# 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    |

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