

Con. 2874-10.**AN-9820****(3 Hours)****[Total Marks : 100****N. B. : (1) Question No. 1 is compulsory.****(2) Solve any four questions from 2 to 7.**

1. (a) Explain the working of JVM. Also explain how java is architectural neutral. 10
(b) Explain data types in Java. Also explain the role of wrapper class. 10
2. (a) Write a java program to find factorial of a given number. The number will be provided by user at run time. 10
(b) Create a class employee with data members empid, empname, designation and salary. Write methods get employee () – To Take user input, show Grade () – to display grade of employee based on salary. Show employee () to display emp details. 10
3. (a) Write a program to find out number of upper case, lower case, blank spaces, number of digits from the string. 10
(b) Write a program to accept five integers from user and arrange in ascending order. 10
4. (a) What types of Inheritance provided by java explain with proper example ? Also discuss about inability of multiple inheritance in java and the alternative way to achieve it. 10
(b) Explain the difference between abstract class, interface and final class. Write a abstract class program to calculate area of circle, rectangle and triangle. 10
5. (a) Explain the difference between single threaded application and multithreaded application ? What is the benefit of multithreading ? Explain how java provided multithreading. 10
(b) What is package? How it is useful demonstrate with example ? 10
6. (a) Explain the exception handling feature of java with any suitable example. 10
(b) What is java applet? Write a java applet to display "Hello java". Also write the relation between applet and HTML. 10
7. Short notes on any four :— 20
 - (a) Difference between C++ & Java
 - (b) System.arraycopy () method
 - (c) Static members
 - (d) Access specifiers
 - (e) Thread synchronization.