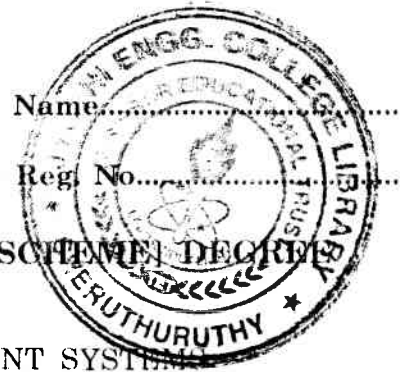


C 1175

(Pages : 3)



**SIXTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE
EXAMINATION, APRIL 2016**

IT / CS / PTCS 09 604—DATABASE MANAGEMENT SYSTEMS

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. Mention the role of a DBA.
2. Mention the different hashing techniques.
3. Give an example for one to one and one to many relationship.
4. What is a trivial functional dependency ?
5. What are ordered indices ?

(5 × 2 = 10 marks)

PART B

Answer any four questions.

6. List four significant differences between file processing system and a DBMS.
7. Consider the following relation :—
EMP (ENO, NAME, DATE_OF_BIRTH, SEX, DATE OF JOINING, BASIC PAY, DEPT).
Develop an SQL query that will find and display the average BASIC_PAY in each DEPT.
8. Consider the following relation : R(A, B, C, D)
The primary key of the relation is A. The following functional dependencies hold :
A → B, C
B → D
Is the above relation in third normal form ?
9. Bring out the difference between static and dynamic hashing.
10. Diagrammatically illustrate and discuss the steps involved in query processing.
11. What benefit does strict two-phase locking provide? What disadvantages result ?

(4 × 5 = 20 marks)

Turn over

15. (a) (i) Define a transaction. Then discuss the following with relevant examples :

- (1) A read only transaction.
- (2) A read write transaction.
- (3) An aborted transaction.

(6 marks)

(ii) With a neat sketch discuss the states a transaction can be in.

(4 marks)

Or

(b) (i) Discuss the ACID properties of a transaction. Give relevant example.

(5 marks)

(ii) Discuss two phase locking protocol. Give relevant example.

(5 marks)

[4 × 10 = 40 marks]