

**ADVANCE JAVA PROGRAMMING**  
**SEM V, 2012-13**  
**B.TECH**  
**UTTARAKHAND TECHNICAL UNIVERSITY (UTU)**

Time: 3 hours

Total marks: 100

Attempt any four parts of the following:

1. How to use EJBGen annotations to speed EJB development? Explain.
2. How to use an EJB control to ease client development? Explain.
3. What is Struts? Explain with example.
4. Explain the format of conditional statements? Give example.
5. What is event handler? Name its types.
6. List and define the data types available in java Script?

**SECTION B**

Attempt any two parts of the following:

1. Explain the lifecycle of a beanmanaged persistent entity bean. What happens when the client wants to create some new database data (say, a new order for goods placed over the Internet), it calls a create() method on your entity bean's home object?
2. (a) How you do Session Management in JSP? Explain.  
(b) Write the names of implicit objects in JSP. Also provide the differences among them. Why we need them?
3. (a) What is Connection pooling? What are the advantages of using a connection pool?  
(b) What are the types of statements in JDBC? What are the differences/key features between the 3 different types of statements in JDBC?

**SECTION C**

Attempt any two parts of the following:

1. (a) Explain life cycle of Servlet. Explain the different Authentication options available in servlets.  
(b) List out the difference between ServletConfig and ServletContext?
2. (a) How servlets differ from RMI. Explain the advantages and disadvantages of each technology? Explain.  
(b) What is Servlet context? Explain session tracking in Java Servlet.
3. (a) What are the important items in javax servlets. Explain them.  
(b) Explain the underlying methods of Servlets interface.

#### SECTION D

- What is Java Interface. Definition Language (IDL)? Explain in detail.
  - What is autoboxing? Explain with example.
- What is Java virtual machine? What are its benefits?
  - The HEAD method provides an efficient way to determine when a resource has been last modified.

Given the following deployment descriptor code:

```
<servlet>
  <servlet-name>
    test
  </servlet-name>
  <servlet-class>
    TestServlet
  </servlet-class>
  <init-param>
    <param-name>color</param-name>
    <param-value>green</param-value>
  </init-param>
</servlet>
```

Which two of the servlet methods can be used to access a servlet initialization parameter color?

#### SECTION E

Attempt any two parts of the following:

- What is the difference between variable declared inside a declaration part and variable declared in scriptlet part?
  - How does a try statement determine which catch clause should be used to handle an exception? Explain with an appropriate example.
- How can you implement a thread-safe JSP page? What are the advantages and disadvantages of using it?
  - Compare 2-tier, 3-tier and N-tier architectures.
- Explain the 3-tier architecture in detail. Also write down two examples of 3-tier architecture.
  - Define Thin and Thick clients. What are the pros and cons of using Thin clients.