CS579

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Homework Assignment 3

Due: 10/5

**Problem 1**

(a)Acceptable

(b)Acceptable

(c)Not Acceptable. This insertion violates the key constraint because another tuple with the same Mgr\_ssn value already exists in the DEPARTMENT relation, and so it is rejected.

(d)Not acceptable. This insertion violates the entity integrity and referential integrity constraint (NULL for the primary key Pnumber), so it is rejected. Also as value of Dnum that is Foreign key which present in DEPARTMENT relation

(e)Acceptable

(f) Not acceptable, because it violates referential integrity

(g)Not acceptable, because it violates primary key constraint by repeating a value that already exists as a primary key in another tuple; it also violates referential integrity constraints because there are other relations that refer to the existing value of Ssn.

(h)Not acceptable, because it violates referential integrity constraint, there are tuples in WORK\_ON that refer to this tuple.

**Problem 2**

1.Cust# in ODER is foreign key for CUSTOMER, Only customer can place order.

2.Order# in ORDER\_ITEM is foreign key for ORDER, One order item match only one oder

3.Item# in ORDER\_ITEM is foreign key for ITEM, item need available when order placed

4.Order# in SHIPMENT is foreign key for ODER, after order placed, we start to shipping.

5.Warehouse# in SHIPMENT is foreign key for WAREHOUSE, Need to ship from the warehouse.

6.Ord\_amt need larger than or equal to Unit\_price

**Problem 3**

1.Ssn in TRIP is foreign key for SALESPERSON

2.Trip\_id in EXPENSE is foreign key for TRIP

Assumption:

Account# in EXPENSE may foreign key for EXPENSE, because expense must record under account.

**Problem 4**

1.Course# in ENROLL is foreign key for COURSE

2.Course# in BOOK\_ADOPTION is foreign key for COURSE

3.Book\_isbn in BOOK\_ADOPTION is foreign key for TEXT

4.Ssn in ENROLL is foreign key for STUDENT

Assumption:

Different Quarter may have different course to choose.