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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
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 New Delhi-110062

ODD SEMESTER EXAMINATION 2024

Paper Name: Java Programming

Paper Code: BTCSE 504 / BTCSE 504 (Lateral) / BTCSEAI 504

TIME: 2.5 HRS

MAXIMUM MARKS: 60

Note: Do not write anything on question paper except Roll No. Use of mobile phone is not allowed.
 Please follow proper numbering while answering the questions.

SECTION A

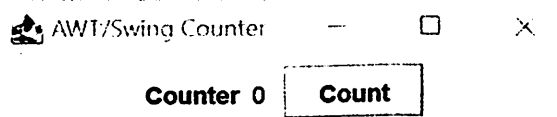
All questions in this section are compulsory (4*5=20)

S.NO.	QUESTIONS	MARKS	CO	BL
Q1.	Explain the signature of main method in Java – “public static void main(String[] args)”.	5	CO1	L2
Q2.	What do you understand by Streams in Java? What is the significance of <i>BufferedReader</i> ?	5	CO2	L4
Q3.	Write a Java program to print the following pattern: 1 2 1 2 3 2 1 2 3 4 3 2 1 2 3 4	5	CO3	L3
Q4.	Illustrate the difference between <i>break</i> and <i>continue</i> keywords using suitable example.	5	CO2	L2

SECTION B

Answer any 4 questions out of 6 (4*10=40)

S.NO.	QUESTIONS	MARKS	CO	BL
Q1.	What is Bytecode, JRE and JDK? Explain JVM architecture.	10	CO1	L1
Q2.	a. Which pillar of Object-Oriented Programming is supported by <i>extends</i> and <i>super</i> keywords? Explain with example. b. Write a Java program to create an Interface <i>Shape</i> with <i>calculateArea()</i> method. Create two classes <i>Rectangle</i> and <i>Circle</i> that implement the <i>Shape</i> interface. Create one more class containing <i>main</i> method that prints the area of both <i>Rectangle</i> and <i>Circle</i> .	10	CO2	L3
Q3.	Write a Java program to copy contents of one file into another file.	10	CO2	L5

Q4.	a. Explain Multithreading in Java. What are the two ways of creating a Thread? b. Write a Java program to demonstrate the concept of Thread Priority.	10	CO4	L4
Q5.	a. What is an Exception in Java? What are its types? Define all the five keywords used in Java to achieve Exception Handling. b. Write a simple Java program to throw "ArithmeticException" and "ArrayIndexOutOfBoundsException".	10	CO3	L2
Q6.	Consider a simple User Interface consisting of a textfield and a button named 'Count' as shown in figure below. Everytime you click on the button 'Count', the integer value in the textfield increases by 1. Initialize the textfield value to zero. Write a Java program using AWT or Swing to create this interactive user window. 	10	CO5	L3

BLOOMS TAXANOMY LEVELS (BL)

1-REMEMBERING, 2-UNDERSTANDING, 3-APPLYING, 4-ANALYSING, 5-EVALUATING, 6-CREATING