

Q.P.

code: 30231

(2 % Hours) [Total Marks: 751 N.B. 1) All questions are compulsory.

- 2 Figures to the right indicate marks.
- 3 Illustrations, in-depth answers and diagrams will be appreciated. Of 4) Mixing of sub-questions is not allowed.
- 5) Assume suitable data if necessary and state it clearly.

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Q.1 Attempt All.

(15M)

(a) Multiple Choice Questions

1) Select _____ from instructor where dept name= 'Comp.

Sci. '; Which of the following should be used to find the mean of the salary ?

- A) mean(salary)
- B) min(salary)
- C) avg(salary)
- D) average(salary)

2) Which of the following is the syntax for views where v is view name ?

- A) Create view v as "query name" ;
- 1.B Create "query expression" as view;
- 1.C Create view v as "query opression";
- D) Create view "query expression";

3) Cartesian product in relational algebra is

- A) a Unary operator.
- B) a Binary operator.
- C) a Ternary operator
- D) not defined.

4) Architecture of the database can be viewed as

- A) two levels
- B) four levels
- C) three level
- D) one level

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5) Grant and revoke ____ statements

- a. ADDL
- a. BDML
- a. CDCL
- a. DTCL

(b) Fill in the blanks. [use following answer pool to fill the correct answer.]

[row, column, unique, single, committed, length, DDL, DML]

- 1) In Mathematical term ____ is called as tuple.
- 2) Primary key should be ____
- a.3 A transactions completes its execution is called as ____
- a.4 _____ is one of the string handling function in mysql. 5) CREATE command is

(c) Answer in one line.

- a.a Define DBMS.
- a.b Write syntax for inserting a row in a table,
- a.c Why security is needed in DBMS?
- a.d Define subquery.
- a.e Give one example of multivalued attribute.

Q.2 Attempt the following (Any THREE)

[15 MI

- a What are the Levels of Abstraction?
- b Explain Record Based Logical Model,
- c What do you mean by Binary Relationship and Ternary Relationship? Explain with suitable examples.
- d What are the characteristics of Relations?

J) Define following terms:

- i) Value Set
- ii) Composite Attribute
- iii) Multivalued Attribute
- iv) Simple %Attribute
- v) Entity Type

f) Construct an ER Diagram for Railway Reservation System.

[Assume suitable data and mapping Cardinalities exists.]

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Q.3 Attempt the following(Any THREE) [15 M]

- a What do you mean by Dependency?
- b Explain following operations of Relational Algebra with algebraic query example.
- a.i Selection
- a.ii Cross-Product
- c How do you Backup and Restore Database in MySQL?
- d Explain Group BY and Having Clause of MySQL with suitable query example.
- e Explain all Aggregrate Functions used in MySQL.
- f Consider following table. Underline fields are key fields.
- book(bookid, title, author,publisher,category,price,)
- Solve following queries using MySQL—
- i) Create above table with bookid as Primary Key.

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- a.ii Find out Book titles starts with 'D'.
- a.iii Add a column 'Year' with data type INT in Book table.
- a.iv Find out Books with price in the range of Rs. 500 to Rs. 1000.

Q.4 Attempt the following(Any THREE) [15 M]

- a Explain any 5 String functions used in MySQL with example.
- b What do you mean by Join? Explain Left outer join and Right outer join with suitable query, example.
- c What are the different threats to the databases?
- d What do you mean by privileges with respect to databases? How to grant and revoke privileges?
- e Write short note on correlated subqueries. Give example of it.
- f Consider following tables:
- Supplier(suppno, sname, city)
- Orders(orderno, orderdt, qty,amt,suppno) Solve following queries using MySQL:
- a.i Display details of suppliers who have taken the orders.
- a.ii Create a view showing the details of supplier living in each city.
- a.iii Get the details of suppliers who have not taken any order. (Solve with subquery).

Q.5 Attempt the following (Any THREE) [15 M]

- a Write short note on Aggregation. Explain with example.

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- b What are the drawbacks on traditional file procéssjng systems?
- c What is the use of keyword 'Distinct' and 'all? in MySQL? Explain with query example.
- d How to create and drop a user in MySQL?
- e What do you nean by views? What are its types?

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