Object Oriented Analysis and Design - Part1

Question. 1 Which statement is true?
A. The UML is a development process for software intensive systems.
B. The UML is a process-dependent language used for visualizing software artifacts.
C. The UML is a modeling language for software blueprints.
D. The UML is a visual programming language.

Question. 2 In which three ways does a structured class differ from a traditional class?
(Choose three.)
A. It clearly defines the class boundary via an encapsulation shell.
B. It brings public interfaces into the class via ports.
C. It shows the role that the class plays.
D. It defines messages between itself and other classes.

Question. 3 Which is a characteristic of a structured class?
A. must have one interface for each role it plays
B. can play only one role, no matter how many objects transact with it
C. can play multiple roles that vary on the objects that interact with it
D. is limited to one role, but can have multiple interfaces

Question. 4 Which statement is true about an iterative development process?
A. Testing and integration take place in every iteration.
B. An iteration focuses on partial completion of selected use-case realizations.
C. It encourages user feedback in later iterations.
D. It is based on functional decomposition of a system.

Question. 5 Which two statements are true about interfaces? (Choose two.)
A. The interface should have a clear purpose.
B. A single interface should include as many possible methods, if not all methods, that may be shared by
objects that implement the interface.
C. An interface should be used to restrict which methods are exposed to a client.
D. Classes may have multiple interfaces depending on the purpose of each interface it implements.

Question. 6 What is the focus of analysis?
A. translating functional requirements into code
B. translating requirements into a system design
C. translating real-world concepts into solution-oriented objects

D. translating functional requirements into software concepts

Question. 7 Why is encapsulation important? (Choose two.)
A. It describes the relationship between two subclasses.
B. It places operations and attributes in the same object.
C. It allows other objects to change private operations and attributes of an object.
D. It prevents other objects from directly changing the attributes of an object.

Question. 8 What are analysis classes?
A. early conjectures on the composition of the system that usually change over time, rarely surviving intact into Implementation
B. incomplete classes that require a programmer to formalize operation signatures and attribute types before they can be implemented
C. the classes inside a systems Business Object or Domain Model, in UML form
D. a prototype of a systems user interface, developed during the Analysis Phase, which allows users to define the systems look and feel

Question. 9 An architect looks at two classes. The first class has the following operations: getName(),getSize(),getTotal(), and findAverage(). The second class has the following operations: getName(),getSize(), findAverage(), findMinimum(), and findMaximum(). The two classes share the same superclass. Which operations are most likely contained in the superclass?
A. getName(), getSize(), and findAverage()
B. findMaximum(), findMinimum(), getSize(), and getTotal()
C. getName(), findAverage(), and findMaximum()
D. getName(), getSize(), getTotal(), and findAverage()

Question. 10 An architect is responsible for creating an Analysis Model for a system. Which area of focus is essential for the creation of this model?
A. hardware on which the system will be deployed
B. behavior of the objects that comprise the system
C. evolution of analysis classes into design classes
D. performance requirements of the system

Question. 11 What does a required interface do?
A. exposes services to anonymous requestors
B. uses the services that a classifier requires to request from anonymous providers
C. declares the services that a classifier offers to provide anonymous requestors
D. exposes methods that the requestor must use

Question. 12 In a sequence diagram, each interaction on the diagram maps to _____.
A. a choice point on a state diagram

B. the transition on a state diagram
C. a state on the diagram
D. the initial state

Question. 13 Which two questions does the use of multiplicity on relationships allow you to answer? (Choose two.)
A. Is the relationship mandatory or optional?
B. How many links can an object of one type maintain with objects of another type?
C. Is an object of a given type permitted to interact with objects of another type?
D. Is the relationship between objects permanent or temporary?

Question. 14 What are two important considerations when diagramming state? (Choose two.)
A. Any time a message is received; there may be a change of state.
B. Any time a message is received; there must be a change of state.
C. Whenever there is a change of state, there is a transition.
D. Changing state may not change transition.

Question. 15 Which statement is true about circular dependencies?
A. They do not matter.
B. They are prohibited.
C. They must be avoided.
D. When there are more than two packages, they are irrelevant.

Question. 16 What is the purpose of Architectural Analysis?
A. to detail the design of the system
B. to review the architecture of the system
C. to define a candidate architecture for the system
D. to define the layers of the architecture

Question. 17 When the interfaces between two classes have been defined from a sequence diagram, the ports are defined by the _____.
A. interface
B. operations the class performs
C. user of the system
D. attributes passed in the sequence diagram

Question. 18 Which statement is true about attributes?
A. They cannot change once the object is instantiated.
B. They change value from object to object of the same class.
C. They can only be primitives.
D. They are required for every class.

Question. 19 What are the three purposes of Analysis and Design? (Choose three.)
A. to provide an organizational context for the system
B. to transform the requirements into a design of the to-be system
C. to evolve a robust architecture for the system
D. to scope the system to be built and describe what it must do
E. to adapt the design to match the implementation environment

Question. 20 Objects that are polymorphic _____.
A. must have the same attributes
B. share all the same operations, and the operations perform the same
C. can only be implemented through interfaces
D. may have the same operation names but the operations perform differently

Question. 21 Which is a best practice for nesting structured classes?
A. should limit the nesting of structured classes to two levels per diagram
B. should display all substructured classes of a structured class in a single to show the depth of interactions
C. should be limited to one level of depth, thereby allowing the user to navigate from diagram to diagram to show the next level
D. should be determined by the architect during the design phase

Question. 22 During Architectural Analysis, a Software Architect wants to reduce the complexity of the system at work and improve its consistency. What should the Software Architect define to accomplish this?
A. coding rules
B. use-case realizations
C. analysis mechanisms
D. design mechanisms

Question. 23 Which two characteristics do all objects have? (Choose two.)
A. primitives
B. state and behavior
C. interfaces
D. a unique identity

Question. 24 Analysis classes evolve into _____. (Choose two.)
A. design classes
B. subsystems
C. use-case realizations
D. design packages
E. architecture

Question. 25 What happens when a superclass is changed?
A. All subclasses inherit the change.
B. The operations of the subclass must be changed.
C. Additional operations in the subclass that are not associated with the superclass must change.
D. Only the operations of the superclass are inherited.

Question. 26 Which two statements are true about use-case realization? (Choose two.)
A. It lists the different steps performed by a use-case.
B. It provides traceability from Analysis and Design back to requirements.
C. It is created by the System Analyst.
D. It describes the use-case in terms of collaborating objects.

Question. 27 Which state does NOT contain another state?
A. Top State
B. Composite State
C. Simple State
D. Bottom State

Question. 28 Which statement is true about grouping elements into a package?
A. Elements in a package should share a logical, common grouping.
B. Packages should contain a small number of elements to avoid confusion.
C. Packages should only be used on large projects requiring a large number of elements.
D. Packages should not contain other packages.

Question. 29 What are three architectural mechanism categories? (Choose three.)
A. analysis mechanisms
B. requirement mechanisms
C. implementation mechanisms
D. design mechanisms

Question. 30 In a sequence diagram, what can be defined by the interactions between participants in the interactions?
A. only services provided by an interface
B. only services required by an interface
C. both provided and required services for interfaces
D. the name of the interface

Question. 31 Which view focuses on the physical realization of the system?

A. Logical View
B. Implementation View
C. Process View
D. Use-Case View

Question. 32 Which statement is true about an active object?
A. It is an independent object that can communicate with other active objects asynchronously.
B. It does not contain state.
C. It is dependent on the overall system execution.
D. It is unstructured to allow the class to be manipulated easily.

Question. 33 During Use Case Analysis, what is generally allocated to control classes?
A. behavior specific to a use-case or part of a very important flow of events
B. behavior that involves the data encapsulated within the abstraction
C. behavior that involves communication with an actor
D. behavior specific to business rule enforcement or workflow

Question. 34 What are three sources for Key Abstractions identification? (Choose three.)
A. domain knowledge
B. requirements
C. design classes
D. glossary

Question. 35 What is a named object in UML?
A. Matt:Employee
B. :Employee
C. Matt::Employee
D. ::employee

Question. 36 During Use Case Analysis, an attribute should be used instead of a class when the information _____.
A. is accessed by operations that only get, set, or perform simple transformations
B. is related to entities in the Business or Domain Model
C. needs to be hidden from other parts of the Analysis Model and not shared
D. is referred to and used multiple times throughout the use-case realization

Question. 37 Which view is NOT part of the RUP 4+1 View Model?
A. Logical View
B. Distribution View
C. Use-Case View

D. Process View

Question. 38 What are two functions of visual modeling? (Choose two.)
A. produces a single model that represents all views of the system
B. improves communication and comprehension among team members
C. documents important design decisions in the code
D. documents system behavior and structure before coding the system

Question. 39 During Use Case Analysis, why are analysis mechanisms used?
A. to reduce complexity and improve consistency by providing a shorthand
representation for complex behavior
B. to simplify the task of creating use-case realizations by providing convenient
shorthand for repetitive tasks
C. to gather common tasks into one place, in order to more easily assign them to
developers for
implementation
D. to verify that designers have performed the analysis task correctly, according to
the architects recommendations

Question. 40 Which statement is true about patterns?
A. Patterns only exist at the Design level.
B. Patterns provide a common solution to a common problem.
C. Patterns only exist at the Architectural level.
D. Patterns are only used during the Elaboration Phase.

**Question. 41 During Use Case Analysis, why is it sometimes necessary to
supplement the use-case description?**
A. The description of each use-case is not always sufficient for finding analysis
classes and their objects.
B. The flow of events in the use-case is sometimes too complex to be
implemented.
C. Designers need to know which use-case flows are being developed in the
current iteration.
D. The architect may need to adjust incorrect requirements before giving them to
the designers.

**Question. 42 In Use Case Analysis, what is the purpose of the Unify Analysis
Classes step?**
A. to ensure that each analysis class represents a single well-defined concept, with
no overlapping responsibilities
B. to gather the analysis classes from each use-case realization and bring them into
the Design Model

C. to make sure the responsibilities of each class are consistent and that the class has a well-defined single purpose
D. to create initial class families by using inheritance to group related classes into tree structures

Question. 43 Which three processes are best suited for UML? (Choose three.)
A. use-case driven
B. waterfall development-based
C. iterative and incremental
D. architecture-centric
E. requirements-centric

Question. 44 Architectural layers are commonly modeled in UML using a _____.
A. package stereotyped <<Layer>>
B. subsystem stereotyped <<Layer>>
C. composite class stereotyped <<Layer>>
D. class diagram entitled Layer

Question. 45 In a state diagram, a state has two transitions. One of the transitions is an internal transition and the other is an external transition. Which state(s) can perform an exit action?
A. the internal transition only
B. the external transition only
C. neither the internal nor the external transition
D. both the internal and external transitions

Question. 46 Which two statements are true about use-case driven processes? (Choose two.)
A. Use-cases are concise, simple, and able to be understood by a wide range of stakeholders.
B. Use-cases help synchronize the content of different models.
C. Use-cases are a complete list of functional requirements.
D. Use-cases specify how the system behavior is to be implemented.

Question. 47 Which is the primary function of entity classes?
A. store and manage information in the system
B. act as a surrogate or proxy for the actors in a system
C. wrap data access calls to a systems relational database
D. marshal information between the tiers in a system

Question. 48 Which is a UML general-purpose mechanism for organizing elements into groups?
A. a class diagram

B. an activity
C. a package
D. a composite diagram

Question. 49 During Use Case Analysis, how many interaction diagrams (sequence or communication) should be drawn for each use-case?
A. enough of each type to ensure that all responsibilities of participating classes are identified and that most of the flows of events are examined
B. one for the main flow and one for each alternate flow of events in the use-case
C. one of each type for the main flow and one of each type for each alternate flow of events in the use-case
D. one of each type per use-case, with each alternate flow of events shown as an interaction occurrence

Question. 50 In Use Case Analysis, what is the function of boundary classes?
A. to insulate external forces from internal mechanisms and vice versa
B. to represent the screens in the user interface
C. to define the service interfaces exposed by the Business layer
D. to define entry points or roots into the core Object Data Model