

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

Term-End Examination

December, 2022

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 a servlet ? Explain servlet life cycle in detail. 10
- (b) Discuss the different categories of session-beans. 6
- (c) Create a database of IGNOU MCA Fifth Semester Students. Write a program using JSP and JDBC to display details of the student(s), including Enrollment Number, Name, Study Centre and Address. 10
- (d) Explain the different development goals of XML document. 6
- (e) Explain the advantages of using Java's Multiple-Layer Security Implementation. 8

- 2.** (a) Draw the layered architecture of EJB and explain its components. 10
- (b) Explain any four basic scripting elements used in JSP, with the help of a small code to show the uses of scripting elements. 10
- 3.** (a) What is JNDI Authentication ? Explain with the help of an example. 10
- (b) Explain the different types of JDBC drivers along with their advantages and disadvantages. 10
- 4.** (a) Explain how an applet is included in a JSP program, with the help of a small code. 5
- (b) Explain executeQuery() and executeUpdate() methods. 5
- (c) Write an XML DTD to represent the Book details which contain the following : 5
- (i) Book Title
 - (ii) Author Name
 - (iii) ISBN
 - (iv) Publisher
 - (v) Price
- (d) Define Session Tracking. Explain any one mechanism of session tracking. 5

5. (a) Write a servlet program which takes your name, address and programme of study from an HTML form and displays it. 10
- (b) Differentiate between Session Beans and Entity Beans. 5
- (c) Explain doGet() and doPost() methods of servlet. 5
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