No. of Printed Pages : 3

BICSE-010

B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

00522

June, 2015

BICSE-010 : DATA MODELLING AND UML

Time : 3 hours *Maximum Marks : 70*

Note : *Answer any* ***seven*** *questions. Assume suitable missing data, if any.*

1. (a) Distinguish between the terms modelling and methodology.

(b) Dynamic model describes the behavioural aspect of system. Explain. *2×5=10*

2. Design a class diagram to illustrate ATM system. *10*

3. (a) What is qualification in class diagram ? Explain with the help of an example.

(b) Describe aggregation with the help of an example. *2×5=10*

4. (a) Differentiate between sequence diagram and state chart diagram.

(b) Differentiate between state and event. *2×5=10*

5. What are the different components of a state diagram ? Draw a state diagram for a "flight reservation system". *10*

6. (a) Explain in brief association in class diagram.

   (b) Distinguish between aggregation and generalization. *2×5=10*

7. (a) Explain in brief the application domain in object oriented modelling.

   (b) Describe abstract class with proper example. *2×5=10*

8. What are the different notations used in use case diagram ? Draw a use case diagram for an on-line shopping system. *10*

9. What is functional model ? Draw a second level DFD for the following scenario : *10*

   Bebop Record is a mail-order company that distributes CDs and tapes at discount price to record-club members. When an order processing clerk receives an order form, he or she verifies that the sender is a club member by checking the member file. If the sender is not a member, the clerk returns the order along with a membership application form. If the customer is a member, the clerk verifies the order item data by checking the item file. Then the clerk enters the order data and saves it to the daily order file. The clerk also prints an invoice and shipping list for each order, which are forwarded to order fulfilment.

10. Write short notes on any ***two*** of the following : *5+5=10*

(a) Multiplicity

(b) Prototyping

(c) Relationship supported by UML