

below:

List I	List II
A. Class diagram	i. Graph of actors, use cases enclosed by system boundary
B. Use case diagram	ii. Shows the static structure of the model
C. Activity diagram	iii. Shows interaction arranged in a time sequence
D. Sequence diagram	iv. Provides a view of flows and what is going on inside a use case

[K4]

- a) A-iii, B-i, C-iv, D-ii b) A-ii, B-i, C-iv, D-iii
c) A-iv, B-i, C-ii, D-iii d) A-i, B-iii, C-iv, D-ii

5. The user playing a role with respect to the system is called as _____. [K1]

- a) Actor b) Model
c) Associate d) Class

6. _____ represents a physical or conceptual connection between two or more objects. [K2]

- a) Persistence b) Dynamic binding
c) Pattern d) Association

7. Assertion (A): Classes are an important mechanism for classifying objects. [K4]

Reason (R): Chief role of a class is to define attributes, methods, and applicability of its instances.

- a) both A and R are individually true and R is the correct explanation of A b) both A and R are individually true but R is not the correct explanation of A
c) A is true but R is false d) A is false but R is true

8. UML stands for _____. [K1]

- a) Unified Machine Language b) Universal Model Language
c) Unified Modeling Language d) Universal Main Language

9. Match list I with list II and select the correct answer using the codes given [K4]

below:

List I	List II
A. Syntax error	i. Detected as the program is running
B. Run time error	ii. Occur when code does not perform the way you intended
C. Logic error	iii. Process of finding out where something went wrong and correcting the code to eliminate errors
D. Debugging	iv. Result from incorrectly constructed code

- a) A-ii, B-i, C-iv, D-iii b) A-ii, B-iv, C-i, D-iii
c) A-iv, B-i, C-ii, D-iii d) A-iii, B-i, C-iv, D-ii

10. The process of quantifying the usability test with some measurable attributes of the test such as functionality, cost or ease of use is called as _____. [K2]
- a) User satisfaction testing b) Branch testing
c) Path testing d) Loop Testing

PART B (10 x 2 = 20 Marks)

11. List the benefits of object oriented systems development. [K4]
12. Distinguish between verification and validation. [K2]
13. Identify the attributes of a vehicle object. [K3]
14. Draw a state chart diagram for a coffee vending machine. [K3]
15. What is an anti pattern? [K1]
16. Define use case. [K1]
17. Why is modeling necessary for a software system? [K5]
18. List the ways to put users in control while using an user interface. [K2]
19. What is OCL? [K1]
20. Outline the purpose of usability testing. [K2]

PART C (6 x 5 = 30 Marks)

21. Examine how class hierarchy and inheritance supports reusability. [K4]
22. Compare patterns and frameworks. [K2]

23. Explain the CRC approach of identifying classes. [K1]
24. Develop a user interface for an online course registration system. Propose any two guidelines for designing the interface. [K6]
25. Discuss the guidelines for developing effective documentation. [K2]
26. Explain the process and guidelines of creating a test plan. [K2]

PART D (4 x 10 = 40 Marks)

27. Face book is an online social networking service. After registering to use the site, users can create a user profile, add other users as "friends", exchange messages, post status updates and photos, share videos and receive notifications when others update their profiles. Additionally, users may join common-interest user groups, organized by workplace, school or college, or other characteristics, and categorize their friends into lists such as "People from Work" or "Close Friends". [K6]
- (i) Design a use case diagram for the above description. (5)
- (ii) Design an activity diagram for the face book user registration process. (5)
28. Explain the design axioms and corollaries that can be applied during software development. [K2]
29. Explain the processes and components of unified approach with a neat sketch. [K2]
30. What is an object oriented database management system? Examine how the object-relational mapping can be achieved. [K4]
