Cambridge International AS & A Level

Cambridge Assessment International Education
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CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

6996613719

PSYCHOLOGY **9990/21**

Paper 2 Research Methods **October/November 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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Cambridge Assessment International Education

Section A

Answer **all** questions in this section.

1 A hypothesis in a study about ways to reduce phobias states 'Positive reinforcement will reduce phobic reactions more than imagery exposure'.

(a) Is this a directional (one-tailed) hypothesis or a non-directional (two-tailed) hypothesis?

Include a reason for your answer.

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..... [1]

(b) Write a null hypothesis for this study.

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..... [1]

(c) Suggest **one** quantitative measure of phobic reactions.

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..... [1]

(d) Suggest **one** problem with the measure of phobic reactions you suggested in part **(c)**.

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..... [2]

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2 Standardisation was important in the study by Dement and Kleitman (sleep and dreams):

(a) State what is meant by 'standardisation'.

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..... [1]

(b) Identify **three** ways in which the laboratory environment was standardised in this study.

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3 .....

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[3]

3 State **one** advantage of using the standard deviation compared to the range as a measure of spread.

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..... [1]

4 In the study by Yamamoto et al. (chimpanzee helping), the chimpanzees were housed socially.

Explain why this housing was important in terms of the ethical treatment of animals.

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..... [2]

5 The study by Baron-Cohen et al. (eyes test) used several samples of participants, selected in different ways. One of these was a volunteer sample.

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

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..... [2]

(b) State **one** advantage and **one** disadvantage of volunteer sampling.

advantage .....

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disadvantage .....

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[2]

6 Describe inter-rater reliability and test-retest reliability, using any examples.

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..... [6]

Section B

Answer **all** questions in this section.

7 Freya is planning a semi-structured interview to find out whether people sleep better in the winter or the summer.

(a) State what is meant by a 'semi-structured interview'.

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..... [1]

(b) Suggest **one** open question that Freya could ask.

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..... [1]

(c) Explain **one** advantage of using a semi-structured interview in Freya's study.

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..... [2]

8 Claude is looking for a link between time spent eating and hunger. He thinks that students who eat faster will be more hungry two hours later. He observes how much time some students spend eating their lunch. They are unaware that they are being observed. Two hours later, he asks them to rate their hunger on a scale of 1 to 10 (1 = not hungry, 10 = very hungry). He correlates how hungry they are with how much time they spent eating lunch. He finds there is a strong negative correlation between time spent eating and hunger.

(a) Claude wants to present the data from his study on the graph, shown in Fig. 8.1.

(i) Label the *x*-axis and *y*-axis on the graph in Fig. 8.1. [2]

(ii) Draw a line to show Claude's correlation on the graph in Fig. 8.1. [1]

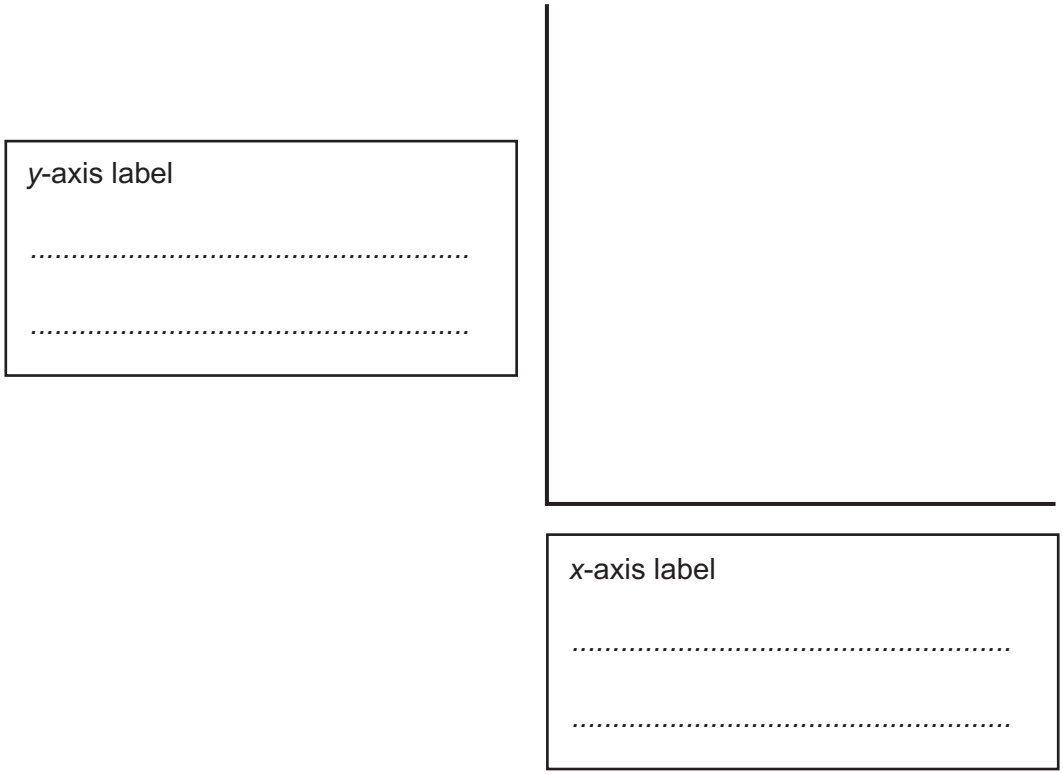


Fig. 8.1

(b) Explain whether Claude can conclude that eating faster makes people feel hungry.

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..... [2]

(c) **(i)** Suggest **one** ethical strength of Claude's study.

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..... [2]

(ii) Suggest **one** ethical weakness of Claude's study.

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..... [2]

(d) Claude's friend says that asking students to rate their hunger two hours after lunch may not be valid because some people may be in more interesting lessons than others.

Explain why Claude's friend could be correct.

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..... [2]

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[Turn over

9 Jia has conducted an experiment on memory. Each participant played a memory game twice, first with a distracting noise and then without the noise.

(a) State the control condition in Jia's study.

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..... [1]

(b) The participants had never played the game before.

Explain why this was important.

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..... [2]

(c) The experimental design of Jia's study was repeated measures.

(i) Suggest **one** advantage of using this experimental design in Jia's study.

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..... [2]

(ii) Suggest why order effects could have been a problem in Jia's study.

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(iii) Suggest **one** way that Jia could have overcome the order effects in his study.

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..... [2]

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Section C

Answer **all** questions in this section.

10 Pihu, a teacher, has been watching the young children at her school playing at lunchtime. She has noticed that there are several different games and activities that they do. She is planning a structured observation to find out which activities are most common.

(a) Describe how Pihu could conduct a structured observation to investigate the children's play.

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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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