USN ☐☐☐☐☐☐☐☐☐☐   16MCA41

Fourth Semester MCA Degree Examination, Dec.2018/Jan.2019
Advanced Java Programming

Time: 3 hrs.   Max. Marks: 80

Note: *Answer FIVE full questions, choosing one full question from each module.*

Module-1

1 a. Explain the process of servlet life cycle in web container.   (10 Marks)
   b. What are the needs, benefits and advantages of JSP?   (06 Marks)

OR

2 a. With an example, explain the structure of servlet program.   (10 Marks)
   b. Briefly explain the HTTP status codes during server response.   (06 Marks)

Module-2

3 a. Explain the following page directive attributes along with an example:
      (i) import   (ii) errorpage and iserrorpage
      (iii) session   (iv) buffer and autoflush   (10 Marks)
   b. Explain the different types of JSP elements.   (06 Marks)

OR

4 a. Write a JSP program to read data from a HTML form (Gender, data from radio buttons and colours data from check boxes) and display.   (10 Marks)
   b. Write a JSP program to include an applet along with necessary applet code.   (06 Marks)

Module-3

5 a. Define package. With an example, explain the usage of sub packages.   (06 Marks)
   b. Write a JSP program to get student information through a HTML and create a Java Bean class, populate bean and display the same information through another JSP.   (10 Marks)

OR

6 a. Discuss built-in annotations with an example.   (10 Marks)
   b. Write a note on : (i) Advantages of Java Bean   (ii) Java Bean API.   (06 Marks)

Module-4

7 a. With example, explain the essential steps of JDBC program.   (10 Marks)
   b. Define EJB. Briefly explain the advantages of EJB.   (06 Marks)

OR

8 a. Explain the types of statement objects in JDBC with an example.   (10 Marks)
   b. Explain the following advanced JDBC data types:
      (i) BLOB   (ii) CLOB   (iii) ARRAY   (06 Marks)

Module-5

9 a. What is Session Bean? Explain three types of Session Bean.   (10 Marks)
   b. Explain the steps in developing EJBs.   (06 Marks)

OR

10 a. What is message-driven beans? Explain the life cycle of message driven beans. (10 Marks)
   b. Explain the following terms:
      (i) Interceptors.
      (ii) Naming and object stores.   (06 Marks)

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