

MCS-220

MASTER OF COMPUTER APPLICATIONS (MCAOL)

WEB TECHNOLOGIES

Time: Three Hours

Maximum Marks: 100

Note: This question paper consists of three Sections.

Section-I (Short Answer) ($5 \times 4 = 20$)

Note: Attempt any five questions.

1. Explain J2EE Architecture with the help of a diagram.
2. Differentiate between a session and cookie.
3. Explain Model-View Controller (MVC). Model-1 Architecture with the help of a diagram. Also, discuss advantages and disadvantages of it.
4. What is responsive web design? Discuss its advantages.
5. Discuss springBoot working with @SpringBoot- Application.
6. Explain Hibernate detailed architectural view with the help of a diagram.
7. Differentiate between Authentication (AuthN) and Authorization (AuthZ).

Section-B (Medium Answer) ($5 \times 10 = 50$)

Note: Attempt any five questions from the following.

8. Define the term module in J2EE., What are the four specific modules used in J2EE applications? Explain.

9. Discuss the process of communication between Web Client and Web Server with the help of a diagram. Also discuss how GET method is different from POST method.
10. Explain, why do we need springBoot DevTools and springBoot Actuators. Also, explain the springBoot application execution with Maven.
11. What is Hibernate Caching? Differentiate between the Hibernate first level cache and second level cache.
12. Explain Hibernate Query Language (HQL) with the help of an example.
13. What is Java Persistence API (JPA)? Also explain the springData JPA.
14. What is Java Cryptography Architecture (JCA)? Differentiate between Message Digest and Message Authentication Code (MAC).

Section–C (Long Answer) (2×15=30)

Note: Attempt any two questions.

15. What is servlet Programming? Write a servlet program to display. “We are the students of SOCIS”. Also differentiate between init () and destroy () methods in servlet.
16. Explain, how can we create and delete records using springBoot and Hibernate with the help of a example. Also discuss how does springData Framework derive queries from method names.
17. What is the role based login? Write the sample code to configure the role-based login. Also discuss the role-based access control (RBAC) with sample configuration code to restrict the URL access based on role.