Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME: StemUp Model Solution

CENTRE NUMBER | | | | | |

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8829549966

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **February/March 2024**

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.

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Section A

Answer **all** questions.

1 From the study by Baron-Cohen et al. (eyes test):

(a) Identify the sampling technique used to recruit participants for Group 1 (adults with AS or HFA).

Volunteer (self-selected) sample. [1]

(b) Outline **one** hypothesis in relation to the sex of the participants.

Females in the general population groups (Groups 2 and 3) will score higher on the Eyes Test than males in these groups. [2]

(c) Outline the instructions that were given to participants on how to use the glossary.

Participants were told to read through the glossary before starting the test and to indicate any words whose meaning they were unsure of, so they could read those meanings. They were also told they could refer to the glossary at any time during the test. [2]

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2 From the study by Fagen et al. (elephant learning):

(a) Outline what is meant by the term 'positive reinforcement'.

Positive reinforcement is when a behaviour is followed by a pleasant consequence (a reward), which increases the probability that the behaviour will be repeated, e.g. the elephants were given pieces of banana when they performed a behaviour correctly.

..... [2]

(b) Outline **one** result in relation to the number of sessions it took for the elephants to pass the full trunk wash test. You **must** use data in your answer.

The four juvenile elephants all passed the full trunk wash test within 25 to 35 sessions, with Elephant 2 needing the fewest sessions (25), so Elephant 2 learned faster than Elephant 4. In contrast, the older elephant (Elephant 5) never passed the full trunk wash test, however many sessions it was given.

..... [3]

3 From the study by Piliavin et al. (subway Samaritans):

(a) Identify **two** features of one of the victims.

1 *The victim was male.*

2 *He wore an Eisenhower jacket, old slacks and no tie.*

[2]

(b) Explain why this study is from the social approach in psychology.

The social approach assumes behaviour is influenced by the presence of others and the social context. Here, passengers' helping was affected by others: help came faster when there were more males in the critical area, and whether the victim seemed drunk or ill. [2]

4 From the study by Hölzel et al. (mindfulness and brain scans):

(a) Outline **one** aim of the study.

To investigate whether taking part in an 8-week mindfulness-based stress reduction (MBSR) course causes changes in grey matter concentration (brain structure) in areas such as the hippocampus, compared with a waitlist control group.

..... [2]

(b) 'Acting with awareness' was measured by the 'Five Facet Mindfulness Questionnaire'.

Outline **one** other factor of mindfulness measured by this questionnaire.

Non-judging of inner experience: this is not evaluating or criticising your own thoughts and emotions as good or bad, but simply accepting them as they are.

.....

..... [2]

5 **(a)** Outline **one** assumption of the cognitive approach in psychology.

People have individual differences in their cognitive processes, such as attention, memory, language and thinking, which is why people can process the same information differently and behave differently.

..... [2]

(b) Explain how **one** finding from the study by Pozzulo et al. (line-ups) supports the assumption you outlined in part **(a)**.

Adults were more accurate than young children at correctly rejecting target-absent line-ups of human faces, as children more often chose someone. This shows that children and adults differ in their memory and recognition processing.

..... [2]

(c) Outline the term 'false positive responses', using an example from the study by Pozzulo et al. (line-ups).

A false positive is when a person believes they have made a correct identification but it is wrong, e.g. a child choosing a face from a target-absent line-up even though the target (culprit) was not in the line-up.

..... [2]

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6 In the study by Milgram (obedience), participants took a piece of paper from a hat. They were told that this would decide whether they would be the teacher or the learner.

(a) Describe the procedure from this point until the 'learning task' began.

Both slips of paper said "teacher", so the true participant was always the teacher and Mr Wallace (a confederate) was the learner. They went into an adjacent room, where the learner was strapped into an "electric chair" apparatus; the experimenter explained this was to prevent excessive movement. An electrode was attached to the learner's wrist with electrode paste "to avoid blisters and burns", and they were told it was attached to the shock generator. The experimenter said the shocks could be extremely painful but caused no permanent tissue damage. The teacher then received a sample 45-volt shock by pressing the third switch on the generator. [4]

(b) Explain **one** strength of this study in relation to reliability.

The procedure was standardised, so it can be replicated to test reliability. For example, every participant was given the same 45-volt sample shock and heard the same four prods, such as "Please continue", in the same order.

[2]

7 Your friend, Taara, needs your help. She has volunteered to take part in a study that is replicating the study by Dement and Kleitman (sleep and dreams). She wants to know how she will be woken up and then asked about her dreams.

Outline this part of the procedure for Taara.

You will sleep in the laboratory with electrodes attached, and at certain times in the night you will be woken up by a doorbell ringing near your bed. The bell will be loud enough to wake you, and you will not know whether you are in REM or NREM sleep when it rings. As soon as you wake, you must speak into a recording device next to your bed. First you will say whether or not you were dreaming, and if you were, you will describe the content of your dream. You may also be asked to estimate whether you had been dreaming for 5 or 15 minutes. The experimenter may then come into the room to ask you more questions about your dream. [4]

8 Saira is talking about the study by Saavedra and Silverman (button phobia). She says that the findings were subjective.

Explain why Saira is correct that the findings were subjective, using evidence from this study in your answer.

Subjective findings are based on a person's own feelings and viewpoint rather than an objective measure. The boy rated his own distress about different buttons on a "feelings thermometer", so the ratings were just how he felt and cannot be compared with other people with the same phobia. There was no objective measure of fear, such as heart rate. He also said that buttons were disgusting and that he did not like the way they smelled, which is his personal opinion. His mother also reported his symptoms, which she may have exaggerated, and the therapists had to interpret what he said in interviews.

[4]

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Section B

Answer **all** questions.

9 **(a)** Describe the sample used in the study by Andrade (doodling).

Andrade used an opportunity sample of 40 participants. They were members of a participant panel (the Medical Research Council Applied Psychology Unit, Cambridge) from the general population, and had just finished taking part in a different, unrelated study when they were asked to take part. They were aged 18 to 55 years and were paid for taking part. Most were female: 35 females and 5 males (the doodling group had 18 females and 2 males, and the control group had 17 females and 3 males).

..... [4]

(b) Explain **one** similarity and **one** difference between the study by Andrade (doodling) and the study by Pozzulo et al. (line-ups). Do **not** refer to the sample in your answer.

Similarity *Both studies were experiments with a manipulated IV and a measured DV. In Andrade, the IV was whether participants doodled (shaded shapes) or not while listening to a boring telephone message, and the DV was how many names and places they recalled. In Pozzulo et al., the IVs included the type of face (cartoon or human) and whether the target was present or absent in the line-up, and the DV was whether the identification was correct. Because both controlled variables and manipulated an IV, both were trying to establish cause and effect.*

.....

Difference *They used different experimental designs. Andrade used an independent measures design: each participant was randomly allocated to only one condition, either the doodling group or the control group. Pozzulo et al. used a mixed design: age (child or adult) was independent measures, but each participant did all four line-ups (cartoon and human faces, target present and absent), which is repeated measures. So Pozzulo controlled participant variables for face type, while in Andrade individual differences could affect the results.*

..... [8]

10 Evaluate the study by Hassett et al. (monkey toy preferences) in terms of **two** strengths and **two** weaknesses. At least one of your evaluation points **must** be about ethics.

One strength is that the study was ethical. The monkeys lived in their normal social troop in a large outdoor enclosure (about 25 m by 25 m) at a field station, with indoor housing, and were fed monkey chow every day with fruit, vegetables and water available, so housing guidelines were followed. Distress was minimised because the toys were simply placed in their usual enclosure and the monkeys were filmed with video cameras, so they were not handled or disturbed, and they were already familiar with the keepers. There was no deprivation or pain, as the toys were a form of enrichment. However, one monkey tore a toy apart, which could have been a risk if it swallowed pieces.

A second strength is that the data were quantitative and recorded on video. The researchers measured how often and for how long each monkey interacted with the wheeled toys (e.g. a wagon) and the plush toys, using defined behaviours such as touching or carrying a toy. Because the trials were filmed, the coding could be checked by re-watching, which increases reliability, and males and females could be compared objectively.

However, one weakness is the sample. Only 34 rhesus monkeys from one captive troop were studied, as some of the troop were too young to be reliably identified, and these may have chosen different toys. Captive monkeys may also behave differently from monkeys in the wild, where toy choice is not available, so the findings may not generalise to all rhesus monkeys.

A second weakness is possible observer bias. The coders could see whether each monkey was male or female, so when deciding whether a monkey was "carrying" a toy or only touching it, they may have expected males to carry the wheeled toys more and coded the behaviour to fit this, which lowers validity.

Overall, the study was ethical and gave reliable, objective data, but its small captive sample and the risk of observer bias limit how far we can conclude that toy preferences are biological.

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