

**1. The basic principles of object orientation are**

- a. Abstraction, Encapsulation, Modularity and Hierarchy
- b. Abstraction, Encapsulation, Inheritance and Polymorphism
- c. Abstraction, Encapsulation and Polymorphism
- d. None of the above

**2. UML is**

- a. A graphical modeling language
- b. A modeling language with an associated process
- c. A language providing standard notations which helps us to visualize, specify, construct and document a system
- d. A visual programming language

**3. The Use Case Diagram specifies**

- a. Functional requirements of the system
- b. Non functional requirements of the system
- c. Interaction of the system with the outside world
- d. Details of how the functionality is programmed within the system

**4. An Activity Diagram can be used to model**

- a. Flow of activities within a business workflow
- b. Algorithm applicable for an operation of a given class
- c. Functional requirements of the system
- d. All of the above

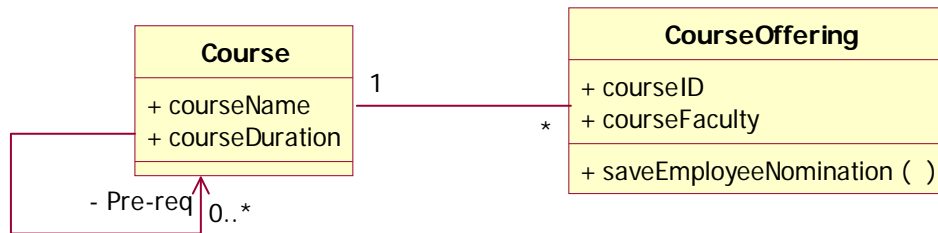
**5. A Sequence diagram**

- a. Is also known as an interaction diagram
- b. Is semantically equivalent to a collaboration diagram
- c. Captures interactions amongst objects in a time based sequence
- d. All of the above

**6. A Collaboration diagram**

- a. Is also known as a Communication diagram in UML 2.0
- b. Is similar to a sequence diagram in terms of the purpose of the diagram
- c. Provides a view of interactions or structural relationships that occur between objects and object like entities
- d. All of the above

7. Consider the following class diagram. Indicate which of the statements below are true with respect to how the diagram is to be interpreted:

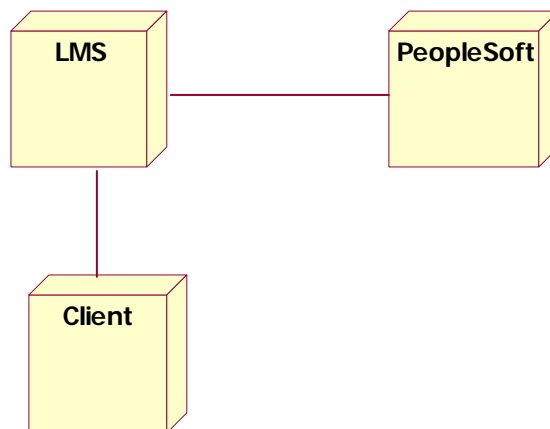


- One course can have multiple course offerings defined against the course
- A course can have any number of pre-requisites, or no pre-requisites at all
- A course offering can be defined against multiple courses
- Each course can be identified by Course ID

8. A class diagram

- Specifies classes and their relationships
- Specifies the structure of the system
- Specifies how the objects corresponding to the classes interact with each other
- Specifies the values that are associated with each of the class attributes at run time

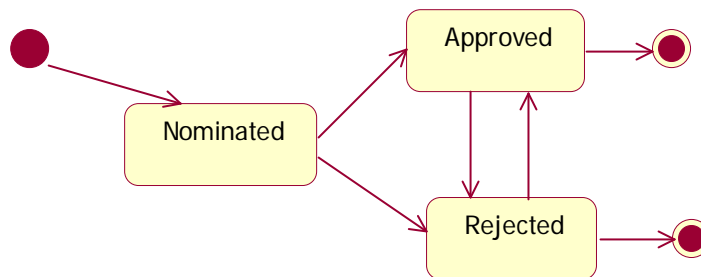
9. Indicate which of the following statements are true for the diagram given below.



- This is a component diagram
- This is a deployment diagram
- This is a collaboration diagram
- This is an object diagram

**10. A statechart diagram**

- a. Contains exactly one start state and one end state
- b. Shows states in which an object can reside in, and the transitions between states
- c. Models the static nature of the system
- d. Is closely related to an activity diagram

**11. Indicate which of the following statements are true for the diagram given below, with respect to what happens to an employee nomination:**

- a. This is an activity diagram.
- b. This is a statechart diagram.
- c. Both Approved and Rejected are end states, which is not valid for this diagram.
- d. It is possible to move from Approved to Rejected as well as vice versa in the given diagram.

**12. A component diagram**

- a. Specifies the components and relationships between them
- b. Specifies the interfaces that are realized by the components
- c. Specifies the internal details of the component in terms of the classes that make up the component
- d. Specifies the deployment of a component as part of the hardware architecture

**13. A deployment diagram**

- a. Shows the hardware architecture required by the system
- b. Is part of the deployment view of the system
- c. Shows the classes needed to achieve the system functionality
- d. All of the above

**Answer Key**

1	a
2	a,c
3	a,c
4	a,b
5	d
6	d
7	a,b
8	a,b
9	b
10	b,d
11	b,d
12	a,b
13	a,b