Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

4386224451

PSYCHOLOGY **9990/21**

Paper 2 Research Methods **May/June 2021**

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.

© UCLES 2021

Section A

Answer **all** questions in this section.

1 In the study by Pepperberg (parrot learning), several features of the procedure helped to improve reliability.

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

.....

..... [1]

(b) Suggest how **one** feature of the procedure helped to make this study reliable.

.....

.....

.....

..... [2]

2 In the study by Andrade (doodling), one possible uncontrolled variable was whether the participants had friends with the same names as the people in the mock telephone call.

(a) Suggest **one** problem this uncontrolled variable might have caused.

.....

.....

.....

..... [2]

(b) Suggest how the problem you referred to in **(a)** could be solved.

.....

.....

.....

..... [2]

© UCLES 2021

3 **(a)** State what is meant by a 'case study'.

.....

.....

.....

..... [2]

(b) One type of colour blindness is when people cannot tell the difference between the colours red and green.

Describe how a case study to investigate colour blindness could be conducted.

.....

.....

.....

.....

.....

..... [3]

4 In the study by Yamamoto et al. (chimpanzee helping), quantitative data was collected.

Suggest **one** strength of collecting quantitative data in this study.

.....

.....

.....

..... [2]

5 Explain **one** weakness of random sampling.

.....

.....

.....

..... [2]

6 Describe structured observations and unstructured observations, using any examples.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [6]

Section B

Answer **all** questions in this section.

7 Kira is conducting a correlational study looking for a relationship between level of creativity and the amount of time spent playing sport. Kira could find a positive or a negative correlation.

(a) State whether Kira should use a directional or a non-directional hypothesis. Include a reason for your answer.

.....

..... [1]

(b) State what Kira would find if there was a negative correlation.

.....

..... [1]

(c) Write a null hypothesis for Kira's study.

.....

..... [1]

(d) Kira finds a strong correlation.

Explain whether Kira will know if one variable is causing the change in the other variable.

.....

.....

.....

..... [2]

8 Ruth is planning an interview to investigate the emotional effect of being a wedding guest.

(a) Suggest **one** open question that Ruth could ask about the emotional effect of being a wedding guest.

.....

..... [1]

(b) Suggest **one** closed question that Ruth could ask about the emotional effect of being a wedding guest.

.....

..... [1]

(c) Explain how Ruth could ensure her procedure is ethical.

.....

.....

.....

.....

.....

..... [3]

© UCLES 2021

9 Jabir is investigating the social lives of old people and is using a questionnaire to measure their friendships.

(a) Jabir will use volunteer sampling but also wants to make his sample representative of old people.

(i) Jabir has identified three features of old people that are relevant to his study:
- whether they live alone or not
- whether they belong to any group or club
- their exact age.

Suggest why each of these features is relevant to Jabir's study.

whether they live alone or not .....

.....

.....

whether they belong to any group or club .....

.....

.....

their exact age .....

.....

.....
[3]

(ii) Describe how Jabir could use volunteer sampling to obtain a sample.

.....

.....

.....

.....

.....

..... [3]

(iii) Outline **one** reason why Jabir may exclude some old people from his sample.

.....

..... [1]

(b) Suggest how Jabir could define the variable of 'friendship' in his study.

.....

.....

.....

..... [2]

(c) Jabir intends to collect all of his data in two days.

Suggest **one** reason why this may reduce the validity of his findings.

.....

.....

.....

..... [2]

(d) Explain **one** weakness of using a questionnaire for Jabir's study.

.....

.....

.....

.....

.....

..... [3]

Section C

Answer **all** questions in this section.

10 Nuan wants to test the idea that the way words are presented affects recall. She predicts that people will recall more words from a list they hear than from a list they see.

(a) Describe how Nuan could conduct a laboratory experiment to test the idea that the way words are presented affects recall.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [10]

(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.

.....

.....

.....

.....

.....

.....

.....

..... [4]

BLANK PAGE

© UCLES 2021

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.

© UCLES 2021