

3RD SEM./AI & ML./CS & E/ IT/ 2024(W)
TH4 OBJECT ORIENTED METHODOLOGY

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Define Encapsulation.
 - b. What is the output of the following program

```
class A
{
    public static void main(String args[])
    {
        System.out.println(10+20+"Java");
    }
}
```
 - c. What is Interface in Java? Write the syntax to create an interface.
 - d. How "public" access specifier different from "default" access specifier?
 - e. Write the importance of final keyword in Java.
 - f. Give at least two benefits of inheritance.
 - g. What do you mean by widening typecasting in OOM. Give one Example.
 - h. Write the functions of JVM.
 - i. What do you mean by platform independency in Java?
 - j. What is the use of super keyword in Java?
2. Answer **Any Six** Questions 5 x 6
 - a. Why main() in java is public, static and void not simply void main()?
 - b. Can we overload constructor? Justify your answer with example.
 - c. How do we declare a static data member? How it differs from non static data member?
 - d. What is String class. Give three examples of in-built methods of String class with their syntax.
 - e. How to declare and initialize a 1-D array in java? Describe it with an example.
 - f. Define Stream. Explain the types of Stream.
 - g. What is polymorphism? Distinguish between Static and dynamic polymorphism.

Answer **Any Three Questions**
3. Briefly describe the basic characteristics of Object Oriented Methodology. 10
4. Define Inheritance. Explain the types of inheritance with example. 2+8
5. What do you mean by a package? Create a package named student and import the package in a program. 2+8
6. Write a program to create a class named Account. Create two objects of Account class holding acc_no, acc_holder_name, bank_name as instance variable and two methods such as input() and display() to initialize and display the members. 10
7. Write short notes on : 2.5 x 4
 - a) Constructor, b) Finally statement, c) Exception handling, d) String Buffer class.