System Modelling MCQ

This section focuses on "System Modelling" of Software Engineering. These Multiple Choice Questions (MCQ) should be practiced to improve the Software Engineering skills required for various interviews (campus interview, walk-in interview, company interview), placements, entrance exams and other competitive examinations.

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

A. Behavioral Model

B. Context Model

C. Structural Model

D. Object Model

View Answer

Ans : A

Explanation: Behavioral models are used to describe the dynamic behavior of an executing system. This can be modeled from the perspective of the data processed by the system or by the events that stimulate responses from a system.

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

A. Structural Model

B. External Model

C. Behavioral Model

D. Data Model

View Answer

Ans : A

Explanation: Structural models show the organization and architecture of a system. These are used to define the static structure of classes in a system and their associations.

3. Which of the following perspective in system modelling shows the system or data architecture?

A. Data perspective

B. External perspective

C. Behavioral perspective

D. Structural perspective

View Answer

Ans : D

Explanation: Structural perspective is used to define the static structure of classes in a system and their associations.

4. The UML supports event-based modeling using _____ diagrams.

A. Deployment

B. Collaboration

C. State chart

D. All of the above

View Answer

Ans : C

Explanation: State diagrams show system states and events that cause transitions from one state to another.

5. Which of the following is true?

A. Activity diagrams are used to model the processing of data.

B. Model-driven engineering is just a theoretical concept.

C. Model-driven engineering cannot be converted into a working/executable code.

D. All of the above

View Answer

Ans : A

Explanation: Activity diagrams are used to model the processing of data is true statement.

6. 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

View Answer

Ans : B

Explanation: DFDs focus on system functions and do not recognize system objects.

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

A. 1

B. 2

C. 3

D. 4

View Answer

Ans : B

Explanation: Level 1 ERD models all data objects (entities) and their "connections" to one another while Level 3 ERD models all entities, relationships, and the attributes that provide further depth.

8. Which of the following is false?

A. A data object can encapsulates processes and operation as well.

B. One creates Behavioral models of a system when you are discussing and designing the system architecture.

C. Both A and B

D. None of the above

View Answer

Ans : C

Explanation: Both option A And B are False statement.

9. Which diagram of UML represent Interaction modeling?

A. Use Case

B. Sequence

C. State Chart

D. Both A and B

View Answer

Ans : D

Explanation: Use case modeling is mostly used to model interactions between a system and external actors.Sequence diagrams are used to model interactions between system components, although external agents may also be included.

10. 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. All of the above

View Answer

Ans : C

Explanation: All participants in the review (of the CRC model) are given a subset of the CRC model index cards.