

①

Ex show the results of inserting the keys

F, S,  $\emptyset$ , K, C, L, H, T, V, W, M, R, N, P, A, B, X, Y, D, Z, E  
in order into an empty B-tree with min. degree 2

sol<sup>n</sup> Here  $t=2$  so a node can contain  $1 \leq x \leq 3$  keys.

F

F

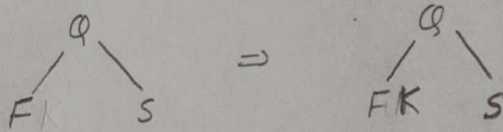
S

F S

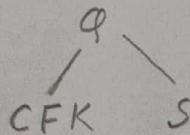
$\emptyset$

F  $\emptyset$  S

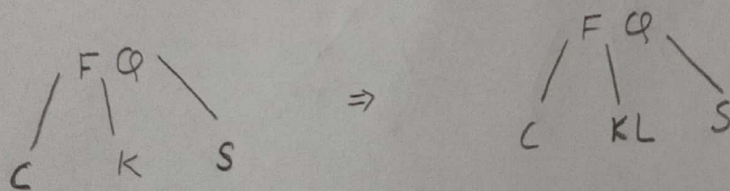
K



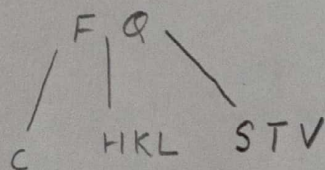
C



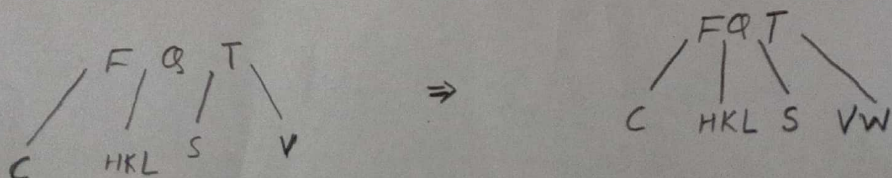
L



H, T, V

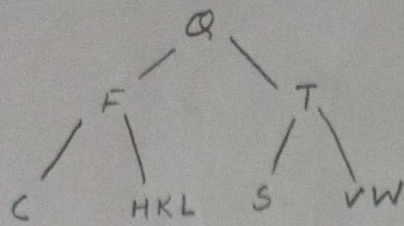


W

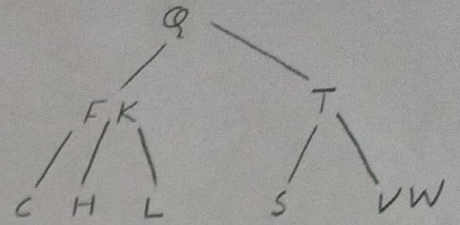




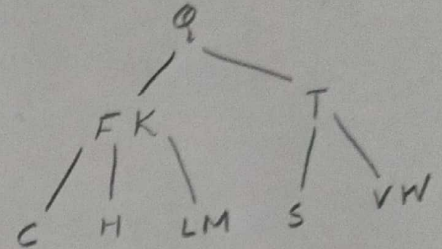
M



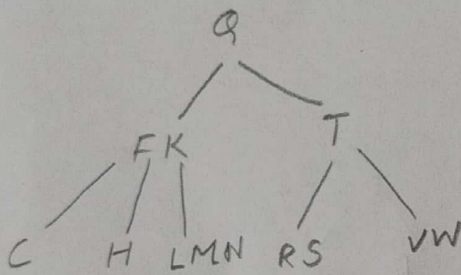
⇒



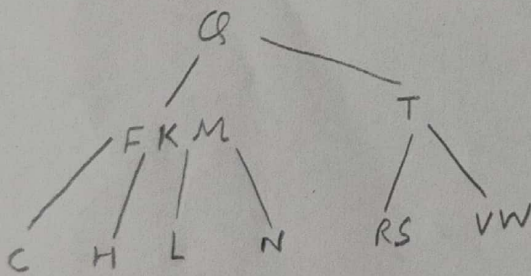
⇒



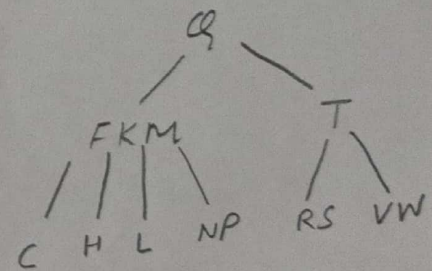
R, N



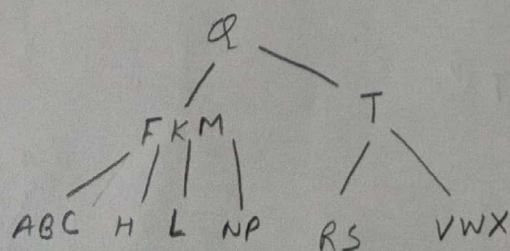
P



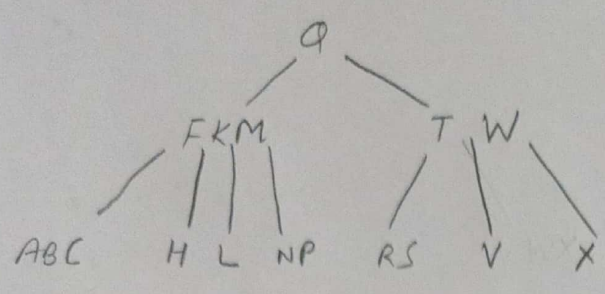
⇒



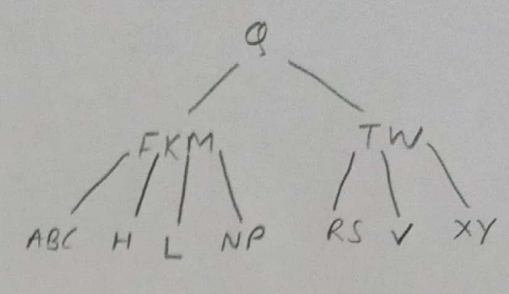
A, B, X



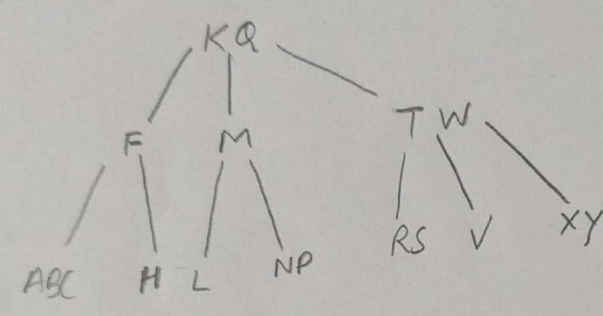
Y



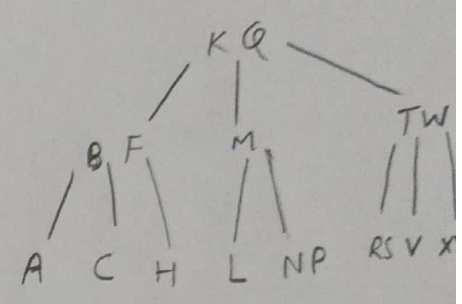
$\Rightarrow$



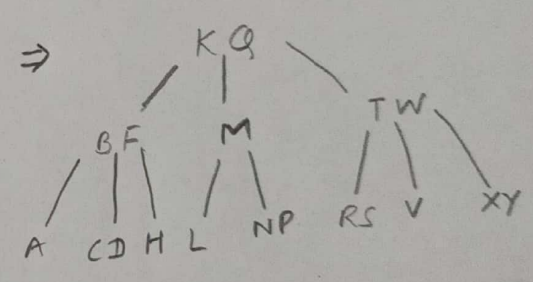
D



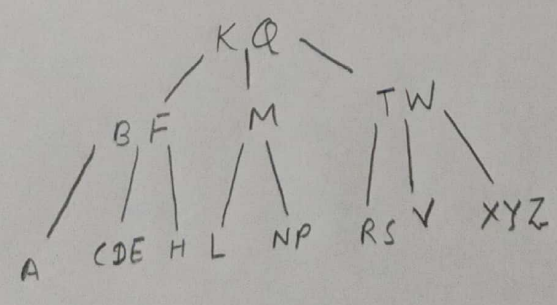
$\Rightarrow$



$\Rightarrow$



Z, E



Required.  
Ans