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PSYCHOLOGY

9990/21

Paper 2 Research Methods

October/November 2018

1 hour 30 minutes

Candidates answer on the Question Paper.

No Additional Materials are required.

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Answer **all** questions.

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This document consists of **9** printed pages and **3** blank pages.

Section A

Answer **all** questions in this section.

- 1 (a) Explain what is meant by a 'repeated measures design'.

.....
[1]

- (b) Suggest **one** advantage of using a repeated measures design, using any core study as an example.

.....

[2]

- 2 The study by Pepperberg (parrot learning) used an animal.

Explain what is meant by 'deprivation' and 'aversive stimuli' in animal research.

deprivation.....

 aversive stimuli.....
[2]

- 3 (a) Explain what is meant by 'reliability', using **one** example from the study by Bandura et al. (aggression).

.....

.....

.....

.....[2]

- (b) Suggest **one** problem with reliability in any core study, other than the Bandura et al. study.

.....

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.....[2]

- 4 In the study by Milgram (obedience), the results he recorded were the final voltage each participant gave to the learner.

- (a) State the range of these results.

.....

.....[1]

- (b) Milgram could have calculated the mean and range of the final voltages given.

- (i) Explain what information the range provides about a set of data, using Milgram's results as an example.

.....

.....

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.....[2]

- (ii) Explain why it would have been better for Milgram to calculate the standard deviation rather than the range.

.....

.....

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.....[2]

- 5 Explain why low validity would be a problem in experiments.

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.....[2]

- 6 Describe the similarities and differences between naturalistic and controlled observations, using any examples.

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.....[6]

Section B

Answer **all** questions in this section.

- 7 Gavin is testing the hypothesis that 'People are more likely to drop rubbish on the ground when there is already rubbish on the ground'. He is conducting a field experiment in a quiet street. His independent variable is whether the street already has rubbish on the ground or not. Gavin's dependent variable is whether people drop a leaflet given to them by a stooge onto the ground or not.

(a) State the type of hypothesis Gavin is testing. Include a reason for your answer.

.....

.....

.....

.....[2]

(b) Outline **one** way in which the participants in Gavin's study are being deceived.

.....

.....[1]

(c) Explain **one** reason why Gavin chose to conduct a field experiment rather than a laboratory experiment.

.....

.....

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.....

.....[3]

(d) Explain **one** disadvantage of using a field experiment in Gavin's study.

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.....[2]

- 8 Lakha is planning to conduct a study to correlate helpfulness and intelligence. She is going to ask her participants to use an online IQ test and is going to measure helpfulness in the laboratory.

(a) Suggest **one** way that Lakha could measure helpfulness for her correlation.

.....

.....

.....

.....[2]

(b) Suggest **one** advantage of the measure of helpfulness that you gave in part (a).

.....

.....

.....

.....[2]

(c) Name the type of graph Lakha should use to plot her results.

.....[1]

(d) Describe the pattern Lakha will see in her results if she finds a negative correlation between the two variables. You may use a drawing in your answer.

.....

.....[1]

(e) A problem with the participants doing an online IQ test at home is that they may cheat.

Explain the effect this would have on the negative correlation if only the less helpful participants cheated.

.....

.....

.....

.....[2]

- 9 Kyle conducted an investigation into doodling during lessons by boys and girls. He counted the number of doodles and how much paper was used per hour when doodling. He had several concerns about uncontrolled variables in his study.

(a) Define quantitative data, using Kyle's data as an example.

.....

.....

.....

.....[2]

- (b) Kyle observed doodling in different lessons and was concerned that the science lessons may have been more interesting than other subjects.

Name this type of uncontrolled variable **and** explain why it could be a problem.

uncontrolled variable:

.....

why it could be a problem:

.....

.....

.....[3]

- (c) On one of the days Kyle collected data, the girls had been on a school trip the day before, so may have been tired, but the boys had not.

Name this type of uncontrolled variable **and** explain why it could be a problem.

uncontrolled variable:

.....

why it could be a problem:

.....

.....

.....[3]

10 Emma is planning to conduct an interview-based study about how well people think their pets/ domesticated animals learn, for example whether cats learn to respond to their names.

- (a)** Describe how Emma could conduct her interview-based study to discover what people think about how well their pets/domesticated animals learn.

.....[10

- (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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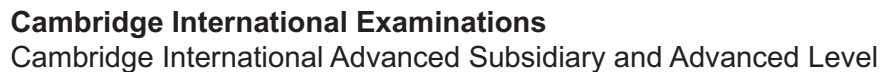
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Section A

Answer **all** questions in this section.

- 1 (a)** Define what is meant by the 'mean'.

.....
.....[1]

- (b)** Describe how a mean is calculated.

.....
.....
.....
.....[2]

- 2** In the study by Andrade, two groups were compared, a doodling condition and a control condition. Each participant produced a memory score.

- (a)** Explain the purpose of a 'control condition', using an example from this study.

.....
.....
.....
.....[2]

- (b)** Name a suitable graph to display the mean memory scores for the doodling condition and the control condition.

.....[1]

3 The study by Saavedra and Silverman (button phobia) was a case study.

(a) Outline what is meant by a 'case study'.

.....

.....

.....

.....[2]

(b) Suggest **one** disadvantage of using a case study.

.....

.....

.....

.....[2]

4 In the study by Pepperberg (parrot learning), the data collected was the parrot's speech. Alternatively, the parrot's actions in response to instructions, such as 'peck yellow square' could have been observed.

(a) Suggest why observing the parrot's actions might have been a better way to collect data than using the parrot's speech.

.....

.....

.....

.....[2]

(b) Suggest why observing the parrot's actions might **not** have been a better way to collect data than using the parrot's speech.

.....

.....

.....

.....[2]

- 5** The procedure in the study by Canli et al. (brain scans and emotions) was standardised as each participant was treated in the same way.

Explain **one** advantage of standardisation, using this study as an example.

.....

.....

.....

..... [2]

- 6** Describe what researchers can and cannot learn from correlational studies, using any examples.

[6]

Section B

Answer **all** questions in this section.

- 7 Dr Kwan plans to investigate whether any species other than chimpanzees will offer help. During testing, each animal will be with another animal but afterwards they will be kept in separate cages.

- (a) Explain **one** ethical issue Dr Kwan should consider in choosing which species to test. You may use an example in your answer.

.....

.....

.....

.....[2]

- (b) Dr Kwan has considered testing whether the animals can help each other to avoid pain.

Explain why this might be an unethical procedure.

.....

.....[1]

- (c) Dr Kwan should use as few animals as possible, for ethical reasons.

State why it would also be important that Dr Kwan uses a big enough sample.

.....

.....[1]

- (d) Dr Kwan has developed behavioural categories for observing the animals. However, he thinks that another researcher should conduct the observations rather than him.

Explain why this is a good idea.

.....

.....

.....

.....

.....

.....[3]

- 8 Kieran is planning a self-report study about dream content, to find out whether people feel happier during the day if they have had pleasant dreams the night before. He is considering using either a structured questionnaire or an unstructured interview.

(a) Suggest **two** closed questions that Kieran could ask in a structured questionnaire.

1.....

 2.....
 [2]

(b) Explain **one** advantage of using closed questions.

.....

 [2]

(c) Outline what is meant by an 'unstructured interview'.

.....

 [2]

(d) Suggest **one** open question that Kieran could ask during an unstructured interview.

.....
 [1]

(e) Explain **one** advantage of using open questions.

.....

 [2]

- 9 Marla is working in a centre for adults with autism. She is observing social behaviour and communication, such as whether the residents seem to understand facial expressions.

- (a) Identify and operationalise **one** behaviour that Marla could record to measure whether the residents understand facial expressions.

behaviour:

.....

operationalisation:

.....[2]

- (b) Explain what Marla should do to be a participant observer.

.....

.....

.....

.....[2]

- (c) Explain what Marla should do to be a non-participant observer.

.....

.....

.....

.....[2]

- (d) Explain whether Marla should choose a participant observation or a non-participant observation for her study.

.....

.....

.....

.....[2]

10 Dr Fox is planning a field experiment to investigate obedience in school children. Her aim is to test whether they are more obedient to teachers who are dressed in informal or formal clothes.

.....[10

- (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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Section A

Answer **all** questions in this section.

- 1** Explain what is meant by the term ‘population’.

.....
.....[1]

- 2** There were many controlled variables in the study by Bandura et al. (aggression).

- (a) (i)** Explain what is meant by ‘a controlled variable’.

.....
.....[1]

- (ii)** Identify an example of a controlled variable from the Bandura et al. study.

.....
.....[1]

- (iii)** Suggest **one** advantage of controlling the variable you have identified in part **(a)(ii)**.

.....
.....
.....
.....[2]

- (b)** State **one** way in which Bandura et al. helped observers to be reliable.

.....
.....[1]

- 3** In the study by Piliavin et al. (subway Samaritans), medians were calculated for 'time taken to help' in the Cane and Drunk conditions.

(a) State whether the median is a 'measure of central tendency' or a 'measure of spread'. Include a reason for your answer.

.....
.....
.....[1]

(b) Describe how a median is calculated, using the Piliavin et al. study as an example.

.....
.....
.....
.....[2]

(c) Name the type of graph that would be best used to show a comparison between the medians for 'time taken to help' in the Cane and Drunk conditions.

.....
.....[1]

4 From the study by Saavedra and Silverman (button phobia):

(a) Identify **two** ethical guidelines followed in this study.

- 1.....
.....
2.....
.....[2]

(b) For **one** of the ethical guidelines you identified in (a):

Suggest **one** disadvantage of following this ethical guideline in this study.

-
.....
.....
.....[2]

5 Explain why low reliability would be a problem in experiments.

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.....
.....
.....[2]

6 Describe ways in which an interview can differ from a questionnaire, using any examples.

[6]

Section B

Answer **all** questions in this section.

- 7 Mikko is conducting an experiment to find out whether people are more easily persuaded by advertisements that are in colour or in black and white. He has put advertisements up in one town library that are all in colour and the same advertisements in black and white in a library in another town.

(a) Explain the importance of **one** control in Mikko's experiment.

.....

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.....[3]

(b) Suggest how Mikko could operationalise the **dependent** variable in his experiment.

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.....[2]

(c) Explain whether Mikko's study is a field experiment or a natural experiment.

.....

.....

.....

.....[2]

- 8 Dr Gopal is planning a study about learning and wants it to follow ethical guidelines for the use of animals. He is testing rats in a maze.

(a) Describe how Dr Gopal should follow the ethical guideline of 'housing' in his study.

.....

.....

.....

.....[2]

(b) Dr Gopal is deciding how to train the rats to learn. He could reward them when they make a correct turn in the maze or he could punish them when they make an incorrect turn.

Explain which **one** of these training methods is the most ethical choice for Dr Gopal to make.

.....

.....

.....

.....[2]

(c) Dr Gopal plans to count the number of correct or incorrect turns each rat makes.

Explain **two** advantages of collecting data in this way.

1.....

.....

.....

.....

2.....

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.....[4]

- 9 Lotty and Nazeem are aiming to observe emotional responses to different films at the cinema. They have different ideas for recording people's emotions. Lotty wants to do a structured observation, with fixed behaviours to record. However, Nazeem wants to do an unstructured observation, and record whatever behaviours are shown.

(a) Suggest **one** way the aim of Lotty and Nazeem's observation is ethical.

.....
[1]

(b) Suggest how behaviours could be recorded using Lotty's idea to do a structured observation.

.....

[4]

(c) Explain **one** advantage of Lotty's idea to do a structured observation.

.....

[2]

(d) Explain **one** advantage of Nazeem's idea to do an unstructured observation.

.....

[2]

- (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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