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9990/23

October/November 2018

1 hour 30 minutes

No Additional Materials are required.

Write your Centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO NOT WRITE IN ANY BARCODES.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **10** printed pages and **2** blank pages.

Section A

Answer **all** questions in this section.

- 1** Explain what is meant by the term 'population'.

.....
.....[1]

- 2** There were many controlled variables in the study by Bandura et al. (aggression).

- (a) (i)** Explain what is meant by 'a controlled variable'.

.....
.....[1]

- (ii)** Identify an example of a controlled variable from the Bandura et al. study.

.....
.....[1]

- (iii)** Suggest **one** advantage of controlling the variable you have identified in part **(a)(ii)**.

.....
.....
.....
.....[2]

- (b)** State **one** way in which Bandura et al. helped observers to be reliable.

.....
.....[1]

- 3** In the study by Piliavin et al. (subway Samaritans), medians were calculated for 'time taken to help' in the Cane and Drunk conditions.

(a) State whether the median is a 'measure of central tendency' or a 'measure of spread'. Include a reason for your answer.

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.....
.....[1]

(b) Describe how a median is calculated, using the Piliavin et al. study as an example.

.....
.....
.....
.....[2]

(c) Name the type of graph that would be best used to show a comparison between the medians for 'time taken to help' in the Cane and Drunk conditions.

.....
.....[1]

4 From the study by Saavedra and Silverman (button phobia):

(a) Identify **two** ethical guidelines followed in this study.

- 1.....
.....
2.....
.....[2]

(b) For **one** of the ethical guidelines you identified in (a):

Suggest **one** disadvantage of following this ethical guideline in this study.

-
.....
.....
.....[2]

5 Explain why low reliability would be a problem in experiments.

-
.....
.....
.....[2]

6 Describe ways in which an interview can differ from a questionnaire, using any examples.

[6]

Section B

Answer **all** questions in this section.

- 7 Mikko is conducting an experiment to find out whether people are more easily persuaded by advertisements that are in colour or in black and white. He has put advertisements up in one town library that are all in colour and the same advertisements in black and white in a library in another town.

(a) Explain the importance of **one** control in Mikko's experiment.

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.....[3]

(b) Suggest how Mikko could operationalise the **dependent** variable in his experiment.

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.....[2]

(c) Explain whether Mikko's study is a field experiment or a natural experiment.

.....

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.....[2]

- 8 Dr Gopal is planning a study about learning and wants it to follow ethical guidelines for the use of animals. He is testing rats in a maze.

(a) Describe how Dr Gopal should follow the ethical guideline of 'housing' in his study.

.....

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.....[2]

(b) Dr Gopal is deciding how to train the rats to learn. He could reward them when they make a correct turn in the maze or he could punish them when they make an incorrect turn.

Explain which **one** of these training methods is the most ethical choice for Dr Gopal to make.

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.....[2]

(c) Dr Gopal plans to count the number of correct or incorrect turns each rat makes.

Explain **two** advantages of collecting data in this way.

1.....

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2.....

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.....[4]

- 9 Lotty and Nazeem are aiming to observe emotional responses to different films at the cinema. They have different ideas for recording people's emotions. Lotty wants to do a structured observation, with fixed behaviours to record. However, Nazeem wants to do an unstructured observation, and record whatever behaviours are shown.

(a) Suggest **one** way the aim of Lotty and Nazeem's observation is ethical.

.....
[1]

(b) Suggest how behaviours could be recorded using Lotty's idea to do a structured observation.

.....

[4]

(c) Explain **one** advantage of Lotty's idea to do a structured observation.

.....

[2]

(d) Explain **one** advantage of Nazeem's idea to do an unstructured observation.

.....

[2]

10 Cael and Elsie are working at a sleep laboratory and have read about external stimuli becoming part of people's dreams. Their aim is to test whether noises can more easily become part of a dream than smells.

.....[10

- (b) Identify **one** weakness/limitation with the procedure you have described in your answer to part (a) and suggest how your study might be done differently to overcome the problem.

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.....[4]

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