

Total No. of Questions :6]

SEAT No. :

P73

[Total No. of Pages :2

Oct./TE/ Insem. - 192

T.E. (Information Technology)

DATABASE MANAGEMENT SYSTEM

(2015 Course) (Semester - I) (314442)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data, if necessary.*

Q1) a) Differentiate between **[4]**

- i) Logical & physical data independence.
- ii) Strong entity set & Weak entity set.

- b) Design a generalization-specialization hierarchy for a motor-vehicle sales company. The company sells motorcycles which have an engine number & cost; cars which have chasis number, an engine number, seating capacity & cost; trucks which have chasis number, an engine number & cost. **[6]**

OR

Q2) a) Discuss with examples about various types of attributes present in the ER model. **[5]**

- b) Given relation R (A, B, C, D, E) with dependencies $AB \rightarrow C$, $CD \rightarrow E$, $DE \rightarrow B$, IS AB a candidate key? or IS ABD is a candidate key? **[5]**

Q3) a) t count {t_author, t_count} **[6]**

tutorials {t_id, t_title, t_author, submission_date}

- i) Write the query to display tutorial id with its author and count using join
 - ii) Display the tutorial details in the descending order of the submission_date.
- b) List and Explain the advantages of NOSQL databases. **[4]**

OR

P.T.O.

- Q4)** a) Describe DROPTABLE Command of SQL with both the options CASCADE and RESTRICT [4]
b) State and Explain Armstrong's axioms and its properties. [6]

- Q5)** a) Explain two phase locking protocol & its disadvantages. [6]
b) Define view & conflict serializable schedule with example. [4]

OR

- Q6)** a) What is transaction? Explain usefulness of Acid properties. [6]
b) Explain time stamp based on currency control. [4]

