

CBCS SCHEME

20MCA33



Third Semester MCA Degree Examination, Jan./Feb. 2023 Advances in Java

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define Servlet. Explain life cycle of a Servlet with a neat diagram. (10 Marks)
- b. Define Cookies. Write a JAVA Servlet program using Cookies to remember user preferences. (10 Marks)

OR

- 2 a. Explain 4 different ways in which a session can be tracked with suitable examples. (10 Marks)
- b. Briefly explain any 5 HTTP status codes during server responses. (05 Marks)
- c. Explain HTTP Request headers in brief. (05 Marks)

Module-2

- 3 a. Explain different kinds of main tags used in JSP with example for each. (10 Marks)
- b. Explain different ways in which you can invoke JAVA code from JSP. (10 Marks)

OR

- 4 a. Explain the need, benefits and advantages of JSP over competing technologies. (10 Marks)
- b. Write a JSP program that adds two numbers entered through HTML form and display the result (10 Marks)

Module-3

- 5 a. List all the attributes of Page directives tags in JSP and explain any five with an example for each. (10 Marks)
- b. Write a JSP program to get student information through HTML form. Create a JAVA Bean class, populate Bean and display the same information through another JSP. (10 Marks)

OR

- 6 a. Define JAVA Bean and state its advantages. Explain the features of JAVA Bean. (08 Marks)
- b. Write a note on JAR files. (06 Marks)
- c. Write a JSP program to include an applet along with necessary applet code. (06 Marks)

Module-4

- 7 a. With an example, explain the essential steps of JDBC program. (10 Marks)
- b. Explain in brief basic and advanced JDBC data types. (10 Marks)

OR

- 8 a. What are annotations? Discuss built-in annotations with an example. (10 Marks)
b. Explain the types of statements objects in JDBC with an example. (10 Marks)

Module-5

- 9 a. Explain the following terms of container services in EJB:
(i) Transactions
(ii) Security.
(iii) Naming and Object stores (10 Marks)
b. What is stateless session bean? Explain the life cycle of stateless session bean with a neat diagram. (10 Marks)

OR

- 10 a. What is message driven bean? Explain the life cycle of message driven bean. (10 Marks)
b. Write short notes on :
(i) Stateful session bean.
(ii) Singleton session bean. (10 Marks)
