(Time: 2$^{1/2}$ hours)　　　　　　　　　　　G11510ODB　　　　　　　　Total Marks: 75

(1) **All** questions are **compulsory.**
(2) Make **suitable assumptions** wherever necessary and **state the assumptions** made.
(3) Answers to the **same question** must be **written together**.
(4) Numbers to the **right** indicate **marks**.
(5) Draw **neat labeled diagrams** wherever **necessary.**
(6) Use of **Non-programmable** calculators is **allowed.**

Q.1. Answer Any three the following　　　　　　　　　　　　　　　　　(15)
1. State 5 advantages and disadvantages of database systems.
2. Explain Integrity constraint with example
3. Explain primary key and foreign key with example
4. Explain the characteristics of DBMS.
5. Describe data model with an example
6. Explain week entity with example .

Q.2. Answer Any three the following　　　　　　　　　　　　　　　　　(15)
a. Explain Data and Information
b. Consider the following relation R = (A,B,C,D,E,F)
   $A \rightarrow B$, $A \rightarrow B$, $BC \rightarrow D$, $B \rightarrow E$, $BC \rightarrow F$, $AC \rightarrow F$
c. Explain GOALS OF Decompositions
d. Explain partial dependency with an example.
e. Describe DDL database languages with example

Q.3. Answer Any three the following　　　　　　　　　　　　　　　　　(15)

a. Draw ER Diagram for Banking management system.
b. Example Various datatypes used in SQL
c. Describe Aggregate function
d. Describe Select Clause with an example.
e. Explain use of Normalisation
f. Explain different types of Relations

Q.4. Answer Any three the following　　　　　　　　　　　　　　　　　(15)

a. List and explain different states through which transaction goes during its execution.
b. Describe ACID properties for Transaction.
c. Transaction Definition in SQL
d. Explain security and authorization with an example
e. Explain syntax for creating views
f. Describe Deadlock Handling

Q.5. Answer Any three the following　　　　　　　　　　　　　　　　　(15)

a. Explain Select statement with all clauses
b. Explain Types of PL/SQL block
c. Explain what joins are and its types.
d. Explain different string Functions in RDBMS
e. Explain Inserting Trigger with an example
f. Explain Subquery and its rules.

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