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(Printed Pages 4)

Roll No. _____

18/2673

P.G.D.C.A/M.C.A. Second Semester

Examination, 2018

Second Paper

(Database Management System)

Time : Three Hours *Maximum Marks : 100*

Note : Answer **five** questions in all. Short answer type **question No.1** carrying **40** marks is **compulsory**. Answer one question carrying **15** marks from each unit.

Note : The answers to short questions should not exceed 200 words and the answers to long questions should not exceed 500 words.

1. Write short answers of the following: 4×10=40

(a) What do you mean by Entity and Entity set? Differentiate between strong and weak entity?

P.T.O.

(b) What is an Attribute? Explain domain of an Attribute.

(c) Explain referential Integrity.

(d) Explain role and responsibilities of DBA?

(e) What are advantages of DBMS over traditional file based systems.

(f) What is a view in SQL? What are the uses of view? Explain with example.

(g) What is a transaction? What are ACID properties?

(h) What is Join? Explain with example inner join and outer join.

(i) Differentiate between Database Instance and Database Schema.

(j) Explain Data Independence.

Unit - I

2. What is data modelling? Explain the relational data model in detail. 15

OR

3. What is ER Modelling? Also, explain the concept of aggregation and specialization with suitable examples. 15

Unit - II

4. What is the use of Normalization? Explain 3NF, BCNF and Functional Dependency. 15

OR

5. Define the five basic operators of relational algebra with an example each. 15

Unit - III

6. (a) Define Object based databases and their features. Explain the challenges in OODBMS implementation? 8

   (b) What do you mean by DML? Explain any two DML statements. 7

OR

7. (a) What is an embedded SQL? Explain with suitable examples. 7

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   (b) What is the use of views? Give the syntax for creating the view. 8

Unit - IV

8. (a) List and explain the steps for query processing. 8

   (b) Explain log-based recovery technique. 7

OR

9. (a) Briefly explain the architecture of Oracle Database. 9

   (b) What is concurrency? Explain the different problems that can be caused by concurrent transactions. 6

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