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Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

9109899074

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **May/June 2023**

1 hour 30 minutes

You must answer on the question paper.

You will need: Ruler

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages. Any blank pages are indicated.

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Section A

Answer **all** questions in this section.

1 From the study by Yamamoto et al. (chimpanzee helping):

Suggest why it was necessary for the chimpanzees to examine and manipulate the tools before the experiment.

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..... [2]

2 Chloë is conducting a study to investigate classical conditioning and operant conditioning. Her aim is to test which type of conditioning produces the fastest learning.

(a) Write a non-directional (two-tailed) hypothesis for Chloë's study.

You do **not** need to operationalise the variables in your hypothesis.

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..... [1]

(b) Chloë's results in the two conditions were the same.

Explain why Chloë **must** reject her non-directional hypothesis, referring to her variables in your answer.

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..... [1]

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3 The study by Schachter and Singer investigated two factors in emotion.

(a) The participants in this study were deceived.

(i) Outline **one** way that the participants were deceived in this study.

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..... [2]

(ii) Explain why the deception that you outlined in **(a)(i)** was necessary.

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..... [2]

(b) Schachter and Singer reported that in one condition, the observer could not hear the spoken reactions for one participant.

State **one** practical reason why this was a problem.

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..... [1]

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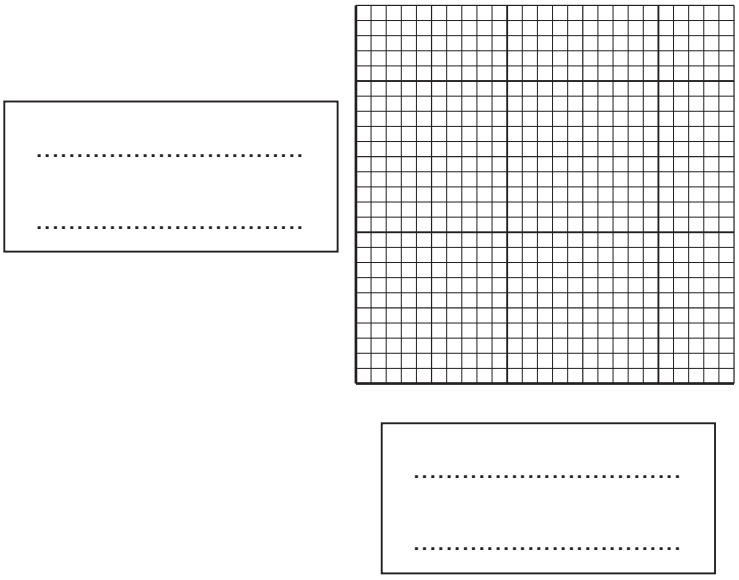
4 The data from Experiment 1 in the study by Laney et al. (false memory) is given in Table 4.1.

Table 4.1

Condition	Mean rating for the critical item 'loved asparagus the first time you tried it'	
	Week 1	**Week 2**
Control	1.5	2.5
Love	1.7	4.2

(a) Draw a bar chart of the 'Week 2' data only. You **must** label the axes.



[4]

(b) State **one** conclusion about this study using the data in Table 4.1.

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..... [1]

5 Explain the importance of inter-observer reliability in the study by Bandura et al. (aggression).

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..... [2]

6 Describe the use of controls in laboratory experiments and field experiments, using any examples.

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..... [6]

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Section B

Answer **all** questions in this section.

7 Deryn is planning an experimental study to compare how, and how often, men and women look at themselves in a shop window. She plans to collect quantitative data using observations and will calculate a median.

(a) (i) Identify the independent variable in Deryn's study.

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..... [1]

(ii) Identify **one** dependent variable in Deryn's study.

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..... [1]

(iii) Identify the experimental design used in Deryn's study.

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..... [1]

(b) (i) Suggest how Deryn could use a structured observation in her study.

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..... [3]

(ii) Suggest **one** disadvantage of using a structured observation compared to an unstructured observation in Deryn's study.

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..... [2]

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(c) A 'measure of central tendency' is a method of data analysis.

(i) Explain why the median is a measure of central tendency.

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..... [1]

(ii) Suggest **one** strength of using **one** method of data analysis, other than the median, with Deryn's results.

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..... [2]

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8 Phyllis is planning a correlational study to investigate the relationship between vocabulary size and level of education.

(a) (i) Suggest **two** ways that Phyllis could measure 'vocabulary size'.

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2 .....

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[4]

(ii) For **one** of the ways you have suggested in **(a)(i)**:

Suggest **one** strength of measuring vocabulary size in this way.

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..... [1]

(b) Suggest **one** way that Phyllis could measure 'level of education'.

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..... [1]

(c) Phyllis expects to find a positive correlation.

(i) Outline what Phyllis would conclude if she found the results in Fig. 8.1.

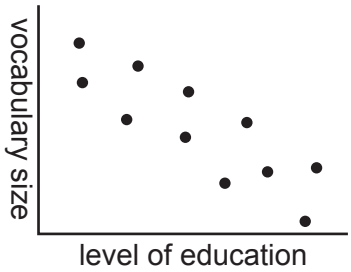

Fig. 8.1

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..... [1]

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(ii) Outline what Phyllis would conclude if she found the results in Fig. 8.2.

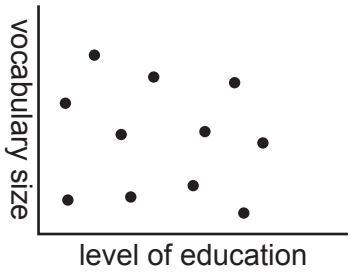

Fig. 8.2

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..... [1]

9 James is planning a study and has chosen to use opportunity sampling to find participants. A friend says he should use random sampling instead. Another friend says that sample size is just as important as sampling technique.

(a) Explain **one** strength of using opportunity sampling.

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..... [2]

(b) Explain **one** advantage of using random sampling instead of opportunity sampling.

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..... [2]

(c) Explain why a larger sample may be better than a smaller sample.

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..... [1]

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Section C

Answer **all** questions in this section.

10 Perrin is going to interview participants about their dreams. He wants to collect information about the duration and content of dreams in children and adults.

(a) Describe how Perrin could conduct a study using an interview to investigate the duration and content of dreams in children and adults.

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..... [10]

(b) Identify **one** practical 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.

Do **not** refer to ethics or sampling in your answer.

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