2007-HIMACHAL PRADESH UNIVERSITY

B.TECH V SEMESTER DEGREE EXAMINATION
DATA BASE MANAGEMENT SYSTEM
(COMPUTER SCIENCE & ENGINEERING,INFORMATION TECHNOLOGY)

PAPER ID : IT-5002

TIME-3 HOUR
MARK-100

NOTE: ANSWER ALL QUESTION

SECTION-A[10*8=80]

1. What do you understand by DBMS? What are its components?

2. Differentiate between:

(a) File-oriented approach vs Database-oriented approach.

(b) File processing versus Data Management.

3. Define Boyce-Codd Normal form. How does it differ from 3 NF? Why is it considered stronger form of 3 NF?

4. Design ER diagrams for a particular enterprise. You have several alternatives from which to choose.

(a) What criteria should you consider in deciding on the appropriate model?

(b) Design several alternative E-R diagrams to represent a university registrar system. The office maintains data about each class including the instructor, the enrolment and the time and the place of the class meetings. For each student class-pair, a grade is recorded.

5. (a) Why do we use heuristics in query optimization?

(b) Discuss key features and advantages of B-tree indexes. What is the difference between B-tree and its different versions?

6. Why do most computer systems support several file organization techniques? Discuss various organization with examples.

7. (a) Discuss the relative advantages of centralized and distributed database.

(b)How does the concept of an object in object-oriented model differ from the concept of an entity in entity-relationship model?

8. Write short notes on the following:

(i) Query optimization .

(ii) Recovery and security.

(iii) Knowledge-based database.

SECTION-B[10*2=20]

9. Define the following :

(i) Database

(ii) Record

(iii) Field

(iv) Primary key

(v) Redundancy

(vi) DDL

(vii) DCL

(viii) DML

(ix) DOL

(x) Schema