

DCSVI  
Term-End Examination  
December, 2013

**BICSE-005 : OBJECT MODELING AND DESIGN**

Time : 2 hours

Maximum Marks : 70

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*Note : Attempt any five questions. Question No.1 is compulsory. All questions carry equal marks.*

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1. (a) Which UML diagram models object state ?
- (i) Sequence diagram 7x2=14
  - (ii) State Machine diagram
  - (iii) Class diagram
  - (iv) None of above
- (b) A dialogue box is an example of :
- (i) Interface diagram
  - (ii) Entity class
  - (iii) Control class
  - (iv) None of above
- (c) The student class in an enrollment system would be an example of :
- (i) Interface class
  - (ii) Control class
  - (iii) Entity class
  - (iv) None of above
- (d) Constraints can be represented in a UML by :
- (i) [text string]
  - (ii) {text string}
  - (iii) Notes
  - (iv) Constraints

- (e) Which diagram depicts the life cycle of a single object ?
- (i) State
  - (ii) Component
  - (iii) Sequence
  - (iv) Communication
- (f) Interface classes are a means through which the attributes will interface with the instances of an entity. (True/False)
- (g) Persistence classes read and write to a database. (True/False)
2. Explain the conceptual model of UML. Explain its modeling classification in detail. Also. **14**
3. (a) Why there is a need of Interaction diagram ? Explain with the help of diagram. **7**
- (b) Define use case diagram. Explain with suitable example. **7**
4. (a) What is object-oriented modelling ? When object-oriented modelling is useful ? **7**
- (b) What do you mean by activity diagram ? Explain with an example. **7**
5. (a) Explain the following concepts from class diagram with the help of suitable example : **7**
- (i) Forward Engineering
  - (ii) Controller class
- (b) Draw a small class diagram with two classes STUDENT and COURSE with relation student enroll for courses. **7**

6. (a) Explain the significance of time signal with diagram. 7  
(b) Compare and contrast state machines and protocol state machine. 7
7. (a) Describe deployment diagram and draw deployment diagram for a Banking System. 7  
(b) Describe the package diagram and decides which class will go in same package. 7
8. Write short notes on the following **any four** :  
(a) Software Development life cycle. **3.5x4=14**  
(b) State chart diagram  
(c) Interface  
(d) Tagged value  
(e) Class and object diagram  
(f) Processes and threads
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