

17630

15162

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data, if necessary.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
- (6) Preferably solve questions in order.

Marks

- 1. Attempt any FIVE of the following: 20**
- a) Write the importance of modeling.
- b) Define object and class. State how they are different and give suitable example of each.
- c) Draw sequence diagram for student registration system.
- d) Draw and explain notations used for object diagram.
- e) Draw activity diagram for online restaurant system for place order.
- f) What is the concept of component diagram and notations.

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- 2. Attempt any FOUR of the following:** **16**
- a) Give any four principles of modeling.
 - b) What is meaning of:
 - (i) attributes
 - (ii) link attributes with reference to class and object.
 - c) State the importance of use case diagram.
 - d) What is behavioral modeling.
 - e) Describe the concept of concurrent sub-state with respect to state diagram.
 - f) Explain <<include>> and <<extend>> dependencies used in use case diagrams.
- 3. Attempt any TWO of the following:** **16**
- a) What is object orientation? Explain object oriented themes:
 - (i) Abstraction
 - (ii) Encapsulation
 - (iii) Combining data
 - b) Draw use case diagram for railway ticket counter (use railway ticket counter, booking clerk).
 - c) Draw activity and state diagrams for online railway reservation system.
- 4. Attempt any FOUR of the following:** **16**
- a) List and classify various UML diagrams.
 - b) Differentiate between aggregation and association.
 - c) Explain synchronous and asynchronous messages with diagram.
 - d) Draw activity diagram with swimlane for online purchase order.
 - e) What is meant by architectural modeling.
 - f) Draw and explain notations used in activity diagram.

- 5. Attempt any FOUR of the following:** **16**
- a) Explain Rumbaugh OMT in detail.
 - b) Define multiplicity and qualification with appropriate example.
 - c) Explain with diagram create and destroy messages.
 - d) Explain forking and joining with diagram.
 - e) Explain concepts of interface and ports.
 - f) What are constraints? How they are applied?
- 6. Attempt any FOUR of the following:** **16**
- a) Describe rational unified software development life cycle with its all phases.
 - b) Explain generalization and inheritance.
 - c) Draw sequence diagram for ATM session.
 - d) Enlist various notation in state diagram. Explain state.
 - e) Sketch component diagram for order processing.
 - f) Explain decision making and branching in activity diagram.
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