1. If you have 10,000 examples, how would you split the train/dev/test set? Choose the best option. `1 point`

○ 98% train. 1% dev. 1% test.

○ 33% train. 33% dev. 33% test.

○ 60% train. 20% dev. 20% test.

2. The dev and test set should: `1 point`

○ Have the same number of examples

○ Be identical to each other (same (x,y) pairs)

○ Come from the same distribution

○ Come from different distributions

3. If your Neural Network model seems to have high variance, what of the following would be promising things to try? `1 point`

☐ Get more test data

☐ Increase the number of units in each hidden layer

☐ Make the Neural Network deeper

☐ Add regularization

☐ Get more training data

4. Working on a model to classify bananas and oranges your classifier gets a training set error of 0.1% and a dev set error of 11%. Which of the following two are true? `1 point`

☐ The model is overfitting the train set.

☐ *D: The model has a high variance.

☐ The model is overfitting the dev set.

☐ The model has a very high bias.

5. What is weight decay? `1 point`

○ The process of gradually decreasing the learning rate during training.

○ Gradual corruption of the weights in the neural network if it is trained on noisy data.

○ A regularization technique (such as L2 regularization) that results in gradient descent shrinking the weights on every iteration.

○ A technique to avoid vanishing gradient by imposing a ceiling on the values of the weights.

6. To reduce high variance, the regularization hyperparameter lambda must be increased. True/False? `1 point`

○ True

○ False

7. Which of the following are true about dropout? `1 point`

☐ It helps to reduce the variance of a model.

☐ In practice, it eliminates units of each layer with a probability of keep_prob.

- [ ] In practice, it eliminates units of each layer with a probability of 1- keep_prob.

- [ ] It helps to reduce the bias of a model.

8.Increasing the parameter keep_prob from (say) 0.5 to 0.6 will likely cause the following: (Check the two that apply)

- [ ] Increasing the regularization effect

- [ ] Reducing the regularization effect

- [ ] Causing the neural network to end up with a higher training set error

- [ ] Causing the neural network to end up with a lower training set error

9.Which of the following actions increase the regularization of a model? (Check all that apply)

- [ ] Decrease the value of keep_prob in dropout.

- [ ] Decrease the value of the hyperparameter lambda.

- [ ] Use Xavier initialization.

- [ ] Increase the value of the hyperparameter lambda.

- [ ] Increase the value of keep_prob in dropout.

10.Suppose that a model uses, as one feature, the total number of kilometers walked by a person during a year, and another feature is the height of the person in meters. What is the most likely effect of normalization of the input data?

- ( ) It will make the data easier to visualize.

- ( ) It will increase the variance of the model.

- ( ) It won't have any positive or negative effects.

- ( ) It will make the training faster.