

DBMS ASSIGNMENT QUESTIONS

UNIT-II - RELATIONAL MODEL

Q.1 Let a Relation R have attributes $\{a_1, a_2, a_3, \dots, a_n\}$ and the candidate keys are "a1", "a2" then the possible number of super keys?

Q.2 Let a Relation R have attributes $\{a_1, a_2, a_3, \dots, a_n\}$ and "a1a2", "a3a4" is the candidate key. Then how many super keys are possible?

Q.3 A relation R(A, B, C, D, E, F, G, H) and set of functional dependencies are

$CH \rightarrow G,$

$A \rightarrow BC,$

$B \rightarrow CFH,$

$E \rightarrow A,$

$F \rightarrow EG$

Then how many possible super keys are present ?

Q.4 Consider the following schema of relation R;

R (A, B, C)

Attributes A, B, and C are all unique valued attributes. Then find out which will be the candidate key in a relation R and the super keys .

Q.5 Consider the relation employee(name, sex, supervisorName) with name as the key. supervisorName gives the name of the supervisor of the employee under consideration. What does the following Tuple Relational Calculus query produce?

$\{e.name \mid \text{employee}(e) \wedge (\forall x) [\neg \text{employee}(x) \vee x.supervisorName \neq e.name \vee x.sex = "male"] \}$