

Year 1 Applied Chapter 1: Data Collection – Exam Questions (Total Marks 30)

1. (a) Explain what you understand by (i) a population and (ii) a sampling frame.

(2)

The population and the sampling frame may not be the same.

- (b) Explain why this might be the case.

(1)

- (c) Give one advantage and one disadvantage of each

(i) a census,

(ii) a sample.

(4)

(Total 7 marks)

2. Give one advantage and one disadvantage of each sampling method.

(a) stratified sampling,

(2)

(b) quota sampling.

(2)

(c) State two reasons why stratified sampling might be chosen as a method of sampling when carrying out a statistical survey.

(2)
(Total 6 marks)

3. A school has 15 classes and a sixth form. In each class there are 30 students. In the sixth form there are 150 students. There are equal numbers of boys and girls in each class. There are equal numbers of boys and girls in the sixth form. The head teacher wishes to obtain the opinions of the students about school uniforms.

Explain how the head teacher would take a stratified sample of size 40.

(Total 7 marks)

4. Describe one advantage and one disadvantage of
- (a) opportunity sampling,

(2)

- (b) simple random sampling.

(2)

(Total 4 marks)

5. A telephone directory contains 50 000 names. A researcher wishes to select a systematic sample of 100 names from the directory.

(a) Explain in detail how the researcher should obtain such a sample.

(2)

(b) Give one advantage and one disadvantage of systematic sampling.

(4)
(Total 6 marks)