Course Code : CST 413-3   MQNR/MW – 19 / 9657

Seventh Semester B. E. (Computer Science and Engineering) Examination

Elective – I

ADVANCED OBJECT ORIENTED TECHNOLOGIES

Time : 3 Hours]   [Max. Marks : 60

Instructions to Candidates :—
   (1)   All questions carry marks as indicated against them.
   (2)   Assume suitable data and illustrate answers with neat sketches wherever necessary.

1.   (a)   Define enterprise java beans. Draw and explain main conponents of EJB architecture.   4 (CO 1)

      (b)   Write a class Emp with attribute id, name and designation. Design a stateful session bean without an interface for an Employee having functionality to add users, remove users and fetch a user by id.   6 (CO 1)

2.   (a)   Create a table :
         STUDENT (SID, SName, SDept, CGPA)
         Connect to this table with code and insert data for 5 students. Write a stored procedure to calculate average CGPA of all Students and call this procedure from the code.   6 (CO 1)

      (b)   Mention types of driver in JDBC. Explain any two drivers in detail with advantages and disadvantages.   4 (CO 1)

OR

      (c)   Differentiate between Prepared Statement and Callable Statement with its method.   4 (CO 1)

3.   (a)   Design a Servlet application for a College :

         (1)   Login Page for the Parents.

         (2)   Profile page to view attendance and (Test 1 and Test 2) marks of the student.

(3) Display warning message if attendance is less than 75% using html and JavaScript.

(4) Home page contain logout button to logout and redirect to login page.

[Assume session attributes named username, password, attendance and test marks already exist in the database]. 7 (CO 2)

(b) Demonstrate HTTPServletRequest and HTTPServletResponse with suitable example. 3 (CO 2)

4. (a) List down advantages of JSP over the Servlet. Also explain life cycle of JSP. 5 (CO 2)

(b) Describe the use of ThreadSafe in JSP. Also explain Single thread model in JSP. 5 (CO 2)

OR

(c) List and elaborate any five JSP implicit objects with example. 5 (CO 2)

5. (a) Demonstrate how spring supports beans with collection of primitive types and collection of references. 6 (CO 3)

(b) How to use interceptors in strut 2 ? List and describe important interceptors provided by strut 2 framework. 4 (CO 3)

OR

(c) Does "Spring Support JDBC framework" ? Justify your answer with suitable example. 4 (CO 3)

6. (a) Generate one – to – one mapping for the given entities :
BANK_CUST (C_ID, C_NAME)
ADDRESS (STREET, CITY, PIN)
Such that, Bank has one and only one Head office address.
Explain the output tables created. 6 (CO 3)

(b) Write a detailed note on any **Two** of the following Hibernate Objects :
(1) Configuration.
(2) SessionFactory.
(3) Transaction. 4 (CO 3)