

M.Sc.(IT & CA) Semester - 1 (CBCS) Examination
OCT/NOV-2024 (AS PER SYLLABUS YEAR JUNE-2018)
APPLICATION DEVELOPMENT USING ADVANCE JAVA(CORE)

Time: 2:30 Hours**Marks:70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer the following questions. (03)
1. What is the purpose of JDBC?
 2. What is the role of JSP in web development?
 3. What does MVC stand for?
- Que.1(B) Answer the following question. (Any Two) (06)
1. Describe connecting a Java application to a database using JDBC.
 2. Write a brief explanation of the MVC architecture.
 3. Explain the role of the IOC container in the Spring framework.
 4. How does Autowiring work in Spring? Provide an example.
- Que.1(C) Answer the following question. (Any one) (05)
1. Explain how Dependency Injection (DI) enhances application modularity.
 2. Discuss the different types of Autowiring in Spring and when to use them
- Que.2(A) Answer the following questions. (03)
1. What does JDBC stand for in the context of Spring?
 2. What is the full form of ORM?
 3. What is the full form of DAO?
- Que.2(B) Answer the following question. (Any Two) (06)
1. Explain the use of RowMapper in Spring JDBC with an example.
 2. Describe how SpEL can be used for method invocation with an example.
 3. Provide a brief overview of how Spring integrates with Hibernate.
 4. What is SimpleJdbcTemplate, and how does it simplify database operations?
- Que.2(C) Answer the following question. (Any one) (05)
1. Compare Hessian and Burlap in the context of Spring remoting.
 2. Discuss the advantages of using NamedParameterJdbcTemplate over traditional JDBC in Spring.
- Que.3(A) Answer the following questions. (03)
1. What is the primary purpose of OXM in Spring?
 2. What role does Hibernate play in Java applications?
 3. What is the function of JAXB in data processing?
- Que.3(B) Answer the following question. (Any Two) (06)
1. Describe the integration of Spring with Struts2.
 2. Explain the use of Hibernate annotations with an example..
 3. Discuss the role of Hibernate Generator classes.
 4. How does Spring integrate with XML for data binding? Provide an example.
- Que.3(C) Answer the following question. (Any one) (05)
1. Discuss how to develop a Hibernate-based web application.
 2. Explain the significance of Hibernate caching and its impact on performance.

- Que.4(A) Answer the following questions. (03)
1. What does the term "Hibernate" refer to in the context of Java applications?
 2. What is meant by "One-to-Many" mapping in Hibernate?
 3. Describe the concept of "Lazy Loading" in Hibernate.
- Que.4(B) Answer the following question. (Any Two) (06)
1. Explain how Table Per Subclass inheritance strategy is implemented using annotations in Hibernate.
 2. Describe the process of mapping a collection using a Map in Hibernate, focusing on bidirectional relationships.
 3. Discuss the differences between Table Per Hierarchy and Table Per Concrete strategies in inheritance mapping.
 4. Provide an overview of how One-to-Many mapping by List is performed using annotations.
- Que.4(C) Answer the following question. (Any one) (05)
1. Compare Table Per Hierarchy and Table Per Subclass inheritance in brief.
 2. Discuss the implementation of One-to-Many mapping by List and Bag, including their advantages.
- Que.5(A) Answer the following questions. (03)
1. What does the term "HQL" stand for?
 2. What does "HCQL" represent in Hibernate?
 3. What is the function of a Foreign Key in relational databases?
- Que.5(B) Answer the following question. (Any Two) (06)
1. Describe the role of Hibernate caching and its impact on performance.
 2. Explain the integration process of Hibernate with Struts.
 3. Discuss the concept and application of Component Mapping in Hibernate.
 4. Provide an overview of how Hibernate manages transactions.
- Que.5(C) Answer the following question. (Any one) (05)
1. Explain how Hibernate Named Queries are defined and used.
 2. Discuss the transaction management mechanisms in Hibernate and their importance for application consistency.
