



## Professional Qualification in COMPUTING AND INFORMATION SYSTEMS Level 4 Diploma

### UNIT 4 – INFORMATION PRESENTATION AND ANALYSIS

#### Question 1

- (a) **Explain** the differences between a standard normal distribution, a chi-squared distribution and an F-distribution as used in statistical analysis. (10 marks)
- (b) **Explain** how calculating the variance, standard deviation and confidence intervals of a given population is of benefit to a statistical analyst. (10 marks)

#### Question 2

- (a) **State** what is meant by the term 'probability'. (4 marks)
- (b) **Explain** how prediction is used as a tool in making statistical judgements. (8 marks)
- (c) **Describe TWO** main types of data. (8 marks)

#### Question 3

- (a) **State** what is meant by the term 'pictogram'. (4 marks)
- (b) **Describe** the conventions associated with the tabular presentation of data. (6 marks)
- (c) **Illustrate** the number of pizzas sold by a fast food outlet by drawing and labelling a pictograph using the details below. Use a suitable key:

Day	Pizzas sold
Monday	4
Tuesday	16
Wednesday	28
Thursday	26
Friday	15

(10 marks)

#### Question 4

- (a) **Discuss** the validity, reliability, accuracy and precision of research instruments and their implications for statistical analysis. (10 marks)
- (b) **Describe** the relevance of statistical analyses subject to different types of data. (10 marks)

### Question 5

**Discuss** the relative benefits and drawbacks of different methods of empirical research and measurement. (20 marks)

Past Paper