GradeMax

Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

1987864337

PSYCHOLOGY **9990/21**

Paper 2 Research Methods **May/June 2020**

1 hour 30 minutes

You must answer on the question paper.

You will need: Ruler

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 Baron-Cohen et al., one variable was the score on the Eyes Test.

(a) State whether this was an independent variable or a dependent variable.
Include a reason for your answer.

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..... [1]

(b) One problem with the original version of the Eyes Test was that the results produced a 'ceiling effect'. This is where most participants obtain high scores on the test.

Explain why a ceiling effect is a problem.

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..... [1]

2 A psychologist is investigating whether a person's happiness depends on whether people around them are happy.

(a) Suggest how you could operationalise 'happiness' when using observations.

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..... [1]

(b) Suggest how you could measure 'happiness' when using a self-report.

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..... [1]

(c) Write a directional (one-tailed) hypothesis for this investigation. You do **not** have to operationalise your hypothesis.

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..... [1]

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3 One part of the investigation by Dement and Kleitman (sleep and dreams) involved a correlational study measuring a range of times spent in REM sleep and the number of words in the participant's dream narrative.

(a) Explain why this part of the investigation was a correlational study rather than an experiment.

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..... [1]

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

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..... [2]

4 In a study about helping, participants were told the study was about visual tracking. They played a computer game in which they could help other players. They were given fake eye-movement tracking spectacles to wear.

(a) Describe the ethical issue of deception, using this study as an example.

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(b) Some participants were upset at debriefing because they had not helped other players.

Describe the ethical guideline of protection, using this study as an example.

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..... [2]

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5 Before the study by Pepperberg (parrot learning), most research on animal learning had been conducted on primates, such as chimpanzees.

(a) Explain **one** ethical reason why a parrot is a better choice of animal than a chimpanzee for a study in a laboratory.

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(b) Explain **one** practical or methodological reason why the parrot was a better choice of animal than a chimpanzee for this study.

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..... [2]

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6 Describe what is meant by ‘experimental conditions’ and ‘control conditions’ in research, using any examples.

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..... [6]

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Section B

Answer **all** questions in this section.

7 Maria is conducting a self-report study into obedience using school children as participants. Her questions are:

Question 1 How many times this week have you disobeyed a teacher?
Never / once / 2–3 times / 4 times or more
Question 2 Describe why you last disobeyed a teacher.

(a) (i) State which question collects quantitative data. Include a reason for your answer.

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..... [1]

(ii) State why this type of data is useful.

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..... [1]

(b) Suggest **one other** question which could be used in Maria's study that would collect quantitative data.

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..... [1]

(c) Identify the **most** appropriate measure of central tendency for Maria to use with the responses to her first question. Include a reason for your answer.

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..... [2]

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8 Richard is conducting an experiment to investigate whether daydreams are affected by the type of background noise. He has two groups who are both given a boring task in a room. For one group there are children laughing outside the open window. For the other group there are adults talking loudly in the corridor. Different participants are used in each group.

(a) (i) Identify Richard's experimental design. Include a reason for your answer.

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..... [2]

(ii) Suggest **one** advantage of this experimental design in this study.

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..... [2]

(b) Suggest **one** reason for using a boring task in this study.

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(c) Suggest **one** practical or methodological problem with studying daydreams.

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(d) Suggest **one** ethical problem with studying daydreams.

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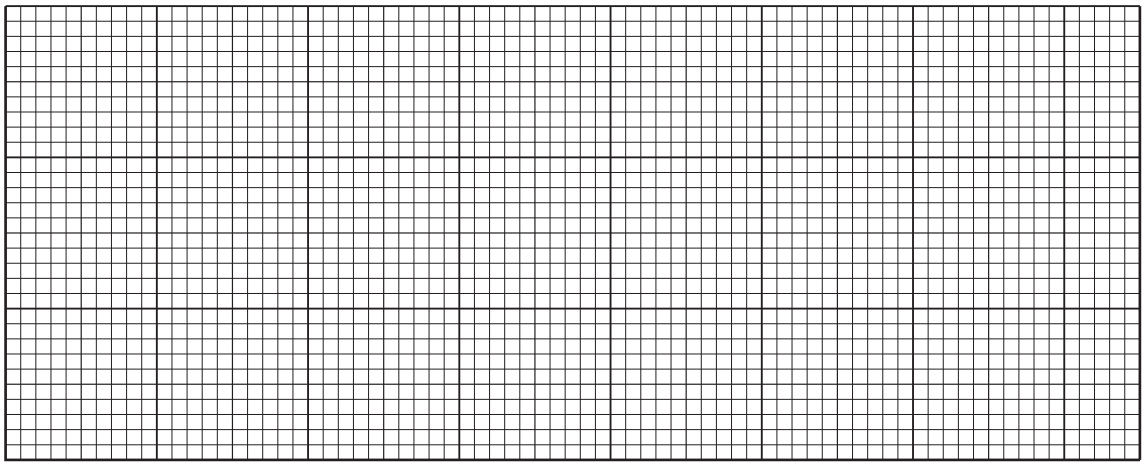
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9 Jasper conducted an observational study of children's behaviours in their school common room. Jasper's data is shown in Table 9.1.

Table 9.1

	Behaviours observed			
	Sitting alone	**Drinking tea**	**Dancing**	**Verbal aggression**
Number of instances	10	15	5	1

(a) Draw a bar chart of Jasper's results. [4]



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(b) Jasper observed the children with the permission of the school principal and the children's parents.

(i) Explain why it was necessary to obtain permission in this study.

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(ii) Explain whether there could have been an issue with privacy in this study.

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(c) Jasper was a non-participant observer.

Explain what is meant by a 'non-participant observer', using this study as an example.

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..... [2]

Section C

Answer **all** questions in this section.

10 Jason is a university lecturer and is interested in doodling behaviour. One day, Jason sees one of his students, Karen, doodling. Jason is especially interested because Karen has a visual impairment that means she cannot see. Jason decides to conduct a case study on her.

(a) Describe how Jason could conduct a case study on Karen to investigate her doodling behaviour.

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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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