QUIZ - 6

Module – 05

Batch ID – JEE/CGNT-M/54/01

Exam Date – 17/07/2023

**Total Marks – 20**

**Student Name: Student ID:**

1.Which of the following best describes the advantages of using software components, assuming that suitable components are available?

| **A)** | The users are more likely to get what they want. |
| --- | --- |
| **B)** | **The project is more likely to be completed in less time and at a lower cost** |
| **C)** | The software is more likely to be capable of running on different hardware platforms |

2. What is meant by the NIH syndrome?

| **A)** | **Some software developers are not inclined to trust software that was written elsewhere** |
| --- | --- |
| **B)** | Some project managers are not inclined to trust programmers who were trained elsewhere |
| **C)** | Many users are not inclined to trust software that was written elsewhere |

3. One of the following is **not** a reason why object-oriented approaches support software reuse. Which one?

| **A)** | Object-oriented development encourages the encapsulation of the internal details of components |
| --- | --- |
| **B)** | Object-oriented models are organized in a way that makes it easier to find suitable components |
| **C)** | **Object-oriented development encourages developers to share ideas with developers in other teams** |

4. Which of the following best describes composition?

| **A)** | A package of model elements |
| --- | --- |
| **B)** | A set of realizations for a single use case |
| **C)** | **A relationship between a whole and its parts** |

5. Which of the following best describes how composition differs from aggregation?

| **A)** | A part cannot be removed from a composition, whereas a part can be removed from an aggregation. |
| --- | --- |
| **B)** | **A part can belong to only one composition, whereas a part can belong to more than one aggregation.** |
| **C)** | A part that belongs to a composition cannot have associations with any other classes, whereas a part that belongs to an aggregation can have associations with other classes |

6. How does generalization increase the opportunities for software reuse?

| **A)** | **A generalization hierarchy can be extended to include new subclasses with minimal effort** |
| --- | --- |
| **B)** | Generalization aids the encapsulation of software components |
| **C)** | Generalization allows a group of software components to be treated as a single whole |

7. What does it mean to say that an operation has been redefined?

| **A)** | **The definition of the operation in a subclass overrides the superclass definition of the same operation** |
| --- | --- |
| **B)** | The definition of the operation has been changed because users have changed their minds about the requirements |
| **C)** | The method that implements the operation does not follow the original definition of the operation |

8. How do abstract and concrete classes differ from each other?

| **A)** | Abstract classes represent intangible concepts in the application domain, whereas concrete classes represent physical things |
| --- | --- |
| **B)** | Abstract classes are superclasses, whereas concrete classes are subclasses |
| **C)** | **Abstract classes have no instances, whereas concrete classes have instances** |

9. Which of the following best describes multiple inheritance?

| **A)** | Multiple inheritance occurs when a subclass is removed from one generalization hierarchy and added to another |
| --- | --- |
| **B)** | **Multiple inheritance occurs when a subclass inherits from more than one generalization hierarchy** |
| **C)** | Multiple inheritance occurs when a subclass inherits characteristics from more than one level of superclass |

10. Which of the following is the best description of a software development pattern?

| **A)** | The way that a particular software developer tends to solve problems |
| --- | --- |
| **B)** | **The core of a solution to a software development problem that occurs over and over again** |
| **C)** | A particular approach to software development, such as the object-oriented approach or the structured approach |

11. What is the role of encapsulation in reuse?

| **A)** | **Encapsulation means that it is not necessary for other developers to know how a software component works internally** |
| --- | --- |
| **B)** | Encapsulation means that software components can work more efficiently |
| **C)** | Encapsulation means that there is no need for software developers to document their work |

12. How does composition support software reuse?

| **A)** | A composite structure is capable of performing more than one task, and thus it is useful in more than one context. |
| --- | --- |
| **B)** | Composition structures are easy to extend with minimal effort |
| **C)** | **Composite structures encapsulate their sub-components, making it easy to treat the composite as a single whole** |

13.Which of the following is true?

| **A)** | Identifying what messages are passed between objects is a straightforward process. |
| --- | --- |
| **B)** | **Message passing is a metaphor used to describe object interaction** |
| **C)** | Message passing is only concerned with query operations |

**14.** Which of the following is true about boundary objects?

| **A)** | The identification and specification of boundary objects is purely a design activity |
| --- | --- |
| **B)** | The identification and specification of boundary objects is part of requirements specification |
| **C)** | **The identification and specification of boundary objects is considered in both analysis and design but in different ways.** |

**15.** Which is the correct UML definition of a collaboration?

| **A)** | A collaboration describes the messages between objects |
| --- | --- |
| **B)** | A collaboration describes objects that share functionality |
| **C)** | **A collaboration describes the structure of instances playing roles in a behavior and their relationships** |

**16.** An interaction sequence diagram drawn during analysis differs from one drawn during design which of the following ways?

| **A)** | **It normally does not include design objects or detailed specifications of message signatures** |
| --- | --- |
| **B)** | It does not include boundary objects. |
| **C)** | It does not include control objects  **17.** What is meant by the term ‘thread of control’ in the context of concurrent behaviour?   | **A)** | A thread of control is a weak part of the control system | | --- | --- | | **B)** | A thread of control is the mechanism that controls concurrent behavior | | **C)** | **A thread of control is an execution pathway that may occur simultaneously with other execution pathways** |   **18.** Which of the following is an appropriate way of managing complex behavior on an interaction sequence diagram?   | **A)** | **A group of objects can be represented by a single lifeline** | | --- | --- | | **B)** | Some messages are omitted to reduce the complexity | | **C)** | Some objects are omitted from the diagram to reduce the complexity |   **19.** Collaboration diagrams differ from interaction sequence diagrams in the following way?   | **A)** | Collaboration diagrams cannot show the design detail that can be shown on a sequence diagram | | --- | --- | | **B)** | Collaboration diagrams only show the collaboration and not the sequence in which the messages are sent | | **C)** | **Collaboration diagrams show the links between the objects** |   **20.** In a collaboration diagram one message has the sequence number 5.1.1. Which of the following sequence numbers indicates the message that must be the immediate successor?   | **A)** | A message with the sequence number 5.1.2 | | --- | --- | | **B)** | **A message with the sequence number 5.1.1.1** | | **C)** | A message with the sequence number 5.2.1 | |