

III B.Tech II Semester Supplementary Examinations, April/May 2005
DATABASE MANAGEMENT SYSTEMS
(Common to Mechanical Engineering and Production Engineering)
Time: 3 hours **Max Marks: 70**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) How do order file systems and database approach differ in relationship between the data and application program?
(b) Describe the general properties of data models.
2. (a) What is meant by the term weak entity? How weak entities are represented in E-R diagrams?
(b) Explain the distinctions among primary, candidate and secondary keys.
3. (a) What is normalization? What are the advantages and disadvantages of Normalization?
(b) Define Boyce-codd normal form. Give a table which is in BCNF and substantiate.
4. (a) Outline the process of converting from unnormalized in to 1NF, 2NF and 3NF.
(b) Describe the stages of conversion process from tables to files.
5. (a) What are virtual records? What are their importances?
(b) Give an example for a multithreaded tree.
(c) How relations are represented in network models.
6. (a) Describe any five basic operations of relational algebra.
(b) Give the structure of a hierarchical database.
7. (a) Describe any protocol for concurrency control.
(b) Describe integrity constraints, which ensure data consistency.
8. Write short notes on:
 - (a) Database administrator
 - (b) Relational calculus
 - (c) Shadow paging
