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Total No. of Pages : 02

Total No. of Questions : 09

MCA (Sem.-2)
ADVANCED JAVA
Subject Code : PGCA-1918
M.Code : 79617
Date of Examination : 11-12-2024

Time : 3 Hrs.

Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION - B & C have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying TEN marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A

1. Answer briefly :

- a. How does a Java servlet handle HTTP requests and responses?
- b. What is the role of session tracking and security in servlets?
- c. What is a session?
- d. Differentiate between standard actions and custom tag libraries in JSP.
- e. What are the implicit objects in JSP, and how are they used?
- f. Discuss the types of Enterprise Java Beans (EJB).
- g. What is the significance of the Common Object Request Broker Architecture (CORBA) services?
- h. How do you create a Java Bean, and what is its purpose in applications?
- i. Describe the basics of handling exceptions in Java servlets.
- j. Explain the concept of garbage collection in Java and its importance in memory management.

SECTION-B

2. Write a Java servlet that reads initialization parameters and request parameters, processes them, and sends an appropriate response. Explain the steps involved and the importance of parameter handling in servlets.
3. Discuss the life cycle of a Java Server Page (JSP) in detail. Explain how a JSP is compiled and executed. Provide an example of a JSP page and describe the stages of its life cycle.
4. Explain the role and importance of session management in Java web applications. Describe various techniques for session tracking and their security implications. Provide examples of session management in servlets.
5. Describe the fundamental concepts of the Struts framework. How does Struts enhance the development of Java web applications? Provide an example of a simple strut based application and discuss its components.

SECTION-C

6. Write a program to show the distributed object model using remote method invocation.
7. Write a Java program that utilizes Hibernate to connect to a database, retrieve data, and display it. Explain the steps involved in configuring Hibernate for database connectivity.
8. Describe the various types of Enterprise Java Beans (EJB), including stateful session beans, stateless session beans, and entity beans. Explain when and how each type of EJB is typically used in enterprise applications.
9. Discuss the basics of the Common Object Request Broker Architecture (CORBA) and its services. Explain how CORBA facilitates distributed computing in a networked environment. Provide examples of situations where CORBA is beneficial.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.