Course Code : CST 413–3/CST 403–3 EVFU/MW – 18 / 6106

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) Assume suitable data wherever necessary and clearly state the assumption made.

1. (a) What are server side software components ? Explain the requirements of an Enterprise Application. 5(CO1)

(b) Description of table LAPTOP is as follows :

Column	Type	Metadata
SerialID	NUMBER	Primary Key
Company_name	VARCHAR2	Blank not allowed
Screensize	FLOAT	Blank not allowed
Manuf_Dt	DATE	May be null

Write an entity class for the given table LAPTOP. 5(CO1)

2. (a) What are the advantages of using a PreparedStatement over Statement? Explain in detail.

Assume a table MOVIES with columns MOVIENAME, LEADACTOR, LEADACTRESS, BUDGET and RATING. Insert 3 rows using PreparedStatement and 2 rows using Statement. Display the row having least value of RATING (if there exist multiple movies with the least value of rating then display the row which has lowest budget amongst them.)
4+6(CO1)

3. (a) Differentiate between :

   (i) Servlets and CGI.

   (ii) RequestDispatcher Forward and SendRedirect. 4(CO2)

   (b) List and explain the steps followed by the Servlet Engine from loading of a servlet until the time the servlet is unloaded from the server.

   6(CO2)

4. (a) Explain the pros and cons of using JSP over a servlet. 3(CO2)

   (b) What is the difference between jsp:param and jsp:params ? 2(CO2)

   (c) Illustrate the use of following JSP page directive attributes with an example:

   (I) buffer.   (II) autoFlush.

   (III) errorPage.   (IV) isErrorPage.

   (V) import   5(CO2)

5. (a) What is spring ? Why is it called inversion of control container ?

   4(CO3)

   (b) Demonstrate how Spring supports beans with collection of primitive types and collection of references. 6(CO3)

6. (a) Write a detailed note on any **Three** of the following Hibernate objects:

   (1) Configuration.   (2) SessionFactory.

   (3) Session.   (4) Transaction.   6(CO3)

   (b) How to implement a parent child hierarchy in Hibernate, using Table per Hierarchy ? 4(CO3)

   OR

   (c) How hibernate is better than entity beans ? 4(CO3)