Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER–VI EXAMINATION – WINTER 2025

Subject Code: 3160707 Date: 25-11-2025

Subject Name: Advanced Java Programming

Time: 02:30 PM TO 05:00 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	**(a)**	Describe the concept of JDBC.	**03**
	(b)	Write a Web application using servlet to find whether entered number is Prime or not.	**04**
	(c)	List the different types of JDBC drivers and explain type3 driver with its advantages and disadvantages.	**07**
Q.2	**(a)**	What are the components of URL? Describe the use of URL class with an example.	**03**
	(b)	Explain CallableStatement with example.	**04**
	(c)	Write a client server program using TCP where client sends two numbers and server responds with the sum of them.	**07**
		OR	
	(c)	Write a client server program using TCP where client send number and server respond reverse of given number.	**07**
Q.3	**(a)**	What is session? List the different ways to manage the session.	**03**
	(b)	Disuss servlet life cycle methods.	**04**
	(c)	Explain use of ServletConfig and ServletContext object with example.	**07**
		OR	
Q.3	**(a)**	How MVC architecture is better than conventional approach?	**03**
	(b)	List and Explain various stages of JSP life cycle.	**04**
	(c)	Write a Web application using servlet to find the sum of all the digits of an input integer.	**07**
Q.4	**(a)**	Define the init() method of a servlet.	**03**
	(b)	Write a servlet to display the name and age of a person received as parameters.	**04**
	(c)	List out JSP Action Tags and explain it.	**07**
		OR	
Q.4	**(a)**	How the GET method different from the POST method?	**03**
	(b)	What is filter? List out the application of the filter.	**04**
	(c)	Write a Web Application using JSP to get an integer N (where N>0) and display all the prime number up to N.	**07**
Q.5	**(a)**	Discuss JSP Exception Handling.	**03**
	(b)	List out JSF HTML tags and explain any two.	**04**
	(c)	Draw the Hibernate Architecture diagram and explain each part in brief.	**07**

OR

Q.5	**(a)**	Explain any three Spring form tags with example.	**03**
	(b)	What is JSF? List and explain its features.	**04**
	(c)	Explain the steps to develop the Hibernate web application.	**07**

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Enrolment No./Seat No_____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER–VI (NEW) EXAMINATION – WINTER 2024

Subject Code:3160707 Date:05-12-2024

Subject Name: Advanced Java Programming

Time:02:30 PM TO 05:00 PM Total Marks:70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	1) What is the purpose of the URL class in Java? 2) List out the important methods of HttpServletResponse. 3) What are the JSP action tags?	**03**
	(b)	1) What are the advantages of Hibernate over JDBC? 2) What are the three types of text field's tags provided by JSF?	**04**
	(c)	What is JDBC driver? Explain its role and compare various JDBC drivers.	**07**
Q.2	**(a)**	What are the differences between a TCP socket and UDP socket? How are they created in Java?	**03**
	(b)	Demonstrate the use of ServletConfig and ServletContext.	**04**
	(c)	How do you handle multiple clients concurrently in socket programming? Explain with example.	**07**
		OR	
	(c)	What is Session? Compare different session management techniques.	**07**
Q.3	**(a)**	What is the use of PreparedStatement? How will you use it?	**03**
	(b)	What is filter? How will you configure filter using deployment descriptor?	**04**
	(c)	What is Java Bean? Demonstrate the use of JSP bean in web application.	**07**
		OR	
Q.3	**(a)**	What is the use of CallableStatement? How will you use it?	**03**
	(b)	What is FilterConfig? How will you use it?	**04**
	(c)	What is JSTL? Explain the core tags of the SQL tag library.	**07**
Q.4	**(a)**	What are the benefits of using JSF Framework?	**03**
	(b)	How will you use validator tags in JSF?	**04**
	(c)	What are the cookies? Demonstrate the use of cookies in servlet for session management.	**07**
		OR	
Q.4	**(a)**	Explain the use of RequestDispatcher in servlet.	**03**
	(b)	Write a code snippet to show the use of JSF action event.	**04**
	(c)	Explain JSP inbuilt objects with their use in application.	**07**
Q.5	**(a)**	What is the advantage of using Spring Framework?	**03**
	(b)	What do you understand by Dependency Injection? How do we implement it using Spring Framework?	**04**
	(c)	What are the different Hibernate interfaces? Explain their role in brief.	**07**
		OR	
Q.5	**(a)**	What is Hibernate SessionFactory and how to configure it?	**03**
	(b)	Show the use of some important annotations for Hibernate mapping.	**04**
	(c)	Explain the flow of Spring Web MVC.	**07**

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Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) EXAMINATION – WINTER 2023

Subject Code:3160707 Date:13-12-2023

Subject Name: Advanced Java Programming

Time:02:30 PM TO 05:00 PM Total Marks:70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	Explain the usage of Socket class with example.	**03**
	(b)	Differentiate Statement and PreparedStatement.	**04**
	(c)	Explain JSP Action tags with example.	**07**
Q.2	**(a)**	What is HTTP? Explain any two HTTP request methods in detail.	**03**
	(b)	Explain scripting elements of JSP.	**04**
	(c)	Write a program in which client sends string from its standard input to the server. The server reads the string, finds number of words, characters and digits of received string and sends result back to client. Use connection-oriented communication.	**07**
		OR	
	(c)	Write a JDBC Program for Employee Management application in which Consider Employee table with attributes Emp_ID, EmpName, Phone and Address, and perform followings: i) Insert multiple records using prepared statement. ii) Display all the records in reverse order.	**07**
Q.3	**(a)**	Discuss the use of CallableStatement.	**03**
	(b)	Differentiate attributes and parameters of servlet.	**04**
	(c)	Write a servlet code for login application using database connectivity.	**07**
		OR	
Q.3	**(a)**	Explain the lifecycle of filter.	**03**
	(b)	Compare JSP with Servlet.	**04**
	(c)	What is Session Management in servlet? Write a servlet application that demonstrates the use of cookie.	**07**
Q.4	**(a)**	What is difference between JSTL tag <c:import> and <jsp:include> action tag?	**03**
	(b)	Explain any four JSTL function tags with example.	**04**
	(c)	Explain the JSF request processing life cycle.	**07**
		OR	
Q.4	**(a)**	What is faces-config.xml? Explain it with code.	**03**
	(b)	List the JSF standard validator tags and explain any three in detail.	**04**
	(c)	Write a JSP application for student registration application using database connectivity.	**07**

Q.5	**(a)**	List the Hibernate annotations and explain any two Hibernate annotations in detail.	**03**
	(b)	What is ORM? Explain object/relational mappings in hibernate.	**04**
	(c)	Explain the architecture of Spring web MVC.	**07**

OR

Q.5	**(a)**	Compare Hibernate and JDBC.	**03**
	(b)	Explain Spring bean life cycle.	**04**
	(c)	Explain Hibernate Architecture.	**07**

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Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI(NEW) EXAMINATION – WINTER 2022

Subject Code:3160707 Date:17-12-2022

Subject Name:Advanced Java Programming

Time:02:30 PM TO 05:00 PM Total Marks:70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	1) How do you get the IP address of a machine from its hostname? 2) List out the important methods of HttpServletResponse. 3) What are the attributes for the JSP page directive?	**03**
	(b)	1) What is the function of a SessionFactory object? How will you obtain such an object? 2) How can you apply JSF Input Validation using input validators?	**04**
	(c)	What do you mean by session tracking? What are the session tracking techniques? Demonstrate any of them.	**07**
Q.2	**(a)**	What are the differences between a TCP socket and UDP socket? How are they created in Java?	**03**
	(b)	Differentiate ServletConfig and ServletContext.	**04**
	(c)	What is connection URL? How do you make a database connection? Explain various ways to make the database connection using JDBC code snippets.	**07**
		OR	
	(c)	What is JDBC driver? Explain its role and compare various JDBC drivers.	**07**
Q.3	**(a)**	What is the use of PreparedStatement? How will you use it?	**03**
	(b)	What is filter? How will you configure filter using deployment descriptor?	**04**
	(c)	What are the directive tags of JSP? Write a JSP page to demonstrate the use of them.	**07**
		OR	
Q.3	**(a)**	What is the use of CallableStatement? How will you use it?	**03**
	(b)	What is FilterConfig? How will you use it?	**04**
	(c)	What are the implicit objects of JSP? Write a JSP page to demonstrate the use them.	**07**
Q.4	**(a)**	What is EL? Write a code snippet to show the use of method expressions in JSF page.	**03**
	(b)	How will you use <h:commandButton> and <h:dataTable>?	**04**
	(c)	Develop a web application as following to demonstrate the use of <jsp:useBean>. • Create a Java Bean named Employee with attributes name and age. • Create a web page to set the properties of Employee using <jsp:useBean>. • Create a web page to display the properties of Employee using <jsp:useBean>.	**07**
		OR	
Q.4	**(a)**	What is JSTL? Write a code snippet to show the use of flow control tags.	**03**
	(b)	Write a code snippet to show the use of JSF action event.	**04**

(c) Develop a web application as following to demonstrate the use of JSTL SQL tag library. **07**

- Create a web page to store the registration detail (Name, email and contact number) of user in the database.
- Create a web page for user to update registration detail in the database.
- Create a web page to display the list of all registered users.

Q.5 **(a)** What is Spring AOP? What are Join points and Point cuts? **03**

(b) What is dependency Injection? What is the role IoC container in Spring? **04**

(c) What are the different Hibernate interfaces? Explain their role in brief. **07**

OR

Q.5 **(a)** What is Hibernate? What are the features of it? **03**

(b) What is OR mapping? How will you configure hibernate mapping file to map a table and its columns from a given database? **04**

(c) What are the advantages of Spring MVC? Explain the flow of Spring Web MVC. **07**

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