Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

0647218875

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **February/March 2022**

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. Any blank pages are indicated.

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Section A

Answer **all** questions in this section.

1 The study by Andrade (doodling) was a laboratory experiment. One feature of a laboratory experiment is that it has controls to limit the effect of extraneous variables.

(a) State **two** other features of a laboratory experiment.

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2 .....

..... [2]

(b) **(i)** Suggest **two** controls that were important in this study.

1 .....

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2 .....

..... [2]

(ii) For **one** of the controls you suggested in **(i)**:

Explain how the results could have been affected if this control had **not** been used.

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..... [1]

2 A study has the experimental hypothesis 'There will be a gender difference in aggression'. This is a non-directional hypothesis rather than a directional hypothesis.

(a) Explain what makes this a 'non-directional hypothesis'.

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..... [2]

(b) Write a null hypothesis for this study.

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..... [1]

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3 In the study by Pepperberg (parrot learning), Alex the parrot was the only participant.

(a) Explain **one** advantage of using one participant in this study.

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..... [2]

(b) Explain **one** disadvantage of using one participant in this study.

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..... [2]

4 State **two** features of a normal distribution.

1 .....

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2 .....

..... [2]

5 In the study by Yamamoto et al. (chimpanzee helping), the results included how often the helper's first tool offer was a stick. The percentage of stick offers when a stick was needed and when a straw was needed could be displayed on a bar chart.

Explain why a bar chart would be the **most** appropriate way to display these results.

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6 Describe ‘opportunity sampling’ and ‘random sampling’, using any examples.

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..... [6]

Section B

Answer **all** questions in this section.

7 Clark is a psychologist investigating whether the behaviours people dream about can be done in everyday life or not. He is monitoring participants' sleep in his laboratory and then interviewing them.

(a) (i) Suggest **one** behaviour in dreams that Clark could ask about which can be done in everyday life. Your suggestion **must** be ethical.

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..... [1]

(ii) Suggest **one** behaviour in dreams that Clark could ask about which **cannot** be done in everyday life. Your suggestion **must** be ethical.

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..... [1]

(b) Clark believes that some participants may lie. For example, they may falsely report dream behaviours to impress Clark.

Suggest **one** way that Clark could minimise this type of lying in his study.

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..... [2]

(c) Clark is concerned that some participants may also lie about their dreams because the events in them are too personal to report to Clark.

Explain which ethical guideline Clark is concerned about.

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..... [2]

(d) Clark thinks that participants' eye movements during dream sleep are related to the content of their dreams.

Suggest how Clark could use participants' eye movements during dream sleep to investigate whether they are lying about their dream content.

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..... [2]

8 Liang is planning to observe behaviour in a park. He is going to sit on a bench and pretend to be using his phone. His aim is to investigate factors which could cause one person to say hello to another person. Two possible factors are age and gender.

(a) Explain whether Liang is conducting a participant observation or a non-participant observation.

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..... [1]

(b) Liang expects that if a person has an animal with them, other people will be more likely to say hello.

Explain **one** other factor for Liang to observe that could affect whether a person says hello. Do **not** refer to age or gender in your answer.

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(c) Liang collects data about the number of males and females who say hello when another person has an animal with them. He plots his data on the graph in Fig. 1.

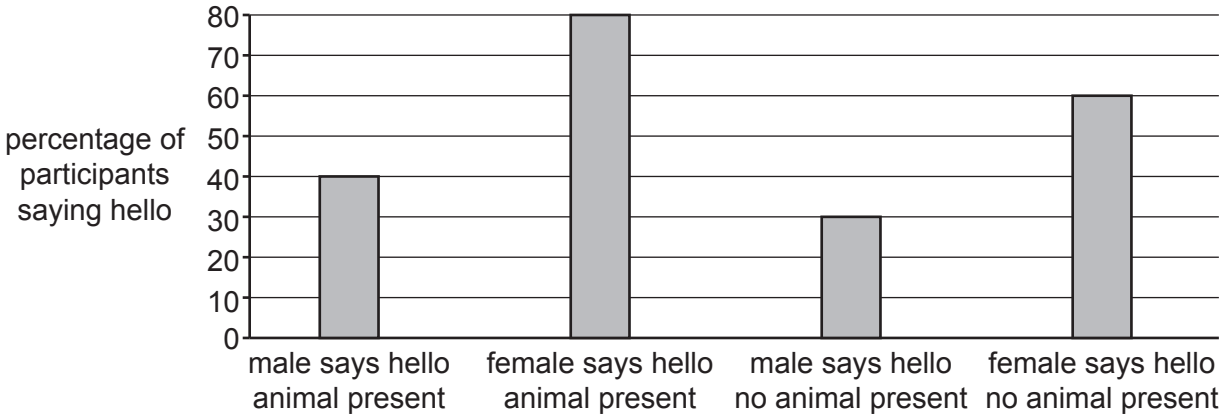


Fig. 1

Suggest **two** conclusions Liang can draw from his data in Fig. 1.

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2 .....

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(d) Participants could realise that Liang is conducting an observation.

Suggest **two** problems this could cause.

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2 .....

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9 Tara can measure physical reaction time using a machine that records the time between a light flashing and the participant pressing a button. Tara will use this measurement to investigate whether there is a relationship between participants' physical reaction time and how quickly they can recall numbers.

(a) Explain the research method that Tara is using.

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(b) Suggest a procedure Tara could use to measure how quickly participants can recall numbers.

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(c) Suggest **one** practical problem with the procedure you have suggested in **(b)**.

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Section C

Answer **all** questions in this section.

10 Justin wants to investigate whether adults are happier when they play particular sports. Many different sports could affect happiness in different ways.

(a) Describe how Justin could conduct a study using a questionnaire to investigate how different sports affect adults' happiness.

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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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