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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Seventh Semester, B.E. - Computer Science and Engineering

Semester End Examination; Jan. / Feb. - 2021

Object Oriented Programming with JAVA

Time: 3 hrs

Max. Marks: 100

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

- 1 a. Differentiate between object oriented programming and procedure oriented programming. 10
- b. Explain the characteristics of object oriented programming. 10
- 2 a. Write a simple Java program and explain the process of compiling and running the Java Program. 10
- b. Explain the tokens present in Java. 10

UNIT - II

- 3 a. Explain method overloading with suitable example programs. 10
- b. What is a constructor? Explain the different types of constructors with example. 10
- 4 a. Explain the procedure of passing arguments by value and reference with example program. 10
- b. Explain class modifiers in Java. 10

UNIT - III

- 5 a. Explain multi-level inheritance with an example Java program. 10
- b. Explain the role of following keywords:
i) *this* ii) *super* 10
- 6 a. Write a Java program that implements a multi-threading that has three threads. First thread generates a random integer, second thread computes the square of number and prints, and third thread computes the cube of number and prints. 12
- b. Explain different thread states. 8

UNIT - IV

- 7 a. Explain exception handling and write a Java program to read two integers *a* and *b*. Compute a/b and prints when *b* is not zero. Raise an exception when *b* is equal to zero. 12
- b. Explain the significance of finally block in Java with suitable example. 8
- 8 a. Explain any five string manipulation functions supported in Java with suitable example. 10
- b. Write a Java program to check if a string is palindrome or not. 10

UNIT - V

- 9 a. What are Java generics? Explain the advantages and disadvantages associated with generic programming in Java. 10
- b. Explain generic method overloading with a suitable example. 10
- 10 a. Explain the different stages in life cycle of an Applet. 10
- b. Write Java Applet program to display Moving text or context. 10