

**PARUL UNIVERSITY**  
**FACULTY OF IT & COMPUTER SCIENCE**  
**MCA/IMCA Winter 2019 – 20 Examination**

Semester: 3/7

Subject Code: 05201203/05301403

Subject Name: Advanced Database Management Systems

Date: 02-12-2019

Time: 10:30 am to 01:00 pm

Total Marks: 60

**Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

**Q.1 Answer the followings.****A. Answer / Define the following in short. (05)**

1. Define ORDBMS.
2. What do you mean by Stored Procedures?
3. What do you mean by Triggers?
4. Define Database Recovery.
5. What do you mean by Decryption?

**B. Multiple choice type questions/ Give the sentence true or false. (Each of 01 marks) (10)**

1. Which of the following gives a logical structure of the database graphically  
 A. Entity-relationship diagram B. Entity diagram C. Database diagram  
 D. Architectural representation
2. If you were collecting and storing information about your music collection, an album would be considered as.....  
 A. Relation B. Entity C. Instance D. Attribute
3. A block of code which performs specific task in RDBMS is called.....
4. Consider a directed line (--->) from the relationship set advisor to both entity sets instructor and student. This indicates .....cardinality  
 A. One to many B. One to one C. Many to many D. Many to one
5. Encrypted text is called .....
6. Syntax of PL/SQL Procedure is.....
7. MultiSet is a type of .....
8. Syntax of FOR LOOP in PL/SQL is.....
9. Key which is kept secret in Public key Encryption Algorithm is called.....
10. Process of converting a Plain text into cipher text is called .....

**Q.2 Answer the followings. (3 Marks Questions.) (Any Five) (15)**

1. What do you mean by Schedules? Define serialized and un-serialized schedules.
2. Write down the at least 3 differences between DBMS and RDBMS.
3. Explain Back up techniques.
4. Explain Storage access methods.
5. Explain Dense and Sparse Matrices.
6. What do you mean by Nested Relations? Explain with example.

**Q.3 Answer the following. (5 Marks Questions)(Any three) (15)**

1. What is SQL3? Write down the newly introduced features of SQL3.
2. What do you mean by Procedures? Why do we need procedures? Explain it with any example.
3. Explain ORDBMS in detail with at least 5 Advantages.
4. What do you mean by Indexing? Explain its Types with example.

**Q.4 Answer the following in detail.**

- A.** What do you mean by Public Key Encryption? Explain in detail. (05)
- B.(1)** Explain types of Backup and Recovery techniques in detail. (05)
- B.(2)** What do you mean by Concurrency? Write names of Concurrency control protocols and explain any one. (05)

**OR**

- B.(1)** What do you mean by Transaction? Explain ACID properties. (05)
- B.(2)** What do you mean by Triggers? Explain Advantages and Disadvantages of Triggers. (05)