Name - Abhishek Tibrewal
ID - 2016UCP1103
Batch- A(1,2)

1.) $R(ABCDE)$
$AC \rightarrow BDE$
$A \rightarrow B$
$B \rightarrow C$
$C \rightarrow D$

Key: A

prime attribute : A

Normal Form: II

∴ transitive F.D. is there
$A \rightarrow BCDE$
$A \rightarrow B$
$B \rightarrow C$
$\Rightarrow A \rightarrow C$

2.) $R(ABCDE)$
$A \rightarrow B$
$BC \rightarrow E$
$DE \rightarrow A$

Keys: ACD, BCD
prime attribute : A, B, C, D

Normal form : I
∴ partial F.D. is there
$BCD \rightarrow EA$
$BC \rightarrow E$

3.) $R(ABCDE)$
$AB \rightarrow CD$
$D \rightarrow A$
$BC \rightarrow DE$

Keys: AB, BC
~~primary~~ prime attribute : A,B,C

Normal Form : III

4.) $R(ABCDE)$
$CE \rightarrow D$
$D \rightarrow B$
$C \rightarrow A$

keys: CE
prime attributes :C,E
Normal Form : I
∴ partial F.D. is there
$CE \rightarrow ABD$
$C \rightarrow A$

5.) R (ABCDE)   Keys: BC, DC
    BC → ADE   prime attributes : B, C, D
    D → B   Normal Form : III

6.) R(ABCDEF)
    AB → C   Keys: CBD, ABD
    DC → AE   prime attributes: A, C, B, D
    E → F
                       Normal Form : II
                    ∵ Transitive dependency is there
                       ABD → CEF
                    ⇒ ABD → E ⎫
                       E → F   ⎬
                       ABD → F ⎭

7.) R(WXYZ)
    Z → W   key: Y
    Y → XZ   prime attributes : Y
    XW → Y   Normal Form : II
                    ∵ Transitive dependency is there
                       Y → WXZ
                       Z → W   ⎫
                       Y → Z   ⎬
                    ⇒ Y → W   ⎭

8.) R(ABCDEF)

$ABC \rightarrow DE$

$CD \rightarrow F$

$CDF \rightarrow B$

$BF \rightarrow D$

keys: ABC

prime attributes : A,B,C

Normal Form: III

9.) R(VWXYZ)

$Z \rightarrow Y$

$Y \rightarrow Z$

$X \rightarrow YV$

$VW \rightarrow X$

keys: VW, XW

prime attributes : X, V,W

Normal Form : I

∵ Partial F.D. is there

$XW \rightarrow VYZ$

$X \rightarrow VY$

10.) R(ABCDEFGH)

$CH \rightarrow G$

$A \rightarrow BC$

$B \rightarrow CFH$

$E \rightarrow A$

$F \rightarrow EG$

Key: DB

prime attributes: D,B

Normal Form: I

∵ partial F.D. is there

$DB \rightarrow ABCDEFGH$

$B \rightarrow CFH$