FYIT/SEM I/FDBMS

Time: 2½ hrs. **Marks:75**

Note:
1. All questions are compulsory with internal choice.
2. Draw neat diagrams wherever necessary.
3. Figures to the right indicate full marks.

Q.1 **Answer the following (any three)** **(15)**

(a) What is DBMS? State its advantages and disadvantages.
(b) Explain any 4 types of keys in RDBMS with example
(c) Explain relational algebra operation with an example
1. Selection operator 2. Projection Operator
(d) Write the comparison between Database Management system and File system.
(e) Describe the detailed architecture of DBMS.
(f) Explain the following database languages used in DBMS:
1.DML 2. TCL 3. DDL

Q.2 **Answer the following (any three)** **(15)**

(a) What is an attribute? What are its types?
(b) Draw ER diagram for Hospital Management System.
(c) Construct an E-R diagram for a car-insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents.
(d) Explain the level of abstraction.
(e) Explain the types of relationship in the E-R diagram.
(f) What is generalization and specialization?

Q.3 **Answer the following (any three)** **(15)**

(a) Explain Pattern matching operation with 4 examples .
(b) Write the difference between 3NF and BCNF.
(c) Explain INSERT ,UPDATE, DELETE anomalies.
(d) Write a short note on normalization.
(e) What are the types of functional dependency?
(f) Explain various set operators with SQL query.

Q.4 **Answer the following (any three)** **(15)**

(a) Explain Right join and Left join in detail.
(b) Explain Logical Operators AND, OR, NOT with examples.
(c) Write a short note on View in SQL
(d) Write a short on Trigger.
(e) Write SQL query to Create the table Student in SQL and insert 4 records.
(f) What are the operation of file?

Q.5 **Answer the following (any three)** **(15)**

(a) Write a short note on deadlock.
(b) Write the difference between Serial schedule and Serializable schedule
(c) Explain the two phase locking system .
(d) Explain state transition with the help of diagram.
(e) Explain READ and WRITE operation done in transaction.
(f) What is ACID property? Explain in detail.

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