

M.Sc. (Bio-Informatics) First Semester
MBIN-8006: Introduction to Database System

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. 7 (Section-D) which is compulsory and selecting atleast one question each from Section A-C.

x-x-x

SECTION-A

- 1)
 - a) Explain the typical components of a DBMS, with a neat diagram.
 - b) What is a weak entity type? Explain the role of partial key in the design of weak entity type. (6, 6)
- 2)
 - a) Explain the different models of database management systems and how each one is used to systematically organize large amounts of data in a logical manner.
 - b) Draw an E-R diagram of hospital management system. Assume your entities (minimum 4), attributes and relations. (6, 6)

SECTION-B

- 3)
 - a) Explain insert, delete and update statements in SQL, with examples.
 - b) How is a view created and dropped in SQL? What problems are associated with updating of views? (6, 6)
- 4)
 - a) Discuss the entity integrity constraint and referential integrity constraints. Why each is considered important?
 - b) Discuss the various types of JOIN operations in SQL. Why is Theta Join required? Explain with examples. (6, 6)

SECTION-C

- 5) What is PL/SQL? Explain the following in the context PL/SQL by taking examples:
 - a) Database stored procedures and functions
 - b) Error handling and its importance (6, 6)
- 6) What is MS-ACCESS? How do you establish a connection to MS-ACCESS tables using VB and access data in the tables? Explain with an example. (12)

SECTION-D (Compulsory Question)

- 7)
 - a) What is data independence in RDBMS?
 - b) Differentiate between primary key and foreign key in RDBMS.
 - c) Define ACID in RDBMS.
 - d) Explain the use of GRANT and REVOKE DCL commands.
 - e) What is event-driven programming?
 - f) What is a database trigger?
 - g) Explain the use of MSG-Box function in VB.
 - h) What is meant by a modal form or dialog box? (8x1.5=12)

x -x-x