

[Time:2.30 Hrs]		[Marks:75]
Please check whether you have got the right question paper.		
N.B:	1. All question are compulsory. 2. Figures to the right indicate full marks. 3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.	

Q.1	Attempt <u>any three</u> of the following: a. Explain benefits of Database System over File System. b. Define Schema and Instance with example. c. Write a brief note on basic building blocks of data model. d. Explain Hierarchical Model with advantages and disadvantages. e. State and explain any 5 Codd's rules. f. Write a brief note on Generalization.	15
Q.2	Attempt <u>any three</u> of the following: a. Define and explain Candidate key and Primary Key with example. b. Define Normalization and explain 3NF with example. c. Explain Relational Database design process. d. Explain Set Operators with example. e. Define Cross Join in relational algebra and explain with suitable example. f. Explain domain relation calculus with example	15
Q.3	Attempt <u>any three</u> of the following: a. Explain Check and Not Null constraints with example b. Explain DDL Commands in SQL. c. Differentiate between table and view. d. Explain Pattern Matching operator in SQL with example. e. Write a brief note on subqueries with insert statement. f. Consider a table product_master(P_Id, P_Name,P_Price, P_Quantity) <ol style="list-style-type: none"> Write a query to create the above table. Write a query to insert 2 records in the above table. Write a query to display details of all products whose name start with 'P'. Write a query to change the price of product P005 to Rs. 500. Write a query to display information of products in ascending order of quantity 	15

Q.4	<p>Attempt <u>any three</u> of the following:</p> <ol style="list-style-type: none"> Explain ACID properties of transaction. Explain Locking Methods in DBMS. Write a brief note Inconsistent Analysis problem of concurrency executions with example. Explain Shadow Paging Technique in Database Recovery Management. What is Deadlock? Explain Deadlock recovery detail. Explain Optimistic concurrency control (OCC) in detail 	15
Q.5	<p>Attempt <u>any three</u> of the following:</p> <ol style="list-style-type: none"> Define PL/SQL and Explain its structure. Explain Case expression in PL/SQL with example. Write and explain syntax of PL/SQL packages with example. Write a brief note on Exception Handling in PL/SQL. What is Cursor? and explain it with its attributes. Write a PL/SQL block to check whether the number is even or odd. 	15