

(Please write your Exam Roll No.)

Exam Roll No

Bharati Vidyapeeth's
Institute of Computer Applications and Management
A-4, Paschim Vihar, New Delhi-63

MCA- SECOND SEMESTER, Model Test Paper - I

Paper Code: MCA – 104

Subject: Object Oriented Software Engineering

Time: 3 Hours

Maximum Marks: 75

Note: Attempt FIVE questions in all. Question No. 1 is compulsory. Choose 1 from Question from each unit.

| | | | |
|----|--|--|---------------|
| 1. | Answer all the following questions briefly:- | | 2.5 x 10 = 25 |
| | (a) | Contrast primary and secondary actors with suitable example? | 2.5 |
| | (b) | Elaborate the various types of relationships? | 2.5 |
| | (c) | Explain the importance of UML? | 2.5 |
| | (d) | Define an object, "Customer" with all its possible attributes, operations and visibility? | 2.5 |
| | (e) | Discuss the concept of Active Class with suitable example? | 2.5 |
| | (f) | Describe the importance of Project Management and Control in system development? | 2.5 |
| | (g) | List the outcomes of the project inception phase? | 2.5 |
| | (h) | Contrast the include and extends relationship through an appropriate example? | 2.5 |
| | (i) | Elaborate the concept of swimlanes and their importance? | 2.5 |
| | (j) | Compare black box and white box testing? | 2.5 |
| | UNIT – I | | |
| 2. | (a) | You have to deliver a system for client query management. Would you prefer to use the traditional or the object-oriented life-cycle model, make a suitable comparison? | 6 |
| | (b) | Justify the statement, "System development is model building"? | 6.5 |
| 3. | (a) | Elaborate with a suitable example the 4+1 view architecture of the UML? | 6 |
| | (b) | Contrast aggregation with composition through a suitable example? | 6.5 |
| | UNIT - II | | |
| 4. | (a) | Describe the different functions of a customer in a mobile banking system through a use case diagram? | 6 |
| | (b) | Describe the importance of Project Management in the Unified Process? | 6.5 |

| | | | |
|-------------------|-----|---|-----|
| 5. | (a) | Explain the various unified process in terms of the varied models generated? | 6 |
| | (b) | An online customer can browse or search items, view specific item, add it to shopping cart, view and update shopping cart, do checkout. User can view shopping cart at any time. Draw an activity diagram to depict the above scenario? | 6.5 |
| UNIT - III | | | |
| 6. | (a) | Illustrate the observer design pattern with a suitable example? | 6 |
| | (b) | Draw the states that a door goes through during its lifetime. The door can be in one of three states: "Opened", "Closed" or "Locked". It can respond to the events Open, Close, Lock and Unlock. Notice that not all events are valid in all states; for example, if a door is opened, you cannot lock it until you close it. Demonstrate this through a state diagram. | 6.5 |
| 7. | (a) | Illustrate the singleton design pattern with a suitable example? | 6 |
| | (b) | Design package diagram for "Track Order" scenario for an online shopping store. Track Order module is responsible for providing tracking information for the products ordered by customers. Customer types in the tracking serial number, Track Order modules refers the system and updates the current shipping status to the customer. | 6.5 |
| UNIT – IV | | | |
| 8. | (a) | How would you estimate the measurements for monitoring error, faults and failures? | 6 |
| | (b) | Explain the roles of the scrum master and the scrum team? | 6.5 |
| 9. | (a) | Contrast alpha and beta testing with suitable examples? | 6 |
| | (b) | Explain the pair programming in terms of agility through a suitable example? | 6.5 |