

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF ENGINEERING – SEMESTER 6 – EXAMINATION – SUMMER 2026

Subject Code: 3160707

Date: 01/06/2026

Subject Name: Advanced Java Programming

Time: 10:30 AM TO 01:00 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) What are the components of URL? Show the use of URL class with an example. **03**
 - (b) What is JSP? Explain the stages of JSP life cycle. **04**
 - (c) Write a concurrent client server program using TCP where the client sends a line of a text message and the server responds by displaying the received message in capital letters. **07**
- Q.2**
- (a) Differentiate ServletConfig and ServletContext. **03**
 - (b) Write a code snippet to show the use of PreparedStatement. **04**
 - (c) What do you mean by session tracking? Discuss various session tracking techniques. **07**
- OR
- Q.2**
- (c) Discuss the architecture of Hibernate. **07**
- Q.3**
- (a) What is the difference between include directive tag and jsp:include action tag? **03**
 - (b) Explain the use of different JSP action tags. **04**
 - (c) Demonstrate the use of JavaBeans in JSP. **07**
- OR
- Q.3**
- (a) What is EL? Write a code snippet to show the use of method expressions in JSP page **03**
 - (b) What is filter? Explain the configuration of filter using deployment descriptor. **04**
 - (c) Demonstrate the use methods forward () and include () using Servlet. **07**
- Q.4**
- (a) How will you use <h:commandButton> and <h:dataTable>? **03**
 - (b) List the JSF validation tags and explain any two in detail. **04**
 - (c) What is JSTL? Explain the core tags of the SQL tag library **07**
- OR
- Q.4**
- (a) Explain the use of any three implicit objects of JSP. **03**
 - (b) What are the directive tags in JSP? Explain any two. **04**
 - (c) Explain the JSF request processing life cycle. **07**
- Q.5**
- (a) What are the features of Spring Framework? **03**
 - (b) Explain the role of IoC container in Spring framework. **04**
 - (c) List out and explain the steps to develop the hibernate web application. **07**

OR

Q.5	(a) What is HQL? How does it differ from SQL?	03
	(b) What is OR mapping? Briefly explain the components of hibernate.cfg.xml file.	04
	(c) Explain the architecture of Spring Framework.	07

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI EXAMINATION – SUMMER 2025

Subject Code: 3160707

Date: 30-05-2025

Subject Name: Advanced Java Programming

Time: 10:30 AM TO 01:00 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) Discuss the use of execute (), executeUpdate () and executeQuery () methods.	03
(b) Explain the following classes with their use. I) URLConnection class II) DatagramSocket class III) DatagramPacket class IV) ServerSocket class	04
(c) Design a form to input details of an employee and submit the data to a servlet. Write code for servlet that will save the entered details as a new record in database table Employee with fields (EmpId, EName, Email, Age).	07
Q.2 (a) Compare JSP and Servlet.	03
(b) Explain various Session tracking mechanisms in servlet with example.	04
(c) What is JDBC? List the different types of JDBC drivers. Compare the various driver types for their advantages and disadvantages.	07
OR	
(c) What is filter? What is its use? List different filter interfaces with their important methods.	07
Q.3 (a) What is Servlet? List and explain various stages of Servlet life cycle.	03
(b) List JSP implicit objects and explain any two in detail.	04
(c) Explain JSP page directives with example.	07
OR	
Q.3 (a) Explain the usage of InetAddress class.	03
(b) Explain JSP life cycle phases.	04
(c) List and Explain JSP Action Tags with example.	07
Q.4 (a) What is the JSF facelets? Explain any two facelets tags.	03
(b) Briefly explain JSF Converter tags?	04
(c) What is Hibernate? List Advantages of Hibernate over JDBC	07
OR	
Q.4 (a) Write a servlet that redirect requests alternatively to JSP pages named odd and even	03
(b) What is HQL? Write difference between HQL and SQL.	04
(c) What is JSF tag library? Explain any four-html tag.	07
Q.5 (a) What is Request Dispatcher? What is the difference between Request dispatcher's forward () and include () method?	03
(b) Briefly explain spring bean life cycle.	04
(c) What is MVC architecture? Explain Spring architecture with neat sketch.	07
OR	
Q.5 (a) What is difference between statement and prepared statement interface.	03
(b) Draw and explain the architecture of Hibernate.	04
(c) What is ORM? Explain object/relational mappings in hibernate.	07

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code:3160707

Date:24-05-2024

Subject Name:Advanced Java Programming

Time:10:30 AM TO 01:00 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) Explain URL and URLConnection class with example.	03
	(b) Explain Statement and PreparedStatement with example.	04
	(c) What is Request Dispatcher? What is the difference between Request dispatcher's forward() and include() method? Explain it in detail with program.	07
Q.2	(a) What is Deployment descriptor (web.xml) in servlet? Explain with code.	03
	(b) What is JDBC? Explain the types of JDBC drivers.	04
	(c) Write a client-server program using TCP/UDP sockets to echo the message send by the client.	07
	OR	
	(c) Write a TCP program in which client sends string from its standard input to the server. The server reads the string, converts the string into upper case and sends back to client	07
Q.3	(a) Explain difference between ServletConfig and ServletContext object	03
	(b) Explain JSP life cycle phases.	04
	(c) What is CallableStatement? Explain how to use it to call a stored procedure with proper example.	07
	OR	
Q.3	(a) Compare JSP and Servlet.	03
	(b) Explain Servlet Life Cycle with example and demonstrate every state in detail.	04
	(c) Write a Login servlet. Take input username and password from html file login.html and authenticate the user. Write the web.xml.	07
Q.4	(a) Explain any three JSTL Core tags.	03
	(b) What is Filter? Explain Filter API.	04
	(c) What is session? List and explain different ways to manage the session.	07
	OR	
Q.4	(a) What is difference between include directive and jsp:include action tag?	03
	(b) What is HQL? Write difference between HQL and SQL.	04
	(c) Draw the JSF request processing life cycle and briefly give the function of each phase.	07
Q.5	(a) What is ORM? Explain object/relational mappings in hibernate.	03
	(b) What is the JSF facelets? Explain any two facelets tags.	04
	(c) Explain architecture of Spring MVC Framework.	07
	OR	
Q.5	(a) What is Dependency Injection?	03
	(b) List the JSF validation tags and explain any two.	04
	(c) Explain Hibernate architecture in detail.	07

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2023****Subject Code:3160707****Date:14-07-2023****Subject Name:Advanced Java Programming****Time:10:30 AM TO 01:00 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) Demonstrate the use of ResultSetMetadata. **03**
 (b) Implement the client server program using UDP Sockets. Client will request to download the file from server and server will send it to client. **04**
 (c) What do you mean by session tracking? Discuss different session tracking **07**
- Q.2** (a) Compare ServerSocket with Socket. **03**
 (b) Differentiate ServletConfig and ServletContext. **04**
 (c) Demonstrate the use of ServletRequestDispatcher and its methods include and forward. **07**
- OR**
- (c) Demonstrate the use of JSP action tags include and forward. **07**
- Q.3** (a) Write a code snippet to show the use of PreparedStatement. **03**
 (b) What is filter? How will you configure filter using deployment descriptor? **04**
 (c) Develop a web application as following to demonstrate the use of <jsp:useBean>. **07**
 1) Create a Java Bean named Student with attributes name and age.
 2) Create a web page to set the properties of Student using <jsp:useBean>.
 3) Create a web page to display the properties of Student using <jsp:useBean>.
- OR**
- Q.3** (a) What is FilterConfig? How will you use it? **03**
 (b) Write a code snippet to explain the use of CallableStatement. **04**
 (c) Develop a web application as following using JSP. **07**
 1) Create a web page (HTML) to submit the registration detail (Name, email and contact number) of user to jsp page.
 2) Create a jsp page to enter the registration detail in the table of database.
 3) Create a jsp page to display the list of all registered users.
- Q.4** (a) What is EL? Write a code snippet to show the use of method expressions in JSP page. **03**
 (b) Create a custom tag to print current date and time in JSP page. **04**
 (c) Discuss JSF request processing life cycle. **07**
- OR**
- Q.4** (a) Write a code snippet to show the use of JSF action event. **03**
 (b) Create a JSF custom convertor and use it in JSP page. **04**
 (c) Discuss the tags of JSTL SQL tag library. **07**
- Q.5** (a) Explain the role of IoC container in Spring. **03**
 (b) Explain AOP concepts of Spring. **04**
 (c) Discuss Hibernate architecture in detail. **07**
- OR**
- Q.5** (a) What is Hibernate? What are the features of it? **03**
 (b) Explain OR mapping using hibernate mapping file. **04**
 (c) Discuss Spring framework architecture in detail. **07**

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3160707****Date:10/06/2022****Subject Name:Advanced Java Programming****Time:10:30 AM TO 01:00 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) What do you mean by MVC architecture? Explain its role in modern applications with its advantages. **03**
(b) What is Servlet? Explain the life cycle methods of it. **04**
(c) Explain the use of PreparedStatement with appropriate example. **07**

- Q.2** (a) Compare Socket with ServerSocket. **03**
(b) Compare the types of JDBC drivers? **04**
(c) Explain JSP inbuilt objects with their use in application. **07**

OR

- (c) Write a java program where client sends a string as a message and sever counts the characters in the received message from client. Server sends this value back to the client. Server should be able to serve multiple clients simultaneously. **07**

- Q.3** (a) What is a session? List out various session management techniques. **03**
(b) Explain the purpose of RequestDispatcher using the methods forward () and include (). **04**
(c) What are cookies? Demonstrate the use of cookies in servlet. **07**

OR

- Q.3** (a) Which action tags are used to access the JavaBeans from a JSP page? **03**
(b) What is Expression Language EL in JSP explain with suitable example program? **04**
(c) What is session? Demonstrate the use of Session in JSP. **07**

- Q.4** (a) What is JSF? List and explain its features. **03**
(b) What is JSTL? Explain the core tags of the SQL tag library. **04**
(c) Discuss various stages of JSP life cycle. **07**

OR

- Q.4** (a) What is a custom tag? Explain the life cycle of tag handler. **03**
(b) What is filter? Explain the configuration of filter using deployment descriptor. **04**
(c) Discuss JSF life cycle phases. **07**

- Q.5** (a) What is hibernate? What are the benefits of using it? **03**
(b) What is HQL? How does it different from SQL? List its advantages. **04**
(c) Explain the Spring Web MVC framework controllers **07**

OR

- Q.5** (a) What are the different bean scopes in spring? **03**
(b) What is Spring Bean? How can you create bean in Spring boot? **04**
(c) What is OR mapping? Explain the components of hibernate.cfg.xml file. **07**
