

## Quiz 2 Solution.

$R(A, B, C, D, E, F)$

$F = \{ A \rightarrow BC, E \rightarrow C, D \rightarrow AEF, ABF \rightarrow BD \}$

Step 1:

$A \rightarrow B, A \rightarrow C, E \rightarrow C, D \rightarrow A, D \rightarrow E, D \rightarrow F,$   
 ~~$ABF \rightarrow B, ABF \rightarrow D$~~

Step 2:

$$A^+ = \{AC\} \checkmark$$

$$D^+ = \{DABC\} \checkmark$$

$$A^+ = \{AB\} \checkmark$$

$$D^+ = \{DABC\} \checkmark$$

$$E^+ = \{E\} \checkmark$$

$$ABF^+ = \{ABF\} \times$$

$$D^+ = \{DEFC\} \checkmark$$

$$ABF^+ \{ABCF\} \checkmark$$

Step 3:

Remaining where no extra fd is,

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

$\hookrightarrow AF \rightarrow D$

$$ABF^+ = \{ABFDEC\}$$

$$A^+ = \{AB\} \checkmark$$

$$AF^+ = \{ABCFDEC\} \checkmark$$

Candidate keys:

$AF^+ = \{A B C F D E\}$  ✓ Candidate key

$D(+) = \{D A B C E F\}$  ✓ candidate key.