

MCA (Revised)
Term-End Examination
June, 2011

**MCS-051 : ADVANCED INTERNET
TECHNOLOGIES**

Time : 3 hours

Maximum Marks : 100

Note : *Question number 1 is compulsory. Attempt any three questions from the rest.*

1. (a) List the packages required for using JDBC 3.0 API in an application. Explain the four types of drivers available with JDBC and their use. 8
- (b) Explain the underlying software architecture of EJB. 8
- (c) There is a data base consisting of student academic records having name (last, middle, first), roll no, address (3 lines, city, PIN), subject and grade. Write down the DTD for this and write an application fragment to create an XML document from the student database. 10

- (d) What are the different ways in which a client can authenticate a user to a web server ? Explain how HTTPS client authentication works. **6**
- (e) Write code for entering data from web based form for a social networking site. User can register with the site using his email id or unique user name. On successful registration, user should be logged in and land on welcome page. You are required to make your assumption for the data fields and to use JSP, Servlets and JDBC. **8**
2. (a) Discuss the layered architecture of EJB and its components briefly. **10**
- (b) What is DTD ? What is the role of DTD in XML ? Explain different components of DTD. **10**
3. (a) Differentiate between Session beans and Entity beans in terms of object sharing, object state, transactions, container failure and object recovery. **10**
- (b) Assume that there is student table named as student in MS - Access database with the following fields : STD_ID, NAME, COURSE, EMAIL, MOBILE AND DOB. Write a Java program to insert and then display the records of the table using JDBC. **10**

4. (a) Explain the following JSP objects and their use in web programming : 10
- (i) Config object
 - (ii) Page object
 - (iii) Application object
 - (iv) Session object
 - (v) Exception object
- (b) What is JNDI authentication ? Explain with the help of suitable example. 10
5. (a) Compare and contrast SGML, HTML and XML. 10
- (b) What is role of Home interface and remote interface in EJB ? Explain with the help of an example. 10
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