1. What is the main goal of using a Random Forest algorithm? /1 Mark

A. To classify data

B. To reduce variance

C. To reduce bias

DTo predict outcomes

2. What is the key difference between a classification and regression problem?/2marks

a.Classification predicts discrete values while regression predicts continuous values.

b. Classification predicts continuous values while regression predicts discrete values.

c. Classification is supervised while regression is unsupervised.

d. Classification is unsupervised while regression is supervised.

3. What is the main difference between a Decision Tree and a Random Forest? /2 marks

A. Random Forest is more accurate

B. Decision Tree is more accurate

C Random Forest creates multiple Decision

Trees

D. Decision Tree creates multiple Random Forest

4. What is logistic regression used for in classification?/1 mark

a. To classify data points into discrete classes.

b. To identify the most important features for a given classification problem.

c. To predict the probability of a given data point belonging to a particular class.

d. To identify relationship between different classes

5. What is the benefit of using a Random Forest algorithm over a single Decision Tree? / 1 mark

a. It reduces variance

b. It reduces bias

c.It is more accurate

d. It is faster

6. What type of data is best suited for Decision Tree algorithms?/1 mark

A Categorical data

8. Continuous data

C. Binary data

D. All of the above

7. Which of the following is an advantage of KNN? /1 mark

A. Low bias

B. High variance

C. Low complexity

D. All of the Above

8. Which of the following is a key feature of KNN? /2 marks

A. Non-parametric learning

B. Parametric learning

C. Both A and B

D. None of the Above

9. The decision tree can then be used to make decisions about loan applications and help the bank decide which applicants should receive the loan, list two advantages and two disadvantages of using decision tree?/4 Marks

10. Differentiate Pruning from Entropy/ 4 marks