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MCS-051

**MASTER OF COMPUTER
APPLICATIONS (REVISED)
(MCA)**

Term-End Examination

June, 2020

**MCS-051 : ADVANCED INTERNET
TECHNOLOGIES**

Time : 3 Hours

Maximum Marks : 100

Note : (i) *Question No. 1 is compulsory.*

(ii) *Attempt any three questions from the rest.*

1. (a) Briefly explain the working of HTTPS client authentication. 5
- (b) Briefly explain the three scripting elements used in JSP. 10
- (c) Consider a relational database table product, with attributes product_code,

P. T. O.

product_name, MRP, manu_date, exp_date. Write a servlet program to connect to this database and increase the MRP of each item by 10%. You are required to connect the database using JDBC driver. 10

- (d) What is EJB ? What are the different types of EJB ? Explain each type briefly. 5
- (e) Bring out the difference between HTML and XML. 5
- (f) Write an XML DTD to represent the account detail of a saving account which contain the following : 5
- (i) Name (First, middle, last)
 - (ii) Account_No (strictly 15 characters)
 - (iii) Account_Type (Current, savings, fixed deposit)
 - (iv) Account_Balance (2 decimal places)
 - (v) Address (Line 1, Line 2, City, PIN) of which Line 2 is optional

2. (a) Explain with a diagram the life cycle of stateless and stateful session beans. 10
- (b) Explain forms based custom authentication using name and password in servlet programming with the help of a suitable code fragment. 10
3. (a) Write a JSP program which take a number as input and display its multiplication table from up 1 to upto 10. Make necessary assumptions required. 10
- (b) Briefly explain how HTTP digest authentication works. 5
- (c) Describe the typical common traits of the process for deploying EJB. 5
4. (a) Briefly explain any *two* security considerations in an application. 6
- (b) Explain executeQuery() and executeUpdate methods. 4

(c) Explain the following in context of servlet and JSP, with the help of code snippets : 10

(i) RequestDispatcher

(ii) SendRedirect

5. (a) Differentiate between the following :

3 each

(i) doGet() and doPost()

(ii) Servlet context and Servlet config

(iii) ejb Passivate() and ejb Activate() methods

(iv) Java sql.Statement and java. sql. PreparedStatement

(v) Session object and application object

(b) Explain servlet chaining. Describe with a code fragment how servlet chaining is achieved. 5