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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

Semester End Examination; Dec. - 2019

JAVA and J2EE

Time: 3 hrs   *Max. Marks: 100*

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

UNIT - I

1a.	List and explain important characteristics of Java.	10
b.	Explain the three object oriented programming principles.	6
c.	Explain the use of super keyword with an example.	4
2 a.	Define dynamic method dispatch. Also write Java program to illustrate dynamic method dispatch.	8
b.	Explain different type of constructors with example.	6
c.	Explain try and catch block with example program.	6

UNIT - II

3 a. Write short notes on any four of the following:

   i) Byte stream   ii) Input stream   iii) Output stream   20

   iv) Character stream   v) File input stream   vi) Print stream

4 a.	Define Generics. Explain a generic class with two type parameter with an example.	10
b.	Write Java code to implement a simple form of procedure consumer problem.	10

UNIT - III

5 a.	Explain life cycle of an Applet.	8
b.	Develop an applet that receives five numerical values as input from the user and displays the average of five numbers.	6
c.	Write and explain the syntax of Applet tag.	6
6 a.	Define delegation event model. Describe the role of sources, listeners and events in event handling mechanism.	10
b.	List the interface defined in collection framework and explain any three interfaces with their methods.	10

UNIT - IV

7 a.	Explain how a J2EE component can interact with the database? Also explain different types of JDBC drivers.	10
b.	Create a employee database and write Java program to establish connection with student database and to retrieve all the rows and columns from the EMPLOYEE data base	10
8 a.	Explain life cycle of Servlet.	10

b. Write HTML form that accepts an email address and call a Java Servlet on click of submit button. Also write Java Servlet code for reading the email address sent by HTML form. | 10

UNIT - V

9 a. List and describe the different types of JSP tags. | 10

b. Explain server side and client side of remote object invocation. | 10

10 a. Explain the two EJB interfaces with a neat diagram. | 10

b. Write HTML document that collects a number from client and to call a JSP to display 1 if the number is even or 0 to display if the number is odd . | 10

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