Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME: StemUp Model Solution

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

7633281399

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **February/March 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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[Turn over

Answer **all** questions.

1 From the study by Andrade (doodling):

(a) State the experimental design used in this study. Include a reason for your answer.

Independent measures design, because different participants took part in each condition: each participant was in either the doodling group or the control (no doodling) group, not both.

..... [2]

(b) Outline the materials used by participants in the doodling condition.

An A4 sheet of paper with alternating rows of squares and circles, each about 1 cm in diameter, and a 4.5 cm margin on the left for writing down names. They used a pencil to shade in the shapes.

..... [2]

(c) Outline the result for 'false alarms for places' (incidental information) in the study.

Both groups had the same mean number of false alarms for places: 0.3 in the doodling condition and 0.3 in the control condition, so there was no difference.

..... [2]

2 From the case study by Saavedra and Silverman who gave therapy to a 9-year old boy after his negative experience with buttons:

(a) Outline **one** psychological concept that was investigated in this study.

A phobia: an irrational, persistent fear of an object or situation that causes distress and avoidance. Here the boy had a specific phobia of buttons.

..... [2]

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(b) Outline **one** result from the posttreatment assessment session.

The boy reported minimal distress about buttons and no longer met the DSM criteria for a specific phobia of buttons. He was also wearing clear plastic buttons on his school uniform every day.

..... [2]

3 From the study by Pepperberg (parrot learning):

(a) Outline **one** result of the test on Alex the parrot which used familiar objects.

For familiar objects Alex scored 76.7% correct (99/129) over all trials, compared with 69.7% (69/99) on first-trial-only performance, so his all-trials score was higher and both were well above chance.

..... [2]

(b) Outline **one** methodological strength of this study.

Blind testing was used to improve validity: the trainer who tested Alex on the trials had not been involved in training him on same and different, so she could not unintentionally cue him towards the correct answer.

..... [2]

(c) Outline **one** ethical weakness of this study.

Animals should not be exposed to aversive stimuli or stress. Alex had "No!" said loudly to him when he answered incorrectly, and he was kept alone in a cage at times, which could be stressful for a highly social species such as a parrot.

..... [2]

4 **(a)** Describe the 'learning task' used in the study by Milgram (obedience).

It was a paired-associate learning task. The teacher (the participant) read out a series of word pairs to the learner, e.g. "blue box". Then the teacher read out one word of a pair along with four other terms. The learner had to indicate which of the four terms had originally been paired with that word. He did this by pressing one of four switches in front of him, which lit up one of four quadrants in an answer box on top of the shock generator. Each wrong answer was punished with a shock, and each correct answer moved the teacher on to the next word.

..... [4]

(b) Outline how Milgram ensured that the participant was never the learner.

The participant and the confederate drew slips of paper from a hat to decide who would be teacher and learner. Both slips had "teacher" written on them, and the real participant always drew first, so he was always the teacher.

..... [2]

5 Sai wants to replicate an experimental condition from the study by Bandura et al. (aggression) and needs your help. You must produce clear instructions for Sai, from when a child in the experimental condition arrives at the experimental room until the child observes a model assembling the tinker toys.

Suggest instructions that Sai could use to replicate this part of the study.

1. Bring each child into the experimental room individually.

2. On the way, invite the model in the hallway to come and join in the game.

3. Take the child to the play-area corner and sit them at the small table.

4. Show the child how to make pictures with potato prints and picture stickers, then leave them to play.

5. Take the model to the opposite corner, which has a table, chair, tinker toys, a mallet and a Bobo doll.

6. Tell the model these toys are for the model to play with, then leave the room once the model is seated.

..... [5]

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

(a) Identify **two** characteristics of the sample used in Group 1.

They were all males.

They had a mean age of 29.7 years (adults).

[2]

(b) Describe how the participants were recruited for Group 1.

It was a volunteer (self-selecting) sample. Advertisements were placed in the UK National Autistic Society magazine, and people who replied were recruited. All had been diagnosed with Asperger syndrome or high-functioning autism using established criteria (DSM-IV/ICD-10), and they were in an equivalent range of socioeconomic class and education to Group 2.

[3]

(c) Outline **one** conclusion from this study.

The Revised Eyes Test overcame the problems of the original version, so it is a valid test of social intelligence (theory of mind) in adults that can discriminate between adults with and without AS/HFA.

[2]

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7 From the study by Laney et al. (false memory):

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

To investigate whether a positive false memory, that you loved asparagus the first time you ate it, can be implanted, and whether this makes people like asparagus more and want to eat it.

..... [2]

(b) Suggest **one** real-world application of this study.

It could help children eat a healthier diet. Parents or dieticians could implant a false memory by telling a child that they loved vegetables such as broccoli the first time they tried them, so the child develops a liking for them and eats more.

..... [2]

8 The study by Piliavin et al. (subway Samaritans) is from the social approach.

(a) Outline **two** assumptions of the social approach, using any example for each.

1 *Our behaviour, thoughts and feelings are influenced by other individuals. For example, in Milgram's study the experimenter in a grey lab coat used prods to make participants continue giving shocks.*

.....

2 *Behaviour is influenced by the groups and social context we are in. For example, in an emergency with many people present, people may think others are already helping, so they walk on by when alone they would have helped.*

..... [4]

(b) Explain how **one** result from the study by Piliavin et al. supports the situational explanation of behaviour and how **one** result does **not** support diffusion of responsibility.

Result that supports the situational explanation of behaviour: *The cane (apparently ill) victim received spontaneous help on 95% of trials (62 of 65), but the drunk victim received help on only 50% of trials (19 of 38), and help for the drunk victim was much slower.*

Explain how: *The passengers were similar types of people in both conditions; only the situation (the type of victim) changed. Because the drunk victim was helped for less, the situation, e.g. the higher costs of helping a drunk (disgust, possible harm), must explain the behaviour rather than the helpers' personalities.*

Result that does **not** support diffusion of responsibility: *Help was given just as often, and actually faster, when there were more bystanders: groups with 7 or more males in the critical area helped more quickly than groups with only 1 to 3 males.*

Explain how: *Diffusion of responsibility predicts that the more bystanders there are, the less responsible each feels, so help should be slower and less likely in larger groups. The opposite was found, so this result does not support diffusion of responsibility.*

[8]

9 Evaluate the study by Canli et al. (brain scans and emotions) in terms of **two** strengths and **two** weaknesses. At least one of your evaluation points **must** be about laboratory-based research.
[10]

Canli et al. used 10 right-handed women who were shown 96 scenes from the International Affective Picture System in an fMRI scanner, rated how emotionally intense each one was from 0 to 3, and were given a surprise recognition test three weeks later.

One strength is that the study was laboratory-based with a high level of control. Every participant saw the same scenes for the same length of time in the same scanner, and pressed a button to rate each one in the same way. This standardisation means the procedure can be replicated to check reliability, and it makes it more likely that the amygdala activation was caused by the emotional intensity of the pictures rather than extraneous variables.

A second strength is the use of objective, quantitative measures. The fMRI scans measured activity in the left amygdala directly, and recognition was scored as remembered, familiar or forgotten. This could be correlated with the intensity ratings, showing that scenes rated as highly emotional produced more amygdala activity and were remembered better. These data are not open to the researcher's interpretation, which increases validity.

However, a weakness of laboratory-based research is low ecological validity. Lying still in a noisy scanner and looking at photographs is very different from experiencing a real emotional event, such as an accident. Memory for pictures after three weeks may not reflect how we remember emotional experiences in everyday life, so the findings may not apply to real-life memory.

A second weakness is the sample. Only 10 participants were used, all of them women, chosen partly because women report more intense emotional experiences. Men may process emotion differently in the brain, so the results cannot be generalised to men or to the wider population. There are also ethical issues, as some scenes were very negative and could cause distress, and participants were not told about the memory test.

Overall, the controlled, objective lab procedure gives strong evidence that the amygdala is

involved in encoding emotional memories, but the small all-female sample and artificial task mean we should be cautious about generalising the conclusions to everyone and to real life.

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