Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

6725083474

PSYCHOLOGY **9990/22**

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

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. Blank pages are indicated.

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Section A

Answer **all** questions in this section.

1 **(a)** State what is meant by the ethical guideline of 'replacement' in relation to animals.

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..... [1]

(b) Suggest **one** practical problem with following the ethical guideline of replacement in relation to animals.

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..... [1]

2 In the study by Canli et al. (brain scans and emotions), participants watched scenes presented to them on a screen. They responded to these scenes by pressing buttons. Their response was one dependent variable.

(a) Describe how this dependent variable was operationalised in this study.

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..... [2]

(b) Explain **one** reason why the results of this study may not generalise to everyday life.

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..... [2]

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3 Andrade conducted an experiment on doodling. Alternatively, she could have conducted a case study.

(a) Identify **two** ways that data could be collected in this case study.

1 .....

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2 .....

..... [2]

(b) For **one** of your answers in **3(a)**:

Explain **one** advantage of this way of collecting data in this case study.

Way of collecting data:.....

Advantage: .....

.....

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..... [2]

4 **(a)** Name **two** types of observations.

1 .....

2 ..... [2]

(b) For **one** of your answers in **4(a)**:

Explain why this type of observation is a valid way of observing participants.

Type of observation: .....

Explanation:.....

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..... [2]

5 At the start of the study by Bandura et al. (aggression), the children were scored numerically on their behaviour in the nursery school.

Explain **one** advantage of scoring behavioural data in this way.

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..... [2]

6 Describe what is meant by 'participant variables' and 'situational variables' in research, using any examples.

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..... [6]

Section B

Answer **all** questions in this section.

7 Mark is planning a natural experiment to investigate the short-term effect of noise on classroom performance of school children. He has found a school next to a noisy railway. He is going to compare the children before and during a temporary closure of the railway which will stop all trains for two weeks.

(a) Explain what makes this study a natural experiment.

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..... [2]

(b) Suggest **one** way that Mark could measure the effect of noise on the children.

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..... [3]

(c) Identify **two** extraneous variables that Mark could control.

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2 .....

..... [2]

(d) Write an operationalised directional (one-tailed) hypothesis for Mark's experiment.

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..... [2]

8 Rachel is correlating two variables: helping behaviour and communication skills.

(a) (i) Suggest **one** way that Rachel could measure helping behaviour for this study.

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..... [2]

(ii) For the way you have suggested in **(a)(i)**:

Suggest **one** advantage and **one** disadvantage of this way of measuring helping behaviour.

Advantage: .....

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Disadvantage: .....

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..... [4]

(b) Outline the relationship that Rachel will find if her results indicate a positive correlation.

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..... [1]

9 Perry has collected data about intelligence. He has measured the IQ (Intelligence Quotient) of a large sample of participants.

(a) Describe **one** way that Perry could obtain a large sample of participants.

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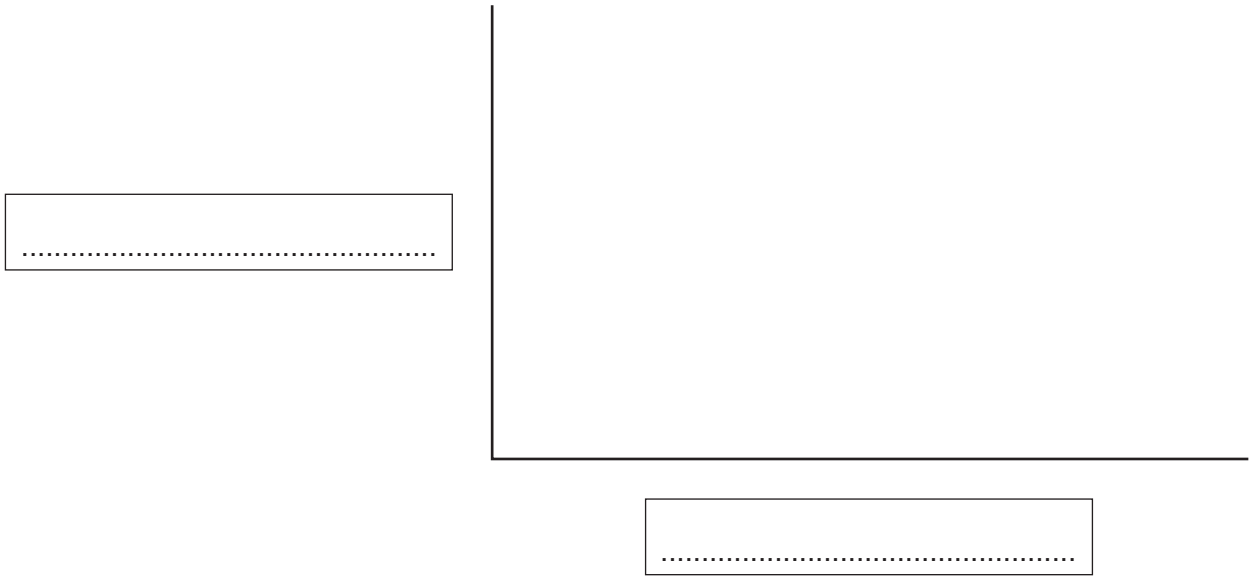
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..... [2]

(b) **(i)** When Perry plots the IQ results, they show a normal distribution.

Draw a graph of the likely results of the IQ scores using the axes below.
You must label the axes of your graph. [3]



(ii) Name the **most** appropriate measure of central tendency for Perry to use with the IQ data. Include a reason for your answer.

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..... [2]

(iii) Label your graph to show the position of the measure of central tendency that you have named in **(b)(ii)**. [1]

Section C

Answer **all** questions in this section.

10 Cecil is studying a family. The mother, father and both of their sons all have a phobia of trees.

(a) Describe how Cecil could conduct unstructured interviews to investigate the phobia in this family.

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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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