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## **IT-7002-CBGS**

### **B.E. VII Semester**

Examination, December 2020

## **Choice Based Grading System (CBGS)**

### **Object-Oriented Analysis and Design**

*Time : Three Hours*

*Maximum Marks : 70*

**Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the need for Object-Oriented approach.  
b) Explain the term generalization and aggregation with suitable examples.
2. a) Explain the role of Abstraction, Inheritance, Multiple Inheritance and Encapsulation with suitable example and sketch.  
b) What do you mean by object-oriented system development life-cycle? Also explain the main advantages of object-oriented development.
3. a) Define the term "Design". Discuss the objectives of design and elaborate why design is so difficult.  
b) Explain the following:
  - i) Design Algorithm
  - ii) Design Optimization
  - iii) Object representation
  - iv) Physical packaging

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4. a) Draw a use case diagram for a vending machine and a sequence diagram to dispense an item from machine.  
b) Compare Object-oriented programming language C++ and JAVA.
5. a) What is the Unified Process Model? Explain the iterations, outcomes and workflow in the Unified Process Model with neat diagram.  
b) Write the goal of an activity diagram. Draw activity diagram for Library Management System.
6. a) Discuss the qualities of Object-Oriented techniques.  
b) What is the Collaboration diagram, explain its symbols used in Railway Reservation System in detail.
7. a) Explain the importance of unified modeling language.  
b) Explain Implementation of control in Object-oriented Design, using suitable example.
8. a) What do you mean by relational database? Also differentiate it with object-oriented database with example.  
b) Describe the following:
  - i) Chart diagram
  - ii) Activity diagram

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