



R20 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 3P4EF

B.Tech IV Semester Regular Examinations, July 2022

**Object Oriented Programming through Java
(CSE)**

Maximum Marks: 70

Date: 02.08.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Differentiate overriding and overloading.
- 2 Write syntax for abstract and concrete class in java.
- 3 Relate class and interface.
- 4 How to serialize object in java?
- 5 When InterruptedException and FileNotFoundException to be raised?
- 6 List down the features of multithreading in java.
- 7 Examine the classes which implements Set interface.
- 8 Define Framework.
- 9 Compare AWT (Abstract Windowing Toolkit) and Swing.
- 10 What is an event?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 A. What are the features of object-oriented programming? (5)
B. Explain four access specifiers with syntax used in Java (5)
- OR
- 12 Write a java code to show shape as parent class and circle, rectangle, square as derived classes. Calculate area of each shape. (10)
 - 13 Develop a Java application to calculate student's mark grade (Above 90- A, 80 to 90- B, 70- 80- C, 60-70- D, 50-60- E, below 50 -U). (10)
- OR
- 14 Write a Java code to do payroll calculation where gross pay= basic pay + allowances, Net pay is the difference between gross pay-(Deductions+TDS). (10)

- 15 A. Differentiate Exception and Error. (4)
B. Justify the use of try and catch with suitable examples. (6)
OR
- 16 Write a java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is odd, second thread computes the square of the number and prints. If the value is even, the third thread will print the value of cube of the number. (10)
- 17 Write a program to show the operations (insertion, deletion) of LinkedList with Java code. (10)
OR
- 18 A. List down Collection Classes. (2)
B. Demonstrate the working of hash table using Java. (8)
- 19 A. Discuss about the layers of MVC (Model View Controller) architecture. (5)
B. Justify the use of BorderLayout Class with an Example. (5)
OR
- 20 Write a Java program that handles all mouse events and shows the event name at the left of the window when a mouse event is fired. (10)