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53 (EC 813) DBMS

2016

DBMS

Paper : EC 813 (Back)

Full Marks : 100

Time : Three hours

**The figures in the margin indicate full marks for the questions.**

**Answer any five questions.**

1. (a) Describe any concurrency control technique. Discuss its merits and demerits. 10
- (b) Discuss various normal forms with the help of proper example. 10
2. (a) What is a transaction? What are the problems associated with concurrent transaction processing? 3+9=12

Contd.

- (b) Explain full functional dependency and transitive dependency with the help of some examples.  $4+4=8$
3. (a) Describe the three-schema architecture. What is data independence?  $6+4=10$
- (b) Discuss various types of locks used in concurrency control. 10
4. (a) Draw an E-R diagram of your institute database considering courses offered, course instructors, semester and any other relevant aspects. 10
- (b) Discuss various cardinality ratios. Give its definition and cite proper example. 10
5. (a) Explain multiprogramming and parallel processing. What are the ACID properties of a transaction?  $5+8=13$
- (b) What are the advantages of DBMS approach over traditional file systems? 7

6. (a) What do you mean by degree of a relationship? Discuss binary and ternary relationships.  $2+6=8$

(b) What are the various types of attributes? What do you mean by database schema?  $9+3=12$

7. Write short notes on the following :  $4 \times 5 = 20$

(i) Primary key and Super key

(ii) Deadlock and Starvation

(iii) DDL and DML

(iv) Entity and Domain.