

Roll No.

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 : 08-07-22

Time : 3 Hrs.

Max. Marks : 60

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) Write briefly :

- a) What are the events that are defined for sessions in servlets?
- b) What do you mean by JSP directive?
- c) What is the need of a Servlet filter?
- d) What are the core interfaces of Hibernate framework?
- e) What are the benefits of Struts framework?
- f) How does COBRA support interoperability?
- g) List the steps to define the remote interface using remote method invocation.
- h) What do you mean by BDK? List its components.
- i) List the advantages of JSP architecture.
- j) What is stateless session bean?

SECTION-B

- 2) Explain the use of Hibernate framework as the persistence layer for retrieving and storing plain old Java objects (POJOs) to a relational database.
- 3) List and explain various implicit objects in JSP with examples. Also, discuss the concept of object scope in JSP.

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- 4) Explain the steps to design a small application in struts with database connectivity.
- 5) Discuss the concept of entity beans in Enterprise Java beans. What are the mechanisms used by entity beans to persist business data?

SECTION-C

- 6) Discuss the structure of HTTP request and response. Why is HTTP called a Stateless protocol?
- 7) Explain model-view-controller architecture in detail.
- 8) Explain the life-cycle methods of a servlet and discuss the complete process of servlet development with the help of a sample program.
- 9) Write short notes on :
 - a. COBRA services
 - b. JAR files



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MCA (Sem.-2)
ADVANCED JAVA
Subject Code : PGCA1918
M.Code : 79617
Date of Examination : 23-11-2023

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

I. Answer briefly :

- a) What is the life cycle of a Java servlet?
- b) How is the Servlet API used in servlet development?
- c) Explain the key components of Java Server Pages (JSP) architecture.
- d) What are session management techniques in JSP?
- e) Provide an overview of the Struts framework.
- f) Explain the basic architecture of Hibernate for database connectivity.
- g) Discuss the concept of Enterprise Java Beans (EJB).
- h) What is CORBA, and how does it support distributed computing?
- i) What are implicit objects in JavaServer Pages (JSP)?
- j) Describe the process of creating a Java Bean and its application in Java programs.

SECTION-B

2. Write a Java servlet that demonstrates how to use cookies for session tracking. Explain the role of cookies in maintaining user sessions and how they contribute to security in web applications.
3. Discuss the syntax and basic structure of Java Server Pages (JSP). Explain the purpose of standard actions and custom tag libraries in JSP. Provide examples of both standard actions and custom tags.
4. Explain the concept of object scope in JSP. Discuss the different object scopes available in JSP and provide scenarios in which each scope is typically used.
5. Describe the process of connecting to a database in a Java web application. Explain how the Java Servlet API facilitates database connectivity? Provide a practical example of database interaction within a servlet.

SECTION-C

6. Write a Java Bean class that implements the remote interface. Explain how remote method invocation works in Java. Provide an example of using this Java Bean in a client-server application.
7. Describe the role of JAR (Java Archive) files in Java development. Explain how JAR files are created and used in packaging Java applications? Provide a practical example of creating and using JAR files.
8. Discuss the concept of reverse mapping in Hibernate. Explain how it is used to generate Java objects from a relational database schema. Provide an example of reverse mapping in Hibernate.
9. Explain the importance of the Common Object Request Broker Architecture (CORBA) services in distributed computing. Discuss how CORBA services contribute to interoperability and communication in a distributed system. Provide examples of CORBA service usage.

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MCA (Sem.-2)
ADVANCED JAVA
Subject Code : PGCA/1918
M.Code : 79617

Date of Examination : 15-05-2024

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. What do you mean by cookies?
- b. What is a session?
- c. What is JSP?
- d. What are struts?
- e. How is session management done in JSP?
- f. What is the basic principle of RMI architecture?
- g. What is the purpose of CORBA?
- h. What are the major advantages of using Hibernate framework?
- i. State the constructor of SimpleBeanInfo Class.
- j. What do you mean by JavaBeans?

SECTION-B

2. Answer the following :

- a. Define the init() method of a Servlet. Explain in detail.
- b. How cookies are used to track a session? Write a program in support of your answer.

3. Answer the following :

- a. Why is JSP preferred over Servlets? Explain.
 - b. What is the use of page and include directive tags?
4. Explain the various components of struts framework.
5. What is MVC architecture in struts framework? Explain the basic architecture of model-view-controller in struts.

SECTION-C

6. Write a program to show remote interface using remote method invocation.
7. What are the main components of CORBA architecture? Explain in detail.
8. Explain Hibernate architecture in detail.
- 9. Answer the following :**
- a. List and explain any 2 classes available in JavaBeans package.
 - b. What is the difference between Stateful and Stateless session beans?

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