Seat No:_____ **Enrollment No:_____**

PARUL UNIVERSITY

FACULTY OF IT & COMPUTER SCIENCE

BCA/IMCA Winter 2017 – 18 Examination

Semester: 2 **Date: 10/ 01/ 2018**

Subject Code: 05101153 /05301153 **Time: 10:30am to 01:00pm**

Subject Name: Database Management System **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 A. Answer the followings. **(05)**

1. What is DBMS? List the component of DBMS.

2. What is data abstraction?

3. Explain Relational Calculus.

4. What is E-R Diagram?

5. What is Normalization?

Q.1 B. Multiple choice type questions. **(10)**

1. …… is the process of organizing data into related tables.

A) Normalization B) Generalization

C) Specialization D) None of the above

2. .. …… is a full form of SQL.

A) Standard query language B) Sequential query language

C) Structured query language D) Server side query language

3. A relational database developer refers to a record as _____

A) a criteria B) a relation

C) a tuple D) an attribute

4. The ..... refers to the way data is organized in and accessible from DBMS.

A) database hierarchy B) data organization

C) data sharing D) data model.

5. …….. Operator is basically a join followed by a project on the attributes of first relation.

A) Join B) Semi-Join

C) Full Join D) Inner Join

6. DCL stands for

A) Data Control Language B) Data Console Language

C) Data Console Level D) Data Control Level

7. By default, the order by clause lists items in _____ order.

A) Descending B) Any

C) Same D) Ascending

8. Which normal form is considered adequate for relational database design?

A) 2 NF B) 3 NF

C) 4 NF D) BCNF

9. The collection of information stored in a database at a particular moment is called as .....

A) schema B) instance of the database

C) data domain D) independence

10. ..... is a combination of two of more attributes used as a primary key

A) Composite Key B) Alternate Key

C) Candidate Key D) Foreign Key

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

1. Give the differences between Data and Information.
2. What is an Entity & Relationship? Also explain the types of Relationship in detail.
3. What is data independence? Explain types of data independence.
4. List out different database users.
5. Give difference between Generalization and Specialization.
6. What is Attribute? List out different types of Attributes.

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

1. What is the differences between weak entity type and strong entity type? Also explain the primary key and super key and candidate key with example.
2. Explain Data Dictionary with example. Also explain the types of Data Dictionary.
3. What is data model? Explain various types of data model.
4. Describe three-level ANSI-SPARC database architecture.

Q.4 Answer the following.

A. What is Functional Dependencies? List the types of functional dependencies and explain any two in detail. **(05)**

B. 1. What is normalization? Explain 1NF, 2NF and 3NF with example. **(7)**

2. Draw E-R Diagram for a University Enterprise **(3)**

OR

B. 1. Explain inner Join and Outer join with example and give the difference between inner Join and Outer Join. **(7)**

2. Draw E-R Diagram for Banking Enterprise. **(3)**