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Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

7530377657

PSYCHOLOGY **9990/21**

Paper 2 Research Methods **May/June 2025**

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.

1 **(a)** Describe what is meant by a questionnaire.

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..... [2]

(b) Explain **one** practical strength of using a questionnaire.

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2 The study by Bandura et al. (aggression) provides no information about whether or not consent was obtained from the participants.

(a) Outline what is meant by 'consent'.

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(b) Suggest why obtaining consent would have been important in this study.

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3 In the study by Milgram, obedience was tested. Participants with a range of different occupations and ages were used to improve generalisability.

(a) Suggest **one** reason why using participants with different occupations could be important to Milgram's test of obedience. Use an example in your answer.

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(b) Suggest **one** reason why using participants with different ages could be important to Milgram's test of obedience. Use an example in your answer.

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4 In the study by Baron-Cohen et al. (eyes test), the ages of all participants were known. The mean and standard deviation of the ages of the participants in Groups 1 and 3 are shown in Table 4.1.

Table 4.1

Group	Mean	Standard deviation
Group 1 (AS/HFA adults)	29.7	14.5
Group 3 (Students)	20.8	0.8

(a) State what the means show about the ages of the two groups.

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(b) State what the standard deviations show about the ages of the two groups.

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5 Explain **one** ethical weakness of the case study research method. Do **not** use consent in your answer.

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6 Describe opportunity sampling and random sampling, using any example(s).

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7 Dr Smith wants to compare how easily two species of animal learn to press a lever to receive food.

(a) (i) Suggest **one** way that Dr Smith could produce a quantitative measure of how easily the animals learn.

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(ii) The two species are very similar, but one is bigger than the other.

For the way that you suggested for measuring how easily the animals learn in part **(a)(i)**: Explain whether this would be valid for both species.

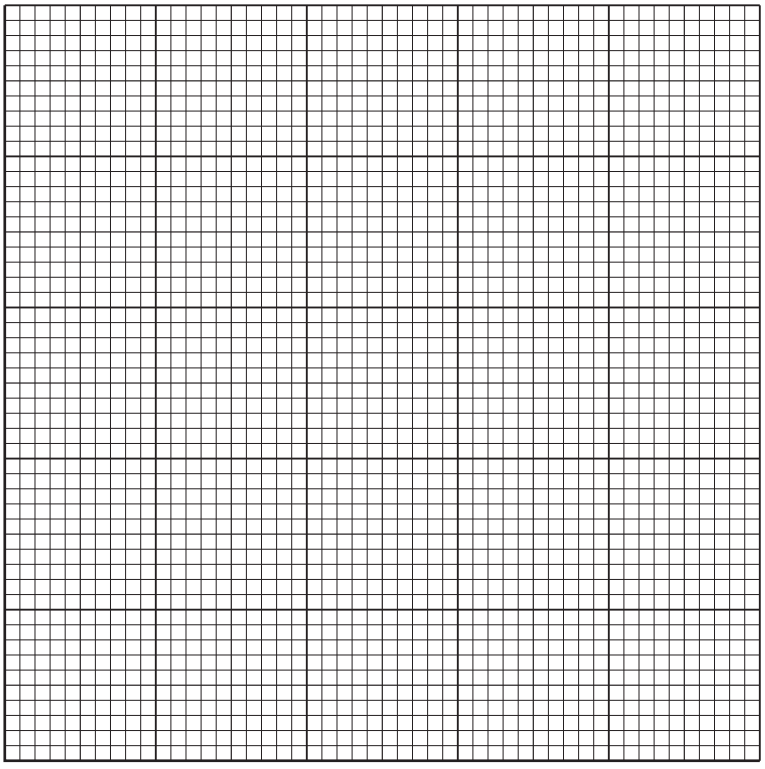
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(b) Draw the axes for a graph that could be used to show the results of Dr Smith's study using the measure of learning that you suggested in part **(a)(i)**. You **must** label the axes.



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(c) Suggest how Dr Smith could follow **one** ethical guideline in relation to animals, other than 'species'.

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8 Josie is collecting data from other students in her class to test the hypothesis 'There is a relationship between tidiness of classwork and enjoyment of lessons'.

(a) Josie will use one of these measures of tidiness:

- look at the work herself and decide whether each student's work is tidy or not
- ask the student to rate the tidiness of their work on a scale of 0 (untidy) to 5 (very tidy).

(i) Explain **one** problem about validity or reliability that Josie could have with **one** of her measures of tidiness.

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(ii) Explain **one** problem about ethics that Josie could have with **one** of her measures of tidiness.

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(b) The hypothesis that Josie is testing is correlational.

Explain which **one** of the measures of tidiness in part **(a)** is **not** suitable for Josie to use in her correlation.

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(c) Josie's data shows that students who enjoy lessons more have tidier work.

(i) Explain what Josie will conclude about her correlation.

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(ii) Explain whether Josie can conclude that having tidier classwork influences students' enjoyment of lessons.

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9 Dr Gao is planning a longitudinal study about changes in reading habits. She will study the same group of participants from childhood, through adolescence and into adulthood.

(a) Dr Gao will need to contact her participants at regular intervals.

(i) Dr Gao is deciding how often to test her participants, and is considering:

- weekly
- yearly.

Explain which of these intervals is the **most** suitable for Dr Gao's study.

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(ii) Suggest how Dr Gao could contact her participants during the study.

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(iii) Suggest **two** problems that Dr Gao may have when trying to contact her participants at regular intervals.

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[2]

(b) A colleague, Dr Roberts, says that the study could be conducted by comparing participants of different ages at one point in time.

Suggest **one** advantage of Dr Roberts' idea, compared to Dr Gao's plan for a longitudinal study.
Do **not** refer to contacting participants in your answer.

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Section B

Answer **all** questions.

10 Dr Miller is researching factors that affect how well people sleep. He wants to know whether creative activities (such as art, music or dance) help people to sleep well.

(a) Describe how Dr Miller could conduct an experiment using an independent measures design to investigate whether creative activities help people to sleep well.

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

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(b) (i) Explain **one** advantage of using an independent measures design in this study compared to using a repeated measures design.

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

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(ii) Explain **one** disadvantage of using an independent measures design in this study compared to using a repeated measures design.

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

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