VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Continuous Assessment Test – II

Programme Name & Branch: B.Tech (CSE)

Course Name & Code: CSE1007 & Java Programming

Class Number: VL 2020210504076 **Slot: C1+ TC1** **Exam Duration: 60 Mins**

Maximum Marks: 30

General instruction(s):

printed material may be permitted

Answer ALL Questions (3 * 10 = 30 Marks)		
S.No.	**Question**	**Course Outcome (CO)**
1. (a)	Write a Java program that takes two numbers and string as command line arguments and prints the reverse of the sub-string of the string specified by two numbers. The program should handle all possible exceptions that may arise due to bad inputs. For example, in the command line argument, if a user types Java Substring Cookie 1 4 The output should be 'ikoo'.	CO
1(b)	VIT Professors are allowed to enter CAT mark and QUIZ mark for students. Professors can enter only CAT mark is between 0 and 100 and Quiz mark is between 0 and 10. Write a Java program that receives the CAT mark and QUIZ mark from Professor. If the marks fail to satisfy the criteria, then handle the exceptions separately for CAT mark and QUIZ mark.	CO

2. (a)	Write a Java program using threads to compute the first 15 natural numbers, and to compute the first 50 Fibonacci numbers. Set the priority of thread that computes Fibonacci number to 9 and the other to 5. After calculating 30 Fibonacci numbers, make that thread to sleep and take up natural number computation. After computing the 15 natural numbers continue the Fibonacci number computing.	CO
2(b)	Mother prepares chapati for her kids. Mother makes chapati and stacks it up in a vessel, and kids eats from it. The max capacity of the vessel is 10. If chapati in the vessel is empty, kids wait for mother to prepare new chapati. Write a Java program to illustrate the given scenario using multithreading.	CO
3.(a)	Write a Java program to create a class Student with Registration number, name, CGPA and Proctor Name as its data members. Store the state of objects of this class in a file. Write another class that reads the objects of the Student class from the file. For each object of the class stored in the file, check the CGPA of the student. • If the CGPA of a student exceeds 90, then categorize the student grade is "A". • If the CGPA of a student is between 70 and 90, then categorize the student grade is "B". • If the CGPA of a student is between 50 and 70, then categorize the student grade is "C".	CO
3. (b)	(i)Create a map to store book-Id and cost with five sample values with keys associated with it, like (B1, 100), (B2, 200), (B3, 300), (B4, 400) and (B5, 500). Remove the third Key and Value pair from the Map, also update the cost of B4 value as 800. Traverse through the Map elements using lambda expression to display all the map's key and value pairs. (7) (ii) Write a Java program using Lambda expressions for addition of	CO

	three numbers. (3)	