

Exemplar exam questions – Chapter 1, *Statistical analysis***Multiple choice questions**

In examinations, marks are **not** deducted for incorrect answers so it is always a good idea to choose an answer even if you are not sure. One mark is given for each correct answer.

Exemplar questions

- 1 Which statement correctly describes the use of error bars?
- A They show how an average has been calculated.
 - B They are a graphical representation of the variability of data.
 - C They are a graphical representation of correlation of data.
 - D They should always be shown on graphs.

Answer is **B**.

- 2 Standard deviation is used to:
- A indicate the spread of values around the mean.
 - B work out the significance of any difference between two sets of data.
 - C identify the 68% of values that are significant.
 - D determine the average of a set of data.

Answer is **A**.

- 3 Which of these statements about the use of the *t*-test is **not** correct?
- A The data must have a normal distribution.
 - B The sample size must be at least 10.
 - C The test can be used to compare two sets of data.
 - D The test is used to calculate the mean and standard deviation of a set of values.

Answer is **D**.

- 4 The existence of a correlation between two variables tells us that:
- A one variable has caused a change in the other.
 - B a scientific experiment has been carried out.
 - C there may be a relationship between the two variables.
 - D as one variable increases, the other decreases.

Answer is **C**.