Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

5453150962

PSYCHOLOGY **9990/23**

Paper 2 Research Methods **May/June 2022**

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.

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Section A

Answer **all** questions in this section.

1 In the study by Andrade (doodling), parts of the procedure helped to reduce demand characteristics.

Describe **two** parts of the procedure that helped to reduce demand characteristics in this study.

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2 .....

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[4]

2 **(a)** State the difference between an 'aim' and a 'hypothesis'.

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..... [1]

(b) A non-directional hypothesis for a study states that 'Boys and girls differ in how aggressive they are' but the researcher has decided to use a directional hypothesis instead.

Suggest a directional hypothesis for this study.

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..... [1]

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3 The study by Milgram (obedience) was not an experiment because there was no independent variable. Milgram later compared the results of this study to the findings of the same procedure carried out in an old office block. This comparison was an experiment.

(a) State the independent variable in this experiment.

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..... [1]

(b) State the dependent variable in this experiment.

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..... [1]

4 **(a)** Explain what is meant by the ethical guideline of 'species and strain' in relation to animals in psychological research.

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..... [2]

(b) Describe how the ethical guideline of 'housing' affects what psychologists should and should not do when studying animals.

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..... [3]

5 In the study by Schachter and Singer (two factors in emotion), the placebo condition was a control condition.

(a) Outline what is meant by a 'control condition'.

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..... [1]

(b) Explain the purpose of this control condition in this study.

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..... [2]

6 Describe 'random sampling' and 'volunteer sampling', using any examples.

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..... [6]

Question 7 appears on the next page.

Section B

Answer **all** questions in this section.

7 Mrs Colling is a headteacher/principal of a school and is planning an experiment to investigate whether rewards or punishments are best for improving students' learning. The independent variable is whether students receive rewards or punishments.

(a) (i) Suggest **two** ways that Mrs Colling could ask teachers to reward students in their classes.

1 .....

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2 .....

.....
[2]

(ii) Explain which of the ways you suggested in **(a)(i)** would be a more valid manipulation of the independent variable in this experiment.

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..... [2]

(b) Mrs Colling is talking to teachers about what punishment to use. Two suggested punishments are:

- missing breaktime every day for a week while standing outside the staffroom
- making the student write a public letter of apology to the school.

Both suggested punishments are rejected by the teachers for ethical and practical reasons.

(i) Suggest **one** ethical problem with **one** of these punishments.

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..... [2]

(ii) Suggest **one** practical problem with **one** of these punishments.

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..... [2]

8 Ruby has conducted an experiment about language learning in animals using an animal called Delphine. Delphine has learned to make noises with different meanings. Ruby has tested Delphine's understanding of word types, including:

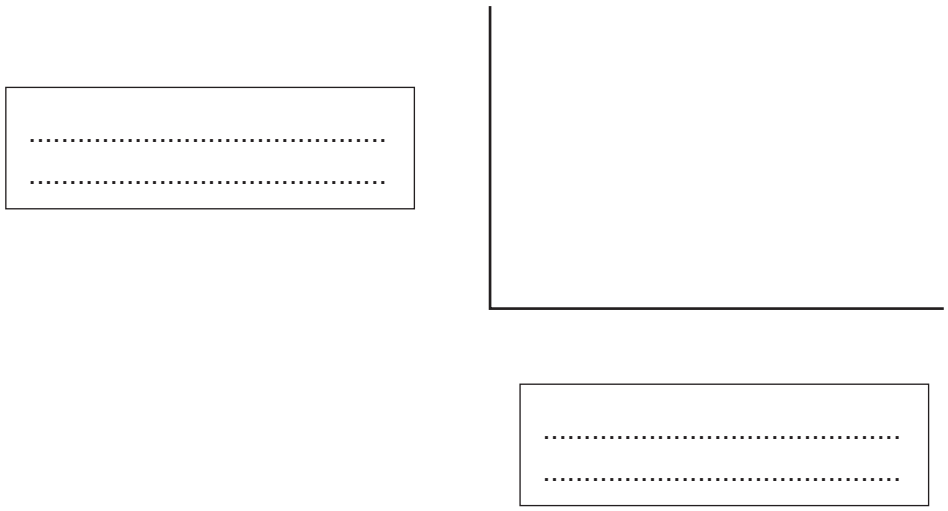
- shapes
- colours
- food types

(a) Ruby's results for the three word types are given in Table 8.1.

Table 8.1

Word type	shapes	colours	foods
Number of words understood	5	8	15

(i) Draw a bar chart of these results. You **must** label the axes.



[4]

(ii) State which measure of central tendency would be **most** appropriate for Ruby to use with this data.

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..... [1]

(b) Ruby plans to include two more word categories.

Explain why this would improve Ruby's results.

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..... [1]

(c) Ruby is concerned that sometimes she will not hear Delphine's noises so wants to use a second observer to help her.

Outline **two** disadvantages of having a second observer.

1 .....

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2 .....

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[2]

9 Dr Felix is conducting a natural experiment to test whether seeing television advertisements for a charity for older people makes participants behave more positively towards them. He measures this by giving a questionnaire about behaviour towards older people to a group of students. He gives the students the questionnaire one week before the advertisements appear on television and again the week after.

(a) Explain what is meant by a 'natural experiment', using this study as an example.

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..... [2]

(b) Suggest **one** problem with natural experiments, using this study as an example.

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..... [2]

(c) Dr Felix thinks it could be better to use covert observations rather than questionnaires to measure positive behaviour towards older people. He could have several older people as stooges, pretending to struggle with their shopping, and he could observe how the students behave.

(i) Suggest **one** advantage of using covert observation rather than questionnaires in this study.

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..... [2]

(ii) Suggest **one** disadvantage of using covert observation rather than questionnaires in this study.

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..... [2]

Section C

Answer **all** questions in this section.

10 Jimmy wants to investigate individual differences in dreams. He is interested in many differences between participants, such as whether each individual:

- has consistent dream content
- has meaningful dreams
- dreams in colour.

(a) Describe how Jimmy could conduct a study using an interview to investigate at least two individual differences in dreams.

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(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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..... [4]

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