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Total No. of Pages : 02

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M.Tech.(CSE Engg.) (E-I) (Sem.–2)

OBJECT ORIENTED ANALYSIS AND DESIGN USING UML

Subject Code : CS-512

M.Code : 35413

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. **Attempt any FIVE questions out of EIGHT questions.**
2. **Each question carries TWENTY marks.**

1. a) What is a state diagram? Discuss the representation of states, events, transitions and conditions in a state diagram.

   b) Describe the principles of object-oriented modeling. Differentiate between Static Modeling and Dynamic Modeling.

2. a) Discuss the role of various UML views in architecture of a software system.

   b) How synchronous messages with/without priority call back mechanism are organized in UML? Explain with suitable example.

3. Differentiate between following with the help of suitable examples:

   a) Collaboration and Sequence

   b) Component diagram and Composite structure diagram

4. a) List and discuss common modeling mechanisms in basic structural modeling.

   b) Discuss the significance of Time and Change events in UML modeling with suitable example.

5. a) What do you mean by transition in a state machine? How guard condition effects the transitions?

   b) Explain modeling a Client/Server system using deployment diagram.

6. Discuss the importance of UML in various phases of a software development lifecycle with suitable example.

7. a) How attributes and operations are organized in a class?

   b) Explain various approaches used to model serialization of access to the critical object.

8. Write short notes on the following :

   a) Abstractions and Instances

   b) Use case diagram

   c) Objects and object classes

   d) Association Relationships

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.