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

(An Autonomous Institution affiliated to VTU, Belagavi)

Fourth Semester, Master of Computer Applications (MCA)

Semester End Examination; May/June - 2018

Advanced Java Programming

Time: 3 hrs *Max. Marks: 100*

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

UNIT - I

1 a. Define Servlet. Explain the role of Servlet as a Web middleware. 10

b. Discuss the Servlet life cycle in detail. 10

2 a. Explain different ways of session tracking in Servlet. 10

b. Define cookies. Discuss the benefits and limitations of cookies. 10

UNIT - II

3 a. Explain the advantages of JSP over other technologies. 10

b. Explain: i) Expression ii) Scriplets iii) Declarations in JSP with a sample program to demonstrate. 10

4 a. Discuss the import, content type and page encoding attributes in JSP. Write a JSP program for conditional generation of excel spread sheet. 10

b. Explain JSP's main capabilities for including external files/pieces into a JSP document. 10

UNIT – III

5 a. Explain JDBC architecture with a neat diagram. Discuss the steps for building a JDBC application. 10

b. Differentiate statement object with prepare statement object in JDBC. Write a JDBC program to demonstrate the insert operation using statement and prepare statement objects. 10

6 a. Define an interface in Java. How it is different from class? Write a program to demonstrate use of interface. 10

b. Define Java Bean. Explain introspection and customizer in Java Bean. 10

UNIT - IV

7 a. Define Enterprise Java Bean (EJB). Discuss how EJB helps in modern enterprise application development? 10

b. Define Session Bean. Discuss the differences between stateful and stateless session Beans. 10

8 a. Discuss Entity Bean in detail. 10

b. Explain any four container services offered by EJB. 10

UNIT - V

9 a. Discuss stateless Session Bean life cycle with a neat diagram. 10

b. Explain Message Driven Bean (MDB) in detail. 10

10 a. Explain different elementary schema mapping. 10

b. Discuss different entity relationships formed by Entity Beans. 10

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