Q-4 → Ans:- In CNN, the unnecessary edges are removed or ignored to reduce the complexity of fully connected network. So, there are many edges that exists which is being used repeatedly, CNN tries to make the edges share among the neurons that receive it. Each filters in the neurone is replicated across the entire visual field. The replicated units share the same parameterization (weight vector and bias) to form a feature map. So, every neurone in the convolutional layer respond to the same feature within their specific response field. Thus, this is the shared concept of CNN.

The two convolution layers and filters of nst denoting dark/light and light/dark boundaries is given below:-
So, representing lighter value as 0 and darker value as more positive or 1:-

$W_1 =$

-1	0	1
-1	0	1
-1	0	1

light/dark

$W_2 =$

1	0	-1
1	0	-1
1	0	-1

dark/light