Cambridge International AS & A Level

Cambridge International Examinations
Cambridge International Advanced Subsidiary and Advanced Level

CANDIDATE NAME	
CENTRE NUMBER	
CANDIDATE NUMBER	

6755541665 1

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **February/March 2018**

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.

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Section A

Answer **all** questions in this section.

1 One of the aims of the study by Schachter and Singer (two factors in emotion) was to find out whether the mood of a stooge affected the way participants interpreted their arousal level.

(a) Write an operationalised directional (one-tailed) hypothesis using this aim.

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.....[2]

(b) Write a null hypothesis using this aim.

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.....[1]

2 **(a)** State the difference between a 'population' and a 'sample'.

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.....[2]

(b) State **one** feature of the population in the study by Milgram (obedience).

.....[1]

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3 **(a)** Name **one** sampling technique.

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.....[1]

(b) Explain **one** advantage of using this sampling technique.

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.....[2]

4 Saavedra and Silverman studied a boy with a phobia of buttons and measured his distress using a 'feelings thermometer'.

(a) **(i)** Name the type of data produced by the feelings thermometer.

.....[1]

(ii) How did the feelings thermometer measure distress?

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.....[1]

(b) Suggest **one** disadvantage of using the feelings thermometer to measure distress.

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.....[2]

5 In the study by Baron-Cohen et al. (eyes test), there was more than one control condition.

(a) Identify **one** of the control conditions.

.....[1]

(b) Explain **one** reason for having a control condition, using this study as an example.

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.....[2]

6 Describe the differences between a field experiment and a natural experiment, using any examples.

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.....[6]

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Question 7 appears on the following page.

Section B

Answer **all** questions in this section.

7 Dipa is studying memory using a brain scanner. She is testing the hypothesis that 'There will be a positive correlation between level of brain activity and how much a person can recall'. Each participant is asked to describe an event that happened more than one year ago.

(a) Name **one** brain scan that Dipa could use.

.....[1]

(b) Suggest why data from brain scans is likely to be reliable.

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.....[2]

(c) Suggest how Dipa could convert each participant's description into a memory score.

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.....[1]

(d) Explain whether Dipa will be able to conclude that greater recall causes more brain activity.

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.....[2]

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(e) Dipa considered asking her participants to recall a specific event, such as their last birthday, but decided that this could be unethical, so gave them a choice about which event to recall.

Explain **one** reason why this was a better procedure in terms of ethics.

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.....[3]

8 Hugo is using a questionnaire to find out about people's helping behaviour in the daytime and at night.

(a) What is meant by 'open questions' and 'closed questions'?

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.....[2]

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

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.....[1]

(c) Suggest **one** advantage of using open questions in Hugo's study.

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.....[2]

(d) Explain **one** problem that Hugo might have with the validity of the responses to his questionnaire.

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.....[3]

9 Keelan has collected data about children's aggression. He has several different types of data.

(a) In one experiment, Keelan recorded the total number of aggressive acts per hour in children of each age between 3 and 18 years old.

Name the type of graph that would be **most** suitable to display this frequency data.

.....[1]

(b) Label the axes for the graph that Keelan should use.



[3]

(c) Name **one** measure of spread that Keelan could calculate from his data.

.....[1]

(d) Keelan also counted the total number of aggressive acts in categories: bite, kick, slap and pinch.

(i) Name the measure of central tendency that Keelan should use for this data.

.....[1]

(ii) State how Keelan would calculate this measure of central tendency.

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.....[1]

Section C

Answer **all** questions in this section.

10 Peter is studying psychology at university and has decided to conduct an experiment about positive emotions and pulse rate because he believes that people's pulse rate changes with mood.

(a) Describe how Peter could conduct a laboratory experiment to test whether pulse rate differs when people experience positive and negative emotions.

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(b) Identify **one** 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.

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.....[4]

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