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## Fourth Semester MCA Degree Examination, Dec.2018/Jan.2019

### Advanced Java Programming

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
  - a. What is a servlet? Give the basic structure of a servlet. (06 Marks)
  - b. Discuss on the life cycle of a servlet. (06 Marks)
  - c. What is a cookie? What are the advantages of cookies? (05 Marks)
  - d. Compare session and permanent cookies. (03 Marks)
  
- 2
  - a. What are the benefits of JSP? (02 Marks)
  - b. Discuss on the different types of scripting elements of JSP. (06 Marks)
  - c. Write a JSP program that reads the username and password and displays a welcome message to the specific user, if valid and asks for log – in again otherwise. (08 Marks)
  - d. What are the advantage of expressions tag? (04 Marks)
  
- 3
  - a. Discuss on the different ways of including files into a JSP page with suitable example for each. (08 Marks)
  - b. List out the attributes of the page directive tag in JSP. Explain the use of error page attribute with example. (08 Marks)
  - c. Give the syntax of plugin log. Explain its use with an example. (04 Marks)
  
- 4
  - a. What is a package? Explain how to create a package with an example. (05 Marks)
  - b. List out any 6 built–in annotations and explain their use. (08 Marks)
  - c. Explain the use of any 6 core Java API packages. (07 Marks)
  
- 5
  - a. Define Java bean, Explain the features of a Java bean. (06 Marks)
  - b. Discuss on the different types of bean properties. (08 Marks)
  - c. What is JDBC? List out the different types of JDBC drivers and mention their use. (06 Marks)
  
- 6
  - a. With code snippet, explain the steps involved in establishing a connection with a database using JDBC. (08 Marks)
  - b. Discuss briefly on :
    - i) Batch updates (08 Marks)
    - ii) Scrollable result sets. (04 Marks)
  - c. Write short notes on basic JDBC data types. (04 Marks)
  
- 7
  - a. Discuss briefly on the container services provided by EJB component model. (12 Marks)
  - b. Explain integration testing and out– of– container testing. (08 Marks)
  
- 8
  - a. What is a session bean? Discuss briefly on the different types of session beans. (08 Marks)
  - b. Discuss on the different types of entity relational mappings of EJB. (10 Marks)
  - c. Define persistence. (02 Marks)

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