANSWER: B

_____ is a path from one activity state to the next activity state.

- A. Action state
- B. Activity state
- C. Transition
- D. Fork

ANSWER: B

Objects placed in an Activity Diagram are connected to the activity or transition using _____ relationship.

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- B. generalization
- C. dependency
- D. realization

ANSWER: A

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- B. Synchronization bar
- C. Swim lane
- D. Branch

ANSWER: C

In an Activity Diagram, organizing the activities into groups is called

- A. forking
- B. joining
- C. swimlane
- D. synchronization

ANSWER: A

1) The method of design encompassing the process of object oriented decomposition and a notation for depicting both logical and physical and as well as static and dynamic models of the system under design is known as:

- a) Object- Oriented Programming
- b) Object- Oriented Design
- c) Object- Oriented Analysis
- d) None of the mentioned

Ans--Answer: b

Explanation: The definition has two important parts. The former part uses the class and object abstractions to logical

ly structure systems, and the latter uses algorithmic abstractions. The term object oriented design (OOD) is used to refer any method that leads to object oriented decomposition

2) 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.

View Answer

Answer: c

Explanation: Object oriented programming follows a conceptual framework called object model and is implemented

by writing classes and objects to make its style clear unlike procedure- oriented language.

3) 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) Encapsulation
- b) Modularity
- c) Hierarchy
- d) Abstraction

View Answer

Answer: d

Explanation: Abstraction focuses only on the outside view of an object and separates object's essential behavior from its implementation. It explains what an object does but doesn't explain how it does.

4) Abstraction is classified into _____ types

- a) 4
- b) 3
- c) 2
- d) 1

View Answer

Answer: a

Explanation: Entity abstraction, Action abstraction, Virtual machine abstraction, Coincidental abstraction

5) 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

[View Answer](#)

Answer: b

Explanation: Encapsulation focuses upon the implementation that gives rise to this behavior and is mostly often achieved through information hiding i.e., abstraction.

6) Single inheritance, Multiple inheritance, and Aggregation comes under _____

- a) Modularity
- b) Typing
- c) Hierarchy
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: All the three types are the examples of Hierarchy, as it denotes ranking or ordering of abstractions.

7) In which of the following mechanisms, types of all variables and expressions are fixed at compilation time.

- a) Strong Typing
- b) Weak Typing
- c) Static Binding/ early binding
- d) Dynamic Binding/ late binding

[View Answer](#)

Answer: c

Explanation: The memory address of a variable can be statically bound to the variable at compile time or dynamically at runtime. Likewise, variables in some languages have dynamic types that change during program execution, while other variables have static types that remain fixed over the execution of the program. Only the binding of the value

determines whether the object is a variable or something else (such as constant).

8) In which of the following mechanisms, types of all variables and expressions are not known until runtime

- a) Strong Typing
- b) Weak Typing
- c) Static Binding/ early binding
- d) Dynamic Binding/ late binding

[View Answer](#)

Answer: d

Explanation: The memory address of a variable can be statically bound to the variable at compile time or dynamically at runtime. Likewise, variables in some languages have dynamic types that change during program execution, while

e other variables have static types that remain fixed over the execution of the program. Only the binding of the value determines whether the object is a variable or something else (such as constant).

9) Which of the following statements about Persistence is correct?

- a) It is the enforcement of the class of an object, such that objects of different types may not be interchanged, or at th e most they may be interchanged only in very restricted ways.
- b) It is the property of an object through which its existence transcends time and/or space.
- c) It is the property that distinguishes an active object from one that is not active.
- d) All of the mentioned

View Answer

Answer: b

Explanation: Persistence deals with lifetime of data. Persistence saves the state and class of an object across time or space.

10) 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

View Answer

Answer: c

Explanation: Polymorphism is a feature of object oriented programming that usually takes the ability of creating an object, or variable, or a function in more than one form. Polymorphism exists when the features of inheritance and dynamic binding interact.

11)A _____ is an abstraction of something for the purpose of understanding it before building it.

Mock-up

Model

Prototype

All of the above

Answer 4

12)Which of the following is the reason/s for constructing a model?

- 1.To test a physical entity before building it
- 2.To set the stage for communication between client and developer
- 3.For visualization or for finding alternative representations
- 4.For reduction of complexity in order to understand it
- 5.All of the above

Answer 5

13)Object-Oriented Modelling allows-

Higher productivity

lower maintenance cost

better quality can be achieved

All of the above

Answer 4

14) During the design phase, the overall _____ of the system is described.

Architecture

System flow

Data flow

None

Answer 1

15) The Object Oriented Modeling for building systems takes the _____ as the basis.

Class

Object

Model

Modules

Answer 2

16) The basic step/s of system designing using Object-Oriented Modelling is/are —

System Analysis

System Design

Object Design

Implementation

All of the above

Answer 5

17) In which of the following phase, the class objects and the interrelationships of these classes are translated and actually coded by using an object-oriented programming language?

Analysis

Design

Development

Testing

Answer 3

18) In which of the following phase required databases are created and the complete system is transformed into an operational one?

Analysis

Design

Implementation

None

Answer 3

19) The OMT consists of three related but different viewpoints each capturing important aspects of the system

The static, dynamic, and functional behaviors of the system

Analysis, Design, Coding

Real-life environment, objects, and behavior of a system

None

Answer 1

20) A class describes —

a collection of similar objects

a template where basic characteristics of a set of objects are defined the basic attributes and the operations of the objects of that type

All of the above

Answer 4

21) An/A _____ is a data value held by objects in a class.

Data
Functions
Attributes
None of the above

Answer 3

22) Which of the following is/are the characteristic/s of an object?

Unique identification
Set of attributes
Set of states
Set of operations (behavior)
All of the above

Answer 5

23) In OMT, the link is represented by a

Line
The line labeled with its name
Arrow labeled with its name
None

Answer 2

24) A link is a physical or conceptual connection between
object instances

Classes
Objects
None

Answer 1

25) Which of the following specifies how many instances of one class may relate to a
single instance of an associated
class

Link or association
Multiplicity
Relationships
None

Answer 2

26) To show multiplicity a solid ball is the symbol for “many”, meaning
zero

one or more
Zero, one or more
None

Answer 3

27) A hollow ball indicates “optional”, meaning _____
zero or one

One
Many
None

Answer 1

28) A line without any ball indicates _____
No association

Association
one-to-one association
None

Answer 3

29)Numbers that are written on the solid ball such as 1,2,6 indicates —

- 1
- 2
- 1 or 2 or 6

All of the above

Answer 3

30)The object model describes the _____ of a system.

- static
- structural
- data aspects

Static, structural, and data aspects

Answer 4

31)The dynamic model describes the _____ aspect of a system

- temporal
- behavioral
- control

Temporal, behavioral, and control

Answer 4

32)The functional model describes the _____ aspects of a system.

- Behavioral
- transformational
- functional

All of the above

Answer 4

33)A link is a physical or conceptual connection between

- Objects
- object instances
- Classes

All of the above

Answer 2

34)An association maybe —

- unary
- binary
- ternary or n-ary

All of the above

Answer 4

35)Which of the following specifies how many instances of one class may relate to a single instance of an associate

d class?

- Multiplicity
- Association
- Degree

None of the above

Answer 1

36)The attribute(s) is/are associated with the association is called

- Link attribute
- Derived attribute
- Multi-valued attribute
- None

Answer 1

37) Which of the following is a property of the links in an association?

- Attribute
- Link attribute
- Degree of attribute
- None

Answer 2

38) Which of the following is a name that uniquely identifies one end of an association?

- Label name of the link
- Role name
- Link attribute name
- None

Answer 2

39) The role name is a _____

- Derived attribute
- Link attribute
- Attribute

All of the above

Answer 1

40) Which of the following indicates an ordered set of objects of an association?

- Writing {ordered} next to the dot
- Writing {ordered} next to the multiplicity dot
- Writing {ordered} next to one end of the dot

None

Answer 2

41) A qualifier is an _____ that reduces the effective multiplicity of an association.

- Association attribute

Attribute

Special attribute

None

Answer 3

42) Which of the following is the “part-whole” or “a-part-of” relationship in which objects representing the component of something are associated with an object representing the entire assembly?

Generalization

Specialization

Aggregation

None

Answer 3

43) Aggregations are drawn like associations, using a small hollow _____ indicating the assembly end of the relationship.

Diamond

Box

Circle

Triangle

Answer 1

44) Aggregation can be _____

fixed

variable

recursive

All of the above

Answer 4

45) Inheritance is a _____ relationship between two classes.

"is-a"

Part of

Both a and b

None

Answer 1

46) Generalization is reverse of _____

Aggregation

Inheritance

Specialization

None

Answer 3

47) When a class replaces the implementation of a method that it has inherited is called _____

Overloading

Overriding

Overwriting

None

Answer 2

48) When a (derived) class inherits properties (data and operations) from a single base class, it is called as

Inheritance

single inheritance

Multilevel inheritance

None

Answer 2

49) When a (derived) class inherits properties (data and operations) from more than one base class, it is called —

Single inheritance

Multiple inheritances

Multi-level inheritance

None

Answer 2

50) When a (derived) class inherits properties (data and operations) from another derived class, it is called as —

Hierarchical inheritance

Multilevel inheritance

Multiple inheritances

None

Answer 2

51) When more than one (derived) class inherits properties (data and operations) from a single base class, it is called

—

Hybrid inheritance

hierarchical inheritance

Multiple Inheritance

None

Answer 2

52) When more than one inheritance paths are available between two classes in the inheritance hierarchy, it is called

- Multiple inheritances
- Multi-level inheritance
- Multipath inheritance
- None

Answer 3

53) Combination of single, multiple, hierarchical, and multilevel inheritance forms

- Hierarchical Inheritance

- Hybrid inheritance

- Containership

- None

Answer 2

54) _____ describes those aspects of the system that changes with the time

- Object model

- Functional model

- Dynamic model

- None of the above

Answer 3

55) Which of the following model implement control aspects of the system?

- Object model

- Dynamic model

- Functional model

- None of the above

Answer 2

56) Which of the following models depicts states, transitions, events, and actions?

- Functional model

- Dynamic model

- Object model

- None of the above

Answer 2

57) Which of the following models includes event trace diagrams describing scenarios?

- Dynamic model

- Object model

- Function model

- All of the above

Answer 2

58) A/An _____ is a one-way transmission of information from one object to another.

- Message

- Event

- Change of event

- None of the above

Answer 2

59) A _____ is a sequence of events that occurs during one particular execution of a system

- State of the system

- Scenario

- Environment

None of the above

Answer 2

60)The outcomes of dynamic modeling are ——

scenario

event-trace diagram

State diagram

All of the above

Answer 4

61)A —— is a sequence of events that occurs during one particular execution of a system.

Object

Scenario

State

None of the above

Answer 2

62)In the —————, the sequence of events and the objects exchanging events both can be shown

Entity Relationship Diagram

event-trace diagram

System flow diagram

None

Answer 2

63)The functional model is represented graphically with ——

State transition diagram

Entity-relationship diagram

Data flow diagrams

None

Answer 3

64)A data dictionary is a structured repository of data

About data

About metadata

About important terms used in the system

All of the above

Answer 4

65)Which of the following can be an attribute with values that are unique within the table that can be used to identify the tuples of that relation?

Candidate key

Primary key

Super key

Foreign key

Answer 2

66)A combination of attributes when taken together have the unique identification property is called ——

Primary key

Composite key

Super key

All of the above

Answer 1

67) More than one attribute combination possessing the unique identification property is referred to as _____

- Primary key
- Composite key
- Candidate key
- Secondary key

Answer 2

68) A candidate key that is not a primary key is called a/an

- Alternate key
- Candidate key
- Primary key
- Foreign key

Answer 1

69) 1. A model is a _____ of reality.

- a. Complication
- b. Simplification
- c. Realization
- d. Generalization

Ans -b

70). Models help us to_____ a system as it is or the way it is wanted.

- a. Analyze
- b. Design
- c. Visualize
- d. Measure

Ans-C

71. In which principle, the models created explain the identification of a problem and find its solution?

- a. The Choice of Model is Important
- b. Levels of Precision May Differ
- c. The Best Models are connected to Reality
- d. No Single Model is Sufficient

Ans- a

72. Algorithmic and object-oriented are the two common ways for modeling

-
- a. Non-software Systems
 - b. Software Systems
 - c. Vocabulary of a System
 - d. Client/Server System

Ans-b

73. _____ helps to communicate the overall system architecture unambiguously.

- a. Flow charts
- b. Designing
- c. SRS
- d. Templates

Ans- b

74. _____ defines the system's actions and how different parts contribute to it.

- a. Behavior
- b. Structure
- c. Model
- d. Use case

Ans- a

75. _____ can be done for both simple and complex systems.

- a. Generalization n
- b. Specification cm,
- c. Modeling
- d. Collaboration

Ans-a

76. The best kind of models helps to choose _____

- a. Degree of detail
- b. Design view
- c. Single model
- d. Choice of model

Ans- a

77. A set of _____ models are used to approach a complex system.

- a. Dependent w"
- b. Independent
- c. Both dependent and independent
- d. Different

Ans- b

78. An Object-oriented program is structured as a community of interacting agents, called _____

- a. Objects
- b. Classes
- c. Functions
- d. Statements

Ans- a

JNTUH OBJECT ORIENTED ANALYSIS AND DESIGN MID-1 EXAM QUESTIONS

79. UML is useful to _____ a system as it is or as we want it to be.

- a. Visualize
- b. Specify
- c. Document
- d. All of the above

Ans- d

80. A collection of operations that specify the services rendered by a class or component known as_____

- a. Class
- b. Interaction
- c. Interface
- d. Collaboration

Ans- c

81. _____ is an abstraction of a set of functions that the system performs.

- a. Class
- b. Interaction
- c. Use case
- d. Collaboration

Ans- c

82. _____ is a physical element that exists at runtime and represents a computational resource.

- a. Node
- b. Actor

c. Name

d. Object

Ans- a

83. Which one of the following is not a structural thing?

a. Class

b. Package

c. Use case

d. Node

Ans-b

84. _____ can represent the invocation of an operation, a step in a business p an entire business process.

a. State machine

b. Interaction

c. Use case

d. Activity

Ans-d

85. The explanatory parts of the UML model are known as _____

a. Behavioral things

b. Grouping things

c. Structural things

d. Annotational things

Ans- d

86. A link is an instance of _____

a. Generalization

b. Association

c. Dependency

d. Realization

Ans-b

87. _____ are used to create new building blocks from existing blocks.

a. Tagged Values

b. Stereotypes

c. Constraints

d. Diagrams

Ans-b

JNTUH OOAD MCQ WITH ANSWERS AND EXPLANATION

88. In which phase is the scope of the project defined?

a. Inception

b. Elaboration

c. Construction

d. Transition

Ans- a

89. Which one of the following GOAD artifacts is the MOST useful?

a. Use cases

b. Interaction diagrams

c. Activity diagrams

d. Package diagrams

Ans-a

.

90. All public methods in business model objects are defined directly or indirectly because of a _____ requireme

nt.

- a. Use case
- b. Dependency
- c. Association
- d. Sequence

Ans-a

91. UML interfaces are used to _____

- a. Define an API for all classes
- b. Program in Java, but not in C++ or Smalltalk
- c. Define executable logic to reuse across classes
- d. Specify required services for types of objects

Ans-d

92. An actor is _____

- a. A person
- b. A job title
- c. A role
- d. A system

Ans-c

93. The system icon identifies _____

- a. The boundaries of the system
- b. The scope of the project so
- c. The context of the system
- d. Another system in the role of an actor

Ans-c

94. A person may function in _____

- a. Only one role le
- b. Many roles
- c. One role per system
- d. One role per use case

Ans-b

95. Devices and other systems _____

- a. May be actors
- b. May only receive output from a use case
- c. May only provide input to a use case
- d. Are out of scope because we are describing only one system at

Ans-a

96. Associations _____

- a. May exist only between actors and use cases
- b. Identify the flow of data between actors and use cases
- c. Identify interactions between actors and use cases
- d. Identify dependencies between actors and use cases

Ans - c

97. Use cases _____

- a. Identify business processes
- b. Identify system goals
- c. Describe workflow
- d. Prioritize system procedures

Ans- b

98. The association stereotype «Extends» indicates _____

- a. Delegation of part of a task to another use case

- b. The target use case is a subprocess of the source use cases
- c. A specialized form of a use case
- d. A deviation from the UML standard

Ans - c

99. Which of the following is/are the part of object oriented development where by an object-oriented strategy is used throughout the development process.

- i) Object oriented analysis ii) Object oriented design
 - iii) Object oriented methods iv) Object oriented programming
- A) i, ii and iii only
 - B) ii, iii and iv only
 - C) i, iii and iv only
 - D) i, ii and iv only

Ans-D) i, ii and iv only

100. concerned with developing an object-oriented model of the application domain.

- A) Object oriented analysis
- B) Object oriented methods
- C) Object oriented design
- D) Object oriented programming

Ans-A) Object oriented analysis

101. concerned with developing an object-oriented model of a software system to implement the identified requirements.

- A) Object oriented analysis
- B) Object oriented methods
- C) Object oriented design
- D) Object oriented programming

Ans- C) Object oriented design

102. is concerned with realizing a software design using an object-oriented programming language.

- A) Object oriented analysis
- B) Object oriented methods
- C) Object oriented design
- D) Object oriented programming

Ans-D) Object oriented programming

103. State whether the following statements about the characteristics of an object-oriented design are True or False.

i) System functionality is expressed in terms of operations or services associated with each object.

ii) Objects may be distributed and may execute either sequentially or in parallel.

- A) True, False
- B) False, True
- C) True, True
- D) False, False

Ans-C) True, True

104. In order to identify objects, use of a natural language description of a system where objects and attributes are nouns, operators or services are verbs.

- A) tangible entities

B) grammatical analysis

C) behavioral approach

D) scenario-base analysis

Ans-B) grammatical analysis

105. While identifying objects, use in the application domain such as aircraft, roles such as manager, e

vents such as request, interactions such as meetings, locations such as offices, organizational units such as companies and so on.

A) tangible entities

B) grammatical analysis

C) behavioral approach

D) scenario-base analysis

Ans-A) tangible entities

106. Which of the following is/are the activities of function-oriented approach.

i) Data-flow design ii) Structural decomposition

iii) System structuring iv) Detailed design description

A) i, ii and iii only

B) ii, iii and iv only

C) i, iii and iv only

D) All i, ii, iii and iv

Ans-C) i, iii and iv only

107. In function-oriented design, should show how data passes

through the system and is transformed by each system function.

A) data-flow design

B) structural decomposition

C) system structuring

D) detailed design description

Ans-A) data-flow design

108. of function oriented design model how functions are

decomposed into sub-functions using graphical structure charts.

A) data-flow design

B) structural decomposition

C) system structuring

D) detailed design description

Ans-B) structural decomposition

109. In function oriented design, describe the entities in the

design and their interfaces.

A) data-flow design

B) structural decomposition

C) system structuring

D) detailed design description

Ans- D) detailed design description

110. In data-flow diagram, represent functions, which transform

inputs to outputs.

A) rounded rectangle

B) rectangles

C) circles

D) arrows

Ans-A) rounded rectangle

111. in data-flow diagram represent data stores, which should be given a descriptive name.

A) rounded rectangle

B) rectangles

C) circles

D) arrows

Ans-B) rectangles

112. in data-flow diagram represent user interactions with the system which provide input or receive output.

A) rounded rectangle

B) rectangles

C) circles

D) arrows

Ans- C) circles

113. In data-flow diagram, show the direction of data flow and their name describes the data flowing along that path.

A) rounded rectangle

B) rectangles

C) circles

D) arrows

Ans-D) arrows

114. are the transformations in the diagram, which are responsible for central processing functions.

A) Input transformations

B) Output transformations

C) System-processing transformations

D) Storage transformations

Ans-C) System-processing transformations

115. Which of the following is/are the steps, which can be identified for transformation process from data-flow diagram to structure chart.

i) Identify system-processing transformations

ii) Identify storage transformations

iii) Identify input transformations

iv) Identify output transformations

A) i, ii and iii only

B) ii, iii and iv only

C) i, iii and iv only

D) All i, ii, iii and iv

Ans-C) i, iii and iv only

116. In structural decomposition, are concerned with reading data, checking it, removing duplicates and so on.

A) input transformations

B) output transformations

C) system-processing transformations

D) storage transformations

Ans-A) input transformations

117. are transformations, which prepare and format output or write it to the user's screen or other devices.

A) Input transformations

B) Output transformations

C) System-processing transformations

D) Storage transformations

Ans- B) Output transformations

118. in function oriented design describe the control structure of the design using a program descripti

on language which includes conditional statements and looping constructs.

A) data-flow design

B) structural decomposition

C) system structuring

D) detailed design description

Ans-D) detailed design description

119. Abstraction has _____ types.

a) 1

b) 2

c) 3

d) 4

Ans- d

120. To hide the internal implementation of an object we use ...

a) inheritance

b) encapsulation

c) polymorphism

d) none of these

Ans- B

121. The vertical dimension of a sequence diagram shows

a) abstract

b) line

c) time

d) messages

Ans- c

122. CRC approach and noun phrase approach are used to identify ...

a) classes

b) colaborators

c) use cases

d) object

Ans- A

123. Abstraction provide an operation named as ...

a) encapsulation

b) call back

c) turndown

d) inheritance

Ans- B

124. To distunguish between active and non-active object which property is applied?

a) abstraction

- b) polymorphism
- c) concurrency
- d) aggregation

Ans- c

125. The time oriented diagram include ...

- a) sequence
- b) classes
- c) activity
- d) none of these

Ans - A

126. Aggregation is ...

- a) set of relationship
- b) composed of relationship
- c) part of relationship
- d) all of these

ANs- B

127. Cohesion and coupling are represented by using ...

- a) structure part
- b) structure effect
- c) dependence matrix
- d) all of these

Ans- C

128. Refinement is a process of

- a) inheritance
- b) colaberation
- c) elaboration
- d) polymorphism

Ans - C

129. SMI stands for

- a) software maturity index
- b) system maturity information
- c) software model index
- c) none of these

Ans- A

130. Group of functionally related objects is ...

- a) concatenation
- b) cohesion
- c) coupling
- d) all of these

Ans- B

131.in a sequence diagram, the _____ indicates when an object sends or receives a message.

- (A)command line
- (B)focus
- (C)request link
- (D)lifeline

Ans - C

132.When arranging actors and objects on a sequence diagram, it is nice to list them

_____.
ANs-in order in which they participate in the sequence across the top of the diagram

133. A ___ describes information about an object.

Ans - Attribute

134. The two types of interaction diagrams are ___, and ___ diagrams.

Ans- sequence and communication

135. Looping in an activity diagram is best represented using what?

Ans- Looping in an activity diagram is best represented by Synchronizaton bars

136. A decision point within an activity diagram may be shown with an activity symbol.

True/False

Ans-True

136. A___ is an instantiation of a class.

ANs- object

137. On an activity diagram the arrows represent what?

Ans- In activity diagram the arrows represent the flow of activities.

138. The focus in a sequence diagram is on _____.

Ans- time ordering of messages being passed between objects

139. The acronym CRUD stands for _____.

Ans- create, read, update, delete

140. A deployment diagram is most useful for which design activity?

Ans- Designing the duplication components

141. The external behavior of a system is described by _____.

Ans- functional models

142. In an activity diagram, the merge symbol has the same shape as what other symbol?

Ans- Decision symbols

143. On an activity diagram, which of the following is not a valid use of a synchronization bar?

Ans-To initiate the alternative paths.

144. We can analyze functional requirements for a system using _____ techniques which are part of object oriented analysis.

Ans. Object modelling

145. _____ defines the relationship among classes where one class shares the structure or behaviour of another defined class.

Ans. Inheritance

146. The main advantage of _____ is that it helps to reduce complexity by allowing one interface to specify an action of general class.

Ans. Polymorphism

147. _____ supports the ability to build applications by selecting and assembling objects from libraries.

Ans. Object technology

148. _____ is a new way of analyzing software that is based on abstractions existing in the real world.

Ans. Object orientated development

149. Object-oriented software deals with _____.

Ans. Object

150. Object-oriented systems are more _____ than traditional systems because we can build new behaviours from e

xisting objects in the object oriented system

Ans. Reliable

151. Object-oriented system is implemented to _____ the real world in a better way than traditional methods do.

Ans. Remodel

152. We consider _____ as one of the underlying principles of the object-oriented system development.

Ans. Encapsulation

153. _____ is the new architecture introduced by the object management group to reuse objects among tool.

Ans. Common Object Request Broker Architecture

154. Object oriented image classification has made way for inversion techniques like_____.

Ans. Synthetic aperture radar images

155. In the future work of OOAD, classes can be derived from domain requirements using _____ as the basis.

Ans. Events

156. Object oriented development offers us a different model differing from _____ software development.

Ans. Traditional

157. We create _____ of functionality using object oriented development.

Ans. Modules

158. We _____ the objects because they are shaped from the real-world problem domain.

Ans. Reuse

159. The core of the unified approach is _____ use case.

Ans. Jacobson's

160. Unified approach is a _____ for software development.

Ans. Methodology

161. We can develop applications using _____ architecture.

Ans. Layered

162. _____ means we can reuse the common properties of different classes and form a new class with it.

Ans. Generalization

163. In data-centric methodology, we first choose the _____ required and then write the algorithm for the task.

Ans. Data structures

164. _____ is defined as the property of an object oriented system, which allows us to build new objects from the existing ones.

Ans. Inheritance

165. _____ means that the same operation may behave differently for different classes.

Ans. Polymorphism

166. _____ is defined as the relationship between objects and classes.

Ans. Association

167. The number of times the instances of a class can relate to a single instance is known as_____.

Ans. Cardinality

168. We use _____ to refer each object using its unique identity.

Ans. Aggregation

169. A _____ is defined as a group of objects with the same structure and behaviour.

Ans. Class

170. We can use a _____ to implement the behaviour of an object.

Ans. Method

171. _____ are known as non specific functions.

Ans. Messages

172. A _____ tells us how to do a task and a _____ tells us what to do in the task.

Ans. Function, Message

173. The generic classes are grouped at the top as the_____.

Ans. Superclasses

174. The waterfall model assumes that the requirements are well known before the _____ commences.

Ans. Requirements

175. Maintenance phase consists of all the activity after the _____ of software.

Ans. Installation

176. After the testing phase, _____ for a system is developed.

Ans. Documentation

177. The final agenda of building high-quality software is to _____ the user.

Ans. Satisfy

178. There are basically _____ ways to perform system testing by which we can actually test a system.

Ans. Two

179. Validation is always _____ in its approach.

Ans. One-Sided

180. A prototype is a _____ of a description of a software product developed.

Ans. Version

181. Component-based software development (CBD) mainly deals with building _____ software systems.

Ans. Large

182. Incremental testing is a form of _____ test model.

Ans. Iterative

183. If an object has to be reusable, more efforts are required to _____ it.

Ans. Design

184. Reusability makes the job of _____ clear.

Ans. Development

185. Reusability is one of the major benefits associated with _____.

Ans. Object Oriented systems development

186. In object oriented systems, the _____ and _____ are grouped together with their properties and behaviours.

Ans. Data structures, algorithms

187. An _____ is a real-world entity, comprised of data and logic used to describe the data.

Ans. Object

188. An _____ is defined as an entity used to set the properties of an object.

Ans. Attribute

189. _____ is the description of the static and dynamic relationships among the components of the pattern.

Ans. Solutions

190. The unified approach determines the combined framework of the different methodologies using _____ to explain the model and software development process documentation.

Ans. UML

191. In _____ phase the static class diagram that represents the system are obtained.

Ans. Analysis

192. _____ layer contains all objects that signify the business, both data and activities.

Ans. Business

193. James Rumbaugh and his colleagues in 1991 developed a method called _____.

Ans. Object modelling technique

194. _____ is the phase where the core requirements of the system are determined.

Ans. Conceptualization

195. _____ defines the classes and objects and explains the relationship between the objects in the domain.

Ans. The domain model

196. Documenting the _____ gives us a suitable situation and the restriction and forces that affect the solution of a problem.

Ans. Pattern

197. _____ depict the features of a good pattern and help in creating them.

Ans. Generative

198. Dynamic model is a collection of _____ or _____ over a stipulated period of time.

Ans. Behaviours, procedures

199. Dynamic modelling is most useful during the _____ phases of the system development.

Ans. Implementation phase

200. Object diagrams can be considered as an instance of _____.

Ans. Class diagram

201. The interaction diagram comprises of _____ and _____.

Ans. Sequence diagram, collaboration diagram

202. The _____ shows a set of nodes and their relationship.

Ans. Deployment diagram

203. The _____ is used to represent the direction in which the name has to read in the binary notation.

Ans. Black triangle

204. The _____ can show only one association for an object at a time.

Ans. OR association

205. The two types of generalizations are _____ and _____.

Ans. Shared target style, separate target style

206. A use case is represented by an _____.

Ans. Ellipse

207. When you have one use case similar to another the _____ relationship comes into play.

Ans. Extends

208. The use-case concept was introduced by _____.

Ans. Ivar Jacobson

209. UML _____ diagrams can be considered an elaborate flow diagram.

Ans. Activity

210. The UML _____ diagrams have a horizontal and vertical dimension.

Ans. Sequence

211. Hierarchical nesting can be done in _____ diagrams.

Ans. State

212. _____ diagrams are used to model physical components.

Ans. Component

213. The deployment diagram consists of _____ shown by a _____.

Ans. Node, cuboid

214. One component can be connected to another component using _____.

Ans. Dashed arrows

215. The packages are represented in the form of a _____.

Ans. Folder

216. Dashed arrows in models show _____.

Ans. Dependency

217. The _____ of a package may be shown by graphic nesting of the figures or by the expansion of a package.

Ans. Ownership

218. _____ models are derived from the existing models but have specific properties pertaining to our problem do main.

Ans. Stereotype

STES's,
RMD Sinhgad School of Engineering, Warje, Pune
 A.Y. 2020-21, Semester-I
 Subject: Software Design and Modeling (MCQ)

Difficulty Level (Low-1,Medium- 2,High -3)	No. of Options(2-6)	Item Text	Option Text 1	Option Text 2	Option Text 3	Option Text 4	Correct Option	Unit No.	Explanation
1	4	A link is an instance of _____	Generalization	Association	Dependency	Realization	b	1	
1	4	_____ are used to create new building blocks from existing blocks.	Stereotypes	Tagged Values	Constraints	Diagrams	a	1	
1	4	How many views of the software can be represented through the Unified Modeling Language (UML)?	Four	Five	Six	Nine	b	1	
1	4	_____ helps to communicate the overall system architecture unambiguously.	Flow charts	Designing	Templates	SRS	a	1	
2	4	Which of the following UML diagrams has a static view?	Activity	State chart	Collaboration	Use case	d	1	
2	4	Which of the following early OOD methods incorporates both a "micro development process" and a "macro development process." ?	Booch method	Rumbaugh method	Wirs-Brock method	Coad and Yourdon method	a	1	
2	4	Extensibility mechanism is /are	Stereotype	Tagged Values	Constraints	All of the above	d	1	
2	4	Associations _____	May exist only between actors and use cases	Identify the flow of data between actors and use cases	Identify interactions between actors and use cases	Identify dependencies between actors and use cases	c	1	
3	4	Which of the following UML diagrams represent the structural View of the software?	Class diagram	Object diagram	Both a. and b	None of the above	c	1	
3	4	Which of the following statements is true? i) There are 5 views that are represented through the Unified Modelling Language (UML). ii) These 5 views in UML are represented through 9 UML diagrams.	Only i is true	Only ii is true	Both i and ii are true	None of them is true	c	1	
1	2	Use-case actor is always a person having a role that different people may play	TRUE	FALSE			b	2	
1	4	Which among the following can be heuristic for Use case diagram	The product can be made actor	Never name actors with noun phrases	Name Use cases with verb phrases	All of the mentioned	c	2	
1	2	Multiple inheritance allows a class to inherit features from more than one superclass.	TRUE	FALSE			a	2	
1	4	Composition is a stronger form of which of the following?	Encapsulation	Inheritance	Aggregation	All of the above	c	2	
2	4	The root super class in diagram of generalization and specialization is considered as	Three tier class	Two tier class	Base class	Top class	c	2	
2	4	An operation can be described as?	Object behavior	Class behavior	Functions	Object & Class behaviour	d	2	
2	4	Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?	Use case diagram	Activity diagram	Class diagram	Sequence diagram	a	2	
2	4	Aggregation is which of the following?	Expresses a part-of relationship and is a stronger form of an association relationship.	Expresses a part-of relationship and is a weaker form of an association relationship.	Expresses an is-a relationship and is a stronger form of an association relationship.	Expresses an is-a relationship and is a weaker form of an association relationship.	c	2	
3	4	Which of the following statement is incorrect regarding the Class-responsibility-collaborator (CRC) modeling ?	All use-case scenarios (and corresponding use-case diagrams) are organized into categories in CRC modelling	The review leader reads the use-case deliberately	Only developers in the review (of the CRC model) are given a subset of the CRC model index cards	All of the mentioned	c	2	
3	4	_____ & _____ diagrams of UML represent Interaction modeling.	Use Case, Sequence	Class, Object	Activity, State Chart	All of the mentioned	a	2	

1	2	Elements include in state chart diagram are	Transitions	Condition markers	Iteration markers	Lifeline markers	a	3	
1	4	Which of the following is not the pros of state chart	Heirarchy	Synchronization	Statemate	Backend	b	3	
1	4	_____ diagram is time-oriented?	Collaboration	Sequence	Activity	Deployment Diagram	b	3	
1	4	When a company hires an employee this would appear as a:	Guard condition on a state diagram	Action expression	State on a state diagram	Event on a state diagram	d	3	
2	4	which term are combined Interaction Diagram?	Sequence Diagram + Collaboration Diagram	Activity Diagram + State Chart Diagram	Deployment Diagram + Collaboration Diagram	Deployment Diagram + Sequence Diagram	a	3	
2	4	Which of the following is not a timing Constraint in program state machine	Exestuation Time Constraint	Processing Time Constraint	Date Rate Constraint	Inter-event Time Constraint	b	3	
2	4	which one of the following is achieved by developing a sequence during an object-oriented design process?	Identification of object state behaviour	Determination of attribute of a class	Determination of inheritance relationships among classes.	Responsibility assignment to classes	d	3	
2	4	Which of the following component is used to clarify which actor performs which activity in an activity diagram?	forks	joins	state	swimlanes	d	3	
3	4	Which one of the following characterizes a sequence diagram?	A call graph illustrating all possible sequences of calls method members	A time-line illustrating a typical sequence of calls between object methods	A time-line illustrating the changes in inheritance and instantiation between classes and objects over time	A time-line illustrating inheritance relationship between classes.	b	3	
3	4	Identify which of the statement(s) below is/are incorrect	State machine diagram are constructed in the design phase and refined during analysis	State machine diagram represent discrete behaviours of objects	A state of an object is a snapshot of the values of its properties	A protocol State machine diagram is a fine-grained refinement of the behavioural State machine with added annotations	a,d	3	
1	4	The rules and semantics of the UML can be expressed in a form known as	Object modeling language	Object constraint language	Object driven language.	Object control language	d	4	
1	2	A class that contains business-related information and implements the analysis classes is a(n):	interface class	system class	control class	entity class	d	4	
1	4	Single inheritance, Multiple inheritance, and Aggregation comes under	Modularity	Typing	Hierarchy	Interface	c	4	
1	4	Which among the following are not the valid notations for package and component diagram?	Note	Box	Extension Mechanisms	Packages	b	4	
2	4	Which of the following statement is false?	A note is a dog-eared box connected to any model element by a dashed line	The main way to extend UML is by constraints, properties, etc	A dependency relation holds between two entities D and I where change in I does not affect D	All of the mentioned	c	4	
2	4	Which of these are types of nodes used in the deployment diagram?	Device	Execution Environment	Artifact	Device & Execution Environment	d	4	
2	4	which diagrams are used to distribute files, libraries, and tables across topology of the hardware	deployment	use case	sequence	collaboration	a	4	
2	4	The architecture layer that provide the interface between the business logic and the underlying database is known as	view access layer	Model access layer	Data access layer	Domain access layer	b	4	

3	4	What are the ways in which artifacts can be deployed?	Artifact symbol can be placed within node symbol	The artifact symbol can appear outside the node but be attached to it by dependency arrow from the artifact	Artifact name can be listed inside the node symbol	All of the mentioned	d	4	
3	4	Which of the following is incorrect in the deployment diagram?	Communication connections between nodes are shown by communication paths	Communication paths are represented by dotted lines	Artifacts are deployed inside nodes where they reside and execute	None of the mentioned	b	4	
1	4	Which GRASP pattern helps to find out answer for "Who should be responsible for creating a new instance of some class?"?	Adapter	Protected Variation	Creator	Fabrication	c	5	
1	4	Why are Patterns important?	They capture expert design knowledge	They make captured design accessible to both novices and other experts	All of the mentioned	None of the mentioned	c	5	
1	4	Which of the below is not a valid design pattern?	Singleton	Factory	Command	Java	d	5	
1	4	When would you use the GOF Decorator design pattern?	to translates an existing class interface into a compatible target interface	to assign more functionality to an object without subclassing it	to decouple an abstraction from its implementation so that the two can vary independently	to nest layers of decorators to add more functionality	b	5	
2	4	Which of the below author is not a part of GOF (Gang of Four)?	Erich Gamma	Gang Pattern	Richard Helm	Ralph Johnson	b	5	
2	4	The term "Delegation" is most closer to which of the following GRASP patterns	Expert	Creator	Low Cohesion	Controller	d	5	
2	4	Which design pattern you would use to limit the class instantiation to one object?	Factory	Singleton	Observer	Adapter	b	5	
2	4	An instructor wants to schedule an exam for which he/she wants that a notification is sent to all the registered students automatically. Which design pattern is most suitable for him.	Composite	Observer	Decorator	Iterator	b	5	
3	4	Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?	Singleton pattern	Chain of responsibility pattern	State pattern	Bridge pattern	b	5	
3	4	Which GRASP pattern answers the question "What object should have the responsibility, when you do not want to violate High Cohesion and Low Coupling, or other goals, but solutions offered by Expert are not appropriate?"	Pure Fabrication	Indirection	Creator	Polymorphism	a	5	
1	4	Architecture description language represent architectural structures that can be divided into which of the following?	Static	Dynamic	All of the mentioned	None of the mentioned	c	6	
1	4	What are the benefits for component based product lines?	Being able to take faster advantage of new product and new technology	Increase in time to market	Higher employee productivity	None of the mentioned	b	6	
1	2	Software Design consists of ?	Software Product Design	Software Engineering Design	All of the mentioned	None of the mentioned	c	6	
1	4	Service Oriented Architecture (SOA) is	Strongly Coupled	Loosely Coupled	Strongly Cohesive	Loosely Cohesive	b	6	
2	4	Which of the following are incorrect needs for component based product lines?	Less reliable components	More changeable system	More extensible system	All of the mentioned	a	6	
2	4	In concurrent Development Model, early in the project when communication activity has completed its first iteration it exits in the	awaiting changes state	under development state	done state	none state	a	6	

2	4	Real time systems are _____.	Primarily used on mainframe computers	Used for monitoring events as they occur	Used for program development	Used for real time interactive users	b	6	
2	4	Which architecture describes the various elements that support the implementation of services.	The Application Architecture	The Service Architecture	The Component Architecture	None of the mentioned	c	6	
3	4	Point out the correct statement.	Service Oriented Architecture (SOA) describes a standard method for requesting services from distributed components and managing the results	SOA provides the translation and management layer in an architecture that removes the barrier for a client obtaining desired services	With SOA, clients and components can be written in different languages and can use multiple messaging protocols	All of the mentioned	d	6	
3	4	How is SOA different from OO Architecture ?	Strong coupling among objects	Communications are prescriptive rather than being descriptive	Data is separated from a service or behavior	Data and methods are integrated into a single object	c	6	

Difficulty Level (Low-1,Medium- 2,High -3)	No. of Options(2-6)	Item Text	Option Text 1
1	4	A link is an instance of _____	Generalization
1	4	_____ are used to create new building blocks from existing blocks.	Stereotypes
1	4	How many views of the software can be represented through the Unified Modeling Language (UML)?	Four
1	4	_____ helps to communicate the overall system architecture unambiguously.	Flow charts
2	4	Which of the following UML diagrams has a static view?	Activity
2	4	Which of the following early OOD methods incorporates both a “micro development process” and a “macro development process.” ?	Booch method
2	4	Extensibility mechanism is /are	Stereotype
2	4	Associations _____	May exist only between actors and use cases
3	4	Which of the following UML diagrams represent the structural View of the software?	Class diagram
3	4	Which of the following statements is true? i) There are 5 views that are represented through the Unified Modelling Language (UML). ii) These 5 views in UML are represented through 9 UML diagrams.	Only i is true
1	2	Use-case actor is always a person having a role that different people may play	TRUE

1	4	Which among the following can be heuristic for Use case diagram	The product can be made actor
1	2	Multiple inheritance allows a class to inherit features from more than one superclass.	TRUE
1	4	Composition is a stronger form of which of the following?	Encapsulation
2	4	The root super class in diagram of generalization and specialization is considered as	Three tier class
2	4	An operation can be described as?	Object behavior
2	4	Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?	Use case diagram
2	4	Aggregation is which of the following?	Expresses a part-of relationship and is a stronger form of an association relationship.
3	4	Which of the following statement is incorrect regarding the Class-responsibility-collaborator (CRC) modeling ?	All use-case scenarios (and corresponding use-case diagrams) are organized into categories in CRC modelling
3	4	_____ & _____ diagrams of UML represent Interaction modeling.	Use Case, Sequence
1	2	Elements include in state chart diagram are	Transitions
1	4	Which of the following is not the pros of state chart	Heirarchy
1	4	_____ diagram is time-oriented?	Collaboration
1	4	When a company hires an employee this would appear as a:	Guard condition on a state diagram
2	4	which term are combined Interaction Diagram?	Sequence Diagram + Collaboration Diagram

2	4	Which of the following is not a timing Constraint in program state machine	Exestuation Time Constraint
2	4	which one of the following is achieved by developing a sequence during an object-oriented design process?	Identification of object state behaviour
2	4	Which of the following component is used to clarify which actor performs which activity in an activity diagram?	forks
3	4	Which one of the following characterizes a sequence diagram?	A call graph illustrating all possible sequences of calls method members
3	4	Identify which of the statement(s) below is/are incorrect	State machine diagram are constructed in the design phase and refined during analysis
1	4	The rules and semantics of the UML can be expressed in a form known as	Object modeling language
1	2	A class that contains business-related information and implements the analysis classes is a(n):	interface class
1	4	Single inheritance, Multiple inheritance, and Aggregation comes under _____	Modularity
1	4	Which among the following are not the valid notations for package and component diagram?	Note

2	4	Which of the following statement is false?	A note is a dog-eared box connected to any model element by a dashed line
2	4	Which of these are types of nodes used in the deployment diagram?	Device
2	4	which diagrams are used to distribute files, libraries, and tables across topology of the hardware	deployment
2	4	The architecture layer that provide the interface between the business logic and the underlying database is known as	view access layer
3	4	What are the ways in which artifacts can be deployed?	Artifact symbol can be placed within node symbol
3	4	Which of the following is incorrect in the deployment diagram?	Communication connections between nodes are shown by communication paths
1	4	Which GRASP pattern helps to find out answer for "Who should be responsible for creating a new instance of some class?"?	Adapter
1	4	Why are Patterns important?	They capture expert design knowledge
1	4	Which of the below is not a valid design pattern?	Singleton

1	4	When would you use the GOF Decorator design pattern?	to translates an existing class interface into a compatible target interface
2	4	Which of the below author is not a part of GOF (Gang of Four)?	Erich Gamma
2	4	The term "Delegation" is most closer to which of the following GRASP patterns	Expert
2	4	Which design pattern you would use to limit the class instantiation to one object?	Factory
2	4	An instructor wants to schedule an exam for which he/she wants that a notification is sent to all the registered students automatically. Which design pattern is most suitable for him.	Composite
3	4	Which design pattern suggests multiple classes through which request is passed and multiple but only relevant classes carry out operations on the request?	Singleton pattern
3	4	Which GRASP pattern answers the question "What object should have the responsibility, when you do not want to violate High Cohesion and Low Coupling, or other goals, but solutions offered by Expert are not appropriate?"	Pure Fabrication
1	4	Architecture description language represent architectural structures that can be divided into which of the following?	Static
1	4	What are the benefits for component based product lines?	Being able to take faster advantage of new product and new technology
1	2	Software Design consists of ?	Software Product Design
1	4	Service Oriented Architecture (SOA) is	Strongly Coupled
2	4	Which of the following are incorrect needs for component based product lines?	Less reliable components

2	4	In concurrent Development Model, early in the project when communication activity has completed its first iteration it exits in the	awaiting changes state
2	4	Real time systems are _____.	Primarily used on mainframe computers
2	4	Which architecture describes the various elements that support the implementation of services.	The Application Architecture
3	4	Point out the correct statement.	Service Oriented Architecture (SOA) describes a standard method for requesting services from distributed components and managing the results
3	4	How is SOA different from OO Architecture ?	Strong coupling among objects

Engineering, Warje, Pune**Master-I****UML Modeling (MCQ)**

Option Text 2	Option Text 3	Option Text 4	Correct Option	Unit No.	Explanation
Association	Dependency	Realization	b	1	
Tagged Values	Constraints	Diagrams	a	1	
Five	Six	Nine	b	1	
Designing	Templates	SRS	a	1	
State chart	Collaboration	Use case	d	1	
Rumbaugh method	Wirfs-Brock method	Coad and Yourdon method	a	1	
Tagged Values	Constraints	All of the above	d	1	
Identify the flow of data between actors and use cases	Identify interactions between actors and use cases	Identify dependencies between actors and use cases	c	1	
Object diagram	Both a. and b	None of the above	c	1	
Only ii is true	Both i and ii are true	None of them is true	c	1	
FALSE			b	2	

Never name actors with noun phrases	Name Use cases with verb phrases	All of the mentioned	c	2	
FALSE			a	2	
Inheritance	Aggregation	All of the above	c	2	
Two tier class	Base class	Top class	c	2	
Class behavior	Functions	Object & Class behaviour	d	2	
Activity diagram	Class diagram	Sequence diagram	a	2	
Expresses a part-of relationship and is a weaker form of an association relationship.	Expresses an is-a relationship and is a stronger form of an association relationship.	Expresses an is-a relationship and is a weaker form of an association relationship.	c	2	
The review leader reads the use-case deliberately	Only developers in the review (of the CRC model) are given a subset of the CRC model index cards	All of the mentioned	c	2	
Class, Object	Activity, State Chart	All of the mentioned	a	2	
Condition markers	Iteration markers	Lifeline markers	a	3	
Synchronization	Statemate	Backend	b	3	
Sequence	Activity	Deployment Diagram	b	3	
Action expression	State on a state diagram	Event on a state diagram	d	3	
Activity Diagram + State Chart Diagram	Deployment Diagram + Collaboration Diagram	Deployment Diagram + Sequence Diagram	a	3	

Processing Time Constraint	Date Rate Constraint	Inter-event Time Constraint	b	3	
Determination of attribute of a class	Determination of inheritance relationships among classes.	Responsibility assignment to classes	d	3	
joins	state	swimlanes	d	3	
A time-line illustrating a typical sequence of calls between object methods	A time-line illustrating the changes in inheritance and instantiation between classes and objects over time	A time-line illustrating inheritance relationship between classes.	b	3	
State machine diagram represent discrete behaviours of objects	A state of an object is a snapshot of the values of its properties	A protocol State machine diagram is a fine-grained refinement of the behavioural State machine with added annotations	a,d	3	
Object constraint language	Object driven language.	Object control language	d	4	
system class	control class	entity class	d	4	
Typing	Hierarchy	Interface	c	4	
Box	Extension Mechanisms	Packages	b	4	

The main way to extend UML is by constraints, properties, etc	A dependency relation holds between two entities D and I where change in I does not affect D	All of the mentioned	c	4	
Execution Environment	Artifact	Device & Execution Environment	d	4	
use case	sequence	collaboration	a	4	
Model access layer	Data access layer	Domain access layer	b	4	
The artifact symbol can appear outside the node but be attached to it by dependency arrow from the artifact	Artifact name can be listed inside the node symbol	All of the mentioned	d	4	
Communication paths are represented by dotted lines	Artifacts are deployed inside nodes where they reside and execute	None of the mentioned	b	4	
Protected Variation	Creator	Fabrication	c	5	
They make captured design accessible to both novices and other experts	All of the mentioned	None of the mentioned	c	5	
Factory	Command	Java	d	5	

to assign more functionality to an object without subclassing it	to decouple an abstraction from its implementation so that the two can vary independently	to nest layers of decorators to add more functionality	b	5	
Gang Pattern	Richard Helm	Ralph Johnson	b	5	
Creator	Low Cohesion	Controller	d	5	
Singleton	Observer	Adapter	b	5	
Observer	Decorator	Iterator	b	5	
Chain of responsibility pattern	State pattern	Bridge pattern	b	5	
Indirection	Creator	Polymorphism	a	5	
Dynamic	All of the mentioned	None of the mentioned	c	6	
Increase in time to market	Higher employee productivity	None of the mentioned	b	6	
Software Engineering Design	All of the mentioned	None of the mentioned	c	6	
Loosely Coupled	Strongly Cohesive	Loosely Cohesive	b	6	
More changeable system	More extensible system	All of the mentioned	a	6	

under development state	done state	none state	a	6	
Used for monitoring events as they occur	Used for program development	Used for real time interactive users	b	6	
The Service Architecture	The Component Architecture	None of the mentioned	c	6	
SOA provides the translation and management layer in an architecture that removes the barrier for a client obtaining desired services	With SOA, clients and components can be written in different languages and can use multiple messaging protocols	All of the mentioned	d	6	
Communications are prescriptive rather than being descriptive	Data is separated from a service or behavior	Data and methods are integrated into a single object	c	6	

1. Use case descriptions consist of interaction_____?

- a) Use case
- b) product
- c) Actor
- d) Product & Actor

Answer: d

2. Which of these statements are truly acceptable?

- a) A precondition is an assertion guaranteed to be true when the operation finishes
- b) A post-condition is an assertion guaranteed to be true when the activity or operation begins
- c) An event which causes a use case to begin is trigger
- d) None of the mentioned

Answer: c

3. What are the types of prototypes?

- a) Horizontal prototypes
- b) Vertical Prototypes
- c) All of the mentioned
- d) None of the mentioned

Answer: c

4. Diagrams which are used to distribute files, libraries, and tables across topology of hardware are called

- A. deployment diagrams
- B. use case diagrams
- C. sequence diagrams
- D. collaboration diagrams

Answer: A

5. How many views of the software can be represented through the Unified Modeling Language (UML)?

- a. Four
- b. Five
- c. Nine

d. None of the above

Answer: b. Five

6. Which of the following views represents the interaction of the user with the software but tells nothing about the internal working of the software?

- a. Use case diagram
- b. Activity diagram
- c. Class diagram
- d. All of the above

Answer: a. Use case diagram

7. What are the notations for the Use case Diagrams?

- a) Use case
- b) Actor
- c) Prototype
- d) Use case and Actor

Answer: d

8. Which among the following can be heuristic for Use case diagram?

- a) The product can be made actor
- b) Never name actors with noun phrases
- c) Name Use cases with verb phrases
- d) All of the mentioned

Answer: c

10. Which of the following statements is true?

- i. There are 5 views that are represented through the Unified Modelling Language (UML).
 - ii. These 5 views in UML are represented through 9 UML diagrams.
- a. Only i is true
 - b. Only ii is true
 - c. Both i and ii are true
 - d. None of them is true

Answer: c. Both I and ii is true

11. Use case description consists of the following...

(A) Actors

- (B) Number and Use case name
- (C) Need and stakeholder
- (D) Both a and b
- (E) All of the above

Answer (E) All of the above

12. Select the true statement from the following.

- (A) The first condition is has guaranteed to be true if the activity finishes
- (B) The next or post-condition is guaranteed to be true if the activity begins
- (C) Trigger is an event that is used to give a start to a use case to begin.
- (D) Both a and b

Answer: (C) Trigger is an event that is used to give a start to a use case to begin.

13. Select the true statement for the use case description format.

- (A) Underline text indicates to another use case
- (B) Extensions section utilize a complex numbering scheme
- (C) Indentation is used in a line to bring extensions easy to read
- (D) Both a and b
- (E) All of the above

View Answer

Answer: (E) All of the above

14. Select the interaction that the use case description has.

- (A) Product and Actor
- (B) Use case
- (C) Actor
- (D) Product

Answer: (A) Product and Actor

15. Select the methods used by the use case to write a description.

- (A) Actors in a use case are mostly stakeholders
- (B) Preconditions always be true in advance statement start
- (C) Requires a list should be checked when writing each use case
- (D) Both A and C

(E) All of the mentioned

Answer (E) All of the mentioned

16. Select the steps that are needed in use case driven iterative development?

(A) At each loop step, one or many use cases are chosen for execution

(B) Iteration must be followed till the system is properly ended

(C) Iterative development forms system work gradually through analysis, design, coding, testing, and evaluation

(D) Both a and b

(E) All of these

View Answer

Answer: (E) All of these

17. Select the true in context to extensions.

(A) The flow specifies the extensions

(B) The alternatives are known as an extension because they extend the activity flow in various direction through the branch point

(C) Both a and b

(D) All of the above

(E) None of these

18. Select the diagram that is used to model the vocabulary of a system.

(A). Object Diagram

(B). Activity Diagram

(C). Both a and b

(D). Interaction Diagram

(E). Class diagram

Answer (E). Class diagram

19. Select which one is model static data structures.

(A). Object diagrams

(B). Class diagrams

(C). Activity diagrams

(D). Interaction diagrams

(E). All of the above

Answer (B). Class diagrams

20. Select the engineering From the following _____ that is theoretically feasible but programmatically o restricted value.

- (A). class diagram
- (B). activity diagram
- (C). object diagram
- (D). interaction diagram
- (E), Both a and c

Answer (C). object diagram

21. Select where the class diagrams are not convenient

- (A). simple interactions model
- (B). the vocabulary of a system model
- (C). simple collaborations model
- (D). logical database schema model
- (E). All of the above

Answer (C). simple collaborations mode

22. Select from the following which is used to show one static frame in the dynamic storyboard.

- (A). Class diagram
- (B). Activity diagram
- (C). Object diagram
- (D). Interaction diagram

Answer (C). Object diagram

23. Select the diagrams that are used to explain data structures, and the static snapshots parts of the things place in the class diagrams.

- (A). use case
- (B). Collaboration
- (C). Object
- (D). Sequence

(E). None of these

Answer (C) Object

24. Select the view which is shown by object Object diagram.

- (A). logical
- (B). dynamic
- (C). static
- (D). process
- (E). All of these

Answer (C). static

25. Select from the following _____ has to be reverse-engineered.

- (A). visibility
- (B). relationship
- (C). target
- (D). constraints
- (E). All of these

Answer (C). target

26. Which of the following diagram is used to model the distribution of objects?

- a. Object Diagram
- b. Activity Diagram
- c. State Chart Diagram
- d. Interaction Diagram

27. _____ select from the following in which engineering and reverse engineering can be applicable

- (A). tagged values
- (B). stereotypes
- (C). class diagram
- (D). adornments
- (E). Both a and b