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B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2013.

Fifth Semester

Computer Science — Main

DATABASE MANAGEMENT SYSTEMS

(For those who joined in July 2008 to 2011)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. An instance is _____.

- (a) a set of relationships
- (b) set of attributes
- (c) set of entities
- (d) schema

2. The hierarchical DBMS organizes data elements into :

- (a) segments (b) data compartments
- (c) data units (d) objects

3. The _____ constraints can be applied only at column level.

- (a) Primary key (b) Foreign key
- (c) Unique (d) None

4. A foreign key must

- (a) be defined in all tables in the database
- (b) be numeric
- (c) match the field value of a primary key in a related table
- (d) be unique

5. The WHERE keyword comes before the condition in a normal select query. When using the command GROUP BY in the Select query, what keyword is used to start the condition section?

- (a) Having (b) Find
- (c) Order (d) Provide

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6. A relation is a(n):
(a) association between objects
(b) dependency between attributes
(c) pointer from one row to another in a table
(d) named table of data
7. Given the relation schema Bank (BankID, Account Numb, Balance, Customer) with FDs :
{BankID, AccountNumb -> Balance ; BankID, AccountNumb -> Customer; Customer -> BankID}.
What is the highest normal form for the relation schema Bank?
(a) first (b) second
(c) third (d) boyce codd
8. Higher normal forms are better than lower normal forms because higher normal forms yield fewer _____ in the database.
(a) update,delete (b) data storage
(c) data redundancies (d) none of the above
9. The left outer join is one type of outer join. Another one is the.
(a) right (b) full
(c) right outer (d) none

10. Which SQL statement is used to extract data from a database?
(a) GET (b) OPEN
(c) EXTRACT (d) SELECT

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) What is a simple attribute? Give examples.
Or
(b) Differentiate between Cartesian product and natural join operations used in relational algebra.
12. (a) Describe transitive dependency.
Or
(b) What are views? How they are created?
13. (a) What do you mean by durability? Why is it important? Give an example.
Or
(b) What is transaction management?
14. (a) What do you mean by rollback?
Or
(b) What is database recovery? Why backups are important?



15. (a) What are centralized databases? List out its characteristics.

Or

- (b) What is a distributed database? List out its objectives.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Draw the ER diagram for hospital management system.

Or

- (b) Explain the various basic relational algebra operations in detail.

17. (a) Explain domains and entity integrity.

Or

- (b) Explain how to insert a tuple and delete a tuple using suitable examples.

18. (a) Explain how you will order the output of a query with suitable examples.

Or

- (b) Explain in detail the features of SQL.

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19. (a) Explain in detail audit trail.

Or

- (b) Explain automatic recovery and backup.

20. (a) Explain the working DTC.

Or

- (b) Explain how to implement basic primary copy model using applied function replication.
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