XAVIER INSTITUTE OF ENGINEERING
DEPARTMENT OF INFORMATION TECHNOLOGY

QUESTION BANK 1 (Chapter 1, 2, 3)

Subject: DBMS Date: 13th July 18
Class/Semester: SE/III

(Chapter 1) (CO1)

1. Define Data Independence and explain types of data Independence. (5M) (BTL-1, 2)
2. Design and explain database system structure. (5M) (BTL-6)
3. Differentiate between a file processing system and DBMS. (5M) (BTL-4)
4. Explain advantages of DBMS over File system. (5M) (BTL-4)
5. Define a database? Explain with examples. Also list the advantages of database system. (5M) (BTL-1, 2)
6. List and explain all the characteristics of database system. (5M) (BTL-1, 4)
7. Define instance and schema with example. (5M) (BTL-1)
8. Discuss different Users of Database System. (5M) (BTL-2)

(Chapter 2) (CO2)

1. Define following terms with suitable example (BTL-1)
   a. Strong entity sets (2.5M)
   b. Derived attribute (2.5M)
   c. Foreign key (2.5M)
   d. Primary key. (2.5M)
   e. Total participation (2.5M)
   f. Weak entity sets (2.5M)
   g. Attributes (2.5M)
   h. Relationship sets (2.5M)
2. Summarize different keys in ER diagram? (5M) (BTL-5)
3. Explain different types of attributes in ER Model. (5M) (BTL-2, 4)
4. Explain the terms total participation and partial participation with example. (5M) (BTL-4)
5. Differentiate between Generalization and Specialization. (5M) (BTL-4)
6. We can convert any entity set to a strong entity set by simply adding appropriates attributes. Why then, do we have weak entity sets? (Justify your answer.) (5M) (BTL-5)
7. Compare ER and EER models. (5M) (BTL-4)

(Chapter 3) (CO2)

1. Explain the steps of an algorithm for ER to relational mapping/model in detail. (5M) (BTL-4)

2. Explain following relational algebra operations with proper examples. (BTL-2)
   a. Project (2.5M)
   b. Left outer join (2.5M)
   c. Division (2.5M)
   d. Rename (2.5M)
   e. Natural join (2.5M)
   f. Set-Intersection operation (2.5M)
   g. Union (2.5M)
   h. Assignment (2.5M)
   i. Generalized Projection (2.5M)
   j. Select (2.5M)
3. Explain different types of operators in relational algebra. (5M) (BTL-4)
4. Define a JOIN? Explain different types of JOIN along with example. (5M) (BTL-4)

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