Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

5567297610

PSYCHOLOGY **9990/23**

Paper 2 Research Methods **October/November 2021**

1 hour 30 minutes

You must answer on the question paper.

You will need: Ruler

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 in this section.

1 **(a)** Outline what is meant by 'fatigue effects'.

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..... [2]

(b) In the study by Pepperberg (parrot learning), fatigue effects could have occurred.

State **two** examples of the parrot's behaviour that suggest fatigue effects did occur.

1 .....

2 ..... [2]

2 Explain why opportunity sampling may **not** produce a representative sample.

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..... [1]

3 Studies using animals should follow the ethical guideline of 'deprivation and aversive stimuli'. The study by Yamamoto et al. (chimpanzee helping) followed this ethical guideline.

Explain **one** feature of this study that ensured the chimpanzees were **not** exposed to deprivation/ aversive stimuli.

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..... [2]

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4 In the study by Canli et al. (brain scans and emotions), several types of quantitative data were collected, including data from fMRI (functional Magnetic Resonance Imaging).

(a) Describe **two** quantitative measures in this study, other than the data from fMRI.

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2 .....

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(b) For **one** of the quantitative measures you described in **(a)**:

(i) Explain **one** reason why it may be a valid measure.

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(ii) Explain **one** reason why it may **not** be a valid measure.

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5 In the cognitive approach, studies often need to deceive participants.

Explain why deception was necessary in the study by Andrade (doodling).

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..... [1]

6 Describe covert observations and overt observations, using any examples.

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..... [6]

Question 7 appears on Page 6.

Section B

Answer **all** questions in this section.

7 Dhia is investigating when children learn to understand differences between shapes. She is comparing children aged 4 years and 8 years. Dhia will test their ability by asking them to sort wooden shapes into triangles, squares or circles.

(a) Suggest **two** ways that Dhia could measure a child's performance on this test.

1 .....

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2 .....

..... [2]

(b) Ethical guidelines suggest that even when consent has been given by a parent, a child should still be asked if they want to participate in a way that they will understand.

Suggest how Dhia could attempt to obtain informed consent from the children in a way that they will understand.

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(c) Children may express their right to withdraw in different ways from adults.

Suggest how Dhia might know that a child wants to withdraw from her experiment.

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(d) The 4-year-old children had been learning about shapes at school the week before Dhia's study.

Explain the possible effect of this on Dhia's findings.

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..... [3]

8 Bai is conducting a correlational study about pain and hours of daylight. He thinks that people experience more pain on days when there is less sunlight. He has asked for volunteers from a specialist centre for back pain.

(a) Bai plans to collect his data about pain using a questionnaire.

Explain **one** reason why it may be better for him to use an interview to collect this data.

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(b) (i) Suggest **one** disadvantage of using participants from a specialist centre for back pain.

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(ii) Suggest **one** alternative source of participants. Justify your answer.

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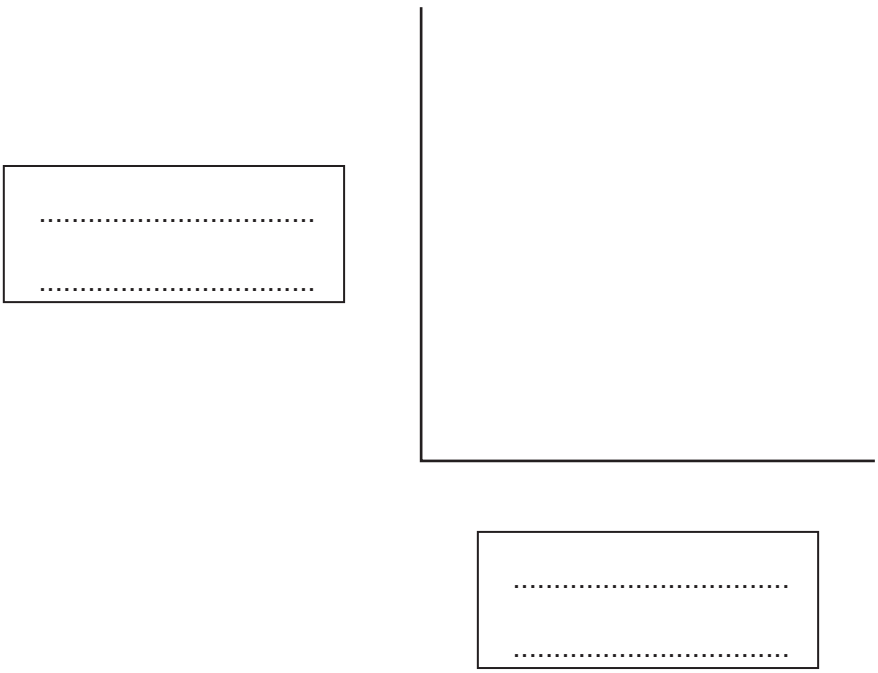
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(c) Sketch a graph of the results Bai expects to find on the axes below. You **must** label the axes.



[3]

9 Mitesh is investigating the effect of doodling on recall of animal noises. He provides pencils and doodling paper for all participants and tells them that they will hear a recording of animal noises that they will have to recall. Mitesh notes which participants doodle while they listen to the recording.

(a) Suggest how Mitesh could encourage participants to doodle, other than by telling them to doodle.

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..... [2]

(b) The participants who doodled recalled more animal noises than the participants who did not doodle. However, Mitesh cannot conclude that doodling causes better recall.

Suggest **one** reason why Mitesh **cannot** conclude that doodling causes better recall.

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(c) Mitesh did not deceive his participants.

Explain why it was necessary for him to debrief his participants.

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..... [2]

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Section C

Answer **all** questions in this section.

10 Mandy wants to investigate the effects of phobias on the way people socialise, such as how friendly they are and the social groups or clubs they belong to.

(a) Describe how Mandy could conduct a study using a questionnaire to investigate the effects of phobias on the way people socialise.

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(b) Identify **one** practical weakness/limitation with the procedure you have described in your answer to part **(a)** and suggest how your study might be done differently to overcome the problem.

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

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..... [4]

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