Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

3968974898

PSYCHOLOGY **9990/23**

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

1 hour 30 minutes

You must answer on the question paper.

No additional materials are needed.

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 **(a)** Describe what is meant by the term 'random sampling'.

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..... [2]

(b) Explain **one** weakness of random sampling.

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..... [1]

2 The study by Yamamoto et al. (chimpanzee helping) followed ethical guidelines relating to the use of animals.

Describe how **two** ethical guidelines relating to the use of animals in research were followed in this study.

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2 .....

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[4]

3 In the study by Laney et al. (false memory), standard deviations were calculated.

(a) State what is meant by a 'measure of spread'.

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..... [1]

(b) State **one** advantage of using the standard deviation compared to **one** other measure of spread.

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..... [2]

4 In the study by Pepperberg (parrot learning), Alex the parrot was tested using the categories of:
- shape
- material
- colour.

(a) Suggest why Pepperberg chose to test the parrot using the categories of 'shape' and 'material'.

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..... [2]

(b) Suggest **one** other category that Pepperberg could have used to test the parrot's understanding of categories.

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..... [1]

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5 The study by Dement and Kleitman (sleep and dreams) investigated two kinds of sleep: REM sleep and non-REM sleep.

State **three** differences between REM sleep and non-REM sleep.

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2 .....

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[3]

6 Describe the ethical guidelines of 'informed consent' and 'protection from harm', using any examples.

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..... [6]

Section B

Answer **all** questions in this section.

7 Nigel has conducted a laboratory experiment to compare children's choice of sweets (candy) in different packets. The children were shown sweets in:

- brightly coloured packets with simple patterns
- black and white packets with complex patterns.

His results showed that more children chose the sweets from the 'brightly coloured packets with simple patterns' condition.

(a) (i) Suggest **one** other condition that Nigel could have included in his study.

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..... [1]

(ii) Explain why the condition you suggested in **(a)(i)** would have been useful.

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..... [2]

(b) Nigel used a repeated measures design.

Explain what is meant by a 'repeated measures design', using an example from this study.

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..... [2]

(c) Name **one** experimental design Nigel could have used, other than a repeated measures design.

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..... [1]

8 Mila is planning a case study to investigate how a 21-year-old person feels about being the only young person in a community of 20 older people on a small island.

(a) Suggest **two** techniques Mila could use to collect data from her participant in this study.

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(b) For **one** of the techniques you suggested in **(a)**:

(i) Explain **one** advantage of this technique.

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..... [2]

(ii) Explain **one** disadvantage of this technique.

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.....[2]

(c) Mila wants to generalise her findings to all adults who live away from other people of their own age.

Explain why Mila should **not** make this generalisation from the findings of her case study.

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..... [1]

9 Alan and Jocelyn are writing a questionnaire to ask about the level of euphoria created by listening to music at a concert, compared with listening to music at home.

(a) (i) Suggest **one** closed question that they could use on the questionnaire to ask about euphoria.

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..... [2]

(ii) Suggest **one** open question that they could use on the questionnaire to ask about euphoria.

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..... [1]

(b) For the questions you suggested in **(a)(i)** and **(a)(ii)**:

(i) Explain **one** reason why the data from the open question could be more valid than data from the closed question.

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..... [2]

(ii) Explain **one** reason why the data from the open question could be less valid than data from the closed question.

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..... [2]

(c) Explain how Alan and Jocelyn could check their inter-rater reliability when they analyse their data.

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..... [2]

Section C

Answer **all** questions in this section.

10 Dr Caesar is interested in animal phobias in his patients. He wants to investigate whether there is a correlation between the size of the animal causing the phobia and the severity of each patient's animal phobia.

(a) Describe how Dr Caesar could conduct a correlational study to investigate the relationship between animal size and the severity of the patients' phobias.

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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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