Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/13**

Paper 1 Approaches, Issues and Debates **October/November 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 October/November 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

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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.

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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.

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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.

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Question	Answer	Marks	Guidance
1(a)	**From the study by Milgram (obedience):** **State the percentage of participants who pressed the 300–volt level switch.** 1 mark for the correct answer. Take the first answer only. 100(%)	**1**	No tolerance.
1(b)	**Outline the payment given to participants.** 1 mark per correct point. They were paid $4.50. Told it was simply for coming to the laboratory. They were told they could keep it no matter what happened.	**2**	List is definitive. Tolerance is $4–$5 Credit 50c for taxi ride.

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Question	Answer	Marks	Guidance
2	**From the study by Pepperberg (parrot learning):** **Describe the procedure of the 'Transfer Tests with Novel Objects'.** 1 mark per correct point. At least 1 must come from the following: Alex was presented with (pairs of) objects never used in **training**. They also had not been used in any previous **tests** asking same/different. The objects may also have been **'totally' novel**/never encountered before. 1 mark per correct point (maximum 3): These objects were kept on a shelf in view of Alex. Therefore, at least one of the pair of objects was unfamiliar to Alex. These could be colours/shapes he had no label for. He was then asked, 'What's Same?'/'What's Different?' If he answered correctly he was praised or rewarded (kept object)/if incorrect the experimenter said 'no'.	**4**	List is definitive. If a candidate has not been awarded 4 marks, they can gain one mark for one of the following: Principal trainer sat with back to Alex. Principal trainer did not know what objects were being presented. Principal trainer repeated what Alex said. Do **not** credit 'given novel objects' as it is in the Q. Accept 'unfamiliar' as novel.

Question	Answer	Marks	Guidance
3	**Explain <u>one</u> problem that could arise if children were used as participants in the study by Laney et al. (false memory).** 1 mark for identification of the problem. 1 mark for elaboration of the problem (can be linked to study or not) 1 mark for linking it to Laney et al. e.g. Children's linguistic ability/experiences of food are not the same as adult (1 mark: identification). The questionnaires used (potentially had) terminology on that a child may find difficult to comprehend (1 mark: elaboration) for example would a child know what sautéed asparagus is? (1 mark: link). Children would be an inappropriate sample to use (1 mark: identification). The aim of the study was about a childhood memory before the age of 10 (1 mark: link) so this would not be possible if children under 10 were used (1 mark: elaboration). There are other creditworthy problems including ethical issues.	**3**	Go with the intention of the candidate. Do not accept anything about generalisations. One mark must be from an example from Laney. Unethical enough for ID.

Question	Answer	Marks	Guidance
4(a)	**From the study by Schachter and Singer (two factors in emotion).** **Describe the procedure from immediately after the injection to immediately before the stooge began his standardised behaviours.** 1 mark per correct point. The experimenter brought a stooge into the room. The experimenter introduced the stooge to the participant. The experimenter explained that there would be a 20-minute delay. This was to ensure that the Suproxin was in the bloodstream. (Anger) The experimenter then asked the P and stooge to use the 20 minutes to complete some questionnaires. (Anger) The experimenter then handed out the questionnaires (to the P and stooge). (Anger)The experimenter then said he will be back in 20 minutes to collect questionnaires/begin vision test. (Euphoria) The experimenter apologised for the disarray in room/taken to a room that was in disarray. (Euphoria) The experimenter told them that they could use anything in the room. The experimenter then left the room.	**4**	List is definitive. Ignore any reference to the content of the questionnaires or any of the stooge's standardised behaviours.
4(b)	**Outline <u>one</u> conclusion from this study.** 2 marks detailed conclusion. 1 mark partial/brief. e.g. There are two factors involved when we experience emotions: a physiological/biological one and a psychological/cognitive one (2 marks). The findings supported the two-factor theory of emotion (1 mark). The highest pulse rate change was in the Anger condition with EPI-IGN (0 marks).	**2**	Do not credit results.

Question	Answer	Marks	Guidance
5(a)	**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).** **Outline <u>one</u> other aim.** 2 marks full aim 1 mark partial/brief aim e.g., To test people on a revised Eyes Test to see if some of the original deficits were no longer seen (2 marks). To see if people with AS/HFA lack/have a Theory of Mind (2 marks). To investigate sex differences in performance on the revised Eyes Test (2 marks). To investigate if females will score higher on the revised Eyes Test (2 marks). To improve the Eyes test (1 mark). To test for Theory of Mind (1 mark).	**2**	Ignore aim based on correlation between eyes test and AQ. Ignore reference to scoring 'better' = 0.
5(b)	**Outline <u>one</u> result in relation to the Autism Spectrum Quotient (AQ).** 2 marks for result with a meaningful comparison. 1 mark for partial result/no meaningful comparison. e.g., The AS/HFA group scored (significantly) higher than Group 3 / Group 4 (2 marks). Males in Group 3 scores higher than females in Group 3 (2 marks). Participants in Groups 3 and Groups 4 scored roughly the same (2 marks). The AS/HFA group scored the highest (1 mark). Females in Group 3 scored the lowest (1 mark). Group 4 scored better on the AQ test (0 marks = value judgement).	**2**	Ignore reference to scoring 'better' = 0. If the response is about an inverse/negative correlation between AQ and Eyes Test then max 1. Group 2 did not complete the AQ.

Question	Answer	Marks	Guidance
5(c)	**Outline <u>one</u> result comparing the participants of Group 1 to the participants of Group 2. You <u>must</u> use data in your answer.** 1 mark for result with a meaningful comparison between two groups given in the question. 1 mark for correct data. e.g. The AS/HFA group / Group 1 scored (significantly) lower on the Eyes Test than Group 2 / General population (1 mark) with a mean of 21.9 (2 marks) The AS/HFA scored the lowest (1 mark).	**2**	The answer can only be about the eyes test result as Group 2 did not complete the AQ or have their IQ measured. Data only needs to be provided for one group. Tolerance: Group 1: 21–22 Group 2: 26–27 Ignore reference to scoring 'better' = 0. Use tick-d for data mark.

Question	Answer	Marks	Guidance
6(a)	**From the study by Bandura et al. (aggression):** **Describe the background to this study.** e.g., Previous studies had shown that children readily imitate behaviour in the presence of an adult model. Social Learning theory was being investigated, which centres around observing and imitating behaviours. People pay attention to a role model. They retain this information in their memory. They must feel like they are capable of imitating the behaviour. They must feel motivated to want to imitate the behaviour / feel will get rewarded for imitation. This study looked into delayed imitation. This when someone witnesses a behaviour at one time point but only reproduces that behaviour at a different time point.	**4**	If in doubt, refer to the introduction of the original paper. Do not credit results from Bandura as NAQ. 1 mark is available for a term linked to SLT (annotate with tick-e).
6(b)	**Explain why this study is from the learning approach.** 2 marks = clearly linked to learning approach (either through example or assumption) 1 mark = partially linked to learning approach e.g. One assumption of the learning approach is that we learn through Social Learning (1 mark). In this study, participants observed and imitated a model's aggressive behaviours (1 mark).	**2**	Do not credit rewards/reinforcement. Do credit vicarious reinforcement / learning and effect of environment and experiences.

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Question	Answer	Marks	Guidance
7	**Suggest <u>two</u> real-world applications based on the study by Saavedra and Silverman (button phobia).** **Your suggestions <u>must</u> be ethical.** 1 mark for what the application is (clearly based on Saavedra and Silverman) or an element of the study that is useful to know for an application (due to the nature of the study). 1 mark for how it will be achieved. e.g. The boy revealed that during an art class a bowl of buttons fell on him as he tried to get some (1 mark: what). Therefore, a therapist may need to investigate / discover a situation when the person first came into contact with their phobic stimulus to (potentially) unearth the cause (1 mark: how) After just four sessions of the mother providing positive reinforcement the boy could cope with his worst button fears (1 mark: what). Therefore, for children with phobias, having a parent involved in the therapy might bring about faster positive outcomes (1 mark: how) Therapists could use imagery exposure to help treat for other phobias (1 mark: what). Clients can be asked to imagine their phobia in different scenarios (1 mark: how) Therapists can use a Feelings Thermometer to measure level of fear/disgust (1 mark: what). Clients can be asked to rate different elements of their phobia so then the therapist can begin with the least traumatic (1 mark: how). There are other creditworthy responses.	**4**	Annotate with a tick for what the application is and a + for how it will be achieved. In this instance the 'what' can be a finding. Anything linked to a therapeutic *process* used in the study <u>is</u> ethical for this question. If any suggestion is about using therapy then a specific one needs to be named (e.g., imagery exposure or behavioural exposure).

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Question	Answer	Marks	Guidance
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 <u>one</u> reason why Xander is correct and <u>one</u> reason why Silvia is correct using evidence from this study.** 1 mark per correct point 3 marks for Xander. 1 mark available for defining the individual explanation. 3 marks for Silvia. 1 mark available for defining the situational explanation. e.g., Xander The individual explanation states that we behave because of our personality (1 mark). Different personalities will doodle in many different ways (1 mark). There were individual differences in the amount of doodling that each participant engaged in. (1 mark) It supports the individual side of the debate as everyone doodled in different ways, may be based on their personality type (1 mark) / wide variety in the amount of doodles (someone doodled 100 items) (1 mark); for example, people who are labelled as extraverts may require doing more than one thing at once to help stimulate themselves and concentrate better (1 mark) e.g., Silvia The situational explanation states that we behaviour because of the environment we find ourselves in / our surroundings / other people around us (1 mark).	**6**	For Xander, do **not** credit 'individual' for a definition. For Xander, having a better memory is creditworthy. For Silvia, do **not** credit 'situation' for a definition. If there is no explicit evidence presented from Andrade then max 2.

Question	Answer	Marks	Guidance
8	The situation of a boring/monotonous telephone message made the participants doodle (1 mark) and some of these participants may be used to doodling in boring situations (1 mark) Andrade had made sure that everyone was bored so that the situation caused them to doodle / concentrate more when doodling (1 mark); the task itself may have brought about an improvement in concentration as doodling helped them focus more (1 mark) as the doodling group did recall more correct names than the control (1 mark)		

Question	Answer	Marks	Guidance
9(a)	**Describe the sample in the study by Yamamoto et al. (chimpanzee helping).** 1 mark per correct point Five pairs/five chimpanzees. Each paired with kin/mother. Three were juveniles. Socially housed. Primate Research Institute at Kyoto University. Had participated in previous research (about perceptual/cognitive mechanisms /sharing behaviour). Had demonstrated sharing behaviour before.	**4**	List is definitive. Accept n=6 Do **not** accept opportunity sample. Do **not** accept ‘been well trained’.

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>9(b)</td><td>
Explain whether each ethical guideline below, relating to animals, was broken in the study by Yamamoto et al. (chimpanzee helping).

• deprivation and aversive stimuli
• housing
• pain and distress
• reward

For each guideline, use the following banded mark scheme:
<table>
<tr><th>Level</th><th>Descriptor</th><th>Marks</th></tr>
<tr><td>2</td><td>The answer explicitly describes the ethical guideline, and the example is contextualised from the named study.</td><td>2</td></tr>
<tr><td>1</td><td>The answer explicitly describes the ethical guideline without correct contextualisation / no contextualisation.
OR the ethical guideline is identified from the use of a brief example contextualised from the named study.
OR the ethical guideline is incorrectly described but the contextualised example from the named study is correct</td><td>1</td></tr>
<tr><td>0</td><td>The description of the ethical guideline is incorrect and/or the contextualised example is incorrect.
OR no answer given</td><td>0</td></tr>
</table>
</td><td>8</td><td>
Do not credit tautological answers:

e.g., housing is about where they house the chimpanzees.

Go with the intentions of the candidate.

Annotate with L2, L1 or SEEN.

Accept not deprived of food/water. Accept familiar with tools.

Do not accept anything about the experimental booths.

Do accept placed in a cage <u>for trials</u> may be distressing.

Do accept being given a reward of juice as an example.
</td></tr>
</table>

Question	Answer	Marks	Guidance
9(b)	e.g., deprivation and aversive stimuli Deprivation needs to be avoided / justified based on the needs of the species. The chimpanzees were only deprived of social contact for a limited time during trials / were socially housed outside of trials (not broken) e.g., housing Housing should take into account the social behaviour of species (e.g., caging). The chimpanzees were socially housed at Kyoto University (not broken). e.g., pain and distress Researchers should always attempt to minimise pain and distress that might arise in a study. There were no invasive procedures carried out on the chimpanzees, it as just tool selection (not broken) e.g., reward Behaviours cannot be controlled by the use of rewards **only /** Rewards should be tailored to the animal and based on preferred food choices / object choice. In this case it could be argued that one chimpanzee did get a reward at the expense of the other (broken).		

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>10</td><td>
Evaluate the study by Canli et al. (brain scans and emotions) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about generalisations.

Suitable strengths include internal validity, reliability, quantitative data.
Suitable weaknesses include generalisations, ethics, external validity.

<table>
<tr><th></th><th>Additional guidance</th></tr>
<tr><td>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.</td><td>10 marks is reserved for: The candidate has given four evaluation points (two strengths and two weakness) that are in depth, in the context of the study, and include the named evaluation point.

Max 8 if: The candidate has given three evaluation points (at least one strength and one weakness) and they are in the context of the Canli et al. study and it includes the named evaluation point, in depth.</td></tr>
<tr><td>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.</td><td>Max 6: if the answer does not include the named evaluation point.

Max 6: if The candidate has given one strength and one weakness and they are in the context of the Canli et al. study and indepth.</td></tr>
</table>
</td><td>10</td><td>Use tick-d for detailed (so the candidate clearly explains why it is a strength or a weakness).

Use tick-b for brief (tends to not explain why).

Rules (points in context)
If all tick-b then Level 2 max
If mixture of tick-b and tick-d then likely Level 3
If three tick-d and one tick-b then Level 4 8 marks max
All have to be tick-d and in context to gain Level 4

If no points are in context then Level 1 max, unless well explained then Level 2</td></tr>
</table>

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>10</td><td>
<table>
<tr><td>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.</td><td>Max 5: The candidate has given either two strengths or two weaknesses (contextualised).

Max 4: if The candidate has given one strength or weakness that is in the context of the Canli et al. study which is in-depth</td></tr>
<tr><td>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.</td><td>Max 3: The candidate has given two evaluation points that are generic/brief.

Max 2: The candidate has given one evaluation point that is generic/brief.</td></tr>
<tr><td>Level 0 (0 marks)
No response worthy of credit.</td><td>If the answer is a description of the study</td></tr>
</table>
</td><td></td><td></td></tr>
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