Cambridge International AS & A Level

Cambridge Assessment International Education
Cambridge International Advanced Subsidiary and Advanced Level

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

4262337250

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **May/June 2019**

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your centre number, candidate number and name in the spaces at the top of this page.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of **10** printed pages and **2** blank pages.

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[Turn over

Section A

Answer **all** questions in this section.

1 Dement and Kleitman (sleep and dreams) found a positive correlation between REM duration and the number of words used to describe the dream.

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

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..... [2]

(b) Suggest why REM duration was a more valid measure of dream duration than the number of words used to describe the dream.

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..... [2]

2 The study by Bandura et al. (aggression) used a sample of children.

(a) Identify **two** features of this sample of children.

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2 .....

..... [2]

(b) Suggest **one** reason why generalisations **can** be made from the sample in this study.

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..... [1]

(c) Suggest **one** reason why generalisations **cannot** be made from the sample in this study.

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..... [1]

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3 In the study by Yamamoto et al. (chimpanzee helping), the researchers needed a reliable procedure for testing the tool choice made by the chimpanzees.

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

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..... [2]

(b) Suggest **one** problem with reliability in this study.

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..... [2]

4 In a study about sharing, pairs of friends were given questionnaires. The questionnaire had only two questions: 'rate your own willingness to share' and 'rate your friend's willingness to share'.

(a) (i) State what is meant by the term 'demand characteristics'.

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..... [1]

(ii) State why demand characteristics are a problem in research.

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..... [1]

(b) Describe **one** way in which demand characteristics could be avoided in this study.

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..... [1]

5 Sometimes it is more appropriate to use one measure of central tendency than another.

State **one** reason why it may be better to use the mean as a measure of central tendency than the mode.

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..... [1]

6 Describe the ethical guidelines of 'right to withdraw' and 'deception' in research with human participants, using any examples.

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Section B

Answer **all** questions in this section.

7 Dr Bahl wants to know about the emotions of people who spend their leisure time in different ways. He intends to use a questionnaire to collect information from these different types of people, about their emotions.

(a) Explain **one** way that Dr Bahl could ensure that he obtains a varied sample of participants.

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(b) Suggest **one** open question that Dr Bahl could ask about emotions.

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(c) Explain **one** disadvantage of using open questions about emotion in this study.

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(d) Dr Bahl is considering using an fMRI (functional magnetic resonance imaging) scanner to investigate emotions.

(i) Suggest **one** advantage of using an fMRI scanner to investigate emotions.

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(ii) Suggest **one** disadvantage of using an fMRI scanner to investigate emotions.

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..... [2]

8 Martha wants to conduct a study using a naturalistic observation of children playing. She is planning to observe the children in her local school.

(a) State what is meant by a 'naturalistic observation'.

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..... [1]

(b) Suggest **one** disadvantage of using a naturalistic observation in Martha's study.

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..... [2]

(c) Suggest how Martha could follow the ethical guideline of informed consent in her study.

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(d) Suggest how Martha could operationalise **one** play behaviour that she could observe.

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..... [2]

(e) Suggest what Martha would do if she were a covert observer.

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..... [2]

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9 Otto's aim is to investigate which age groups of internet users are most likely to play internet-based games.

(a) Suggest an operationalised directional (one-tailed) hypothesis that Otto could test.

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..... [2]

(b) Describe the population that Otto will need to use for his investigation.

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..... [2]

Section C

Answer **all** questions in this section.

10 Cecile has ten parrots that can answer questions about shapes. She is interested in whether there is a difference between the ability of parrots to learn to answer questions about sounds, such as from bells or buzzers, compared to shapes.

(a) Describe how Cecile could conduct a laboratory experiment to test whether there is a difference in the ability of parrots to learn to answer questions about sounds compared to shapes.

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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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