

**17P459**

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Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2019**

(CUCSS - PG)

**CC17P CSS4 E01b – ADVANCED TOPICS IN DATABASE DESIGN**

Computer Science

(2017 Admission Regular)

Time: Three Hours

Maximum: 36 Weightage

**PART A**

Answer *all* questions. Each question carries 1 weightage.

1. What is meant by JOIN?
2. Describe generalization with example.
3. Explain code modularity with suitable example or diagram.
4. What is meant by object containment?
5. Explain data fragmentation.
6. Write the advantages of database system over file system.
7. Describe OODBMS storage issues.
8. What is meant by nested query?
9. Describe the role of DBA
10. Differentiate OODBMS and ORDBMS
11. Explain the basic concepts in relational model.
12. Define decomposition of tables.

**(12 x 1 = 12 Weightage)**

**PART B**

Answer any *six* questions. Each question carries 2 weightage.

13. Explain the database system structure with a neat diagram.
14. Explain the properties of transaction.
15. Consider the relation R (A, B, C, D) with the following dependencies.  
{AB->C, D->B}. Find the candidate key for this relation.
16. Write note on recovery in distributed database.
17. Explain the motivation to complex data structures.
18. Explain normalization? Explain the fifth normal form.
19. Write a note on deductive databases and query processing.
20. Explain the two phase commit protocol in distributed database.
21. Write note on distributed system structure.

**(6 x 2 = 12 Weightage)**

### **PART C**

Answer any *three* questions. Each question carries 4 weightage.

22. Explain extended entity relationship model features.
23. Write note on object oriented data model.
24. Describe persistent programming languages.
25. Explain query processing in distributed database.
26. Write note on temporal and spatial databases.
27. Explain the techniques for concurrency control.

**(3 x 4 = 12 Weightage)**

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