

**DIPLOMA IN COMPUTER SCIENCE AND
ENGINEERING**

Term-End Examination

June, 2012

BICS-038 : DATABASE MANAGEMENT SYSTEM

Time : 2 hours

Maximum Marks : 70

Note : All the questions are to be answered in English language only. Attempt any five questions. Question No.1 is compulsory.

1. Choose the correct answer. 7x2=14
- (a) The set of Inter-related files for real time processing is called :
- (i) Database (ii) File system
(iii) Report (iv) Data items
- (b) The extent to which a program meet system specification and user objectives is called :
- (i) Reliability (ii) Correctness
(iii) Efficiency (iv) Usability
- (c) Transitive Dependency exist in :
- (i) 1 NF (ii) 2 NF
(iii) 3rd NF (iv) BCNF

- (d) The case with which program errors are located and corrected is called :
- (i) Durability
 - (ii) Efficiency
 - (iii) Testability
 - (iv) Maintainability

State True / False :

- (e) In Inverted list records are not stored in sequence. *(True / False)*
- (f) In Direct Access new records are stored at the end or specific location. *(True / False)*
- (g) The candidate key applicable in 3NF. *(True / False)*
2. (a) Define Data abstraction Illustrate with an example of ER - Model. **2+5=7**
- (b) What are database languages ? Write notes on schema. **3+4=7**
3. (a) What is called Relational database ? Write a short notes on Queries. **2+5=7**
- (b) Define constraint. How do you explain Integrity Constraint ? **2+5=7**
4. (a) Illustrate with an example of Tables and Views. **3½+3½=7**
- (b) Explain the renaming and joint operations performed in Relational Algebra. **3½+3½=7**

5. (a) Illustrate with an example of Nested Queries in SQL. 7
- (b) Define NULL Value. Explain outer join operations in SQL. 2+5=7
6. (a) Discuss the following : 3½+3½=7
 (i) AND
 (ii) OR and NOT
- (b) Explain in detail about BCNF. 7
7. (a) What is Indexing ? Explain Index data Structure. 2+5=7
- (b) What is transaction ? Explain Concurrent Execution of transaction. 2+5=7
8. Write short note on *any four* :
- (a) DDL 3½
- (b) DML 3½
- (c) Relational Algebra 3½
- (d) SQL Triggers 3½
- (e) Active Database 3½
- (f) Hashing 3½
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