

SDM College of Engineering & Technology, Dharwad – 2  
Department of Computer Science & Engineering

**Internal Assessment-II**

**Semester & Division:** IV [A & B]

**Date:** 17/05/2024

**Course Code & Title:** 22UCSC401 & Object-Oriented Programming

**Time:** 09:30 – 10:30 AM

**Max. Marks:** 20

**Course Instructors:** Prof. Indira Umarji. & Govind Negalur

**Note:** Answer any one question from Q.No.1 & Q.No.2; Q.No.3 is **COMPULSORY**.

**Q.No.1.**

- a) Explain the use of parameterized types in Java. Also explain the various ways in which bounds can be enforced on parameterized types. [2+3=5M, CO4]
- b) Write a Java program that uses thread to display odd and even numbers from 1 to 100. The program should create two threads, each thread printing odd and even numbers. The program must ensure that when one thread is printing numbers, the other thread must wait. [5M, CO3]

**Q.No.2.**

- a) Illustrate the two ways to display elements of Iterable interface in Java. [3+2=5M, CO4]
- b) Write a Java program that uses generic sort method to sort elements of any reference type. [5M, CO4]

**Q.No.3.**

- a) Discuss two ways to create threads in Java. [3+2=5M, CO3]
- b) Postgraduate program of the CSE department can accommodate a maximum of 15 students. Each PG student in the department is identified by Roll No., USN, Name and Semester. Using appropriate Collection class, write a Java Program to simulate the following scenarios: [1+1+1+2=5M, CO4]
- On request, the capacity was increased from 15 to 20
  - Only 3 students enroll for the course
  - Two students bearing Roll No.s 2 and 3 voluntarily unroll from the program
  - After a month, two students get enrolled to the program
  - Print the information of all the students currently enrolled in the program

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*15/05/2024*