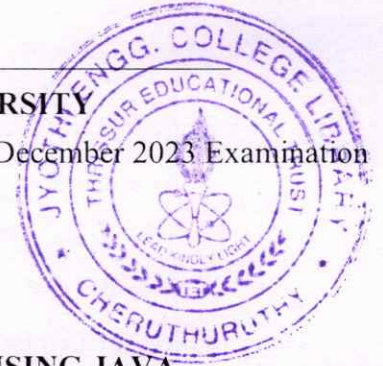


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S3 (S,FE)/S1 (PT)(S) June 2024 (2019 Scheme)/S3 (WP)(R) December 2023 Examination

**Course Code: CST205****Course Name: OBJECT ORIENTED PROGRAMMING USING JAVA**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions. Each question carries 3 marks*

Marks

- | | | |
|----|---|-----|
| 1 | Why java is said to be platform independent? | (3) |
| 2 | Explain any three OOP concepts. | (3) |
| 3 | What is a parameterized constructor? Is it possible to create an object for a class A using A obj = new A (), if the class contains only parameterized constructor? Justify | (3) |
| 4 | State the uses of super keyword? | (3) |
| 5 | Present an outline of Java's checked exceptions defined in java. lang. | (3) |
| 6 | What is the need for thread synchronization? How it can be implemented? | (3) |
| 7 | Differentiate between interface and abstract class? | (3) |
| 8 | What is an event? Explain any three event classes? | (3) |
| 9 | Outline the use of setSize(), setVisible() and setTitle() methods when working with frame windows with their signature | (3) |
| 10 | Discuss the advantages of Swing over AWT. | (3) |

PART B*Answer any one full question from each module. Each question carries 14 marks***Module 1**

- | | | |
|----|---|-----|
| 11 | (a) Represent a Library management system using a use case diagram | (6) |
| | (b) Name the four integer types in Java and outline the bitwise operators that can be applied to the integer types. | (8) |
| 12 | (a) Explain any six buzzwords using which java can be characterized. | (6) |
| | (b) Draw the class diagram of a movie reservation system. | (8) |

Module 2

- 13 (a) Differentiate method overloading and method overriding with the help of examples (7)
(b) Write a java program to find the sum of two complex numbers. Use suitable constructors and methods. (7)
- 14 (a) Write a java program to find the product of two matrices? (7)
(b) Define Constructor? State its properties. Explain its uses with examples. (7)

Module 3

- 15 (a) Explain the use of try, catch, throw, throws and finally in detail? (7)
(b) Write a Java program to read a string from a file and store it in another file (7)
- 16 (a) Write a java program that catches NegativeException. This is caused when a negative number is entered by user? (6)
(b) What are the steps involved in creating a user defined package with example? (8)

Module 4

- 17 (a) Explain List and Collections interfaces. Mention the exceptions thrown by its methods. (6)
(b) Write a program to count the total no. of chars, words, lines, alphabets, digits, white spaces in a given string (8)
- 18 (a) What is meant by event delegation model? (6)
(b) Write a program that creates two threads. First thread prints the numbers from 1 to 100 and the other thread prints the numbers from 100 to 1. Execute the two threads in parallel (8)

Module 5

- 19 (a) What are the steps followed to establish a connection with JDBC driver and a JAVA application (7)
(b) Write a Swing program to create a mini calculator. (7)
- 20 (a) List and explain different types of Layout managers with suitable examples. (7)
(b) Write a java GUI Program to calculate the factorial of a number. (7)