



- Notes :
1. All the questions are compulsory and carry equal marks.
 2. Draw neat and labelled diagram wherever necessary.
 3. Avoid vague answers.

1. Either

- a) Explain any four swing components. **8**
- b) Write a program to insert a employee record in access table. **8**

OR

- c) What is collection class in Java? Explain any two methods of it. **8**
- d) Explain in detail Event Delegation Model. **8**

2. Either

- a) Explain in detail various Http methods. **8**
- b) Discuss in detail about servlet Life Cycle. **8**

OR

- c) What is meant by web server? Explain in detail. **8**
- d) Explain, how the servlet- Browser communication takes place? **8**

3. Either

- a) Discuss in detail JSP Life cycle. **8**
- b) Explain in detail any four classic tags with example. **8**

OR

- c) What are the various JSP Implicit objects? Explain. **8**
- d) Explain in detail declarative JSP scripting elements. **8**

4. Either

- a) What is ORM? Explain. **8**
- b) What is meant by CRUD operations? Explain in detail. **8**

OR

- c) Explain the configuration of XML file in detail. **8**
- d) Write a sample application using Hibernate. **8**

5. Attempt all the questions.

- a) Write a short note on Hash set. **4**
- b) Explain in brief Generic Servlet. **4**
- c) Write in short about web logic. **4**
- d) Discuss in brief about Native SQL. **4**
