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Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

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PSYCHOLOGY **9990/21**

Paper 2 Research Methods **October/November 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 researcher is conducting an observation to investigate the study habits of students. The observation uses a fixed list of behavioural categories.

(a) Explain whether this observation is structured or unstructured.

.....

..... [1]

(b) (i) Suggest **two** behavioural categories that the researcher could use to observe the study habits of students.

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.....

..... [2]

(ii) For **one** of the behavioural categories you suggested in part **(b)(i)**:

Suggest **one** methodological problem with using this category to observe the study habits of students.

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..... [2]

2 In the study by Saavedra and Silverman (button phobia), imagery exposure was investigated. During this, the boy reported a 'severity rating' for distress at three different 'time frames'.

(a) State what was meant by the time frames 1, 2 and 3.

Time frame 1: .....

.....

Time frame 2: .....

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Time frame 3: .....

.....

[2]

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(b) Outline the change in severity rating from time frame 1 to time frame 3, when the boy had to imagine hundreds of buttons falling on his body.

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..... [1]

3 The study by Hölzel et al. (mindfulness and brain scans) used participants who wanted to reduce their stress and were able to have an MRI scan. There were several other inclusion criteria (reasons for being included in the sample).

(a) Outline **two** other inclusion criteria.

1 .....

.....

2 .....

.....
[2]

(b) For each of the inclusion criteria outlined in part **(a)**:

Suggest why each inclusion criterion was important in this study, other than to ensure that the experimental and control groups were similar.

1 .....

.....

2 .....

.....
[2]

4 The study by Baron-Cohen et al. (eyes test) used an independent measures design.

(a) Explain **one** strength of using an independent measures design.

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..... [2]

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(b) Explain **one** weakness of using an independent measures design.

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..... [2]

5 Sketch a graph on the axes in Fig. 5.1 to show a negative correlation between 'time spent watching television' and 'attention span'. You **must** label the axes.

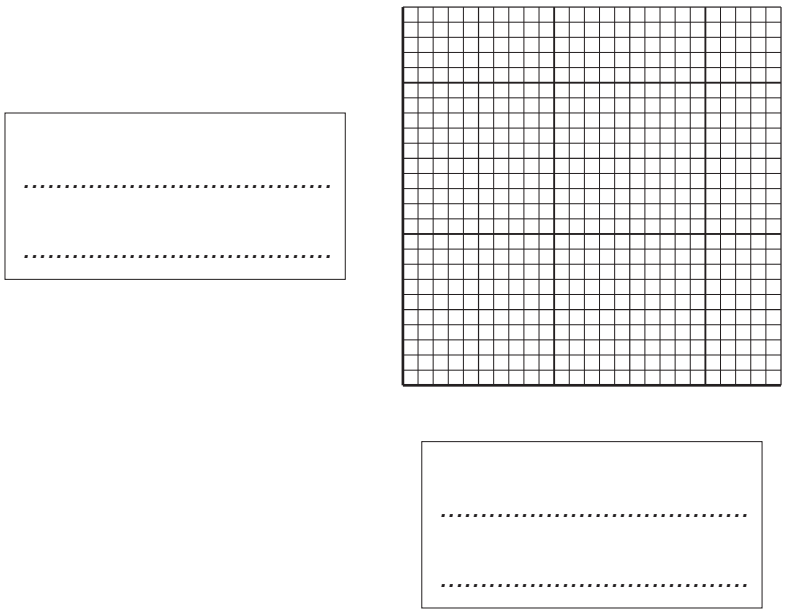


Fig. 5.1

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6 Describe measures of central tendency, using any example(s).

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..... [6]

7 Professor March is interested in interpersonal distance. He has met Dennis, who needs a large interpersonal distance. Dennis has agreed to Professor March conducting a case study about him using a questionnaire.

(a) Suggest why Dennis may prefer Professor March to use a questionnaire rather than a face-to-face interview.

.....

..... [1]

(b) Suggest **two** examples of questions that Professor March could use to collect data about the need Dennis has for a large interpersonal distance.

1 .....

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2 .....

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[2]

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(c) Suggest **one** problem that Professor March could have when using a questionnaire to study Dennis.

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..... [3]

8 Dr East is observing children playing. She is a participant observer. The children have met Dr East before and believe she is a playground assistant who watches them when their teachers have lunch.

(a) Suggest **one** strength of using participant observation in this study.

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..... [2]

(b) Suggest **one** advantage of Dr East using a non-participant observation compared to a participant observation.

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(c) Explain **one** ethical problem caused by the children believing that Dr East is a playground assistant.

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9 Dr Okami is using animals in an experiment to study the effects of noise on learning. In this study, the animals will learn to run through narrow tunnels and will meet other animals. Each animal will **either** run through the tunnels with noise **or** run through the tunnels without noise.

(a) Explain whether the experimental design of Dr Okami's study is repeated measures or independent measures.

.....

..... [1]

(b) The independent variable is 'with noise or without noise' and the dependent variable is 'learn to run through the tunnels'.

Define what is meant by the terms 'independent variable' and 'dependent variable'.

independent variable .....

.....

dependent variable .....

.....
[2]

(c) Dr Okami needs to follow ethical guidelines in relation to animals.

(i) Dr Okami will use reinforcement to help the animals learn to run through the narrow tunnels.

Suggest **one** way that the animals could be reinforced. Your answer **must** be ethical.

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..... [1]

(ii) Dr Okami needs to follow the guideline of 'species'.

Explain **two** ways that Dr Okami's choice of animal will be affected by following this guideline.

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(iii) Dr Okami needs to follow the guideline of 'minimising harm'.

Suggest why this guideline is relevant to Dr Okami's study.

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Section B

Answer **all** questions.

10 Dr Aster is interviewing people about their exciting experiences. He is interested in peoples' feelings about different types of exciting experience.

(a) Describe how Dr Aster could conduct a study using an interview to investigate peoples' feelings about different types of exciting experience.

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

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(b) For **one** part of the procedure you described in part **(a)**:

(i) Describe **one** practical/methodological strength of this part of the procedure.

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

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..... [2]

(ii) Describe **one** practical/methodological weakness of this part of the procedure.

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

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..... [2]

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