109-2 人工智慧概論 模擬期中考

* Required

1. Email address *

   _____

2. Student ID

   _____

3. Name

   _____

4. Which scales can be used for discrete data?   1 point

   Check all that apply.

   ☐ Nominal
   ☐ Ordinal
   ☐ Interval
   ☐ Ratio

5. Which algorithm can be used for unsupervised learning?   1 point

   Mark only one oval.

   ◯ kNN
   ◯ k-means
   ◯ KFC
   ◯ k-fold cross validation

6. Given a training sample, suppose its true label y=0, and our prediction p = 　0 points
0.8, what is the binary cross entropy loss?

Mark only one oval.

◯ -0.2

◯ -0.8

◯ -log(0.2)

◯ -log(0.8)

7. The process of reducing overfitting can be viewed as a bias-variance　　1 point
tradeoff. In general, which type of error is larger with the model capacity
increases?

Mark only one oval.

◯ Bias

◯ Variance

◯ Both

◯ None

8. Here is a COVID-19 test result. The rows are predictions while the columns are　2 points
true condition. Positive means the patient is infected. What is the accuracy of
the test?

		COVID-19 Test	
		True Condition	
		Positive (infected)	Negative
Prediction	Positive	2	1
	Negative	2	5