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**USN**

**RNS Institute of Technology**

**Department of MCA**

**IV Semester - III Test – May 2018**

**Advanced Java Programming (16MCA41)**

**Duration: 90 mins. Max Marks: 45 Time: 9:00-10:30 am Date: 16/05/18**

**NOTE: Answer *FIVE* full questions.**

***Don’t write anything on question paper other than USN.***

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| --- | --- | --- | --- | --- | --- |
| **Qn.**  **No.** | | **Questions** | **Marks** | **BCL** | **CO** |
| 1 | a) | Define annotations. | 2 | L1 | CO3 |
|  | b) | List and explain the three built-in annotations. Give examples. | 7 | L1, L2 | CO3 |
| **OR** | | | | | |
| 2 | a) | What are the properties of a bean? | 2 | L1 | CO3 |
|  | b) | Explain the following:  i) Introspection ii) Customizer | 7 | L1, L2 | CO3 |
|  | | | | | |
| 3 | a) | List the types of JDBC drivers. | 2 | L1 | CO4 |
|  | b) | Briefly describe any two types of JDBC driver. | 7 | L1, L2 | CO4 |
| **OR** | | | | | |
| 4 |  | Discuss the JDBC steps to build connection to the database. | 9 | L1, L3 | CO4 |
|  | | | | | |
| 5 |  | Explain the following:  a) Statement b)PreparedStatement c) CallableStatement | 9 | L2 | CO4 |
| **OR** | | | | | |
| 6 |  | Discuss the methods executeUpdate(), executeQuery() and executeBatch(). | 9 | L2 | CO4 |
|  | | | | | |
| 7 |  | Write a JAVA program to insert data into Student DATABASE and retrieve Student DB. | 9 | L1,L3 | CO4 |
| **OR** | | | | | |
| 8 | a) | Mention the different types of EJB. | 2 | L1 | CO5 |
|  | b) | With a neat diagram, explain the life cycle of Stateless Session Bean. | 7 | L1, L2 | CO5 |
|  | | | | | |
| 9 |  | Write an EJB program to demonstrate Session Bean using business logic. | 9 | L2 | CO5 |
| **OR** | | | | | |
| 10 | a) | Explain the types of Message Driven Bean. | 6 | L1, L2 | CO5 |
|  | b) | List and explain the advanced data types in SQL3. | 3 | L1 | CO5 |

**Bloom’s Cognitive Levels (BCL): L1: Remember, L2: Understand, L3: Apply, L4: Analyze, L5: Evaluate, L6: Create**

**Course Outcomes:**

1. **CO1:** Learn the concept of Servlet and its life cycle, JSP and its tag
2. **CO2:** Understand JSP tags and develop applications using JSP Tags.
3. **CO3:** Create packages and interfaces
4. **CO4:** Build Database connection
5. **CO5:** Develop Enterprise Java Bean Applications