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**R-17**

**Code: 7P2B34**

M.C.A. III Semester Supplementary Examinations April/May 2019

**Web Component Development with J2EE**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. a) Describe the Multi-tier architecture of J2EE. 6M
- b) Write short note on various types of JDBC drivers. 6M

**OR**

2. a) Explain the mechanism for associating the JDBC/ODBC connection. 6M
- b) Discuss the procedure for inserting data in to the table with an example. 6M

**UNIT-II**

3. a) With a neat sketch explain the life cycle of Servlet. 6M
- b) Explain the procedure for updating data in a table with an example. 6M

**OR**

4. a) Describe the mechanism for joining tables in SQL. 6M
- b) What is Servlet? Write short notes on Servlet API. 6M

**UNIT-III**

5. a) Discuss the concept of Servlet Request Dispatcher. 6M
- b) Write short note on Single Thread Model. 6M

**OR**

6. a) Explain the concept of Multi-tier Applications using Database Connectivity. 6M
- b) Write short note on Filter API. 6M

**UNIT-IV**

7. a) Write about Custom Tags in JSP with an example. 6M
- b) Explain how to declare variables and methods in JSP. 6M

**OR**

8. a) Explain the procedure for developing JSP application with an example. 6M
- b) Describe Standard Action in JSP. 6M

**UNIT-V**

9. a) What is java Bean? Write the advantages of Java Beans. 6M
- b) Write short notes on Event Descriptor with an example. 6M

**OR**

10. a) Explain Java Beans API. 6M
- b) Write procedure for accessing java Beans using JSP. 6M

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<b>R-17</b>
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**Code: 7P2B35**

M.C.A. III Semester Supplementary Examinations April/May 2019

**Design & Analysis of Algorithms**

Max. Marks: 60

Time: 3 Hours

Answer all five units by choosing one question from each unit ( 5 x 12 = 60Marks )

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**UNIT-I**

- 1. a) Explain briefly about the Algorithm design and analysis process. 6M
- b) Describe Recurrence equations with a suitable example. 6M

**OR**

- 2. a) How to prove the Algorithm's Correctness? Explain in detail. 6M
- b) Discuss in detail about the different asymptotic notations with suitable examples. 6M

**UNIT-II**

- 3. Discuss about the Binary tree traversal using divide and conquer technique? 12M

**OR**

- 4. a) Explain divide and conquer approach and discuss it with the Merge sort? 6M
- b) Write about quick sort method with example. 6M

**UNIT-III**

- 5. a) Give brief description about the All pairs shortest paths problem. 6M
- b) Write short notes on the general method of the greedy technique. 6M

**OR**

- 6. Explain in detail about the Bellman and Ford algorithm to compute the shortest paths with a suitable example. 12M

**UNIT-IV**

- 7. a) Give a brief note on general method of Backtracking. 6M
- b) Explain in detail about the Hamiltonian Cycles. 6M

**OR**

- 8. Explain the concept of Branch and Bound technique with a suitable example? 12M

**UNIT-V**

- 9. a) Explain how the Connected Components of a graph can be obtained. 6M
- b) Write short notes on COOKS Theorem 6M

**OR**

- 10. What is a NP hard problem? Explain. 12M

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Hall Ticket Number :

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**R-17**

**Code: 7P2B31**

M.C.A. III Semester Supplementary Examinations April/May 2019

**Database Management Systems**

Max. Marks: 60

Time: 3 Hours

Answer *all five* units by choosing one question from each unit ( 5 x 12 = 60 Marks )

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**UNIT-I**

1. Explain the Database Architecture? 12M

**OR**

2. a) Write about Data Models? 6M

b) Illustrate the View of Data? 6M

**UNIT-II**

3. Discuss about the Domain Relational Calculus? 12M

**OR**

4. Describe the difference between Domain Relational Calculus and Relational Algebra with an Example? 12M

**UNIT-III**

5. Explain the four Operations EXCEPT, IN, EXISTS, SOME? 12M

**OR**

6. a) Write about the Normalization and FD? 6M

b) Describe the 5NF? 6M

**UNIT-IV**

7. a) What is the Concept of ACID? Explain 6M

b) Write about Recovery System in DBMS? 6M

**OR**

8. How the Lock Manager Implements Lock and Unlock Requests? Explain 12M

**UNIT-V**

9. a) What are the Performance implications of Disk Structure? 6M

b) Discuss the Concept of ISAM? 6M

**OR**

10. a) Compare Linear Hashing and Extendable Hashing? 6M

b) Describe what is the Concept of B+ Trees? 6M

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