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MCA (Sem. - 2nd)

RELATIONAL DATABASE MANAGEMENT SYSTEM

SUBJECT CODE : MCA - 202 (2012 Batch)

Paper ID : [B0134]

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt one question each from sections A, B, C, and D.
- 2) Section E is compulsory.
- 3) All questions carry equal marks.

SECTION - A

- Q1)** Discuss the concept of data independence. Explain its importance in a database environment.
- Q2)** a) What is entity type and entity instance? Explain with an example.
b) Draw and explain the ER diagram of University examination system.

SECTION - B

- Q3)** a) What is transaction? Explain ACID properties of transaction.
b) What is lock granularity? Explain various types of locks used in concurrency control.
- Q4)** What is object oriented database? What are its characteristics features? Explain how object oriented database is different from object relational database.

SECTION - C

- Q5)** What is distributed database? How It is different from centralized database? Explain various components of distributed database.
- Q6)** Explain the features of :
a) SPSD
b) Distributed database transaction

SECTION - D

Q7) What is meant by threat in a database environment? What are various threats that could affect a database environment? Discuss the mechanism to protect data against these threats.

Q8) Write notes on the following :

- a) DSS database and its properties
- b) Developing a data administration strategy

SECTION - E

Q9) Write short notes on the following :

- a) Define degree and cardinality of a relation.
- b) List various functions of DBMS.
- c) Differentiate weak and strong entity
- d) What are different types of an attribute.
- e) What is need of concurrency control?
- f) Define deadlock.
- g) List various features of client server model.
- h) What is MOLAP?
- i) How operational data is different from decision support data?
- j) What is star schema?

