



# Professional Qualification in COMPUTING AND INFORMATION SYSTEMS

## Level 4 Diploma

### UNIT 4 – INFORMATION PRESENTATION AND ANALYSIS

#### Question 1

- (a) **State** what is meant by the term 'standard deviation'. (4 marks)
- (b) A manager conducted a survey during one working day to find out how long it took staff to answer the telephone. **Calculate** the mean, the variance, and the standard deviation for the following data. (16 marks)

Time taken (in seconds)	frequency
0-10	22
11-20	48
21-30	43
31-40	26
41-50	11
51-60	9
=>61	6

#### Question 2

- (a) **State** what is meant by the term 'discrete probability distribution'. (4 marks)
- (b) **Describe** the differences between discrete and continuous probability distributions. (8 marks)
- (c) **Explain** how predictive modelling is used in statistical analysis. (8 marks)

#### Question 3

- (a) **State** what is meant by the term 'scattergram'. (4 marks)
- (b) **Explain** how scattergrams are used to illustrate data. (4 marks)
- (c) An ice cream vendor kept a daily record of how many ice creams they sold over a 10-day period. They also noted the maximum temperature that day. **Illustrate** the ice cream sale records below by drawing a scattergram and **describe** the correlation. (12 marks)

Day	1	2	3	4	5	6	7	8	9	10
Ice creams sold	5	15	33	49	22	8	38	19	27	41
Max temp (°C)	3	9	20	30	14	5	23	11	15	25

#### Question 4

- (a) **State** what is meant by the term 'outlier'. (4 marks)

(b) **Describe** the effects of outliers in the statistical interpretation of data. (8 marks)

(c) **Describe** a statistical analysis relevant to continuous data. (8 marks)

#### Question 5

(a) **Describe** the key differences between qualitative and quantitative measurement. (6 marks)

(b) **Describe** the advantages and disadvantages of **TWO** different methods of research. (6 marks)

(c) **Describe** the advantages and disadvantages of **TWO** data collection instruments. (8 marks)

Past Paper