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13MCA42

**Fourth Semester MCA Degree Examination, Dec.2016/Jan.2017**  
**Advanced Java Programming**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 a. Explain the structure of a servlet program with a servlet template. (08 Marks)  
b. List and explain the methods involved in the servlet life cycle. (06 Marks)  
c. Write a servlet program which demonstrates the usage of the get parameter ( ) method. (06 Marks)
- 2 a. List and explain any six methods of HttpServlet Request class. (06 Marks)  
b. Explain the steps in detail involved in sending the cookies to the client. (09 Marks)  
c. Write a servlet program to check whether the session is new or old. (05 Marks)
- 3 a. What is the need for JSP, benefit and advantages of JSP over competing technologies? (10 Marks)  
b. Explain the different types of JSP tags with an example for each. (10 Marks)
- 4 a. List all the attributes of page directive tag and explain any five with an example for each. (10 Marks)  
b. Write a JSP program which displays an applet with the help of <jsp:plugin>tag. (10 Marks)
- 5 a. What is a Java Bean? What are the key concepts of Java Bean? List out the advantages of Java Bean. (10 Marks)  
b. What are the different categories of JDBC drivers? (06 Marks)  
c. What are basic steps that need to be followed while writing an application that uses JDBC API? (04 Marks)
- 6 a. Explain Prepared statement object with an example java program. (10 Marks)  
b. What is the advantage of using add Batch ( ) and execute Batch ( ) methods in JDBC. (06 Marks)  
c. Explain the following advanced JDBC data type: BLOB, CLOB. (04 Marks)
- 7 a. Explain transactions, security and Timer specification of container services in EJB. (10 Marks)  
b. With a neat diagram, explain the states of life cycle of a stateless session Bean. (10 Marks)
- 8 Write short notes on :  
a. Creating a jar file (05 Marks)  
b. Scrollable Result set (05 Marks)  
c. Message Driven Bean (05 Marks)  
d. Dependency Injection. (05 Marks)

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Important Note: 1. On completing your answers compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 4+2=8 - 30, will be treated as malpractice.