

**DIPLOMA VIEP COMPUTER SCIENCE AND
ENGINEERING**

Term-End Examination

December, 2013

BICS-038 : DATABASE MANAGEMENT SYSTEM

Time : 2 hours

Maximum Marks : 70

Note : Attempt any five questions. Question No.1 is compulsory. All questions carry equal marks.

1. Choose the correct answers. **7x2=14**
- (a) Data is a :
 - (i) Raw fact & figures
 - (ii) Metadata
 - (iii) Information only
 - (iv) None of above
 - (b) PL/SQL is a :
 - (i) Non-procedural DML
 - (ii) Procedural DML
 - (iii) Formal Query Language
 - (iv) None of the above
 - (c) A Row of a relation is called as :
 - (i) Domain
 - (ii) Tuple
 - (iii) Relation
 - (iv) None of above
 - (d) The procedure of decomposition of a table is known as :
 - (i) Specialization
 - (ii) Generalization
 - (iii) Normalization
 - (iv) None of above

- (e) A set of changes that must be all made together is called as :
- (i) Atom
 - (ii) Transaction
 - (iii) Concurrency
 - (iv) None of the above
- (f) MVD stand for Many Value Dependency. (True/False)
- (g) A virtual relation is also known as a view. (True/False)
2. (a) Explain physical, logical and view level of the database with the help of suitable examples. 7
- (b) List the advantages of DBMS over the file system. 7
3. (a) Draw an ER diagram for the Hospital Management System. 7
- (b) Define constraints. How do you explain Integrity constraints in SQL ? 7
4. (a) What is a view ? What are its advantages ? Explain syntax for creating view. 2+2+3=7
- (b) Explain the renaming and Joint operations performed in Relational Algebra with the help of example. 3.5+3.5=7
5. (a) Distinguish between Implicit cursor and Explicit cursor. 3.5+3.5=7
- (b) What is the difference between trigger and procedure? Explain with example. 3.5+3.5=7
6. (a) Illustrate the use of sum(), avg(), and count(). 7
- (b) What is indexing? Explain index data structure. 7

7. (a) Define the following terms. 2.5x2=5
(i) Normalization
(ii) FD
- (b) Discuss 1NF, 2NF, 3NF. Consider any non-normalized relation and bring it into 1NF, 2NF, 3NF step by step. 4.5+4.5=9
8. Write short notes on **any four** of the following :
- (a) ACID properties 3.5x4=14
(b) Need for concurrency control
(c) Dead lock
(d) Log-based recovery
(e) Tree based indexing
(f) Primary and secondary Indexes.
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