

**R17****Code No: 843AA****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA III Semester Examinations, April/May - 2019****DATABASE MANAGEMENT SYSTEMS****Time: 3hrs****Max.Marks:75****Note:** This question contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A**5 × 5 Marks = 25**

- 1.a) Discuss about different types of database users. [5]
- b) When can we use group by clause? Explain with an example. [5]
- c) What is functional dependency? Explain with an example. [5]
- d) What is a transaction? What are the properties of transaction? [5]
- e) What are sparse and dense indexes? [5]

PART - B**5 × 10 Marks =50**

- 2.a) What is the role of storage manager? Explain. [5+5]
 - b) Explain about database system architecture. [5+5]
- OR**
3. Discuss about various data models. [10]
 4. Discuss about integrity constraints over relations. [10]
- OR**
- 5.a) Discuss about destroying and altering tables and views. [5+5]
 - b) Explain in detail about nested queries. [5+5]
 6. Discuss about different types of relational calculus in detail. [10]
- OR**
7. Explain 3 NF and BCNF with examples. [10]
 8. Explain timestamp based protocols. [10]
- OR**
9. Explain ARIES recovery system. [10]
 - 10.a) Explain ISAM in detail. [5+5]
 - b) Explain about cluster index. [5+5]
- OR**
11. Explain about different file organizations. [10]

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