Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Third Semester B.Tech (minor) Degree Examination December 2020

Course Code: ITT281
Course Name: JAVA PROGRAMMING

Max. Marks: 100   Duration: 3 Hours

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

1	Define the term 'Encapsulation' in java.	(3)
2	List out different data types in java.	(3)
3	What is meant by super class and sub class?	(3)
4	Identify the method of String class to find the length of a string.	(3)
5	Define Stack Trace Elements.	(3)
6	What is meant by byte streams?	(3)
7	State the use of bounded types in Java.	(3)
8	Explain the concept of generic programming in Java	(3)
9	What is an event handler?	(3)
10	List six different components in swing.	(3)

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

Module 1

11(a) How did the overloading concept is implemented in Java? Illustrate with an example. (10)

11(b) Define Java virtual machine. (4)

12(a) Write a java program to implement the following concepts. (10)

    i.   Pass by value

    ii.   Pass by reference

12(b) Write a program to illustrate the uses of static methods and variables. (4)

Module 2

13(a) Develop a java program to create an abstract class named GeometricalShape that contains two integers and an empty method named area(). Provide three classes named ShapeRectangle, ShapeTriangle and ShapeCircle such that (9)

each one of the classes extends the class Shape. Each one of the classes contain only the method area( ) that prints the area of the given shape.

13(b) Illustrate final method with an example. (5)

14(a) Develop a Java program to read and print employee's data using inheritance (9)

Class employee: name, dob, address, phone, gender

Class employee_salary (inherits from employee): basicpay, travel allowance, house rent allowance.

14(b) What is meant by interfaces in Java? Illustrate with an example. (5)

Module 3

15(a) Write a program to handle the following exceptions. (9)

    i.   Division by zero exception

    ii.   Illegal array location exception

15(b) Describe the mechanism of throwing and catching exceptions. (5)

16(a) Read a list of numbers and write all positive numbers to posistive.txt and write negative numbers to negative.txt (10)

16(b) State the use of finally with an example. (4)

Module 4

17(a) Write a Java program to implement Inter-thread communication. (8)

17(b) State thread life cycle. (6)

18(a) Illustrate the use of Generic classes and methods with an example. (8)

18(b) What is meant by synchronizing threads? (6)

Module 5

19 Write a java AWT based java program to display even numbers in a list up to a limit entered using TextField. The event handling as well as code for clearing components must be provided. (14)

20 Develop a calculator application using Swing (14)

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