



**ABES Engineering College, Ghaziabad**  
**Department of Computer Science**

**Session: 2023-24**

**Semester: 4<sup>th</sup>**

**Section: A, B, C, D**

**Course Code: BCS 403**

**Course Name: Object Oriented Programming with Java**

**Assignment 1**

**Date of Assignment: 12.04.2024**

**Date of submission: 22.04.2024**

| S.No. | Question   | KL, CO  |
|-------|--|---------|
| 1     | Explain the Memory storages available with JVM.  | K2, CO1 |
| 2     | Explain the difference between JVM, JRE, and JDK.  | K2, CO1 |
| 3     | Explain the difference between instance and local variables.   | K2, CO1 |
| 4.    | How is the creation of a String using new() is different from that of a literal?   | K2, CO1 |
| 5.    | <p>Write a Java program to print the contents of a two-dimensional Boolean array where t represents true and f represents false.</p> <p>Sample array:<br/>array = {{true, false, true},<br/>          {false, true, false}};</p> <p><i>Expected Output :</i><br/>t f t<br/>f t f</p> | K3, CO1 |

|    |  |         |
|----|--|---------|
| 6  | <p>Write a Java program that finds numbers greater than the average of an array.</p> <p><i>Expected Output:</i></p> <p>Original Array:<br/>[1, 4, 17, 7, 25, 3, 100]</p> <p>The average of the said array is: 22.0</p> <p>The numbers in the said array that are greater than the average are:</p> <p>25<br/>100</p> | K3, CO1 |
| 7  | Write a Java program to create a class called "Person" with a name and age attribute. Create two instances of the "Person" class, set their attributes using the constructor, and print their name and age.  | K3, CO1 |
| 8  | Write a Java program to create a class called "Restaurant" with attributes for menu items, prices, and ratings, and methods to add and remove items, and to calculate average rating.  | K3, CO1 |
| 9  | Why is the main method static in Java?   | K3, CO1 |
| 10 | Explain the difference between compile time and run time polymorphism.   | K2, CO1 |