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MCS-051

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

Term-End Examination

December, 2021

**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 ? Explain Servlet life cycle in detail. 10
- (b) What is Web Security ? Why is it important ? Explain use of SSL in secure communication on the Internet. 8
- (c) What is Session Bean ? Differentiate between stateful session bean and stateless session bean. 4

- (d) Write/Create an XML document to represent IGNOU MCA students ID_card information, containing name, enrollment_number, programme_code, study_centre_code, address and mobile_number. 6
 - (e) Write a program using Servlet and JDBC for developing an online registration system for a quiz competition, which take candidate name, gender, address, mobile_number, email_id and educational qualification as input and generate a unique control number for each candidate. Make necessary assumptions. 12
2. (a) Explain the following methods of Servlet programming : 10
 - (i) doGet
 - (ii) get_cookies
 - (iii) doPost
 - (iv) getSession

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- (b) What is JDBC ? Explain advantages and disadvantages of type 4 JDBC driver. Also explain use of createStatement of JDBC with the help of an example. 10
3. (a) What is entity bean ? Explain life cycle of an entity bean with the help of a diagram. Also explain ejbLoad and ejbStore methods. 10
- (b) What is SGML ? Differentiate between SGML and XML. 5
- (c) Explain with the help of an example, the process of checking correctness of a DTD. 5
4. (a) Write a servlet program using JDBC for managing issue and return of books of a library. Make necessary assumptions. 10
- (b) Explain how servlet and jsp interact with each other,; with the help of code blocks. 10

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5. (a) Explain how message driven bean consume the message from JMS. 5
- (b) Explain form based authentication process briefly. 5
- (c) Explain two-way SSL authentication using JNDI. Write code block to support your explanation. 10

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