



Professional Qualification in
COMPUTING AND INFORMATION SYSTEMS
Level 4 Diploma

UNIT 4 – INFORMATION PRESENTATION AND ANALYSIS

Question 1

State what is meant by each of the following statistical terms:

- (a) Probability. (2 marks)
- (b) Degrees of freedom. (2 marks)
- (c) Correlation. (2 marks)
- (d) Normal distribution. (2 marks)
- (e) Chi-squared distribution. (2 marks)

Question 2

- (a) Write the formula for calculating a median average. (5 marks)
- (b) Write the formula for calculating variance. (5 marks)

Question 3

Describe the features and applications of probability theory. (10 marks)

Question 4

Write examples of each of the following types of data:

- (a) Dichotomous. (2 marks)
- (b) Nominal. (2 marks)
- (c) Ordinal. (2 marks)
- (d) Interval. (2 marks)
- (e) Ratio. (2 marks)

Question 6

Discuss the effect of APA conventions on the quality of descriptions of statistics and their interpretations. (10 marks)

Question 7

When presenting data graphically, identify the merits of using:

(a) Pie charts. (5 marks)

(b) Bar charts. (5 marks)

Question 8

Describe **ONE** common assumption associated with each of the following:

(a) Parametric statistics. (5 marks)

(b) Non-parametric statistics. (5 marks)

Question 9

Describe each of the following key research philosophies:

(a) Positivism. (5 marks)

(b) Pragmatism. (5 marks)

Question 10

(a) Identify the advantages of using surveys as a method of research. (5 marks)

(b) Identify the disadvantages of using surveys as a method of research. (5 marks)