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Cambridge International AS & A Level

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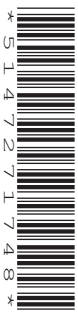

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **February/March 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)** Outline what is meant by an overt observation.

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(b) **(i)** Suggest **one** reason why an overt observation may be better than a covert observation.

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(ii) Suggest **one** reason why an overt observation may **not** be better than a covert observation.

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2 Dr Bryan has been asked to investigate the effects of a new drug for people with a psychological disorder. Each week, Dr Bryan's patients visit him to receive the drug and to report their symptoms.

Explain what makes this investigation a longitudinal study.

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3 In the study by Hölzel et al. (mindfulness and brain scans), two participants withdrew from the sample due to the MRI scan being uncomfortable.

Explain why the withdrawal of these two participants could have reduced the validity of the study.

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4 In studies in cognitive psychology, groups of participants are often given tests that produce numerical data so that the groups can be compared.

(a) Outline the **most** appropriate measure of central tendency to use for a maths test in which each question is equally difficult.

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(b) In a study, the measures of central tendency from the maths tests of two groups of participants could be compared.

State the **most** appropriate type of graph to use for this data.

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5 In the study by Fagen et al. (elephant learning), one way that data was collected about elephant learning was the performance test.

(a) Suggest **one** way that the performance test could have lacked validity. Justify your answer.

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(b) Suggest **one** way that the validity of the performance test could have been improved.

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6 Describe quantitative data and qualitative data, using any example(s).

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7 Jacinda, a factory manager, is planning a study about her workers' interpersonal distance preferences.

(a) Jacinda arranges the distance between workstations. In one section of the factory the distance between the workstations is large, and in another section the distance between the workstations is small.

(i) Suggest **two** situational variables that should be controlled so that they are the same for the two sections of the factory.

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(ii) For **each** of your suggestions in part **(a)(i)**:

Explain why **each** situational variable would be relevant to Jacinda's study.

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(b) Suggest how Jacinda could obtain a volunteer sample for her study.

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(c) Suggest how Jacinda could measure her participants' interpersonal distance preference, other than by using an interview.

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8 Dr Foster is conducting research about cognition using monkeys in a laboratory. He wants to provide ethical housing for them, so will investigate which materials the monkeys prefer to sleep on inside their cages. The monkeys will be given two choices: leaves or paper.

(a) (i) Suggest **one** ethical reason why it is important that the monkeys are comfortable in the environment in which they are housed when they are **not** being tested.

Do **not** refer to the ethical guideline of 'housing'.

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(ii) Suggest **one** methodological reason why it is important that the monkeys are comfortable in the environment in which they are tested.

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(b) Suggest **one** way to measure which material the monkeys prefer inside their cages.

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(c) Identify **two** features that are important in the 'housing' guideline in relation to animal ethics. Do **not** refer to the materials inside an animal's cage.

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9 A psychologist is investigating whether there is relationship between happiness and exercise. He thinks that either:

- being happier would make people exercise more
- exercising more would make people happier
- happiness and exercise are both affected by another variable.

(a) Explain why it is better to use a correlation than an experiment for this investigation.

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(b) Suggest **one** way that exercise could be measured in this investigation.

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(c) For the way of measuring exercise you suggested in part **(b)**:

(i) Suggest **one** strength of this way of measuring exercise.

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(ii) Suggest **one** weakness of this way of measuring exercise.

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Section B

Answer **all** questions.

10 Dr Anand is interested in conversations that children aged 8–10 years old have with their parents. He wants to know about different features of these conversations, such as:

- how long they talk for
- what they talk about
- how positive they feel about talking to each other.

He intends to study these conversations using structured interviews.

(a) Describe how Dr Anand could use structured interviews to study conversations that 8–10 year old children have with their parents.

Do **not** describe sample/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 reliable.

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

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(ii) Explain how **one** feature of the procedure you described in part **(a)** could be a problem for reliability of the study.

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

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