

III B.Tech I Semester Supplementary Examinations, April/May 2005
DATABASE MANAGEMENT SYSTEMS
(Information Technology)

Time: 3 hours

Max Marks: 70

Answer any FIVE Questions
All Questions carry equal marks

1. Write in detail about the data models.
 - (a) Object based logical model
 - (b) Record based logical model
 - (c) Physical data models.
2. Which of the following plays an important role in representing information about the real world in a database? Explain briefly.
 - (a) The data definition language.
 - (b) The data manipulation language
 - (c) The buffer manager.
3.
 - (a) Explain the differences between a weak and strong entity set.
 - (b) Consider an E-R diagram in which the same entity set appears several times. Why is allowing this redundancy a bad practice that one should avoid whenever possible.
4.
 - (a) What is the difference between a candidate and the primary key for a given relation? What is a super key?
 - (b) What is a foreign key constraint? Why are such constraints important? What is referential integrity?
5. What is relational completeness? If a query language relationally complete, can you write any desired query in that language.
6. Discuss the strengths and weaknesses of the trigger mechanism? Contrast triggers, with other integrity constraints supported by SQL.
7. Explain in detail about the following
 - (a) Hash-based indexing
 - (b) tree structured indexing.
8. Write short notes on the following:
 - (a) Purpose of database systems
 - (b) Relational calculus
 - (c) Shadow paging.
