

**DIPLOMA - VIEP - COMPUTER SCIENCE AND  
ENGINEERING (DCSVI)**

00394

**Term-End Examination**

**June, 2014**

**BICS-038 : DATABASE MANAGEMENT SYSTEM**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** Attempt any *five* questions. Question no. 1 is compulsory.

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1. Choose the correct answer : *7×2=14*

- (a) The costs of moving to a database environment are
- (i) tangible and back-loaded
  - (ii) intangible, back-loaded and long term
  - (iii) short term, expensive and intangible
  - (iv) tangible, upfront and large in the short term
- (b) The DBMS acts as an interface b/w application program and
- (i) the user
  - (ii) the reporting facility
  - (iii) the physical data files
  - (iv) None of the above

- (c) A characteristic or quality describing an entity is called a
  - (i) field
  - (ii) tuple
  - (iii) key field
  - (iv) attribute

State True/False.

- (d) A DBMS eliminates most of the data definition statements found in traditional programs.
    - (i) True
    - (ii) False
  - (e) The project operation creates a subset consisting of columns in a table
    - (i) True
    - (ii) False
  - (f) Conventional DBMS can easily handle graphics-based and multimedia applications.
    - (i) True
    - (ii) False
  - (g) Data mining poses challenges to the protection of individual policy.
    - (i) True
    - (ii) False
2. (a) What are database languages ? Write short notes on schema. 7
- (b) List and describe the four critical elements in a database environment. 7

3. (a) What is called Relational database ? Write a short note on Queries. 7
- (b) What is the use of comparison operators in SQL ? Write aggressive operators. 7
4. (a) Illustrate with example of Tables and Views. 7
- (b) Discuss the hierarchical organization of data in a typical database. 7
5. (a) What is transaction ? Explain concurrent execution of transaction. 7
- (b) Illustrate with example of Nested Queries in SQL. 7
6. (a) Describe the three basic operations of relational database. 7
- (b) What is Indexing ? Explain Index data structure. 7

7. Write short notes on any **four** of the following :

$$3\frac{1}{2} \times 4 = 14$$

- (a) Hashing
- (b) Boyce-Codd Normal Form
- (c) Relational Algebra
- (d) Deadlock
- (e) ACID property
- (f) Locking Techniques