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# Cambridge International AS & A Level

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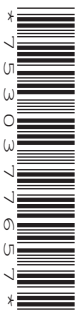

**PSYCHOLOGY** **9990/21**

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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**(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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..... [1]

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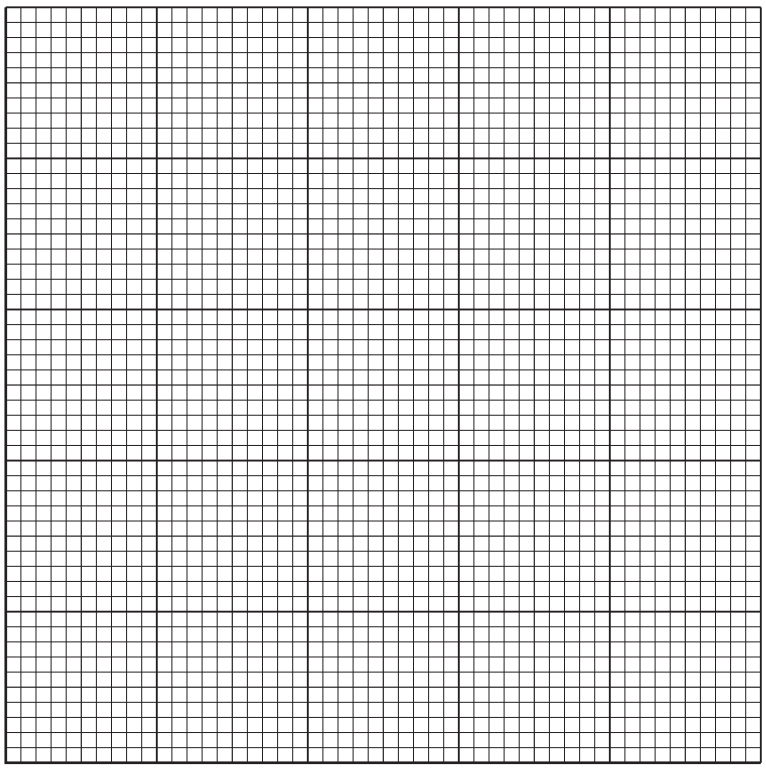
**(b)** Draw the axes for a graph that could be used to show the results of Dr Smith's study using the measure of learning that you suggested in part **(a)(i)**. You **must** label the axes.



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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 .....

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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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