USN ☐☐☐☐☐☐☐☐☐☐ **13MCA42**

Fourth Semester MCA Degree Examination, June/July 2018
Advanced Java Programming

Time: 3 hrs.　　　　　　　　　　　　　　　　　　　　　　　　Max. Marks:100

Note: *Answer any FIVE full questions.*

1　a. Define servlet. Discuss the life cycle of servlet with appropriate method implementations. **(06 Marks)**
　　b. Explain about HTTP Request headers. **(06 Marks)**
　　c. What are the methods available to handle the form data? Write a servlet program to create a dynamic page using form data. **(08 Marks)**

2　a. What is cookie? How to send and receive the cookies? Write a servlet program to keep track the user session using cookies. **(10 Marks)**
　　b. What is JSP? Explain the advantages of JSP over servlets. **(04 Marks)**
　　c. Explain about JSP expressions and JSP declarations with syntax and examples. **(06 Marks)**

3　a. Explain about any 6 attributes of page directives. **(06 Marks)**
　　b. Explain the following JSP action tags
　　　i) < jsp : include >
　　　ii) <jsp : forward>
　　　iii) <jsp : plugin>. **(06 Marks)**
　　c. Write a JSP program to get student information through HTML and create Java bean class, populate bean and display the same information through another JSP. **(08 Marks)**

4　a. What is annotation? Explain the built-in annotations of Java. **(10 Marks)**
　　b. What is Java bean? Explain about simple and indexed properties of Java bean. **(10 Marks)**

5　a. Explain the steps in writing JDBC program with sample code. **(08 Marks)**
　　b. Explain about prepared statement. **(04 Marks)**
　　c. Explain the following with code snippet : i) Scrollable Resultset ii) Updatable Resultset. **(08 Marks)**

6　a. Explain about the services provided by the container. **(10 Marks)**
　　b. Discuss the life cycle of Message Driven Bean. **(05 Marks)**
　　c. What is JMS? Discuss about JMS messaging models. **(05 Marks)**

7　a. What is stateful session bean? Explain about the life cycle of stateful session bean. **(08 Marks)**
　　b. Define the terms persistence, entity, entity bean and Entity Manager. Write an employee entity bean class which contains employee id and name. **(12 Marks)**

8　　Write a short note on the following :
　　a. Advanced JDBC datatypes
　　b. JSP implicit objects
　　c. Status codes
　　d. Jar files. **(20 Marks)**

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