1. What computer-based system can have a profound effect on the design that is chosen and also the implementation approach will be applied?

a. Scenario-based elements
b. Class-based elements
**c. Behavioural elements**
d. Flow-oriented elements

2. 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

3. The Unified Modeling Language (UML) has become an effective standard for software modelling.How many different notaions does it have ?

a) Three

b) Four

c) Six

d) **Nine**

4. Which model in system modelling depicts the dynamic behaviour of the system ?

a) Context Model

**b) Behavioral Model**

c) Data Model

d) Object Model

5. Which model in system modelling depicts the static nature of the system ?

a) Behavioral Model

b) Context Model

c) Data Model

**d) Structural Model**

6. Which perspective in system modelling shows the system or data architecture.

**a) Structural perspective**

b) Behavioral perspective

c) External perspective

d) none of the above

7. Which of the following diagram is not supported by UML considering Data-driven modeling ?

a) Activity

**b) Data Flow Diagram (DFD)**

c) State Chart

d) Component

8. _____ allows us to infer that different members of classes have some common characteristics.

a) Realization

b) Aggregation

c) **Generalization**

d) dependency

9. _____ & _____ diagrams of UML represent Interaction modeling.

a**) Use Case, Sequence**

b) Class, Object

c) Activity, State Chart

d) both a & b

10. Which level of Entity Relationship Diagram (ERD) models all entities and relationships ?

a) Level 1

**b) Level 2**

c) Level 3

d) level 4

11. _____ classes are used to create the interface that the user sees and interacts with as the software is used.

a) Controller

b) Entity

c) **Boundary**

d) Business

12. Which of the following statement is incorrect regarding the Class-responsibility-collaborator (CRC) modeling ?

a) All use-case scenarios (and corresponding use-case diagrams) are organized into categories in CRC modelling

b) The review leader reads the use-case deliberately.

c) **Only developers in the review (of the CRC model) are given a subset of the CRC model index cards**

d). none of the above

13. 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**

14. 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

15. 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

16. Which of the following come under system control?

a) Reconfigure

b) Shutdown

c) Powersave

**d) All of the mentioned**

17**.** 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

18. 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**

19. Which model shows the flow of object interactions?

**a) Sequence model**

b) Subsystem model

c) Dynamic model

d) Both Sequence and Dynamic model

20. 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**

21. 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()**

22. Which of the following is a building block of UML?

a) Things

b) Relationships

c) Diagrams

**d) All of the mentioned**

23. Classes and interfaces are a part of

**a) Structural things**

b) Behavioral things

c) Grouping things

d) Annotational things

24. What is a collection of operations that specify a service of a class or component?

a) Use Case

b) Actor

c) **Interface**

d) Relationship

25. 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

26. What can be requested from any object of the class to affect behavior?

a) object

b) attribute

c) **operation**

d) instance

27. Which things are dynamic parts of UML models?

a) Structural things

**b) Behavioral things**

c) Grouping things

d) Annotational things

28. Which diagram in UML emphasizes the time-ordering of messages?

a) Activity

b) **Sequence**

c) Collaboration

d) Class

29. 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

30. Which diagram shows the configuration of run-time processing elements?

**a) Deployment diagram**

b) Component diagram

c) Node diagram

d) ER-diagram

31. Which things in UML are the explanatory parts of UML models?

a) Structural things

b) Behavioral things

c) Grouping things

**d) Annotational things**

32. 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

33. 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

34. Which of the following UML diagrams has a static view?

a) Collaboration

**b) Use case**

c) State chart

d) Activity

35. What type of core-relationship is represented by the symbol in the figure below?

software-engg-aggregation symbol

a) **Aggregation**

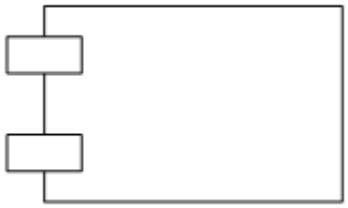
b) Dependency

c) Generalization

d) Association

36. Which core element of UML is being shown in the figure?

software-engg-component symbol



a) Node

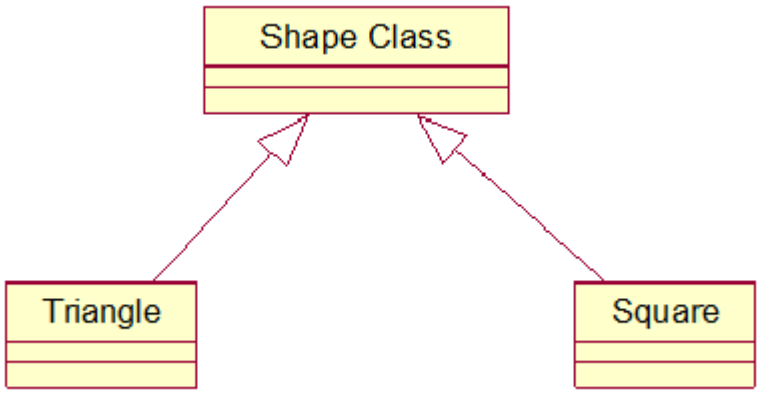
b) Interface

c) Class

d) **Component**

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

software-engg-generalization




a) Realization

b) Generalization

c) Aggregation

d) Dependency

38. 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**

39**.** 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

40. Which of the following diagram is time oriented?

a) Collaboration

b) **Sequence**

c) Activity

d) ERD

41. How many diagrams are there in Unified Modelling Language?

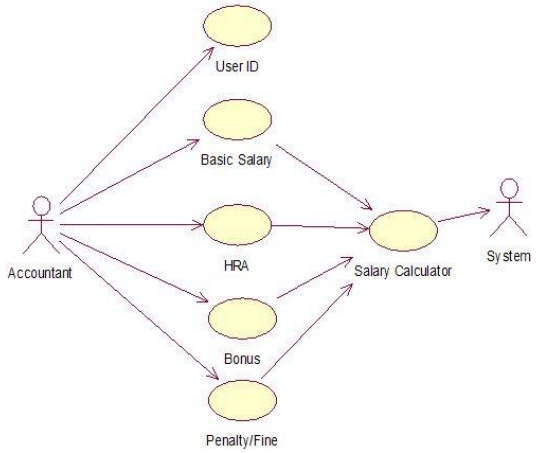
a) six

b) seven

c) eight

d) **nine**

42**.** Which UML diagram is shown below?



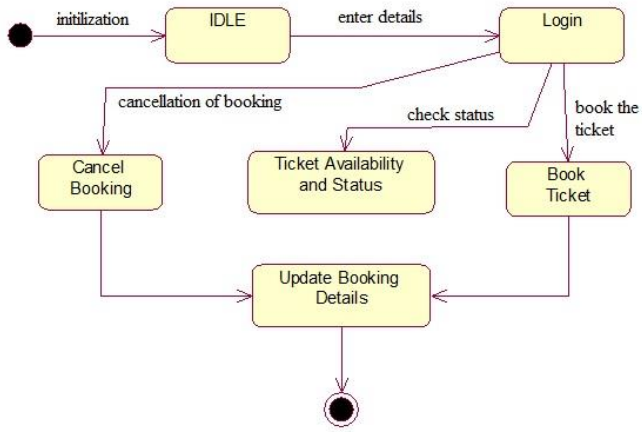

**a) Use Case**

b) Collaboration Diagram

c) Class Diagram

d) Object Diagram

43. Which UML diagram is shown below?



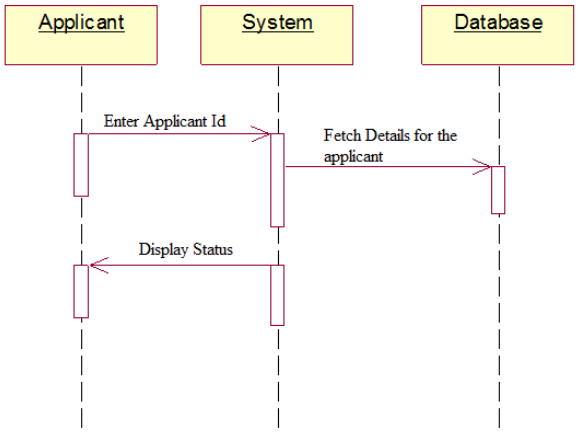

a) Use Case

**b) State Chart**

c) Activity

d) Object Diagram

44. Which UML diagram is shown below?



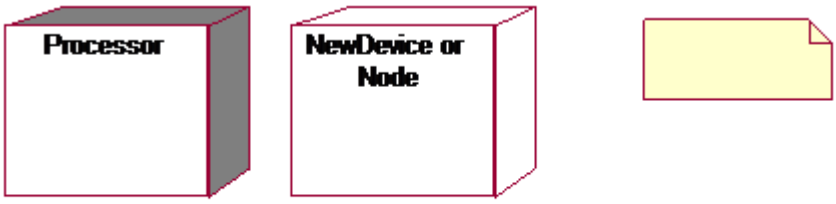

a) Use Case

b) Collaboration Diagram

**c) Sequence Diagram**

d) Object Diagram

45. Which UML diagram's symbols are shown below?



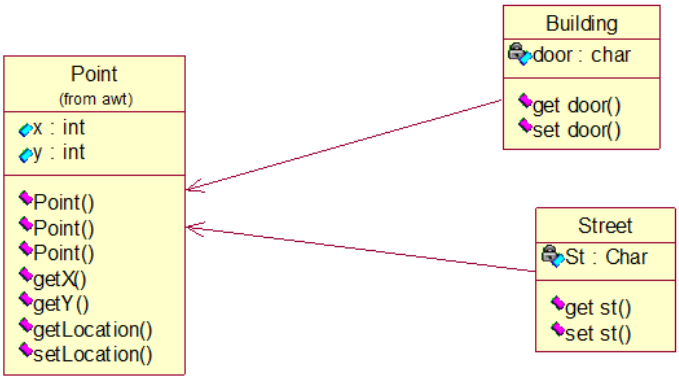

a) **Deployment diagram**

b) Collaboration Diagram

c) Component Diagram

d) Object Diagram

46. Which UML diagram is shown below?



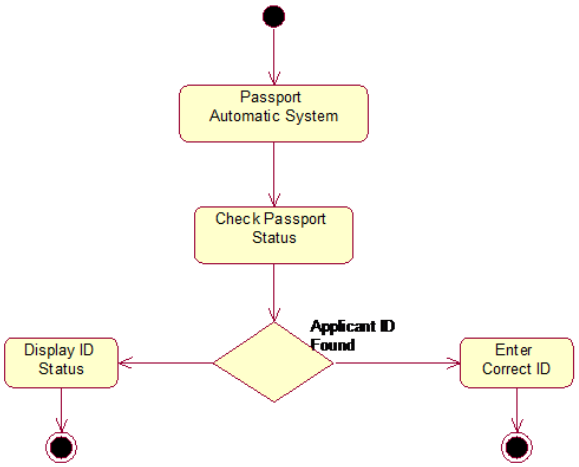

a) Deployment diagram

b) Collaboration Diagram

c) Object Diagram

**d) Class Diagram**

47. Which UML diagram is shown below?



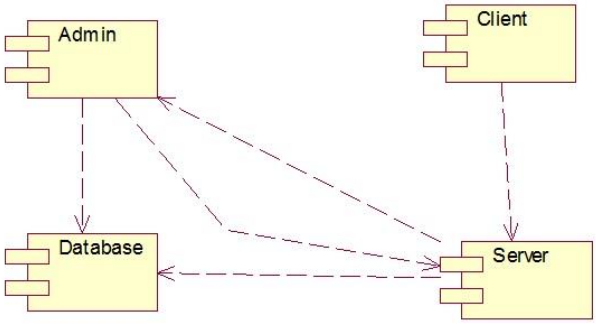

a) **Activity**

b) State chart

c) Sequence

c) Collaboration

48. Which UML diagram is shown below?




a) **Component**

b) Deployment

c) Use Case

d) DFD

49. Which of the following mechanisms is/are provided by Object Oriented Language to implement Object Oriented Model?

a) Encapsulation

b) Inheritance

c) Polymorphism

**d) All of the mentioned**

50. The UML was designed for describing _____.

a) object-oriented systems

b) architectural design

c) SRS

**d) Both object-oriented systems and Architectural design**

51. 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

52. Class diagram, component diagram, object diagram and deployment diagram are considered as types of

**a) structural diagrams**
b) behavioral diagrams
c) non-behavioral diagrams
d) non structural diagrams

53. Weak entities are represented in UML diagrams by using aggregations called

a) qualified segregation
b) non-qualified segregation
c) non-qualified aggregation
**d) qualified aggregation**

54**.** In UML diagrams, relationship between object and component parts is represented by

a) ordination
b) **aggregation**
c) segregation
d) increment

55. What does a simple name in UML Class and objects consists of ?

a) Letters

b) Digits

c) Punctuation Characters

**d) All of the mentioned**

56**.** 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**

57. 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

58. An object symbol is divided into what parts ?

a) Top compartment

b) Bottom Compartment

**c) All of the mentioned**

d) None of the mentioned

59. Activity diagram, use case diagram, collaboration diagram and sequence diagram are considered as types of

a) non-behavioral diagrams
b) non structural diagrams
c) structural diagrams
**d) behavioral diagrams**

60**.** Kind of diagrams which are used to show interactions between series of messages are classified as

a) activity diagrams
b) state chart diagrams
**c) collaboration diagrams**
d) object lifeline diagrams

61. 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

62. Dynamic aspects related to a system are shown with help of

a) sequence diagrams
**b) interaction diagrams**
c) deployment diagrams
d) use case diagrams

63. 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

64. 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

65. 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

66. 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) all of above**

67. Usecase descriptions consists of interaction among which of the following ?

a) Product

b) Usecase

c) Actor

**d) a, c**

68. What is 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

69. 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**

70. 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 super imposed 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

71. Which of the following is true about Sequence frames?

a) A sequence diagram has a frame consisting of a rectangle with a pentagon inits 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**

72**.** 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

73. Which among these are the common notations for deployment diagrams?

a) **Artifacts and nodes**

b) Stereotypes

c) Components

d) All of the mentioned

74. Which of these are types of nodes used in deployment diagram?

a) Device

b) Execution Environment

c) Artifact

**d) a,b**

75. 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**

76**.** Which among the following are not the valid notations for package and component diagram?

a) Notes

b) **Box**

c) Extension Mechanisms

d) Packages

77. Which of these depicts the true definition for the UML extensions?

a) A constraint is the 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**

78**.** What is collection of model elements called?

a) Box

b) Dependency

c) UML packages

**d) Package members**

79**.** 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**

80**.** 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

81. 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

82. 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**

83. Which model shows the flow of object interactions?

**a) Sequence model**

b) Subsystem model

c) Dynamic model

d) Both Sequence and Dynamic model

84. A data model contains

a) data object

b) attributes

c) relationships

**d) All of the mentioned**

85. Which of the following is not a diagram studied in Requirement Analysis ?

a) Use Cases

b) Entity Relationship Diagram

c) State Transition Diagram

**d) Activity Diagram**

86. The benefits of object-oriented modeling are which of the following?

a) The ability to tackle more challenging problems
b) Reusability of analysis, design, and programming results
c) Improved communication between users, analysts, etc.
d) **All of the above.**

87. 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
88. What are the notations for the Use case Diagrams ?
a) Use case
b) Actor
c) Prototype
d) **a and b**
89. Use case description contents includes ?
a) Use case name and number
b) Actors
c) Stakeholder and needs
**d) All of the mentioned**
90. 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**

. 88. **In the context of object-oriented software engineering a component contains**

a) attributes and operations b) instances of each class

c) roles for each actor (device or user) d**) set of collaborating classes**

89. **OOD languages provide a mechanism where methods performing similar tasks but vary in arguments, and that can be assigned to the same name is called**

a) Classes b) Object **c) Polymorphism** d) Encapsulation

90. **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

91. **Which of the following UML diagrams has a static view?**

a) Collaboration **b) Use case** c) State chart d) Activity

92. **In object oriented design of software, objects have?**

a) attributes and names only b) operations and names only

**c) attributes, name and operations** d) None of above

93. **Give the name to diagram that represents the flow of activities described by the use cases and at the same time the captors are involved in UML**.

a) State diagram **b) Swim lane diagram** c) Activity diagram d) Component diagram

94. **Agile Software Development is based on**

a) Incremental Development b) Iterative Development c) Waterfall Model **d) Both a and b**

95. **Class diagram, component diagram, object diagram and deployment diagram are considered as types of**

e) **structural diagrams** b) behavioral diagrams c) non-behavioral diagrams d) nonstructural diagrams

96. **Which of the following is an activity that distributes estimated effort across the planned project duration by allocating the effort to specific software engineering tasks?**

a) Software Macroscopic schedule b) **Software Project scheduling**

c) Software Detailed schedule d) None of the mentioned

97. **The use of design patterns for the development of object-oriented software has important implications for**

a) component-based software engineering b) reusability in general

**c) both a & b** d) None of the mentioned