

Printed Pages : 2

MBAIT01

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 7127

Roll No.

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MBA

(SEMESTER-III) THEORY EXAMINATION, 2012-13

DATABASE MANAGEMENT SYSTEM

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all questions.

Section – 1

10 × 2

1. (a) What is DBMS ? Give the functions of DBMS.
- (b) Who is DBA and write down his responsibilities ?
- (c) What are the database constraints ?
- (d) Define Entity and Attribute.
- (e) Explain the difference between weak and a strong entity set.
- (f) Write the difference between DBMS and RDBMS.
- (g) Define database schema.
- (h) What is the difference between logical data independence and physical data independence ?
- (i) Discuss the main characteristics of the database approach and how it differs from traditional file systems.
- (j) What is normalization ?

Section – 2

Attempt any **three** questions from this section :

10 × 3

2. (a) Discuss the concept of Relational Data Model.
- (b) Construct an ER diagram for a hospital with a set of patients and a set of medical doctors. Associate with each patient a log of the various tests and examinations conducted.

- (c) Elaborate the concept of Data Warehousing and Data Mining.
- (d) Consider two set of functional dependencies :
 $F1 = \{A \rightarrow C, AC \rightarrow D, E \rightarrow AD, E \rightarrow H\}$
 $F2 = \{A \rightarrow CD, E \rightarrow AH\}$
Check whether they are equivalent.
- (e) Write short notes on :
 - (i) Serializable Schedule
 - (ii) DML

Section – 3

Attempt **all** the questions from this section :

10 × 5

3. (a) What are the three data anomalies that are likely to occur as a result of data redundancy ? Can data redundancy be completely eliminated in a database approach ? Why or why not ?

OR

Explain two phase locking protocol, B-tree and Query processing with examples.

- (b) What is a view in SQL, and how is it defined ? Discuss the problems that may arise when one attempts to update a view. How are views typically implemented ?

OR

What is ER modeling ? Also discuss the components of ER model.

- (c) Explain the architecture of DBMS along with its advantages and disadvantages.

OR

Explain the record based logical models and data independence.

- (d) Define the concept of aggregation. Give two examples where this concept is useful.

OR

Explain any five SQL commands with suitable examples.

- (e) Write short notes on any **three** :
- (i) Cursor
 - (ii) Foreign Key
 - (iii) Second Normal Form
 - (iv) Trigger
 - (v) DDL Compiler