Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME: StemUp Model Solution

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

3479406289

PSYCHOLOGY **9990/11**

Paper 1 Approaches, Issues and Debates **October/November 2023**

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.

© UCLES 2023

[Turn over

stemup.co.uk

Answer **all** questions.

1 In the study by Andrade (doodling), the participants were given a surprise recall test for two categories of information that was presented in the telephone message. One of these categories was the names of the party-goers.

(a) Name the other category of information that the participants were asked to recall from the telephone message.

Places (the names of the places mentioned in the message). [1]

(b) For the names of party-goers, 'false alarms' given by the participants were noted.

Outline the **two** types of false alarms given by the participants when recalling the names of the party-goers.

New names: names that had not been in the message at all. Lures: names of non-party-goers that were mentioned in the message, e.g. people who were not coming.

[2]

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

(a) Outline what the model was supposed to do in the 'Critical area – early' condition.

The model stood in the middle of the critical area. He waited until the train passed the fourth station (about 70 seconds after the collapse) and then went over to help the victim, raising him to a sitting position.

[2]

(b) Describe the victim in the drunk condition.

The victim was a male aged 26 to 35 (white or black), wearing an Eisenhower jacket, old slacks and no tie. He smelled of liquor and carried a liquor bottle wrapped tightly in a brown paper bag.

[2]

© UCLES 2023

stemup.co.uk

3 Explain **one** problem that could arise if children were used as participants in the study by Baron-Cohen et al. (eyes test).

Children may not understand what they are being asked to do. In the Eyes Test they had to choose which of four complex mental state words best described what the person in a photograph of the eye region was thinking or feeling. Young children have a limited vocabulary and understanding of complex emotions, so even with the glossary they might not understand the words, guess randomly or treat it as a game. A low score would then not show a lack of theory of mind, so the test would not measure what it intends to. [3]

4 Saavedra and Silverman studied a boy with a phobia of buttons.

(a) One aim was to investigate whether exposure to buttons would help to treat his phobia.

Outline **one** other aim of this study.

To investigate the role of disgust, as well as fear, in the boy's button phobia, and whether his phobia could be explained by classical conditioning (evaluative learning) from an unpleasant experience with buttons.

..... [2]

(b) Outline how the boy's severity rating for buttons changed during behavioural exposure sessions.

His severity (distress) ratings for buttons stayed the same over the first two behavioural exposure sessions. They then increased from session 2 to session 3, and increased again from session 3 to session 4.

..... [2]

(c) State **two** results from the posttreatment assessment session.

1 *He reported minimal distress and no longer met DSM criteria for a phobia.*

2 *He was wearing clear plastic buttons on his school uniform every day.*

[2]

5 In the study by Bandura et al. (aggression), the final part of the procedure was named the 'test for delayed imitation'.

(a) Describe the procedure used to 'test for delayed imitation'.

Each child was taken alone to a room with a variety of toys, including a 3-foot Bobo doll, a mallet and peg board, dart guns and a tether ball, plus non-aggressive toys such as crayons and dolls. The child spent 20 minutes in the room and their behaviour was observed through a one-way mirror. The session was divided into 5-second intervals using an electric interval timer, giving 240 response units per child. Behaviour was coded into categories, e.g. imitative physical and verbal aggression. The male model rated all the children, and half were also rated by a second observer to check inter-rater reliability. [4]

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

Children who observe an adult model behaving aggressively are likely to imitate that aggression later, even when the model is not present, so simply witnessing aggression is enough to produce aggression in the observer, through social learning.

[2]

6 From the study by Dement and Kleitman (sleep and dreams):

(a) Describe the psychology being investigated in this study.

Sleep goes through a cycle of stages. In REM (rapid eye movement) sleep the eyes move rapidly under the eyelids and the brain is active, but all other muscles are paralysed. The other four stages are NREM sleep, which differ in brain activity, with slower, larger brain waves in deeper sleep. Dreaming is the subjective experience of imagery while we are asleep. An EEG measures brain wave activity, recording the amplitude and frequency of the waves. For example, Dement and Kleitman used an EEG to identify REM and NREM sleep, then woke participants with a doorbell to see if dream recall was linked to REM. [4]

(b) Explain why this study is from the biological approach.

Dement and Kleitman used an EEG to measure brain activity in order to identify the stages of sleep (REM and NREM), and recorded eye movements to see how they were linked to dream content. So they explained dreaming through physiological processes in the body. [2]

7 Suggest **two** real-world applications based on the study by Canli et al. (brain scans and emotions).

Your suggestions **must** be ethical.

1 *Teachers could help students learn using emotionally intense images. In Canli et al. scenes rated as highly emotionally intense were remembered better, so teachers could link key facts to emotionally arousing (but positive, not upsetting) pictures to improve students' recall in exams.*

2 *Advertisers could use emotionally intense positive imagery in adverts. Canli et al. found that intensely emotional images produced more amygdala activity and were better remembered, so linking a product to such images would help viewers remember the product.*

[4]

8 Two friends, Rose and Yaroslav, are discussing the validity of the study by Milgram (obedience). Rose thinks the study has validity but Yaroslav thinks the study does **not** have validity.

Explain **one** reason why Rose is correct and **one** reason why Yaroslav is correct, using evidence from this study.

Rose (has validity) *The study had a degree of mundane realism, as the situation felt real to the participants. Each participant was given a real 45-volt sample shock before the study began, and the learner gave pre-set protests, such as pounding on the wall at 300 volts. So participants believed they were really giving painful shocks, shown by their sweating, trembling and nervous laughter, which means their obedience was genuine rather than play-acting.*

Yaroslav (does **not** have validity) *The study lacked ecological validity. Giving electric shocks to a stranger as punishment for wrong answers on a word-pair memory test in a Yale laboratory is not a situation people face in real life. So the obedience found (65% went to 450 volts) may only show how people behave in this artificial situation, not what they would do in a real-life destructive obedience situation, such as a soldier ordered to harm civilians.*

[6]

© UCLES 2023

stemup.co.uk

9 **(a)** Describe the sample used in the study by Pepperberg (parrot learning).

The sample was a single participant, an African Grey parrot called Alex. He had already taken part in many years of research on his communication and cognitive abilities. He could already produce vocal labels for colours, shapes and materials, and already knew some of the objects used. He had already shown limited comprehension of abstract concepts, and could communicate his needs, e.g. "wanna go gym".

[4]

(b) Explain whether each ethical guideline below, relating to animals, was broken in the study by Pepperberg (parrot learning):

housing *Housing should meet the needs of the species, e.g. social animals should not be caged alone. Alex was housed on his own in the laboratory, which could be stressful because parrots are very social birds, so this guideline was broken.*

pain and distress *Researchers must minimise any pain or distress. Alex was not given any painful procedures: if he answered wrongly the trainer only said "No" and he was not physically punished, so this guideline was not broken.*

reward *Rewards should suit the species and the animal's preferences. When Alex answered correctly he was given the object to play with, or could ask for a preferred food instead, so this guideline was not broken.*

species and strain *Researchers should choose the species least likely to suffer and suited to the aim. African Greys are not endangered, and Alex had been trained in vocal labels for years, so he was an ideal participant and this guideline was not broken.*

[8]

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

One strength of Laney et al.'s study is its internal validity because of controls. Participants were randomly allocated to the Love group or the Control group, and both groups completed exactly the same questionnaires (the Food History Inventory, Food Preferences and Restaurant Questionnaires) in both sessions. The only difference was that the Love group's false profile said they had loved asparagus the first time they tried it. This means Laney could conclude that the false suggestion caused the increase in the Love group's belief and liking for asparagus.

A second strength is that it collected quantitative data. Participants rated items on the same numbered rating scales, e.g. how confident they were that an event happened before age 10, so the Love and Control groups' mean changes could be compared objectively and statistically, without the researchers' interpretation biasing the results.

However, one weakness is ethics. Participants were deceived, as they were told their food profile had been generated by a computer from their answers, when in fact the asparagus item was false. The study also deliberately planted a false memory that could change their real eating behaviour after the study. Although the change was towards a healthy food and participants were debriefed, they could not give fully informed consent and may have felt embarrassed at being fooled.

A second weakness is generalisability. The participants were undergraduate students from one American university, so their memories and eating attitudes may not represent older people or people from other cultures. Also, the task was artificial: changing attitudes to asparagus through a questionnaire is not very important to most people, so the findings may not generalise to false memories of more important real-life events, such as in eyewitness testimony.

Overall, the controls and quantitative data make the findings about false memories valid and reliable, but the deception and narrow sample mean they should be applied with caution.

© UCLES 2023

stemup.co.uk

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [10]

© UCLES 2023

stemup.co.uk

BLANK PAGE

© UCLES 2023

stemup.co.uk

BLANK PAGE

© UCLES 2023

stemup.co.uk

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2023

stemup.co.uk

Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME: StemUp Model Solution

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

8767014303

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **October/November 2023**

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.

DC (CE) 313211
© UCLES 2023

[Turn over

Answer **all** questions.

1 The study by Baron-Cohen et al. used the eyes test as a measure of theory of mind.

(a) The eyes test results were negatively (inversely) correlated with the results of another measure.

Name this measure.

The Autism Spectrum Quotient (AQ). [1]

(b) Outline the Group 4 sample from this study.

Group 4 were 14 adults randomly selected from the general population. They were matched with Group 1 (AS/HFA) on IQ (mean IQ 116) and had the same age distribution (mean age about 28 years).

[2]

2 The study by Saavedra and Silverman investigated a boy with a phobia of buttons.

The boy reported an experience that he thought was the cause of his button phobia.

Describe the experience the boy reported.

The boy said the incident happened when he was five years old, about four years before the study, during an art project in his class at school. He had run out of buttons for his project, so he was asked to go to the front of the class to get more. The buttons were in a large bowl on the teacher's desk. As he reached for the bowl his hand slipped and he knocked it over, so all of the buttons fell down on him. He said he had found buttons distressing ever since.

[4]

© UCLES 2023

stemup.co.uk

3 Explain **one** problem that could arise if children were used as participants in the study by Canli et al. (brain scans and emotions).

Children may find it very hard to keep still inside the fMRI scanner. In Canli et al.'s study the scanner measured brain activity, e.g. in the amygdala, while participants viewed 96 scenes and rated each one by pressing a button, which takes a long time. If children moved their heads the scans would be blurred and could not be used, so the link between amygdala activity and emotional intensity could not be measured. Children may also be scared to go into the noisy machine. [3]

4 In the study by Pepperberg (parrot learning), a principal trainer was used during the 'test procedures'.

(a) Describe the procedure that the principal trainer followed during the 'test procedures'.

The principal trainer sat in the room with her back to Alex, so she did not look at Alex or the tray while the test objects were presented, and she did not know which objects were being presented. A secondary trainer presented the objects and asked Alex the question. The principal trainer then repeated out loud what Alex said, and it was decided from this whether his response was correct, incorrect or indistinct.

[4]

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

An avian subject, an African Grey parrot, can show symbolic comprehension of the abstract concepts of same and different, so this cognitive ability is not exclusive to primates.

[2]

5 The study by Piliavin et al. (subway Samaritans) used models and victims.

(a) Name **two** features of the models used in this study.

1 They were all white males.

2 They were aged 24 to 29 years (students, informally dressed).

[2]

(b) Outline **one** result in relation to the time taken to help the victims.

The ill (cane) victim was helped significantly faster than the drunk victim. The cane victim usually received help almost immediately (median about 5 seconds), whereas the drunk victim took much longer (median about 109 seconds).

[2]

(c) Outline **one** result in relation to participants leaving the critical area.

Participants were more likely to leave the critical area when the victim was drunk than when he was ill. Overall, 34 people left the critical area, on 21 of the trials (about 20%).

[2]

© UCLES 2023

stemup.co.uk

6 From the study by Andrade (doodling):

(a) Describe the background to this study.

It had been assumed that doing a concurrent task such as doodling would impair concentration on a primary task, as dual-task research shows that information processing is harder when doing two things at once. However, the effects of boredom on processing had been overlooked. Boredom is linked to daydreaming, which uses up cognitive resources and distracts from the main task, and arousal levels need to be maintained to concentrate. So doodling might help concentration by reducing daydreaming. Andrade aimed to test whether doodling while listening to a boring message would improve recall. [4]

(b) Explain why this study is from the cognitive approach.

The cognitive approach assumes that behaviour can be explained by cognitive processes such as attention and memory. This study examined how split attention (doodling while listening to a telephone message) affected recall of the names and places. [2]

7 Suggest **two** real-world applications based on the study by Yamamoto et al. (chimpanzee helping).

Your suggestions **must** be ethical.

1 *Teachers could teach helping in schools using a similar task. They could set up paired activities where one child has the tool or item the other needs to finish a task, so children learn to understand the other's needs and pass the correct item when asked, like the chimpanzees.*

2 *Parents could promote helping behaviour in their children. As the chimpanzees mostly helped when their partner asked, parents could praise or reward children whenever they respond to a sibling's request for help, so the helping behaviour is more likely to be repeated.*

[4]

8 Two friends, Zayn and Danna, are discussing the nature versus nurture debate in relation to the study by Bandura et al. (aggression). Zayn thinks the study supports the nature side of the debate but Danna thinks the study supports the nurture side of the debate.

Explain **one** reason why Zayn is correct and **one** reason why Danna is correct, using evidence from this study.

Zayn (nature) *Nature is the view that behaviour is due to inherited, genetic factors present from birth. In Bandura's study boys were more physically aggressive than girls across the conditions, whatever the sex of the model. This may be due to biological factors such as males having higher levels of testosterone, which is innate, so this supports nature.*

Danna (nurture) *Nurture is the view that behaviour is learned through experiences and the environment after birth. The children were matched on pre-existing aggression levels, yet those who saw the aggressive model imitated his exact acts, e.g. hitting Bobo with a mallet and saying "Pow", which the control group rarely did. So this imitated aggression must have been learned by observing the model.*

[6]

9 From the study by Schachter and Singer (two factors in emotion):

(a) Describe the sample.

The sample was 184 male college students taking introductory psychology at the University of Minnesota. Most of them (90%) were volunteers, and they received two extra points on their final examination for each hour they took part. All of their health records were checked and cleared by the Student Health Service before the injection, and only one participant refused to take part.

[4]

(b) Explain whether each ethical guideline below was broken in the study by Schachter and Singer (two factors in emotion).

confidentiality *Participants' data must not be identifiable as theirs. No names were published; we only know they were male students from the University of Minnesota, and only the doctors saw their medical records, so this was not broken.*

lack of deception *Participants should not be deceived without strong justification. They were told the injection was a vitamin called Suproxin to test their vision, when it was adrenaline or a placebo, so this guideline was broken.*

privacy *Participants should not have to reveal personal details they would not normally share. In the anger condition the questionnaire asked very personal questions, e.g. about their mother's relationships, so this guideline was broken.*

protection from physical harm *Participants should leave in the same physical state as they arrived. They were given an injection, which may have hurt and caused side effects such as a racing heart, so this was broken, although a doctor gave it to minimise harm.*

[8]

10 Evaluate the study by Milgram (obedience) in terms of **two** strengths and **two** weaknesses. At least one of your evaluation points **must** be about validity.

One strength of Milgram's study is its internal validity because of its controls. Every participant met the same experimenter (a stern 31-year-old man in a grey lab coat) and the same learner (a 47-year-old accountant), and the learner gave the same pre-set responses, e.g. pounding on the wall at 300 volts and then giving no further answers. The experimenter used the same four standardised prods, such as "You have no other choice, you must go on". This means differences in obedience were due to the participants, not extraneous variables, so Milgram could validly measure obedience.

A second strength is that it collected quantitative data. The maximum voltage each participant gave was recorded on the shock generator, from 15 to 450 volts, so obedience could be measured objectively and compared, e.g. 65% (26 of 40) continued to 450 volts. The study also collected qualitative data, such as signs of tension, which helps explain why participants obeyed.

However, one weakness is ethics. Participants were deceived, as they believed the shocks were real, and they were not protected from psychological harm: many showed extreme stress such as sweating, trembling and nervous laughter, and three had full-blown uncontrollable seizures. The prods also made it hard to use their right to withdraw. Although they were debriefed, they may have felt guilty about what they had been willing to do.

A second weakness is low ecological validity and generalisability. Shocking a stranger in a memory test at Yale is unlike real-life obedience, and the sample was only 40 American men aged 20 to 50 from New Haven who volunteered through a newspaper advert, so the results may not apply to women or other cultures.

Overall, the controls and quantitative data make the study a valid measure of obedience in the laboratory, but the ethical problems and artificial task limit how far it can be applied to real life.

© UCLES 2023

stemup.co.uk

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [10]

© UCLES 2023

stemup.co.uk

BLANK PAGE

© UCLES 2023

stemup.co.uk

BLANK PAGE

© UCLES 2023

stemup.co.uk

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2023

stemup.co.uk

Cambridge Assessment International Education

Cambridge International AS & A Level

CANDIDATE NAME: StemUp Model Solution

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

2827087359

PSYCHOLOGY **9990/13**

Paper 1 Approaches, Issues and Debates **October/November 2023**

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.

© UCLES 2023

[Turn over

stemup.co.uk

Answer **all** questions.

1 From the study by Milgram (obedience):

(a) State the percentage of participants who pressed the 300-volt level switch.

100% ..... [1]

(b) Outline the payment given to participants.

They were paid $4.50 ($4 plus 50 cents carfare). They were told it was simply for coming to the laboratory, and that they could keep the money no matter what happened after they arrived.

..... [2]

2 From the study by Pepperberg (parrot learning):

Describe the procedure of the 'Transfer Tests with Novel Objects'.

Alex was presented with pairs of objects that had never been used in his training or in any previous same/different tests, and some were totally novel, with colours or shapes he had no labels for. These objects were kept on a shelf in view of Alex. For each pair he was asked "What's same?" or "What's different?". If he answered correctly he was praised and allowed to keep the object, and if he was incorrect the trainer said "No".

..... [4]

© UCLES 2023

stemup.co.uk

3 Explain **one** problem that could arise if children were used as participants in the study by Laney et al. (false memory).

Children would be an inappropriate sample. The study aimed to plant a false childhood memory, that they loved asparagus the first time they tried it before the age of 10. Children under 10 would have very little food history to recall, and might not understand terms in the food questionnaires, e.g. "sautéed asparagus", so their answers would not show whether a real false memory had been created.

..... [3]

4 From the study by Schachter and Singer (two factors in emotion):

(a) Describe the procedure from immediately after the injection to immediately before the stooge began his standardised behaviours.

Immediately after the injection the experimenter brought a stooge into the room and introduced him as another participant. He explained that they had to wait 20 minutes for the Suproxin to get into the bloodstream before the vision tests. In the euphoria condition he apologised for the room being in disarray and told them they could use anything in it. In the anger condition he asked them to complete questionnaires during the 20 minutes, handed them out and said he would be back to collect them. The experimenter then left the room.

..... [4]

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

Emotion has two factors: physiological arousal and a cognitive label for that arousal. When people are aroused without an explanation, they label the feeling using cues from the situation, which supports the two-factor theory of emotion.

..... [2]

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

One aim was to investigate whether there would be a correlation between scores on the revised 'Reading the Mind in the Eyes' test and the Autism Spectrum Quotient (AQ).

(a) Outline **one** other aim.

To investigate whether there would be sex differences on the revised Eyes Test, i.e. whether females in the general population would score higher than males.

[2]

(b) Outline **one** result in relation to the Autism Spectrum Quotient (AQ).

The AS/HFA group (Group 1) scored significantly higher on the AQ than both control groups (Groups 3 and 4), showing that they had more autistic traits.

[2]

(c) Outline **one** result comparing the participants of Group 1 to the participants of Group 2. You **must** use data in your answer.

Group 1 (adults with AS/HFA) scored significantly lower on the Eyes Test than Group 2 (general population adults), with a mean of 21.9 out of 36 compared with 26.2.

[2]

© UCLES 2023

stemup.co.uk

6 From the study by Bandura et al. (aggression):

(a) Describe the background to this study.

Previous studies had shown that children readily imitate the behaviour of an adult model when the model is present. Bandura was investigating social learning theory, which says that behaviour is learned by observing and imitating role models. The observer must pay attention to the model, retain the behaviour in memory, feel capable of reproducing it and be motivated to imitate it. This study looked at delayed imitation, where someone sees a behaviour at one time but only reproduces it later, in a new setting when the model is absent.

..... [4]

(b) Explain why this study is from the learning approach.

The learning approach assumes that behaviour is learned from the environment, e.g. through social learning. In this study the children observed an adult model's aggressive acts towards the Bobo doll and then imitated them.

..... [2]

7 Suggest **two** real-world applications based on the study by Saavedra and Silverman (button phobia).

Your suggestions **must** be ethical.

1 *Therapists could find out when a client first came into contact with their phobic object. The boy remembered a bowl of buttons falling on him in art class, so asking clients about such early experiences can help uncover the cause of a phobia and target treatment.*

.....

2 *Therapists could use imagery exposure for disgust-based phobias. Clients would imagine the feared object in different scenarios, rated on a Feelings Thermometer, starting with the least distressing, as the boy's distress ratings fell when this was used.*

.....

[4]

8 Two friends, Xander and Silvia, are discussing the individual and situational explanations for behaviour in relation to the study by Andrade (doodling). Xander thinks the study supports the individual explanation but Silvia thinks the study supports the situational explanation.

Explain **one** reason why Xander is correct and **one** reason why Silvia is correct, using evidence from this study.

Xander (individual explanation) *The individual explanation says behaviour is caused by the person's own characteristics, such as personality or cognitive abilities. In Andrade's study there were individual differences: participants doodled different amounts, and even within the same condition some recalled more names than others, e.g. due to having a better memory. So recall depended partly on the person.*

Silvia (situational explanation) *The situational explanation says behaviour is caused by the environment we are in. Andrade made the situation boring: participants had just finished another study and heard a monotonous 2.5-minute telephone message. The doodling group, who shaded shapes, recalled 29% more information than the control group, so the task and situation improved concentration.*

[6]

9 **(a)** Describe the sample in the study by Yamamoto et al. (chimpanzee helping).

The sample was chimpanzees at the Primate Research Institute, Kyoto University. Three of them were juveniles, and each was tested in a pair with its mother (kin), e.g. Ayumu with his mother Ai. They were socially housed in a group, had taken part in previous research on their perceptual and cognitive abilities, and had already demonstrated sharing behaviour.

[4]

(b) Explain whether each ethical guideline below, relating to animals, was broken in the study by Yamamoto et al. (chimpanzee helping).

deprivation and aversive stimuli *Deprivation of food, water or company must be avoided or justified. The chimpanzees were not deprived of food or water and were only separated from their partner in the booths for short trials, so this was not broken.*

housing *Housing should take into account the social behaviour of the species. The chimpanzees were socially housed in a group at Kyoto University, which suits this social species, so this was not broken.*

pain and distress *Researchers must minimise pain and distress. There were no invasive procedures, the chimpanzees only had to select and pass tools that they were familiar with, so this was not broken.*

reward *Rewards should be tailored to the animal's preferred foods. Only the recipient got the juice reward, so the helper chimpanzee was not rewarded for its effort, so this could be broken.*

[8]

10 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 generalisations.

One strength of Canli et al.'s study is its internal validity because of its standardised procedure. All participants saw the same 96 scenes, each shown for the same length of time while in the fMRI scanner, and each rated the scenes on the same four-point scale from 0 (not emotionally intense) to 3 (extremely emotionally intense) by pressing a button. Three weeks later they all did the same surprise recognition test with the old scenes and new foils. This means differences in memory were due to the emotional intensity of the scenes, and the study could be replicated to test its reliability.

A second strength is that it collected objective, quantitative data. The fMRI scan measured activity in the amygdala as each scene was viewed, so the link between amygdala activity and later memory could be measured precisely, e.g. scenes rated as highly intense were remembered better and produced more activity in the left amygdala. The data could not be biased by the researchers' interpretation.

However, one weakness is that the findings are hard to generalise. The sample was only 10 healthy, right-handed female volunteers, so the results may not apply to men, whose brains may respond to emotional stimuli differently, or to left-handed people, whose brain lateralisation may differ.

A second weakness is low ecological validity. Participants viewed photographs while lying still in a noisy scanner, which is very different from experiencing emotional events in real life, where we are personally involved. So the link between emotion and memory may be weaker or stronger in everyday situations. Some scenes were also negative and could have caused distress.

Overall, the controlled procedure and objective brain scans make the findings valid, but the small, all-female sample and artificial setting mean they should be generalised with caution.

© UCLES 2023

stemup.co.uk

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... [10]

© UCLES 2023

stemup.co.uk

BLANK PAGE

© UCLES 2023

stemup.co.uk

BLANK PAGE

© UCLES 2023

stemup.co.uk

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.

© UCLES 2023

stemup.co.uk