MCS-220

MASTER OF COMPUTER APPLICATIONS (MCA-NEW)

Term-End Examination

December, 2022

MCS-220 : WEB TECHNOLOGIES

Time : 3 hours   *Maximum Marks : 100*

Note : Question no. **1** *is* **compulsory** *and consists of 40 marks. Attempt any* **three** *questions from the rest.*

1. (a) What is web application ? Explain the use of web server for development of web applications. Also, describe the differences between web server and web container.   *10*

   (b) What is design pattern ? Explain the use of Singleton design pattern, with the help of an example.   *10*

   (c) What is Servlet ? Explain the use of HTTP protocol in servlet programming. Explain the use of GET and POST methods, with the help of examples.   *10*

   (d) What is Struts 2 ? Explain the core components of Struts 2.   *10*

2. (a) What are JSP implicit objects ? Explain the use of any four implicit objects. *10*

(b) Explain the use of Authorize Tag for providing view layer security, with the help of program code. *10*

3. (a) What is Session Management ? Write a servlet program to demonstrate the use of HttpSession and its methods setAttribute and getAttribute. *10*

(b) Explain how Java Secure Socket Extension (JSSE) is used in web security. *10*

4. (a) Explain core container and its components in Spring Framework. *10*

(b) Explain how CRUD is mapped to SQL statement, with example. *10*

5. (a) What is Role-based Login ? Explain how user's access can be restricted using Role-based Login. *10*

(b) Write short notes on the following : *10*

  (i) Servlet Collaboration

  (ii) JSP Life Cycle