Q1: Computers excel at learning.

* (A) facts
* (B) concepts
* (C) procedures
* (D) principles

Q2: The average positive difference in values between computed and intended outcomes is known as \_\_\_\_\_

* (A) root mean squared error
* (B) mean squared error
* (C) mean absolute error
* (D) mean positive error

Explanation:

Q3: Increase in which of the following hyper parameter results into overfit in Random forest? (1). Number of Trees. (2). Depth of Tree, (3). Learning Rate

* (A) Only 1
* (B) Only 2
* (C) 2 and 3
* (D) 1,2 and 3

Q4: Below are the 8 actual values of target variable in the train file: [0,0,0, 0, 1, 1,1,1,1,1], What is the entropy of the target variable?

* (A) -(6/10 log(6/10) + 4/10 log(4/10))
* (B) 6/10 log(6/10) + 4/10 log(4/10)
* (C) 4/10 log(6/10) + 6/10 log(4/10)
* (D) 6/10 log(4/10) – 4/10 log(6/10)

Q5: Which of the following statements is/are true about “Type-1” and “Type-2” errors? (1).Type1 is known as false positive and Type2 is known as false negative. (2).Type1 is known as false negative and Type2 is known as false positive. (3).Type1 error occurs when we reject a null hypothesis when it is actually true.

* (A) Only 1
* (B) Only 2
* (C) Only 3
* (D) 1 and 3

Q6: In a neural network, which of the following techniques is used to deal with overfitting?

* (A) Dropout
* (B) Regularization
* (C) Batch Normalization
* (D) All of these

Q7: Lasso can be interpreted as least-squares linear regression where

* (A) weights are regularized with the l1 norm
* (B) weights are regularized with the l2 norm
* (C) the solution algorithm is simpler

Q8: Pearson captures how linearly dependent two variables are whereas Spearman captures the monotonic behavior of the relation between the variables.

* (A) TRUE
* (B) FALSE

Q9: What would be the Type I error?

* (A) Concluding that listening to music while studying improves memory, and it’s right.
* (B) Concluding that listening to music while studying improves memory when it actually doesn’t.
* (C) Concluding that listening to music while studying does not improve memory but it does.

**Explanation:**

Type I error occurs then the Negative sample is classified as positive. Type I error is also known as False Positive (FP). In the courts, a type I error is equivalent to convicting an innocent defendant.

Type I error occurs then the Positive sample is classified as Negative. Type II error is also known as False Negative (FN). In the courtroom scenario, a type II error would be acquitting a criminal.

Q10: Cross-fertilizing a red and a white flower produces red flowers 25% of the time. Now we cross-fertilize five pairs of red and white flowers and produce five offspring. What is the probability that there are no red flower plants in the five offspring?

* (A) 23.7%
* (B) 37.2%
* (C) 22.5%
* (D) 27.3%