# Problem 1

## a.

Text, letter

Description automatically generated

Based on the drawn trees, there are 2 unpredicted leaves that always yield error. Hence, given the training set, there is no decision tree with 100% accuracy.

## b.

Text, letter

Description automatically generated

Look at the computed Information Gains, all 3 attributes have the same amount of Information Gains = 0.092.

# Problem 2

Diagram

Description automatically generated

# Problem 3

A picture containing engineering drawing

Description automatically generated

# Problem 4

Text, letter

Description automatically generated

# Problem 5

Text, letter

Description automatically generated