

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY- GURAJADA VIZIANAGARAM**

## II B. Tech I Semester Supplementary Examinations, November – 2024

# OBJECT ORIENTED PROGRAMMING WITH JAVA

**(COMMON TO CSE(AIML), AIML, AIDS, AI, DS, CSE(AIDS))**

**Time: 3 hours****Max. Marks: 70**

***Answer any FIVE Questions  
ONE Question from Each unit  
All Questions Carry Equal Marks  
\*\*\*\*\****

- |   |  |     |
|---|--|-----|
| 1 | a) List and explain various operators with examples in Java?   | [7] |
|   | b) Write a Java Program that accepts U (initial velocity) and A (Acceleration) and displays the distance with Time intervals i.e. T=1, 2, 3 ....n. Use the formula $S=UT + \frac{1}{2} AT^2$ | [7] |
|   | <b>(OR)</b>  |     |
| 2 | a) Describe a Java program to use Bit-wise operators.  | [7] |
|   | b) Explain any three Control Statements in Java with example programs.   | [7] |
| 3 | a) Write a program to display the student's name, roll no and age of a student using class and object concept.   | [7] |
|   | b) Explain about Overloading Methods, Overloading Constructors with an example program.  | [7] |
|   | <b>(OR)</b>  |     |
| 4 | a) What is recursion? Write a recursive program in Java to find nth Fibonacci number.  | [7] |
|   | b) Explain the different methods supported in Object class with example.   | [7] |
| 5 | a) Define an array and write its syntax. Write a Java program to print the prime numbers between 1-100 and stored into an array?   | [7] |
|   | b) What is an interface? And what are the rules to create an interface in java with example.   | [7] |
|   | <b>(OR)</b>  |     |
| 6 | a) Explain the advantages of inheritance. And explain how constructors are called in inheritance hierarchy.  | [7] |
|   | b) Write a Java program to implement the addition of two matrixes.   | [7] |
| 7 | a) Recognize how can wrapper class be organized in java with an example?   | [7] |
|   | b) How packages are used to resolve naming conflicts in Java? With an example show to add classes to packages and how to import packages in classes.   | [7] |

**(OR)**

- 8     a) Write a Java program to create a user defined Exception. [7]  
      b) What is exception? Explain the syntax of try block and catch block with an example. [7]
- 9     a) How to declare and initialize string in Java and also explain the different string handling functions with suitable examples? [7]  
      b) With an example, demonstrate the concept of thread synchronization. [7]

**(OR)**

- 10    a) What is meant by multi-threading? What are the 2 ways of creating a thread? Which is the best way and why? [7]  
      b) What is JDBC? List out JDBC components and explain creation of JDBC application [7]

\*\*\*\*\*