NAME : _____

CLASS : _____

DATE : _____

ML-1-F-3-Quiz-2-May-2021

5 Questions

1. Consider the following two layers of CNN architecture. Assume both layers share the weights.CONV - CONVInput image: 224 X 224Filter size: 2 X 2Number of filters = 10Stride: 2Padding: 0Compute a number of parameters. Assume there is NO bias term.How many learnable parameters are there?

☐ a) 40
☐ b) 80
☐ c) 112
☐ d) None of above

2. Consider the following two layers of CNN architecture. Assume both layers share the weights.CONV - CONVInput image: 224 X 224Filter size: 2 X 2Number of filters = 10Stride: 2Padding: 0Compute a number of parameters. Assume there is NO bias term.What will be the size of activation maps after the second layer?

☐ a) 112 X 112 X 3
☐ b) 56 X 56 X 3
☐ c) 56 X 56 X 10
☐ d) 56 X 56

3. Swati is training a CNN. She has 1000 training samples. Her mini-batch size = 50. She optimizes the network with mini-batch SGD. How many iterations will be there in each epoch.

☐ a) 50
☐ b) 1000
☐ c) 20
☐ d) Can not be determined.

4. Let the number of weight updates for these varients of Gradient Descent are as follows:Batch-SGD: n1Mini-batch SGD: n2SGD: n3Which of the following is correct?

- ☐ a) n3 < n2 < n1
- ☐ b) n1 < n2 < n3
- ☐ c) n2 < n3 < n1
- ☐ d) n2 < n1 < n3

5. Which of the following hyper-parameter needs to be chosen based on RAM of the system where your training the neural network?

- ☐ a) Learning rate
- ☐ b) batch size
- ☐ c) Both learning rate and batch size
- ☐ d) None of these

Answer Key

1. a
2. c
3. c
4. b
5. b