

Reg. No. \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

FIRST SEMESTER MCA (LATERAL ENTRY) DEGREE EXAMINATION, JULY 2017

Course Code: **RLMCA205**Course Name: **DATABASE MANAGEMENT SYSTEMS**

Maximum.Marks:60

Duration: 3 Hours

**PART A***Answer All Questions. Each question carries 3 marks.*

1. Write a note on weak entity sets. How they are represented in an ER model? How they are identified uniquely?
2. What is meant by Referential Integrity constraints?
3. What are the set operators in SQL?
4. What is 'view' in SQL? How is it managed in SQL?
5. Explain functional dependency with a suitable example.
6. Explain BCNF with an example.
7. What is a Transaction and what are the basic operations?
8. Explain Serial and Non Serial schedules with example.

**PART B***Answer ALL questions. Each question carries 6 marks.*

9. Write in detail the purpose of data base systems.

OR

10. What are the different types of database users? Explain the responsibilities of a Database Administrator.
11. Explain Basic Relational Algebra operations.

OR

12. Consider 3 tables:

•SAILORS (SID:INTEGER, SNAME:STRING, RATING:INTEGER,AGE:REAL)

•BOATS (BID:INTEGER, BNAME:STRING, COLOR:STRING)

•RESERVES(SID:INTEGER, BID:INTEGER, DAY:DATE)

Write a Relational algebra queries for the following:

- i) Find the names of sailors who have reserved at least one boat.
- ii) Find the names of sailors who have reserved a 'red' boat
- iii) Find the names of sailors who have reserved both red and green boats.

13. Write a procedure to print the prime numbers below 100.

OR

14. Explain about Triggers in SQL.

15. What is Normalization? Explain 1NF, 2NF and 3NF in detail.

OR

16. What is decomposition? What are the desirable properties of decomposition?

17. What is 2PL.Explain all the variants of 2PL.

OR

18. What is Deadlock? How can we deal with Deadlocks?

19. Explain Association rules in data mining.

OR

20. Explain the concept and characteristics of Data Warehouses.

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