**SEIS632-02-Assignment 1**

**Submitted By – Shivali Dalmia**

Question1: What is the proportion of individuals who purchased organic products?

Answer1: 24.77% individuals purchased organic products.

Chart, pie chart

Description automatically generated

**Model Assessment Statistic – Decision**

Question2: How many leaves are in the optimal tree?

Graphical user interface, chart, histogram

Description automatically generatedAnswer2: There are 13 leaves in optimal tree.

Question3: Which variable was used for the first split?

Answer3: DemAge variable was used for the first split.(Logworth-323.299)

Question4: What were the competing splits for this first split?

Answer4: The other competing splits at second, third and fourth place were DemAffl(200.188), DemGender(133.1391), PromSpend(32.9677) respectively.

**Model Assessment Statistic – Average Square Error**

Question5: How many leaves are in the optimal tree?

Answer5: There are 29 leaves in optimal tree.

Chart

Description automatically generated

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Question6: Which variable was used for the first split?

Answer6: DemAge variable was used for the first split.(Logworth-323.299)

Question7: What were the competing splits for this first split?

Answer7: The other competing splits at second, third and fourth place were DemAffl(200.188), DemGender(133.1391), PromSpend(32.9677) respectively.