GradeMax

Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

PSYCHOLOGY **9990/21**

Paper 2 Research Methods **May/June 2024**

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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[Turn over

Section A

Answer **all** questions.

1 **(a)** Identify the sampling technique used in the study by Milgram (obedience).

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..... [1]

(b) Outline how the sample was obtained in this study.

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..... [2]

2 Explain what is meant by the ethical guideline of 'species' in relation to animals in psychological research.

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..... [2]

3 Dement and Kleitman (sleep and dreams) asked participants to record their dream narratives. The words in each narrative were counted.

(a) Identify the type of data provided by counting the words in the narratives. Justify your answer.

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..... [2]

(b) Explain **one** strength of collecting this type of data in this study.

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4 Glyn is conducting an experiment with an independent measures design. He is testing the effect of background noise on social learning (learning by imitation). Glyn shows each participant how to build a tower from blocks. Each participant then builds this tower, with either singing or silence in the background.

(a) Explain what is meant by an 'independent measures design', including an example from Glyn's study.

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..... [2]

(b) Explain what is meant by a 'control condition', including an example from Glyn's study.

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..... [2]

(c) Suggest how Glyn could measure social learning (learning by imitation) in his study.

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5 In the study by Pozzulo et al. (line-ups), children were interviewed.

(a) Explain why it was necessary to gain consent from both the children and the children's parents/guardians.

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..... [3]

(b) To test correct identification of the cartoon characters, many 'foils' were needed that were similar to the target cartoons.

Explain **one** way in which the foils needed to be similar to the targets.

.....

..... [1]

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(c) Fig. 5.1 shows some of the data from this study. Use this graph to produce a table of the data. You **must** write full headings on your table.

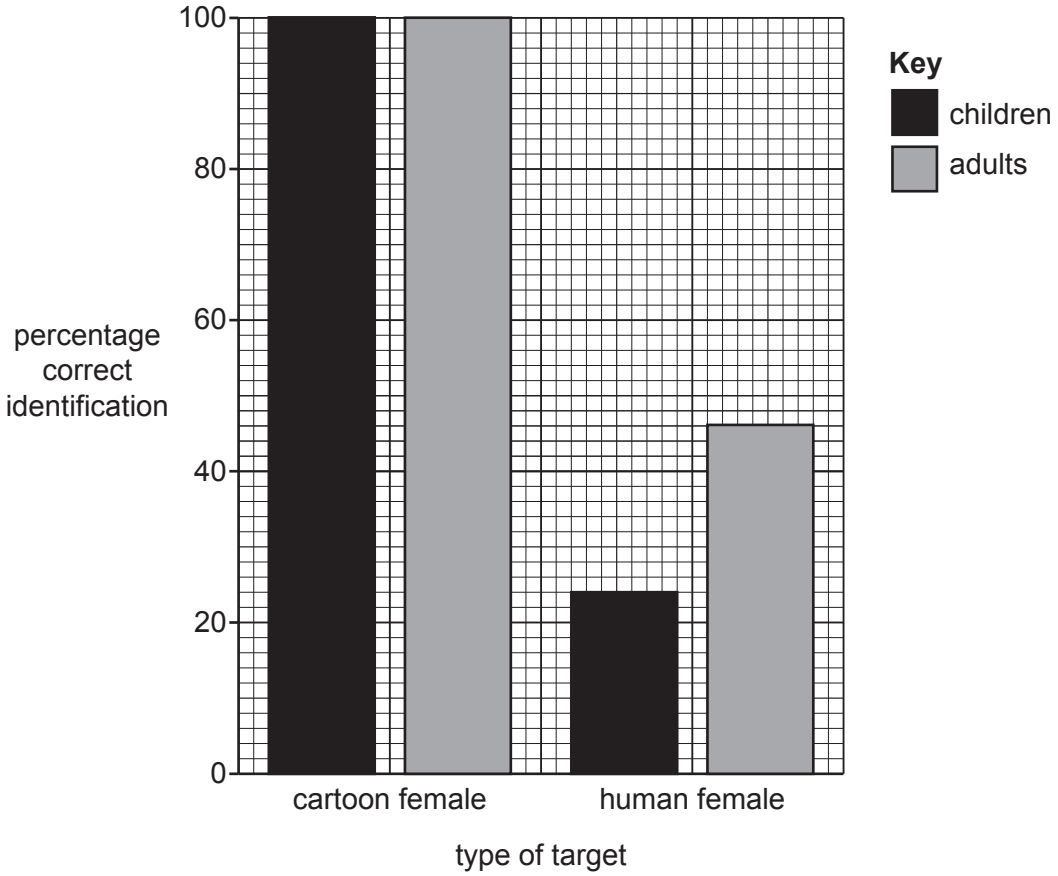

Fig. 5.1

**Results from the study by Pozzulo et al.
for the correct identification of target individuals in a line-up.**

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6 Describe participant observation and non-participant observation, using any example(s).

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..... [6]

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7 Ranya is collecting data about study habits after school. She is asking students in her school two questions:

- Question 1 How long do you spend studying per week after school?
- Question 2 Which subject do you prefer to study after school: arts, languages, maths or science?

(a) Ranya will use two different measures of central tendency on her data, the mode and the mean.

Explain which measure of central tendency would be **most** appropriate for each of Ranya's questions.

Measure of central tendency for Question 1 .....

Explanation .....

.....

Measure of central tendency for Question 2 .....

Explanation .....

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[2]

(b) **(i)** Explain how Ranya would calculate the range of hours spent studying per week after school.

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..... [1]

(ii) Ranya's colleague says she should use the standard deviation instead of the range for the data from Question 1.

Explain why the standard deviation would provide more information than the range.

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..... [2]

(c) Ranya will use a non-directional (two-tailed) hypothesis about study habits.

Explain which hypothesis Ranya will use:

X Students who prefer maths will spend more time studying.

Y There will be a difference in the time spent studying by students who prefer maths and students who do not prefer maths.

Hypothesis X or Y: .....

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..... [1]

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8 Simon is conducting a study about children learning to read. He is comparing how well they understand a story when reading from a book which has pages with images that are either:

- coloured shapes
- pictures that are not related to the text
- pictures that are related to the text.

(a) Identify the independent variable (IV) in Simon's study.

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..... [1]

(b) Identify the dependent variable (DV) in Simon's study.

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..... [1]

(c) All the pictures and shapes are brightly coloured.

Explain **one** reason why this is important.

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..... [3]

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9 Heng is conducting a study to investigate the job satisfaction of male and female employees at a factory.

She has identified two problems with uncontrolled variables. One is a situational variable and the other is a participant variable:

- variable X: female employees have more responsibilities at home
- variable Y: the factory promotes male employees faster than females.

(a) Explain which **one** of these problems is a participant variable.

.....

..... [1]

(b) Explain which **one** of these problems is a situational variable.

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..... [1]

(c) **(i)** Suggest how Heng could limit the problem of **one** of these uncontrolled variables.

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..... [2]

(ii) Trying to limit a problem in a study can create further issues.

Suggest **one** issue that your answer to part **(c)(i)** could create for Heng.

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..... [2]

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Section B

Answer **all** questions.

10 Mary is conducting a case study on a boy diagnosed with an autistic spectrum disorder. He produces many detailed doodles and Mary wants to learn about him and his doodling.

(a) Describe how Mary could conduct a case study of doodling in a boy diagnosed with an autistic spectrum disorder.

Do **not** describe sampling technique or ethical issues/guidelines in your answer.

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(b) (i) Explain how **one** feature of the procedure you described in part **(a)** helps to make the study valid.

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

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..... [2]

(ii) Suggest **one** way to improve the reliability of the procedure you described in part **(a)**. Justify your answer.

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

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..... [2]

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