



**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY  
RAMAPURAM CAMPUS, CHENNAI-89  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**18CSC202J-OBJECT ORIENTED DESIGN AND PROGRAMMING**

**QUESTION BANK**

**UNIT 1**

**Refer PART – A & 12 Marks Questions from “18CS202J-OODP Question bank All Units” (File)**

**PART- B (4 Marks)**

1. Compare and contrast abstract classes and interfaces
2. How can we prevent a class from instantiation?
3. Construct Use-case diagram for an Online Shopping Application
4. With the help of a neat sketch, explain the Object Oriented Software Development Life cycle model.
5. List out the difference between procedure oriented programming & Object oriented programming. (CLA1-L1)
6. Write syntax of class, objects and methods and explain with example. (CLA1-L1)
7. Differentiate public and private functions with an example. (CLA1-L2)
8. Give example for static keyword and explain. (CLA1-L2)
9. Write a C++ program to generate factorial of a number using class (CLA1-L3)
10. Write an example program to demonstrate type conversions and explain.(CLA1-L3)
11. List the features of OOPS and explain. (CLA1-L1)
12. Write the drawbacks in procedural oriented programming. (CLA1-L1)
13. Differentiate class and objects with example. (CLA1-L2)
14. Give an example for pointer and explain. (CLA1-L2)
15. Write a C++ program to generate Fibonacci series using class (CLA1-L3)
16. Write an example program to demonstrate casting (CLA1-L3)
17. Illustrate the relationship used in Use case.
18. What is UML? List out the UML Diagrams
19. Compare Include and Extend use case relationships.
20. When to use class diagram?
21. Explain the terms: Polymorphism and Encapsulation
22. Consider a Banking System. Identify three entities in the system which can be represented using classes and show the relationship between them using UML class diagrams

23. Explain how objects are passed as function parameters with a suitable example.
24. What is a constructor? What are its uses?
25. Draw the Use Case diagram of online railway ticket reservation system

### **PART C (12 Marks)**

#### **Answer the Questions Briefly:-**

**Refer PART – A & 12 Marks Questions from “18CS202J-OODP Question bank All Units” (File)**

1. Write the problem statement for Library Management system. Design UML Class diagram and explain its components (CLA1-L3)
2. What is UML? Explain its components with suitable example (CLA1-L1)
3. There are 50 computers available in computer programming lab where each computers are used six hours per day. Write a C++ program using classes and objects that contain getDetail() for getting input from user, calculateSecondperDay() for calculating the usage of each computer in seconds per day, calculateMinutesperWeek() for calculating the usage of each computer in minutes per week, calculateHourperMonth() for calculating usage of each computer in hour per month and calculateDayperYear() for calculating usage of each computer in day per year (CLA1-L3)
4. Give example for cast? Explain OOPS features with suitable example.(CLA1-L2)
5. Write the problem statement for Railway Reservation System. Design UML Class diagram and explain its components (CLA1-L3)
6. Explain in detail about constructor and demonstrate with an example (CLA1-L1)
7. Design UML Class diagram for ATM system and write C++ code for each class. (CLA1-L3)
8. Compare local and global variable and demonstrate classes and objects with real time example (CLA2-L2)
9. Create three classes with names Shape, Rectangle and Circle and make use of the functions getData(), printdata(), and area(). To find the area of circle and rectangle, which type of inheritance is suitable? Why? Explain?
10. A Library lends books and magazines to member, who is registered in the system. It also maintains the purchase of new books and magazines for the Library. A member can reserve a book or magazine that is not currently available in the library, so that when it is returned or purchased by the library, that person is notified. The library can easily create, replace and delete information about the books, members, and reservation in the system. The books transactions are stored in the database. The fine list while the member returns the book after the due date must be

generated. Design the use case diagram and discover the users and actors of this system, and the interactions between them must be depicted.

11. Design and illustrate the use case model for activities involved in ordering food in a restaurant from the point when the customer enters a restaurant to the point when he leaves the restaurant.

12. Explain the benefits and concepts of use case and use case model and analyze the relating use cases have in ATM system

13. Describe a suitable example showing the various relationships used in Use Case and also give a short note on each relationship.

14. List the Various UML diagrams and explain the purpose of each diagram

15. By considering the Library management system, perform the object oriented System Development and give the use case model for the same (use include, extend and generalization)

16. A University conducts examinations and the results are announced. Prepare a report for the following:

- Print the marks in the register number order semester wise for each department
- Print the Arrear list semester wise.
- Prepare a Rank list for each department.
- Prepare the final aggregate mark list for final year students.

Identify the problem statement and Design and Explain the classes for each sequence. Design the Use case case & Class diagram

17. Analyze and design for Library Information System which comprises the following notations and explain them. (i)Aggregation (ii) Composition (iii) Association.

18. Design the Class diagram for Hospital management system?

19. With a suitable example explain how to design a class. Give all possible representation in a class (such as: name, attribute, visibility, methods, and responsibilities).

20. Draw Use case Diagram for online Pizza ordering system