**ST. JOSEPH’S COLLEGE (AUTONOMOUS), BENGALURU -27**

**BCA–VI SEMESTER**

**SEMESTER EXAMINATION: APRIL 2023**

**(Examination conducted in May 2023)**

**CA 6218 – OBJECT ORIENTED AND DESIGN UNIFIED**

**MODELING LANGUAGE**

**(For current batch students only)**

**Time: 2 ½ Hours Max Marks: 70**

**This paper contains TWO printed page and THREE parts**

**PART-A**

Answer **ALL** the following questions: (2 x 10 =20)

1. What is Object-Oriented Analysis and Design?
2. Differentiate between message and method.
3. What is incremental testing?
4. Draw a Class diagram to implement an Online Order System.
5. Define static model and dynamic model.
6. List the primary goals in the design of UML?
7. Write a note on Association and Cardinality
8. What is a class diagram
9. Differentiate between Private and Protected class visibility.
10. State the main activities in design process?

**PART-B**

Answer any **FIVE** of the following: (6 x 5 = 30)

1. Summarize the following with an example:
   1. Aggregation b. Composition c. Generalization
2. Discuss the broader classification of inheritance.
3. Identify the benefits and risks of Object-Oriented Development.
4. List the various types of methods a class can provide.
5. Briefly explain the process of designing view layer classes.
6. Mention the steps in the macro development process. Explain.
7. What is prototyping? Explain the 4 types of prototyping.

**PART-C**

Answer any **TWO** of the following: (10 x 2 = 20)

1. a. Explain the structure of a complex system.

b. Illustrate state transition diagram for an ATM machine. (5+5)

1. What is a use case diagram? Draw a use case diagram for a book publication system.
2. a. Mention the common operations of an object. Explain it with an employee class.

b. Explain the role of participation of an object in a link for the leave management system. (5+5)