Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

7302647037

PSYCHOLOGY **9990/21**

Paper 2 Research Methods **October/November 2020**

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. Blank pages are indicated.

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Section A

Answer **all** questions in this section.

1 In the study by Yamamoto et al. (chimpanzee helping), one variable being measured was the object offered by a chimpanzee.

(a) Describe **two** ways in which an 'object offer' was operationalised in this study.

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..... [2]

(b) Explain whether this study was ecologically valid.

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2 In the study by Saavedra and Silverman (button phobia), data was collected in the form of statements. During therapy the boy stated that:

- buttons 'emitted unpleasant odours'
- 'buttons are gross'.

(a) Identify this type of data. Include a reason for your answer that refers to the boy's statements.

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(b) Explain **one** disadvantage of collecting this type of data in this study.

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3 Explain the difference between a 'measure of central tendency' and a 'measure of spread'.

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..... [2]

4 The study by Laney et al. (false memory) used an independent measures design. However, there was still a risk of order effects.

(a) Explain what is meant by 'order effects', using this study as an example.

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..... [3]

(b) Explain why order effects reduce validity in experiments.

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..... [1]

5 Explain why following ethical guidelines can cause demand characteristics.

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6 Describe the difference between ‘samples’ and ‘populations’ in research, using any examples.

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Section B

Answer **all** questions in this section.

7 Aileen is planning an interview-based study to investigate what old people often forget. She is concerned that this could break the ethical guideline of 'privacy'.

(a) (i) Explain what is meant by the ethical guideline of privacy, using Aileen's study as an example.

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(ii) Suggest how Aileen could ensure that she follows the ethical guideline of privacy in her study.

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..... [2]

(b) Aileen wants to be certain that the forgetting is due to her participants' age. She could do this by making her study into an experiment, using two groups of participants.

(i) State how Aileen could operationalise her **two** groups of participants.

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..... [2]

(ii) Aileen believes that a possible extraneous variable is whether any participant has a job.

Explain the effect that this extraneous variable could have on the results.

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8 Elaf used a natural experiment to investigate the effect of noise on sleep. His participants completed identical questionnaires before the opening of a new motorway behind their houses and after the motorway had been open for one month.

(a) Explain what is meant by a 'natural experiment', using this study as an example.

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(b) Suggest **one** problem with natural experiments, using this study as an example.

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(c) **(i)** Identify the experimental design used in Elaf's experiment. Include a reason for your answer.

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(ii) Explain **one** advantage of using this experimental design in Elaf's experiment.

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9 Jasmin conducted an overt observation of friendship behaviours on customers in a café for many weeks. She observed the same customers every day, who initially asked her what she was doing. She explained that she was taking notes on their behaviour.

(a) Explain what made Jasmin's study an overt observation.

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..... [1]

(b) Suggest **one** advantage of overt observations, using Jasmin's study as an example.

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..... [2]

(c) Suggest **one** disadvantage of overt observations, using Jasmin's study as an example.

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(d) (i) Suggest **two** behavioural categories that Jasmin could have used to record 'friendship behaviours'.

1 .....

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2 .....

..... [2]

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

Explain **one** disadvantage of using this behavioural category.

Behavioural category: .....

Disadvantage: .....

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..... [1]

Section C

Answer **all** questions in this section.

10 Valerie is a teacher. She notices that students who are expecting a test in another lesson are more likely to feel angry in her lesson. She thinks this is because they are misinterpreting their high level of arousal as anger rather than anxiety about the test. She decides to use a questionnaire to investigate whether her students are misinterpreting their arousal.

(a) Describe how Valerie could conduct a study using a questionnaire to investigate whether students who are expecting a test in another lesson are misinterpreting their arousal.

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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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