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67059

MCA 2nd Semester CBCS Scheme w.e.f. 2016-17 (Re-Appear) Examination – October, 2020

DATABASE MANAGEMENT SYSTEM

Paper : 16MCA32C4

Time : 1.45 hours] *[Maximum Marks : 80*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any ***three*** questions. All questions carry equal marks.

1. (a) What is the difference between data and information ?

(b) What do you mean by data redundancy ?

(c) What is single-valued and multi-valued attributes ?

(d) What are data views ? Write the command for deleting view.

(e) What is concept of NULL values in SQL ?

(f) Differentiate between WHERE and HAVING clauses.

(g) What are the properties of transaction ?

(h) What are the advantages of PL/SQL ?

2. "A database is a computer based repositories for logically coherent meaningful data". Explain in detail. Also describe the typical components of DBMS with a neat diagram.

3. What is an E-R model ? How does it help in database design ? Construct an E-R diagram for a library management system, make suitable assumptions.

4. (a) Define super key, candidate key, primary key and secondary key with the help of example.

   (b) Discuss the entity integrity and referential integrity constraints. Why each is considered important ?

5. What is relational calculus ? How different operations are carried out in relational calculus ? Also explain the differences between relational algebra and relational calculus.

6. (a) Write purpose and syntax of the following SQL commands and give an example of each : (i) Inset (ii) Alter (iii) Update (iv) Delete

   (b) List and explain different types of aggregate functions with the help of an example.

7. What is normalization ? What are its objective? Explain all the normal forms with the help of example.

8. Discuss the concurrency and the various possible problems associated with it in DBMS. Explain various concurrency control techniques through suitable example.

9. What do you mean by deadlock ? What are the various reasons for the occurrence of deadlock ? What are the various mechanisms for resolution of deadlocks ? Discuss.
