Given the following relation instance

x	y	z
1	1	1
1	2	1
2	1	2
2	1	3
1	3	3

The number of non trivial FD's are satisfied by the instance

Given the following relation instance

X	Y	Z
1	4	2
1	5	3
1	6	3
3	2	2

Which of the following functional dependencies are satisfied by the instance?

(a) $XY \rightarrow Z$ and $Z \rightarrow Y$

(b) $YZ \rightarrow X$ and $Y \rightarrow Z$

(c) $YZ \rightarrow X$ and $X \rightarrow Z$

(d) $XZ \rightarrow Y$ and $Y \rightarrow X$

[GATE-2000 : 2 Marks]

The following functional dependencies are given : AB→ CD, AF→D, DE→ F, C→ G, F→ E, G→ A.

which one of the following options is false?

(a) $\{CF\}^+ = \{ACDEFG\}$

(b) $\{BG\}^+ = \{ABCDG\}$

(c) $\{AF\}^+ = \{ACDEFG\}$

(d) $\{AB\}^+ = \{ACDFG\}$

[GATE-2006 : 2 Marks]

This Questions is MSQ :

Consider the following statement.

S_1 : Every super key is a candidate key.

S_2 : All attribute of relation form a super key.

S_3 : A prime attribute of relation schema R is an attribute that appears in all candidate key of R.

S_4 : Every candidate key are super key.

Which of the above statement is/are incorrect?

(a) S_1 (b) S_2 (c) S_3 (d) S_4

Consider the relation scheme R(A, B, C) with the following functional dependencies.

$AB \rightarrow C$

$C \rightarrow A$

Determine the minimal keys of relation R.

[GATE-1995 : 2 Marks]

In a schema with attributes A, B, C, D and E following set of functional dependencies are given

$A \rightarrow B$

$A \rightarrow C$

$CD \rightarrow E$

$B \rightarrow D$

$E \rightarrow A$

which of the following functional dependencies is Not implied by the above set

(a) $CD \rightarrow AC$ (b) $BD \rightarrow CD$ (c) $BC \rightarrow CD$ (d) $AC \rightarrow BC$

[GATE-2005 :2 Marks]

Let R = (A, B, C, D, E, F) be a relation scheme with the following dependencies C → F,E → A, EC → D, A → B. Which of the following is a key for R?

(a) CD (b) EC (c) AE (d) AC

[GATE-1999 : 1 Mark]

Consider a relation scheme R = (A, B, C, D, E, H) on which the following functional dependencies

hold:

{A→ B, BC→ D,E→ C, D→ A}

What are the candidate keys of R?

(a) AE, BE

(b) AE, BE, DE

(c) AEH, BEH, BCH

(d) AEH, BEH, DEH

[GATE-2005 : 2 Marks]

This Questions is MSQ :

R is a relational schema with the following FD's {AD →C, B→A, C→E, E→BD}
Which of the following is a not candidate key of R?

(a) AD (b) AB (c) BE (d) CD

Consider a relation R with five attributes V, W, X, Y, and Z. The following functional dependencies hold : $VY \rightarrow W$, $WX \rightarrow Z$, and $ZY \rightarrow V$. Which of the following is a candidate key for R?

(a) VXZ (b) VXY (c) VWXY (d) VWXYZ

[GATE-2006 : 2 Marks]

Relation R has eight attributes ABCDEFGH. Fields of R contain only atomic values.

F={CH→G, A →BC, B→CFH, E→A, F→EG} is a set of functional dependencies (FDs) so that F is exactly the set of FDs that hold for R.

How many candidate keys does the relation R have?

(a) 3 (b) 4 (c) 5 (d) 6

[GATE-2013 : 2 Marks]