

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

Term-End Examination

December, 2020

**MCS-051 : ADVANCED INTERNET
TECHNOLOGIES**

Time : 3 Hours

Maximum Marks : 100

Note : *Question No. 1 is compulsory. Attempt any
three questions from the rest.*

1. (a) What is Servlet ? How do you invoke a Servlet ? Explain use of doGET and doPOST methods with the help of example code. 10
- (b) What is JDBC ? Each car in an automobile showroom has the following attributes : 10
 - (i) Name of manufacturer
 - (ii) Year of manufacture
 - (iii) Colour

(iv) Model

(v) Submodel

(vi) Basic Price

Write a JSP program to read in the information of each car from a database and display the details of all cars that are of model Wagon-R.

(c) Write an XML DTD for the “car” entity in question 1 (b) and state any needed assumptions. 5

(d) What are Entity Beans ? Explain how entity bean is different from session bean. 5

(e) Describe the HTTP Basic Authentication with the help of an example program. 10

2. (a) What is need of Servlet Collaboration ? Explain two-ways of servlet collaboration. 6

(b) Explain advantages and disadvantages of JDBC-ODBC bridge driver. 4

(c) What is EJB ? Discuss the architecture of EJB. 10

3. (a) Interest on savings bank accounts is paid quarterly on the first day of the next quarter @ 3.5% per annum. The passbook entries of Naresh on 30th Sept., 201 are as follow : 10

Date	Deposit (₹)	Withdrawal (₹)	Balance (₹)
20-06-18	5,000=00		84,000=00
01-07-18	856=00		84,856=00
23-07-18		20,000=00	64,856=00
17-08-18		10,000=00	54,856=00
12-09-18		45,000=00	9,856=00
21-09-18	70,000=00		79,856=00

Interest is calculated on the daily balance for each day of the quarter from 1-07-18 to 30-09-18. Write a JSP program to read the above entries and calculate the interest payable on 1-10-18 to Naresh.

- (b) Explain use of form based authentication of clients with the help of an example program. 10
4. (a) What is JNDI Authentication ? Explain one-way SSL authentication using JNDI. 5
- (b) Explain life cycle of Entity Bean. 5
- (c) What are JSP implicit objects ? Briefly describe use of any *four* JSP implicit objects. 10
5. (a) What is RequestDispatcher in JSP ? Explain its use in JSP programming. 5
- (b) What is Deployment Descriptor (DD) file ? Explain its use in Servlet and JSP programming. 5
- (c) Explain any *two* system recovery procedures. Also explain the scenarios in which use of these mechanisms are more appropriate. 10