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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

**Semester End Examination; May/June - 2018**

**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. | Describe the characteristics of Java.                                                                      | 8  |
|      | b. Write a Java program to find the largest element in an array of elements using for-each loop construct. | 6  |
|      | c. Distinguish between interface and class.                                                                | 6  |
| 2 a. | Define package. With sample code explain the concept of package.                                           | 10 |
|      | b. With an example, explain the structure of a simple Java program.                                        | 6  |
|      | c. Explain the concept of auto boxing in Java.                                                             | 4  |

### UNIT - II

- |      |                                                                                            |   |
|------|--------------------------------------------------------------------------------------------|---|
| 3 a. | Define the role of synchronization. Write an example program using synchronized methods.   | 8 |
|      | b. Explain the significance of isAlive() and join() methods in Java thread implementation. | 8 |
|      | c. Explain generic interfaces.                                                             | 4 |
| 4 a. | Explain any six methods of URLConnection class.                                            | 6 |
|      | b. Discuss how InetAddress class is used to handle IPV4 and IPV6 in Java.                  | 8 |
|      | c. Write a note on TCP/IP server socket.                                                   | 6 |

### UNIT - III

- |      |                                                                                                 |    |
|------|-------------------------------------------------------------------------------------------------|----|
| 5 a. | Explain the delegation event model mechanism for handling events.                               | 10 |
|      | b. Write a Java program to demonstrate virtual key codes for handling key board events.         | 10 |
| 6 a. | Explain the collection interface and any six methods, defined by collection.                    | 10 |
|      | b. Illustrate get_DocumentBase() and get_Codebase() methods in Applets with Java code snippets. | 10 |

### UNIT - IV

- |      |                                                                                                                                                                                                                  |    |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 7 a. | Describe the working of JDBC. List and explain the different types of JDBC drivers.                                                                                                                              | 10 |
|      | b. Define Servlet. Explain the life cycle of Servlet.                                                                                                                                                            | 10 |
| 8 a. | Distinguish between CGI and Servlets.                                                                                                                                                                            | 5  |
|      | b. Write a program to read a data from the ResultSet.                                                                                                                                                            | 5  |
|      | c. Write an HTML document that has a form. Form contains a list of 6 department name, and a submit button. On submission of HTML document call a Servlet. Write a Servlet that displays the selected department. | 10 |

**UNIT - V**

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|-------|--------------------------------------------------------------------------|----|
| 9 a.  | Define JSP. List and explain various tags used in JSP.                   | 10 |
| b.    | Discuss the concepts of Entity Java Bean with the help of skeleton code. | 10 |
| 10 a. | Explain the concept of Java RMI.                                         | 10 |
| b.    | Explain in detail deployment descriptor of EJB.                          | 10 |

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