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

(An Autonomous Institution affiliated to VTU, Belgaum)

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

**Semester End Examination; Dec - 2016/Jan - 2017**

**Java and J2EE**

*Time: 3 hrs*

*Max. Marks: 100*

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

### UNIT - I

- 1 a. Define JDK. What are the different tools available in JDK? With neat labeled diagram explain how they interact with each other? 6
- b. Explain the characteristics of Java. 8
- c. Explain the method overloading and method overriding with suitable example. 6
- 2 a. With example, explain the labeled break and labeled continue statements. 6
- b. Illustrate the use of following keywords with examples for each; 7
- (i) super (ii) final.
- c. Write a Java program to create a try block, that is to generate 3-different types of exceptions and then incorporate necessary catch blocks to catch and handle exceptions. 7

### UNIT - II

- 3 a. Describe the role of synchronization in threads. Demonstrate the program using synchronized methods. 8
- b. Define delegation event model. Describe the roles of sources, listeners and events in event handling mechanism. 6
- c. Write a Java program to show the status of key board key (excluding special keys) in the status window and which echoes keystrokes to the applet window. 6
- 4 a. Explain the lifecycle of applets. 6
- b. With syntax explain HTML applet tag. 6
- c. Write a HTML document to pass 3-numerical values to a applet and also write an applet to receive those 3 values and display the largest among them. 8

### UNIT - III

- 5 a. Define swing. Discuss the features of string. List the components of the swing. Write a seeking application program to display a window. 11
- b. With syntax explain the following : 9
- i) JScollpane (ii) JComboBox (iii) JTabbedPane.
- 6 a. Describe the working of JDBC. List and explain the different types of JDBC drivers. 10

- b. Write a program to, 10  
(i) To read the Resultset                      (ii) To delete the row in the Resultset.

**UNIT - IV**

- 7 a. Define servlet. Explain the lifecycle of the servlet. 6  
b. List and write the description of core classes provided in Javax.Servlet package. 3  
c. List out the differences between CGI and servlet. 4  
d. Define session. Write Java code to illustrate how session tracking is handled in Java with servlets? 7
- 8 a. Define cookie. Write a JSP to read cookies. 6  
b. Describe the different types of JSP tags with example. 6  
c. Write an XHTML document that collects a number from client and calls a JSP to display the largest digit of given number on screen. 8

**UNIT - V**

- 9 a. Using Java mail API, Write programs to read an e-mail and to delete an e-mail. 10  
b. Define RMI. Write server side and client side programs to simulate a RMI. 10
- 10 a. Explain the EJB interface and environment with the help of a block diagram. 10  
b. Define Entity Java Bean. With skeleton explain an Entity Java Bean. 10

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