**Q#2 Solution:**

| Hyper Parameters | Activation Shape | Activation Size | Number of Trainable Parameters |
|---|---|---|---|
| Input(16,16,4) | (16,16,4) | 1024 | 0 |
| ConvolutionLayer1_Conv2D( number of filters=16, filter size=4, stride=1, padding=yes) | (16,16,16) | 16*16*16 =4096 | (4*4*4+1)*16 =1040 |
| PoolingLayer1( filter size=2, Stride=2, Padding=null) | (8,8,16) | 8*8*16 =1024 | 0 |
| ConvolutionLayer2_SeparableConv2D( number of filters=32, filter size=3, stride=1, padding=null) | (6,6,32) | 6*6*32 =1152 | (3*3+1)*32 =320 |
| PoolingLayer2( filter size=2, Stride=2, Padding=null) | (3,3,32) | 3*3*32 =288 | 0 |
| FullyConnectedLayer3( number of neurons=100) | (100,1) | 100*1 =100 | (288+1)*100 =28900 |
| FullyConnectedLayer4( number of neurons=10) | (10,1) | 10*1 =10 | (100+1)*10 =1010 |
| OutputLayer( number of neurons=5, activation function=softmax) | (5,1) | 5*1 =5 | (10+1)*5 =55 |