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MCS-220

**MASTER OF COMPUTER
APPLICATIONS (MCA-NEW)**

Term-End Examination

June, 2026

MCS-220 : WEB TECHNOLOGIES

Time : 3 Hours

Maximum Marks : 100

Note : (i) *Question no. 1 is compulsory.*

(ii) *Attempt any **three** questions from
the rest.*

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1. (a) What is J2EE ? Briefly explain J2EE
architecture. 10

- (b) What is a servlet ? Explain the uses of
Http ServletRequest and HttpServletResponse
interfaces in servlet
programming with the help of an
example program. 10
- (c) What is STRUTS 2.X framework ?
Briefly explain its features. 10
- (d) What is Spring-4 security ? Explain. 5
- (e) What is ORM ? Explain. 5
- 2. (a) What is SecurityFilterChain in Spring
Security ? 5
- (b) Explain the annotation@OneToMany
and its attributes. 5
- (c) What is Hibernate ? Explain Hibernate
caching ? Explain Hibernate first level
cache. 10

3. (a) Write a simple “Hello Word” Spring Boot rest application and explain it. 10
- (b) Explain Inversion of Control (IoC) Dependency Injection with the help of a diagram. 10
4. (a) What is Model-2 MVC architecture ? Briefly explain its advantages and disadvantages. 10
- (b) Write a JSP program using JDBC to create a database of MCA fifth semester students of IGNOU and display their details such as Name, Rollnumber, Studycentre code etc. Make necessary assumptions. Design appropriate form for taking input and display result. 10

5. Write short notes on the following : 20

- (a) Session Management
- (b) Exception Handling in JSP
- (c) Maven
- (d) Cross Site Request Forgery

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