QP Code: SN23BTECH236 | Reg. No | | | | | | | | | | | AY 23

Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)

B. Tech (Fifth Semester - Regular) Examinations, November 2025

23BCSOE35013/23BCMOE35013/23BCDOE35013 – Advanced JAVA

(CSE,CSE-AIML,CSE-DS)

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions
(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions

		CO #	Blooms Level
a.	Write the steps involved in establishing a JDBC connection to a database.	CO1	K1
b.	Differentiate between doGet() and doPost() methods in Servlets.	CO1	K1
c.	Explain the use of <jsp:useBean> action tag.	CO1	K2
d.	What is the role of the Spring IoC (Inversion of Control) container?	CO1	K1
e.	Define Aspect-Oriented Programming (AOP) in Spring.	CO1	K2

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** the questions

		Marks	CO #	Blooms Level
2. a.	Discuss the use of callable statements in executing stored procedures.	5	CO1	K2
b.	Write a JDBC program to connect to a MySQL database and retrieve all student records.	5	CO1	K3
	(OR)			
c.	Explain the different SQL query types that can be handled through JDBC.	5	CO1	K2
d.	Explain the database connection pooling in JDBC with example.	5	CO1	K2
3.a.	Explain the life cycle of a servlet.	5	CO1	K2
b.	Explain the session tracking mechanism in servlets.	5	CO1	K2
	(OR)			
c.	Explain servlet filters and their lifecycle.	5	CO1	K1
d.	Explain the annotation based servlet development with an example.	5	CO1	K2
4.a.	Explain the purpose of JSP action element with example.	5	CO1	K2
b.	Describe the difference between include directive and include action directive with an example.	5	CO1	K2
	(OR)			
c.	Explain the use of JavaBean in JSP with an example.	5	CO1	K1
d.	Explain different scripting elements in JSP with an example.	5	CO1	K1
5.a.	Explain the different types of mapping methods in hibernate such as configuration file, annotation based mapping and programmatic mapping.	5	CO1	K2
b.	Explain about Spring boot dependency injection and Auto configuration.	5	CO1	K2
	(OR)			
c.	Explain the purpose of Lombok in Java. Describe any four commonly used Lombok annotations with examples..	5	CO1	K2

d.	Write and explain a simple example of using @Before and @After advices in Spring AOP for method execution logging.	5	CO1	K1
6.a.	What is Spring Security? Explain how authentication and authorization are handled in a Spring Boot application.	5	CO1	K2
b.	Explain the difference between in memory authentication and database authentication in Spring Security with code snippets.	5	CO1	K2
	(OR)			
c.	What is OAuth 2.0? Describe its key components such as Resource Owner, Client, Authorization Server, and Resource Server with a suitable example.	5	CO1	K1
d.	Define RESTful Web Services. Explain the key principles of REST architecture and describe how HTTP methods (GET, POST, PUT, DELETE) are used in REST APIs.	5	CO1	K2

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