**VR20**

Reg. No:

*Time: 3 hours*                                                    *Max. Marks: 70*
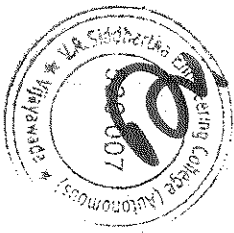
*Part-A is compulsory*

*Answer One Question from each Unit of Part - B*

*Answer to any single question or its part shall be written at one place only*

### PART-A

10 x 1 = 10M

1.  a.  Define data abstraction.                                    (CO1 K1)

    b.  What is the use of anonymous inner class?                   (CO1 K1)

    c.  Differentiate class, abstract class and interface.         (CO2 K1)

    d.  List string manipulation functions of Java String class.   (CO2 K2)

    e.  How to assign priorities to threads?                       (CO3 K1)

    f.  How many catch blocks and finally blocks can we use with try blocks?
        Why?                                                       (CO3 K1)

    g.  Differentiate between error and exception.                 (CO3 K1)

    h.  Explain different methods in Set class?                    (CO4 K2)

    i.  Write about different versions of reduce() methods in Stream class?
                                                                   (CO4 K1)

    j.  Why we use Set interface?                                  (CO4 K2)

## PART-B

4 x 15 = 60M

### UNIT-I

2. a. Demonstrate constructor overloading concept in java.

(CO1 K3) 8M

   b. What are the primitive data types in Java? Write about type conversions? (CO1 K2) 7M

(or)

3. a. Make a comparison of procedural programming paradigm with object oriented programming paradigm. (CO1 K3) 8M

   b. Explain the use of 'static' and 'final' keywords. (CO1 K2) 7M

### UNIT-II

4. a. Differentiate between interface and abstract class. (CO2 K1) 8M

   b. Discuss the various levels of access protection for packages and their implications. (CO2 K4) 7M

(or)

5. a. Write a short note on String Tokenizer. (CO2 K4) 8M

   b. What is meant by dynamic method dispatch? Explain with a program. (CO2 K2) 7M

### UNIT-III

6. a. How to handle multiple catch blocks for a nested try block? Explain with an example. (CO3 K3) 8M

   b. Describe how to create a thread with an example. (CO3 K3) 7M

(or)

7. a. What are the uses of 'throw' and 'throws' clauses for exception handling? (CO3 K1) 8M

   b. What is the need of thread synchronization? What is the Java support for this? (CO3 K1) 7M

### UNIT-IV

8. a. Explain the benefits of the Java collections framework. (CO4 K3) 8M

   b. What is a vector? How does it differ from array, list? (CO4 K2) 7M

(or)

9. a. What is difference between ArrayList and LinkedList in collection framework? Explain. (CO4 K2) 8M

   b. Discuss collection classes and collection interfaces with examples. (CO4 K2) 7M

* * *