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**DCSVI**

**Term-End Examination**

**June, 2012**

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

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** *Attempt five questions, Question No 1 is mandatory.*

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1. (a) Which diagram will represent the physical relationship between software components and the hardware in the delivered system. **7x2=14**
- (i) Component diagram
  - (ii) Deployment diagram
  - (iii) Class diagram
  - (iv) Network diagram
- (b) State True/False (T/F)
- UML interfaces can be used to specify required services for type of objects.
- (c) State T/F
- The stereotype {frozen} indicates that the UML element cannot be changed.
- (d) State T/F
- When ( ) and after ( ) are valid events in a state diagram.

- (e) State T/F  
Knowing UML means one can handle object oriented analysis and design.
- (f) Constraints can be represented in UML by :
- (i) [text string]
  - (ii) {text string}
  - (iii) notes
  - (iv) constraint
- (g) Which is not a valid relationship in Use Case Diagram ?
- (i) include
  - (ii) extract
  - (iii) extend
  - (iv) generalization

2. Explain the conceptual model of UML and its modeling classification. 14
3. (a) Class diagrams are used for structural modelling. Justify the statement with an example. 7x2=14
- (b) Differentiate between abstract class and interface. Also represent them with the help of a class diagrams
4. (a) Explain the concept of object diagrams with example. 7x2=14
- (b) Explain multiplicity concept of class diagram with example.

5. (a) Explain interaction diagram and its classification with diagram.  $7 \times 2 = 14$
- (b) Draw an activity diagram for student admission process in an university.
6. (a) What is a super state in state machine diagram ? Explain with example.  $7 \times 2 = 14$
- (b) Explain the significance of time signal with diagram.
7. (a) Explain deployment diagram with example.
- (b) Describe the principles of package diagram that decides which class will go in same package.  $7 \times 2 = 14$
8. Write short notes on the following : (*any 4*)  $3\frac{1}{2} \times 4 = 14$
- (a) Importance of modelling
- (b) Tagged value
- (c) Package Diagram
- (d) Level of use case
- (e) History Pseudostate
- (f) SDLC
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