Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

9926412535

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **May/June 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)** State what is meant by an 'open question'.

.....

..... [1]

(b) Outline **one** open question from the study by Dement and Kleitman (sleep and dreams).

.....

..... [1]

2 In the study by Baron-Cohen et al. (eyes test), two of the groups of participants used were:
- Group 1 – AS/HFA participants
- Group 4 – participants from the general population.

(a) State **two** similarities between the participants in Group 1 and Group 4.

1 .....

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2 .....

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[2]

(b) State **one** difference between how Group 1 and Group 4 were selected, other than being diagnosed with AS/HFA.

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..... [1]

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3 The study by Piliavin et al. (subway Samaritans) raised ethical issues of 'right to withdraw' and 'deception'.

Explain why the study by Piliavin et al. raised these ethical issues.

right to withdraw .....

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deception .....

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[4]

4 In the study by Pepperberg (parrot learning) the sample was only one parrot, Alex. This parrot could have differed from other parrots of the same species.

Explain how **two** possible differences could have affected Pepperberg's study.

1 .....

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2 .....

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[4]

5 The mean and the mode are measures of central tendency.

(a) Explain why the mean could be a better measure of central tendency than the mode.

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..... [2]

(b) Explain why a researcher may have to use the mode instead of the mean.

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..... [1]

6 Describe participant observation and non-participant observation, using any examples.

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..... [6]

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Section B

Answer **all** questions in this section.

7 Two friends, Zvi and Bill, are conducting a natural experiment. They are collecting data by observing whether young or old people are more likely to become frustrated when trying to get on a busy train.

(a) (i) Suggest how the friends could operationalise their independent variable.

.....

..... [1]

(ii) For the way you suggested in **(a)(i)**:

Explain **one** strength of operationalising the independent variable in this way.

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..... [2]

(b) Explain what is meant by a 'dependent variable', using Zvi and Bill's study as an example.

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..... [2]

(c) The friends agree that they should collect data over several days but have different plans for when they should do this.

(i) Zvi plans to collect data at the same time each day.

Explain **one** strength of Zvi's plan.

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..... [2]

(ii) Bill plans to collect data over a range of different times each day.

Explain **one** strength of Bill's plan.

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..... [2]

8 Jacy is conducting a laboratory experiment to investigate the effect of eating chocolate on mood. She predicts that eating chocolate will make people happier than not eating chocolate. She has 20 participants.

(a) Explain why Jacy is able to make a causal prediction.

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..... [2]

(b) Jacy gave each participant a number from 1 to 20. She has a hat which contains cards that are numbered from 1 to 20. She takes 10 cards from the hat and uses the 10 people with those numbers as her control group. She uses the remaining 10 participants as her experimental group.

(i) Name the process Jacy is using in this part of her study.

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..... [1]

(ii) Explain **one** strength of this part of Jacy's procedure.

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..... [3]

(c) Explain the experimental design that Jacy is using.

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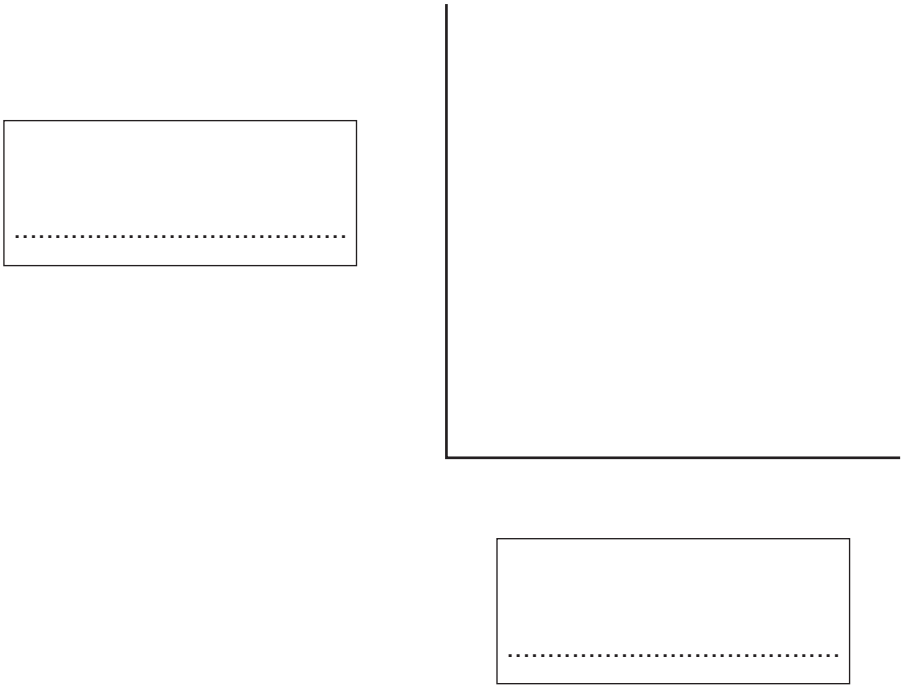
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..... [2]

9 Dr Lee is measuring two variables, tiredness and generosity, on scales of 0 to 10. He finds a strong positive correlation between the two variables.

(a) Sketch a graph on the axes below using crosses to show the pattern of Dr Lee's results. You **must** label the axes. [4]



(b) Write a null hypothesis for Dr Lee's study.

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..... [1]

(c) Suggest **one** advantage of using correlations compared to experiments.

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..... [2]

Section C

Answer **all** questions in this section.

10 Seth is planning a case study to investigate the communication and emotion in a family. The family consists of a mother, father, grandmother and one son. They live in a remote house and do not interact with other people often.

(a) Describe how Seth could conduct a case study to investigate the communication and emotion in this family.

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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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