Q1)

Ep Id	EmpN	City	Dep	
101	Amit	Kolk	OBIEE
102	Durga	Ind	CONGNUS
103	Yodhini	Hydr	SIEBEL
104	Amit	Kolk	ETL

Candidate Key - Ep Id

R_1 (Emp Id, Emp Name) R_2 (Emp Id, departm...)

Em	EmpN
101	Amit
102	Durga
103	Yodhini

Emp Id	
101	OBIEE
101	ETL
102	CONGNUS
103	SIEBEL

2NF

Emp

Emp	Depreat	Emp Name
101	101	Amit
102	102	Durya
103	103	Rama

EmpN

Dep NO	Department
101	OBIEE
102	COGNOS

which is in 3F

3NF

83) $R = (A B C D E F)$

$C \rightarrow F$, $E \rightarrow A$, $EC \rightarrow D$, $A \rightarrow B$

Cand Key =

su	pre
C	F
E	A
EC	D
A	B

* $EC^+ = (E, C, F, A, B, D)$
∴ EC is candidate key

84) $A \rightarrow B$ $\quad A \rightarrow C$

$CD \rightarrow E$, $B \rightarrow D$, $E \rightarrow A$

a) $CD \rightarrow AC$
$CD \rightarrow OA$ $\quad (E \rightarrow A)$
b) $CD \rightarrow AC$ $\quad (A \rightarrow C)$

b) $BD \rightarrow CD$
$BD \rightarrow C$
$BD \rightarrow D$
Not possible

c) BC → CD
   B → D   (given)
   BC → CD   (con Boln stde)
           True

d) AC − BC
   A → B
   AC → BC   True

   Ans (b)

Q5)
   AB → CD
   AF → D
   DE → F
   C → G
   F → E
   G → A

a) $(CF)^+ = (C, F, G, E, A, D)$
   True

b) $(BG)^+ = (B, G, A, C, D)$
   True

c) $(AF)^+ = (A, F, D, E)$
   Not True

d) $(AB)^+ = (A, B, C, D, G, E, G)$
   ↳ Not F in Data

The Given table in in 1NF form

2 NF form
~pas~ check for partial dependency

User_Id → U email fname1name city State Zip
ll@ Zip → city State
     city → Zip State
     (Non Prime → Non Prime)
so no partial dependency.

∅ It is in 2NF form

3 NF form
for 3NF condition, the cond are
   for X → Y
      X must be superkey
         Or
      Y must be prime attribut

So, for
   zip → city State, city → zip Stat
   it is not valid.

User_Personal (User Id, U_email, Fname, Lname, Zip)

City (Zip, ~~a~~ city, State)

(User Id   U_email Fname Lname Zip

Table I

        Zip   City   State.
    ↳ Table II

Now uts in 3NF form.

(S1) 3NF

Emp Id	emp name	Ed	City	Pe
101	Amit	101	Koh	0016
102	peyng	101	Kreh	BCOG
103	ung	102	Indo	uqne
104	Buit	103	Ayb	S1F
		104	Koln	ETC