



Cambridge International AS & A Level

PSYCHOLOGY

9990/11

Paper 1 Approaches, issues and debates

May/June 2023

MARK SCHEME

Maximum Mark: 60

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**Social Science-Specific Marking Principles
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

2 Presentation of mark scheme:

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

3 Annotation:

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

Question	Answer	Marks
1(a)	From the study by Schachter and Singer (two factors in emotion): Identify which <u>one</u> of the following groups scored the highest on the Activity Index in the Euphoria condition. Epinephrine Ignorant (Epi Ign) Epinephrine Informed (Epi Inf) Epinephrine Misinformed (Epi Mis) Placebo 1 mark for the correct answer. Epinephrine Misinformed (Epi Mis)	1
1(b)	In the Anger condition, an observer recorded the participant's response to the stooge using several categories. Outline how the category of 'Ignores' was operationalised in this study. 1 mark per correct point. The participant makes no verbal response (to stooge) / ignores stooge's <u>comments</u>; The participant does not look at / pays no attention / does not acknowledge / does not join / does not engage with the stooge; The participant wholly works on the questionnaire;	2

Question	Answer	Marks
2(a)	From the study by Andrade (doodling): Identify <u>two</u> features of the sample used in this study. 1 mark per correct point. n=40; Aged 18–55 years; 18 females / 2 males in control; 17 females / 3 males in doodling; 35 females / 5 males; All from MRC Applied Psychology Unit / Cognition and Brain Sciences Unit; Opportunity sample / recruited from another study that had just ended;	2

Question	Answer	Marks
2(b)	Identify <u>one</u> strength of the sample used in this study. 1 mark for correct point. e.g. (Is) generalisable (as wide age range / both sexes); (More) willing as interested in the subject; Already bored and fatigued (so a valid sample); There are other creditworthy responses.	1

Question	Answer	Marks
3(a)	From the study by Saavedra and Silverman (button phobia): Describe the Disgust/Fear hierarchy used in this study. 1 mark per correct point. 1 mark available for an example from the hierarchy. He was asked to rate (11) different scenarios that included buttons / list of different buttons; Each was rated on Distress scale of 0–8 / on a 9–point scale; 0 was the lowest distress / 8 was the highest distress; The (subjective) ratings used a Feelings Thermometer; One example was small clear plastic buttons rated 8 (1 mark for example);	3
3(b)	Explain <u>one</u> weakness of the Disgust/Fear hierarchy used in this study. 1 mark for identifying the weakness. 1 mark for linking it to the study. e.g. The ratings are subjective (1 mark: identification) so it would not be useful for other people to use who have a button phobia (1 mark: link to study); He may have given desirable ratings (1 mark: identification); He may have lied about the ratings (1 mark: identification); It was a case study so cannot be generalised (0 marks as not about Disgust/Fear hierarchy); There are other creditworthy responses.	2

Question	Answer	Marks
4(a)	The study by Piliavin et al. (subway Samaritans) used ‘victims’ who needed help. Describe the victims used in this study. 1 mark per correct point made. They were all male; They were aged 26–35 years; Three white / one black; Identically dressed; Eisenhower jackets / old slacks / no tie (2 named for 1 mark); One type was drunk who smelled of liquor / held a bottle of liquor in a brown paper bag; One type was ill who had a cane;	4
4(b)	One conclusion was that in a field setting, diffusion of responsibility did <u>not</u> happen. Outline <u>one</u> other conclusion from this study. 2 marks full/detailed conclusion. 1 mark partial/brief conclusion. e.g. A person who is ‘ill’ is more likely to receive help when they collapse than a person who is ‘drunk’ (2 marks); People will help an ill victim (rather than a drunk) because they feel more sympathy towards them (2 marks); General public are more likely to help someone of the same race if they are drunk (2 marks); Men are more likely to help in an emergency situation than women (2 marks); People help ill victims more often (1 mark); Diffusion of responsibility did not happen (0 marks: repeating the question); The victim with the cane received spontaneous help on 62 of 65 trials (0 marks: result);	2

Question	Answer	Marks
5	In Experiment 1 of the study by Laney et al. (false memory), participants completed both the Food History Inventory and the Restaurant Questionnaire. Describe <u>one</u> result from the Food History Inventory and <u>one</u> result from the Restaurant Questionnaire. You <u>must</u> use data for <u>one</u> of these results. For result: 2 marks for result with a meaningful comparison. 1 mark for partial result / no meaningful comparison. For data: 1 mark for correct data in <i>one</i> of the results. e.g., Food History Inventory At post-manipulation the <i>Love</i> group had increased significantly more than the <i>Control</i> group (2 marks). This was 2.6 for the <i>Love</i> group (1 mark: data). Both the <i>Love</i> group and <i>Control</i> group had ratings increase at Session 2 (2 marks). The mean ratings for the <i>Love</i> group increased (1 mark) <u>after manipulation</u> (2 marks). It increased by (an average of) 2.6 points (indicating an increase in confidence) (1 mark: data). The mean ratings for the <i>Control</i> group remained (roughly) the same (1 mark). It increased by (an average) of just 0.2 points (1 mark: data). e.g., Restaurant Questionnaire The <i>Love</i> group had a higher (mean) rating than the <i>Control</i> group (at both sessions) (2 marks). Believers reported more desire to eat asparagus at Session 2 compared to nonbelievers (2 marks). The believers score increased by around 0.5 points (1 mark: data). The <i>Love</i> groups rating (virtually) remained the same for asparagus (1 mark).	5

Question	Answer	Marks
6	Outline <u>two</u> assumptions of the cognitive approach. You <u>must</u> use an example from a core study for each assumption. For assumptions: 2 mark for full assumption 1 mark for partial assumption. For example: 1 mark per correct example per assumption. Examples have to come from a core study and be linked to the assumption given. e.g. assumptions Behaviours and emotions can be explained in terms of cognitive processes such as attention, language and memory (2 marks) (must have 2 examples to award 2; otherwise award 1). We process information in the same way: input – process – output (2 marks). Similarities <u>and</u> differences between people can be understood in terms of individual patterns of cognition (2 marks). Behaviours and emotions can be explained in terms of cognitive <u>processes</u> (1 mark). It is about the way we process information (1 mark). We think/process like a computer (1 mark). e.g. examples In the Laney study they examined the role of suggestion on false memories. In the Baron-Cohen et al. study it was about how autistic people process information about emotions. In the Andrade study it was about how we can divide our attention across tasks.	6

Question	Answer	Marks
7	Suggest <u>two</u> real-world applications based on the study by Milgram (obedience). Your suggestions <u>must</u> be ethical. 1 mark for <i>what</i> the application is (clearly based on Milgram). 1 mark for <i>how</i> it will be achieved. e.g. A teacher could get students to complete required tasks in the classroom / make sure students are listening (1 mark: what) by wearing clothes that show authority like a technician's coat (1 mark: how) / using prods like 'you must finish this task in the lesson' (1 mark: how). Soldiers could be encouraged to be more obedient at <u>following orders</u> (1 mark: what) as an authority figure can give out commands in a firm tone / stern voice (1 mark: how). Patients can be encouraged to adhere to a new drug treatment (1 mark: what). The doctor can use prods like 'it is essential you take these for two weeks' (1 mark: how). People can be encouraged to take up a life saving vaccine (1 mark: what). Doctors can appear on advertisements in a laboratory coat telling people to have the vaccine (1 mark: how). Lifeguards can have a uniform/whistle to show authority (1 mark: how). To improve obedience / stop disobedience in students (0 marks: obedience is in the question, the 'what' must be explicit: see above). A guard can administer electric shocks to people who are not being obedient in a prison (0 marks: not ethical).	4

Question	Answer	Marks
8	Two friends, Danilo and Noah, are discussing the validity of the study by Baron-Cohen et al. (eyes test). Danilo thinks the study has validity but Noah thinks the study does <u>not</u> have validity. Explain <u>one</u> reason why Danilo is correct and <u>one</u> reason why Noah is correct, using evidence from this study. 3 marks for Danilo. 1 mark per correct point made. 1 mark available for type of validity. 3 marks for Noah. 1 mark per correct point made. 1 mark available for type of validity. e.g., Danilo The study did have some internal validity (1 mark: type). Baron-Cohen had a range of controls like the same eyes and choices of emotions (1 mark). This ensured that Baron-Cohen could conclude that the type of participant (e.g., AS/HFA) affected the choice of emotional response (1 mark). Extraneous variables were controlled (1 mark). e.g., Noah The study lacked ecological validity / mundane realism (1 mark: type). This is because the eyes that were viewed were static (1 mark) and this is not how we judge emotions in the real world – we have social cues too (1 mark). The person could just guess the correct answer (1 mark maximum). The second test was an improvement on the first test (1 mark). For example, a glossary was provided so people could understand the words that described the emotions (1 mark). The sample lacks population validity (1 mark: type). This is because the sample of AS/HFA participants was only 15 (1 mark) and they were all male so the findings may not be valid for females (1 mark).	6

Question	Answer	Marks
9(a)	From the study by Dement and Kleitman (sleep and dreams): Describe what is meant by REM sleep. 1 mark per correct point. It is Rapid Eye Movement sleep / our eyes flicker / move rapidly; Our body is paralysed; Tend to dream / dream more often in this period of sleep / more likely to recall dreams; Increases in length every (sleep) cycle; Brain activity/waves most similar to when awake / low voltage / fast pattern brain waves / on EEG monitor; Occur at regular intervals during the night/occurs in cycles through the night; Usually every 90 minutes; Usually lasts for 3–50 minutes/average length 20 minutes; It is the last stage of the sleep cycle/it is Stage 5 of the sleep cycle;	4

Question	Answer	Marks																		
9(b)	Explain <u>one</u> similarity and <u>one</u> difference between the study by Dement and Kleitman (sleep and dreams) and the study by Canli et al. (brain scans and emotions). 4 marks available for the similarity; 4 marks available for the difference. Creditworthy points include: sample/sampling, ethics, quantitative data, brain measurement techniques. <table border="1"> <thead> <tr> <th>Level</th><th>Descriptor</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>4</td><td>The similarity/difference is well explained using both studies as examples.</td><td>4 marks</td></tr> <tr> <td>3</td><td>The similarity/difference is well explained/described but only one study is used as an example OR both studies used briefly.</td><td>3 marks</td></tr> <tr> <td>2</td><td>The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.</td><td>2 marks</td></tr> <tr> <td>1</td><td>The similarity/difference is brief with no attempt at using studies as examples.</td><td>1 marks</td></tr> <tr> <td>0</td><td>No creditworthy material.</td><td>0 marks</td></tr> </tbody> </table> e.g., difference 4 marks Both studies used different techniques to measure brain activity. Canli used an FMRI scan to be able to see brain activity while the participants watched the different emotional scenes. Dement and Kleitman used a different technique called an EEG that could only monitor brain wave activity/patterns. Therefore, Canli's technique is more comprehensive than Dement and Kleitman's. 3 marks Both studies used different techniques to measure brain activity. Canli used an FMRI scan to be able to see brain activity whilst the participants watched the different emotional scenes. Dement and Kleitman used a different technique called an EEG to measure brain waves when asleep. 2 marks Both studies used different techniques to measure brain activity. Canli used an FMRI scan to measure brain activity / Dement and Kleitman used an EEG. 1 marks Both studies used different techniques to measure brain activity.	Level	Descriptor	Mark	4	The similarity/difference is well explained using both studies as examples.	4 marks	3	The similarity/difference is well explained/described but only one study is used as an example OR both studies used briefly.	3 marks	2	The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.	2 marks	1	The similarity/difference is brief with no attempt at using studies as examples.	1 marks	0	No creditworthy material.	0 marks	8
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10	Evaluate the study by Bandura et al. (aggression) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about reliability. Suitable strengths include: internal validity, reliability, observations, quantitative data. Suitable weaknesses include: ethics, external validity, sample size, generalisations. Level 4 (8–10 marks) • Evaluation is comprehensive. • Answer demonstrates evidence of careful planning, organisation and selection of material. • Analysis (valid conclusions that effectively summarise issues and arguments) is evident throughout. • Answer demonstrates an excellent understanding of the material. Level 3 (6–7 marks) • Evaluation is good. • Answer demonstrates some planning and is well organised. • Analysis is often evident but may not be consistently applied. • Answer demonstrates a good understanding of the material. Level 2 (4–5 marks) • Evaluation is mostly appropriate but limited. • Answer demonstrates limited organisation or lacks clarity. • Analysis is limited. • Answer lacks consistent levels of detail and demonstrates a limited understanding of the material. Level 1 (1–3 marks) • Evaluation is basic. • Answer demonstrates little organisation. • There is little or no evidence of analysis. Answer does not demonstrate understanding of the material. Level 0 (0 marks) No response worthy of credit.	10



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Question	Answer	Marks
1(a)	From the study by Schachter and Singer (two factors in emotion): Identify which <u>one</u> of the following groups self-rated the highest score for palpitations in the Euphoria condition. Epinephrine Ignorant (Epi Ign) Epinephrine Informed (Epi Inf) Epinephrine Misinformed (Epi Mis) Placebo 1 mark for the correct answer. Epinephrine Ignorant (Epi Ign)	1
1(b)	In the Anger condition, an observer recorded the participant's response to the stooge using several categories. Outline how the category of 'Watches' was operationalised in this study. 1 mark per correct point. The participant makes no verbal response / did not agree or disagree with the stooge; To/with the stooge comments; But just directly watches/observes <u>the stooge</u>;	2

Question	Answer	Marks
2(a)	From the study by Baron-Cohen et al. (eyes test). Name the <u>two</u> tests used in this study, other than the eyes test. 1 mark per correct test named. Autism Spectrum Quotient / AQ; Intelligence Quotient / IQ / WASIR;	2
2(b)	For <u>one</u> of the tests you named in (a): Identify <u>one</u> strength of this test. 1 mark for correct strength identified. e.g. Quantitative data so easy to compare / comparable/objective; Published so can replicate; IQ is a standardised/psychometric test so valid/reliable; There are other creditworthy strengths.	1

Question	Answer	Marks
3(a)	In the study by Canli et al. (brain scans and emotions), participants viewed scenes. Outline how the participants' emotional arousal towards the scenes was measured. 1 mark per correct point. (The scale was) 0 = <u>not</u> emotionally intense at all; To 3 = <u>extremely</u> emotionally intense; There were four choices / four-point scale (per image); It was a scale of buttons that they had to press;	3
3(b)	Explain <u>one</u> weakness of how the participants' emotional arousal towards the scenes was measured. 1 mark for identifying the weakness. 1 mark for linking it to the study. e.g. It was a forced choice (scale) being used (1 mark: identification) so the (four) responses may not exactly represent how the participant actually felt towards the scene (1 mark: link). It is a subjective measurement (1 mark: identification) so participants will have different ideas on emotions / what a '3' means on the scale (1 mark: link). It may lack validity due to small range (1 mark: identification). The sample is difficult to generalise from as they were all female (0 marks: not about the measurement). There are other creditworthy weaknesses.	2

Question	Answer	Marks
4(a)	From the study by Bandura et al. (aggression): Describe how the participants were allocated into the experimental groups. 1 mark per correct point. Observed/rated by a teacher/experimenter (on aggression); Each participant had a composite score on aggression / from four scales; Participants were arranged in triplets/threes; Who had similar/same aggression scores / were matched on aggression; Randomly / equal chance of being in one of the experimental groups;	4

Question	Answer	Marks
4(b)	One conclusion was that imitation of aggression in children is influenced by the sex of the model. Outline <u>one</u> other conclusion from this study. 2 marks full conclusion. 1 mark brief/partial conclusion. e.g. Witnessing an aggressive act is enough to produce aggression in the person who observed it (2 marks); Boys are more likely to imitate aggression compared to girls (2 marks); Children can observe an adult and then imitate behaviour in the absence of that adult (2 marks); People will imitate aggression (1 mark); Girls are more likely to imitate verbal aggression (1 mark);	2

Question	Answer	Marks
5	In Experiment 2 of the study by Laney et al. (false memory), participants completed both the ‘Memory or Belief?’ questionnaire and the Food Preferences Questionnaire. Describe <u>one</u> result from the ‘Memory or Belief?’ questionnaire and <u>one</u> result from the Food Preferences Questionnaire. You <u>must</u> use data for <u>one</u> of these results. For result: 2 marks for result with a meaningful comparison. 1 mark for partial result / no meaningful comparison. For data: 1 mark for correct data in <i>one</i> of the results. e.g. Memory or Belief? Questionnaire There were more participants in the <i>Love</i> group who reported a ‘memory’ compared to the <i>Control</i> group (2 marks). For the <i>Love</i> group this was 28% of participants. (1 mark: data). There were more participants in the <i>Love</i> group who reported a ‘memory’ (1 mark). e.g. Food Preferences Questionnaire Believers reported more desire to eat asparagus at Session 2 / follow up compared to controls (2 marks). The mean rating for the Believers group rose by 1 point (1 mark: data). Believers reported more desire to eat asparagus at Session 2 / follow up (1 mark).	5

Question	Answer	Marks
6	Outline <u>two</u> assumptions of the social approach. You <u>must</u> use an example from a core study for each assumption. For assumptions: 2 mark for full assumption 1 mark for partial assumption. For example: 1 mark per correct example per assumption. Examples have to come from a core study and be linked to the assumption given. e.g., assumptions Behaviour/cognitions/emotions can be influenced by other individuals (2 marks) (must have two of the three elements mentioned at the beginning). Behaviour/cognitions/emotions can be influenced by groups (2 marks) (must have two of the three elements mentioned at the beginning). Behaviour can be influenced by other people (1 mark). Behaviour can be influenced by social <u>context</u> (1 mark). e.g., examples In the Milgram study the experimenter in the lab coat used prods to get them to continue to give electric shocks (1 mark); In the Piliavin study, some people only helped after a model had intervened (1 mark); In the Yamamoto study, the chimpanzee could give a tool as requested by another chimpanzee (1 mark).	6

Question	Answer	Marks
7	Suggest <u>two</u> real-world applications based on the study by Dement and Kleitman (sleep and dreams). Your suggestions <u>must</u> be ethical. 1 mark for <i>what</i> the application is (clearly based on Dement and Kleitman). 1 mark for <i>how</i> it will be achieved. e.g. It can help people with sleep related disorders (1 mark: what). Patients can be attached to an EEG monitor to see if brain waves whilst sleeping are typical or not (1 mark: how). It can be used in therapy involving dream analysis (1 mark: what). Patients can be woken up in REM sleep (via a device that detects REM sleep) and asked to recall the content of their dream immediately (1 mark: how). It can be used to promote better quality sleep (1 mark: what). People can use their watch / sleep app to measure/track sleep/REM time to see if sleep is good or needs 'improving' (1 mark: how). It can be used by a mattress company to see if their mattresses promote good quality sleep (1 mark: what). There are other creditworthy suggestions.	4

Question	Answer	Marks
8	Two friends, Haji and Dottie, are discussing the ethics of the study by Yamamoto et al. (chimpanzee helping). Haji thinks the study is ethical but Dottie thinks the study is <u>not</u> ethical. Explain <u>one</u> reason why Haji is correct and <u>one</u> reason why Dottie is correct, using evidence from this study. 3 marks for Haji. 1 mark per correct point made. 1 mark available for naming guideline. 3 marks for Dottie. 1 mark per correct point made. 1 mark available for naming guideline. e.g., Haji The smallest number of animals should be used in research (1 mark: naming guideline) in order to meet the aims and goals of the study (1 mark). Yamamoto only used five chimpanzees / five kin pairs of chimpanzees in the study (1 mark). The chimpanzees did not experience any deprivation (1 mark: reason) as they had access to food and water all of the time (1 mark). e.g., Dottie Behaviours cannot be controlled by the use of rewards only (1 mark: naming guideline). In this case it could be argued that one chimpanzee did get a reward at the expense of the other (1 mark) which meant that the chimpanzee who did not receive a reward was stressed (1 mark). The chimpanzees may have felt some distress (1 mark: reason) if they could not figure out which tool was the best choice (1 mark).	6

Question	Answer	Marks
9(a)	From the study by Saavedra and Silverman (button phobia): Outline what is meant by a phobia. 1 mark per correct point. e.g. It is a (an irrational) fear; Of an object or situation; We feel anxious in the presence of the (phobic) stimulus;	2
9(b)	Outline what is meant by evaluative learning. 1 mark per correct point e.g. It is a form of Classical Conditioning; An individual perceives/evaluates a previously neutral event/object negatively; As a result of complex cognitive/thought processes; Which is more likely to elicit disgust rather than fear of an object/event;	2

Question	Answer	Marks																		
9(c)	Explain <u>one</u> similarity and <u>one</u> difference between the study by Saavedra and Silverman (button phobia) and the study by Pepperberg (parrot learning). 4 marks available for the similarity. 4 marks available for the difference. Creditworthy points include: sample/sampling, ethics, quantitative data, species used, type of conditioning. <table border="1"> <thead> <tr> <th>Level</th><th>Descriptor</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>4</td><td>The similarity/difference is well explained using both studies as examples.</td><td>4 marks</td></tr> <tr> <td>3</td><td>The similarity/difference is well explained/described but only one study is used as an example OR both studies used briefly.</td><td>3 marks</td></tr> <tr> <td>2</td><td>The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.</td><td>2 marks</td></tr> <tr> <td>1</td><td>The similarity/difference is brief with no attempt at using studies as examples.</td><td>1 mark</td></tr> <tr> <td>0</td><td>No creditworthy material.</td><td>0 marks</td></tr> </tbody> </table> e.g. similarity 4 marks Both of the studies used the case study method. Saavedra and Silverman used a boy who had been diagnosed with a button phobia. Pepperberg used a parrot who was being tested on the concepts of same/different. This means that both studies could collect rich/in depth data about the participant. 3 marks Both of the studies used the case study method. Saavedra and Silverman used a boy who had been diagnosed with a button phobia. Pepperberg used a parrot who was being tested on the concepts of same/different. 2 marks Saavedra and Silverman used just one boy with a phobia and Pepperberg used just one parrot. 1 mark They both used the case study method.	Level	Descriptor	Mark	4	The similarity/difference is well explained using both studies as examples.	4 marks	3	The similarity/difference is well explained/described but only one study is used as an example OR both studies used briefly.	3 marks	2	The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.	2 marks	1	The similarity/difference is brief with no attempt at using studies as examples.	1 mark	0	No creditworthy material.	0 marks	8
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Question	Answer	Marks
10	Evaluate the study by Andrade (doodling) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about the use of an independent measures design. Suitable strengths include: internal validity, reliability, independent measures, generalisations. Suitable weaknesses include: external validity, ethics, independent measures. Level 4 (8–10 marks) • Evaluation is comprehensive. • Answer demonstrates evidence of careful planning, organisation and selection of material. • Analysis (valid conclusions that effectively summarise issues and arguments) is evident throughout. • Answer demonstrates an excellent understanding of the material. Level 3 (6–7 marks) • Evaluation is good. • Answer demonstrates some planning and is well organised. • Analysis is often evident but may not be consistently applied. • Answer demonstrates a good understanding of the material. Level 2 (4–5 marks) • Evaluation is mostly appropriate but limited. • Answer demonstrates limited organisation or lacks clarity. • Analysis is limited. • Answer lacks consistent levels of detail and demonstrates a limited understanding of the material. Level 1 (1–3 marks) • Evaluation is basic. • Answer demonstrates little organisation. • There is little or no evidence of analysis. • Answer does not demonstrate understanding of the material. Level 0 (0 marks) No response worthy of credit.	10



Cambridge International AS & A Level

PSYCHOLOGY

9990/13

Paper 1 Approaches, issues and debates

May/June 2023

MARK SCHEME

Maximum Mark: 60

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**Social Science-Specific Marking Principles
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers / examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons.).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted / not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion / Corrosion)

2 Presentation of mark scheme:

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information / context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

3 Annotation:

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

Question	Answer	Marks
1(a)	From the study by Schachter and Singer (two factors in emotion): Identify which <u>one</u> of the following groups scored the lowest on the Activity Index in the Euphoria condition. Epinephrine Ignorant (Epi Ign) Epinephrine Informed (Epi Inf) Epinephrine Misinformed (Epi Mis) Placebo 1 mark for correct answer. Epinephrine informed (Epi Inf)	1
1(b)	In the Anger condition, an observer recorded the participant's response to the stooge using several categories. Outline how the category of 'Neutral' was operationalised in this study. 1 mark per correct point. A non-committed response; An irrelevant response; To any of the stooge's remarks;	2

Question	Answer	Marks
2(a)	From the study by Piliavin et al. (subway Samaritans): Name <u>two</u> measures observed for every participant who helped a victim. 1 mark per correct measure. Race; Sex; Location; Latency time for helping;	2
2(b)	Identify <u>one</u> methodological strength of this study. 1 mark for correct strength identified. Ecological validity; Mundane realism; Replicable; Generalisable;	1

Question	Answer	Marks
3(a)	In the final part of the study by Bandura et al. (aggression), each participant spent 20 minutes in the experimental room and their behaviour was observed through a one-way mirror. Outline the procedure for this final part of the study. The room contained a range of toys / had Bobo doll and other toys in it; Behaviour was rated on (predetermined) response categories; E.g. imitation of physical aggression, imitative verbal aggression, imitative nonaggressive responses (2 named for 1 mark); The session was divided into 5 second intervals; Using an electric interval timer; A total of 240 response units were recorded per participant; The male model completed all observations; Half were then rated by a second observer (for inter-rater reliability);	3
3(b)	Explain <u>one</u> weakness of this final part of the study. 1 mark for identifying an appropriate weakness. 1 mark for linking to study. e.g. There may have been issues with validity of recording behaviours (1 mark) as the observer could distinguish which group a participant was in as nearly all children replicated novel aggressive responses shown by the model (1 mark). There may have been some issues surrounding reliability of observations (1 mark) as the inter-rater reliability score was 0.9 rather than a perfect 1 so not all behaviours were agreed upon (1 mark).	2

Question	Answer	Marks
4(a)	From the study by Milgram (obedience): Describe the feedback from the learner (victim) that was given to the teacher (participant) during this study. 1 mark per correct point. These were predetermined responses; There tended to be three wrong answers to one correct; No vocal response is heard up until Shock Level 300; When 300v given, the learner pounds on the wall; From this point on there are no answers from the learner; The learner pounds again at 315v; After that there is no pounding or answers given;	4
4(b)	One conclusion was that people find it stressful to follow destructive orders from a person in authority. Outline <u>one</u> other conclusion from this study. 2 marks full conclusion. 1 mark brief/partial conclusion. Individuals appear to be much more obedient to an authority figure than we might expect (2 marks); People will follow / listen to an authority figure even if it means harming another person (2 marks); People are willing to harm someone if responsibility is taken away / passed on to someone else (2 marks); People will be obedient to an authority figure (1 mark); All participants gave 300v (0 marks: result);	2

Question	Answer	Marks
5	In Experiment 2 of the study by Laney et al. (false memory), participants completed both the Food History Inventory and photograph ratings of food items. Describe <u>one</u> result from the Food History Inventory and <u>one</u> result from the photograph ratings of food items. You <u>must</u> use data for <u>one</u> of these results. For result: 2 marks for result with a meaningful comparison. 1 mark for partial result / no meaningful comparison. For data: 1 mark for correct data in <i>one</i> of the results. e.g. Food History Inventory The mean confidence of the Love Group increased <i>more</i> than the Control Group (2 marks). This was 2.5 points for the Love Group (1 mark: data); The mean confidence of the Love Group increased (1 mark). e.g. Photograph Ratings Believers rated the asparagus photo as being more appetising compared to controls (2 marks). The score for the believers was 5.1 (1 mark: data); Believers scored lowest on the disgusting rating for asparagus (1 mark).	5

Question	Answer	Marks
6	Outline <u>two</u> assumptions of the learning approach. You <u>must</u> use an example from a core study for each assumption. For assumptions: 2 mark for full assumption 1 mark for partial assumption. For example: 1 mark per correct example per assumption. Examples have to come from a core study. E.g., assumptions Operant Conditioning can explain changes in <u>behaviour</u> (2 marks); Classical Conditioning can explain changes in <u>behaviour</u> (2 marks); Social Learning can explain changes in <u>behaviour</u> (2 marks); Conditioning can explain behaviour (1 mark); E.g., examples In the Bandura study, children observed and imitated (modelled) aggressive behaviours; In the Pepperberg study, Alex the parrot got rewarded for a correct response to a question; In the Saavedra and Silverman study, classical conditioning (evaluative learning) was used to help understand the causes of his button phobia;	6

Question	Answer	Marks
7	Suggest <u>two</u> real-world applications based on the study by Baron-Cohen et al. (eyes test). Your suggestions <u>must</u> be ethical. 1 mark for <i>what</i> the application is (clearly based on Baron-Cohen et al.). 1 mark for <i>how</i> it will be achieved. The eyes test could be used as a diagnostic tool for AS/HFA (1 mark: what); those who score low on the test may show a lack of theory of mind (1 mark: how). The eyes test can be used to improve social intelligence in people diagnosed with AS/HFA (1 mark: what). A therapist can run through the test with them explaining why each emotion is being shown (1 mark: how).	4

Question	Answer	Marks
8	Two friends, Maria and Oscar, are discussing the ethics of the study by Saavedra and Silverman (button phobia). Maria thinks the study is ethical but Oscar thinks the study is <u>not</u> ethical. Explain <u>one</u> reason why Maria is correct and <u>one</u> reason why Oscar is correct, using evidence from this study. 3 marks for Maria. 1 mark per correct point made. 1 mark available for naming guideline. 3 marks for Oscar. 1 mark per correct point made. 1 mark available for naming guideline. E.g., Maria The study did gain informed consent (1 mark). This was taken from the boy and his mother before the therapy started (1 mark). Therefore, both the boy and mother knew exactly what the <u>therapy</u> was going to entail (1 mark); the boy/mother agreed to wanting to take part in the study / having results published (alternative 1 mark). Also, they started the therapy with his least distressing scenario (1 mark). The mother used positive reinforcement during the therapy so the boy would not get too distressed (1 mark). Therefore, the boy was protected from any harm throughout the therapy (1 mark). E.g., Oscar The study could have easily caused psychological stress (1 mark). The boy was having to confront his button phobia throughout the therapy (1 mark). He also had to discuss potential causes/effects of the phobia (e.g., buttons falling on him in art class) which would be stressful (1 mark).	6

Question	Answer	Marks
9(a)	From the study by Yamamoto et al. (chimpanzee helping): Outline what is meant by altruism. 1 mark per correct point. e.g. The willingness to help / doing certain things for someone else (1 mark) even if it disadvantages yourself / gain no benefit (1 mark).	2
9(b)	Outline what is meant by targeted helping. 1 mark per correct point. e.g. To select an appropriate tool / offer appropriate advice; To help someone else / a chimpanzee solve a task; As the person/chimpanzee giving the help understands the demands of the situation;	2

Question	Answer	Marks																		
9(c)	Explain <u>one</u> similarity and <u>one</u> difference between the study by Yamamoto et al. (chimpanzee helping) and the study by Pepperberg (parrot learning). 4 marks available for the similarity. 4 marks available for the difference. Creditworthy points include: sample/sampling, ethics, quantitative data, species used. <table border="1"> <thead> <tr> <th>Level</th><th>Descriptor</th><th>Mark</th></tr> </thead> <tbody> <tr> <td>4</td><td>The similarity/difference is well explained using both studies as examples.</td><td>4 marks</td></tr> <tr> <td>3</td><td>The similarity/difference is well explained/described but only one study is used as an example OR both studies used briefly.</td><td>3 marks</td></tr> <tr> <td>2</td><td>The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.</td><td>2 marks</td></tr> <tr> <td>1</td><td>The similarity/difference is brief with no attempt at using studies as examples.</td><td>1 mark</td></tr> <tr> <td>0</td><td>No creditworthy material.</td><td>0 marks</td></tr> </tbody> </table> e.g. similarity 4 marks Both of the studies used animals/non-humans as participants. Yamamoto used a group of chimpanzees in a Primate Research Laboratory whilst Pepperberg used a solitary African Grey parrot. Therefore, they would have to adhere to the same ethical guidelines of housing etc. 3 marks Both of the studies used animals/non-humans as participants. Yamamoto used a group of chimps to test helping and Pepperberg used a parrot to test his comprehension. 2 marks Both of the studies used animals/non-humans as participants. Yamamoto used a group of chimps. 1 mark Both studies used animals/non-humans as participants.	Level	Descriptor	Mark	4	The similarity/difference is well explained using both studies as examples.	4 marks	3	The similarity/difference is well explained/described but only one study is used as an example OR both studies used briefly.	3 marks	2	The similarity/difference is brief with an attempt at using at least one study as an example OR The similarity/difference is well explained but there is no study evidence.	2 marks	1	The similarity/difference is brief with no attempt at using studies as examples.	1 mark	0	No creditworthy material.	0 marks	8
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10	Evaluate the study by Dement and Kleitman (sleep and dreams) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about reliability. Suitable strengths are: internal validity, reliability, quantitative data. Suitable weaknesses are: external validity, ethics, quantitative data. Level 4 (8–10 marks) • Evaluation is comprehensive. • Answer demonstrates evidence of careful planning, organisation and selection of material. • Analysis (valid conclusions that effectively summarise issues and arguments) is evident throughout. • Answer demonstrates an excellent understanding of the material. Level 3 (6–7 marks) • Evaluation is good. • Answer demonstrates some planning and is well organised. • Analysis is often evident but may not be consistently applied. • Answer demonstrates a good understanding of the material. Level 2 (4–5 marks) • Evaluation is mostly appropriate but limited. • Answer demonstrates limited organisation or lacks clarity. • Analysis is limited. • Answer lacks consistent levels of detail and demonstrates a limited understanding of the material. Level 1 (1–3 marks) • Evaluation is basic. • Answer demonstrates little organisation. • There is little or no evidence of analysis. • Answer does not demonstrate understanding of the material. Level 0 (0 marks) No response worthy of credit.	10