Question 1
The decision boundary learned by a neural network with tanh activation function will be piecewise linear.

a. True
b. False

Question 2
Compute the number of parameters in a densely connected neural network on the MNIST dataset (784 input dimensions, 10 classes) with two hidden layers of dimension 500 each.

a. 647000
b. 647010
c. 643000
d. 648010

Question 3
Which of the following statements apply to neural networks?

a. Fast to train of large datasets
b. Work well when little training data is available
c. Have no hyper-parameters to tune
d. Can learn arbitrarily complex functions
e. Provide state-of-the-art performance in computer vision and also analysis

Question 4
Which one of the following is not an activation function?

a. Tanh
b. Sigmoid
c. Polynomial
d. Relu

Question 5
Which of the following is calculated using backward pass?

a. a
b. Z
c. $\partial z/\partial w$
d. $\partial l/\partial z$

Question 6
Suppose there are two inputs to a neuron: 0.72 and 0.12. The corresponding weights are 3 and -1, and the bias parameter is -2. What is the output of this neuron using the sigmoid function as an activation function? Pick the closest answer.

a. 0.85
b. 0.51
c. 0.11
d. 0.62

Question 7

With a data set of 150 features and 20 classes, if we create a fully connected neuron network with one hidden layer of 100 neurons, then how many parameters will be trained in total?

a. 17000
b. 270
c. 17120
d. 300000