CAMBRIDGE
International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **May/June 2024**

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.

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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 descriptions 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)	**The first stage of the study by Bandura et al. (aggression) was when the children were rated on four scales by the experimenter and a nursery school teacher. One of these scales was 'aggressive inhibition'.** **Identify <u>one</u> of the other scales used in this first stage.** 1 mark for correct answer. Physical aggression. Verbal aggression. Aggression towards inanimate objects.	**1**	Take the first answer <u>only.</u> List is definitive.
1(b)	**Outline how the children were assigned to one of the conditions in this study.** 1 mark per correct point. The scores on the four scales were added together. Participants were arranged 'in triplets'/matched on their (initial aggressive) ratings. Assigned at random to one of the conditions.	**2**	List is definitive. Ignore reference to being divided by gender/type of model.
1(c)	**Identify <u>two</u> features of the final experimental room used in the 'test for delayed imitation'.** 1 mark per correct feature <u>Variety</u> of toys. Some were 'aggressive toys'/Bobo doll (any aggressive toy can be awarded mark). Some were 'nonaggressive toys'/tea set (any nonaggressive toy can be awarded mark). Arranged in a fixed order/always in the same place. One way mirror.	**2**	Allow 'no model/experimenter in the room'. Do **not** accept 2-way mirror. predominantly nonaggressive forms of behavior. The aggressive toys included a 3-foot Bobo doll, a mallet and peg board, two dart guns, and a tether ball with a face painted on it which hung from the ceiling. The nonaggressive toys, on the other hand, included a tea set, crayons and coloring paper, a ball, two dolls, three bears, cars and trucks, and plastic farm animals. In order to eliminate any variation in behavior due

Question	Answer	Marks	Guidance
2(a)	**From the study by Andrade (doodling):** **Outline the experimental design used in this study.** 1 mark for correct identification of experimental design. 1 mark for the correct outline (generic or by example). Independent groups (1 mark: identification) Participants only took part in one condition/level of IV/two separate groups (1 mark: outline generic) Participants were either in the doodling group or non-doodling/control group (1 mark: example).	**2**	List is definitive. …as there was a doodling group and a control group = 1 mark.
2(b)	**Outline one conclusion from this study.** 2 marks full conclusion 1 mark partial/brief conclusion e.g., People concentrate better/their memory is better when allowed to doodle as it focuses their attention/stops them getting distracted (2 marks). People can pay attention to information even when engaged in dual-processing (tasks) (2 marks). Doodling aids concentration/memory as it increases arousal/alertness/attention/reduces daydreaming (2 marks). Doodling aids concentration/memory (1 mark). Participants recalled more names in the doodling condition (0 marks: result). There are other creditworthy responses.	**2**	Ignore pure results. Do credit a conclusion presented after the results in a response

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Question	Answer	Marks	Guidance
3(a)	**From the study by Dement and Kleitman (sleep and dreams):** **Outline <u>one</u> result in relation to REM sleep and dream recall.** 2 marks for the result with a meaningful comparison. 1 mark for result with no meaningful comparison. e.g., There were more dreams recalled in REM compared to NREM sleep (2 marks). There were more dreams recalled in REM (1 mark). There was a positive correlation between the number of words used to recall dream (in RME) and length of time in REM. WD had the highest recall level in REM compared to the other participants/KC/DN etc. (2 marks). There are other creditworthy responses	**2**	Dreams are more vivid in REM (than NREM) = 1 mark. Most dreams occur in REM (than NREM) = 1 mark. Dreams are more detailed in REM (than NREM) = 1 mark. Do **not** credit dreams only occur in REM.
3(b)	**Outline <u>one</u> result in relation to dream duration estimates when participants were woken up 15 minutes after the onset of REM sleep.** 2 marks for the result with a meaningful comparison. 1 mark for result with no meaningful comparison. e.g., Participants were less likely to estimate 15 mins correctly compared to 5 mins correctly (2 marks). There were 47 instances of correct estimation compared to 13 instances of incorrect estimation (2 marks). DN only got the estimate correct 50% of the time (1 mark). There are other creditworthy responses.	**2**	Accept on 78% of trials, Ps could estimate 15 minutes correctly = 1 mark. Accept ‘most’ estimations of length were correct = 1 mark. However, 78% of **Ps** could estimate correctly is incorrect = 0 marks.

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Question	Answer	Marks	Guidance
3(c)	**Explain <u>one</u> weakness of this study.** 1 mark for the identification of weakness. 1 mark for explaining the weakness via example from the study. e.g. (Lacks) generalisability (1 mark: identification) as the sample size was only 5 for those studied intensively and these people may be unique (1 mark: explanation in context). (Lacks) mundane realism (1 mark: identification) as being asked to guess how long you have been asleep for is not a typical daily behaviour (1 mark: explanation in context. (Lacks) ecological validity (1 mark: identification). There are other creditworthy responses, including ethics.	**2**	

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Question	Answer	Marks	Guidance
4(a)	**From the study by Milgram (obedience):** **Outline what is meant by the term 'obedience'.** 1 mark for aspect of following orders. 1 mark for aspect of it being an authority figure. e.g., The act of following order (1 mark) given by a figure in authority (1 mark).	**2**	Ignore tautological responses with the word obedience in the definition (obey is fine though). Do **not** accept conformity.
4(b)	**Outline how <u>one</u> ethical guideline was broken in this study.** 1 mark for identification of an appropriate ethical guideline. 1 mark for outlining the ethical guideline. 1 mark for example from Milgram. e.g., Deception (1 mark) is when you are given false information about the study (1 mark). In Milgram, the participants thought that the shock was real (1 mark). Right to withdraw (1 mark) is when participants are able to leave a study without consequence (1 mark). In Milgram, the prods given by the experimenter stopped the participants from leaving (1 mark). There are other creditworthy responses.	**3**	Candidates can also get 3 marks for identifying an ethical guideline and then the other two marks for two different ways that guideline was broken. 'He did not tell the true aim' is **not enough** for an example mark here.

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>5</td><td>Suggest at least one application to everyday life of the study by Hölzel et al (mindfulness and brain scans). Do <u>not</u> refer to more than three applications in your answer. Your suggestion(s) <u>must</u> be ethical.

e.g.,
Employers with employees who are feeling stressed.
(Counsellors in) schools can use them to help reduce stress in students (around exam time).
Using brain scans to examine grey matter concentration in therapy/people with problems/head injuries.
Yoga instructors can introduce elements of mindfulness into their classes to decrease stress.

<table>
<tr><th>Marks</th><th>Description</th></tr>
<tr><td>5</td><td>One application suggested in depth, and it is clear what the application is and how it will be achieved; OR
More than one application suggested in less depth but still clearly showing what the application is and how it will be achieved</td></tr>
<tr><td>3–4</td><td>One application suggested which has some detail with the application identifiable and how it will be achieved; OR
More than one application suggested that are brief but the application is identifiable with how it will be achieved.</td></tr>
<tr><td>1–2</td><td>One or more application suggested that are/is brief but may lack clarity as to what the application is and/or how it will be achieved</td></tr>
<tr><td>0</td><td>No creditworthy real-world application or description of study only</td></tr>
</table>
</td><td>5</td><td>Annotate in the following way:

tick = what [explicit]
plus = how [explicit]
I = what/how implicit (see below)

Ignore responses about explaining everyday behaviours with examples. They must be proactive/prospective applications to everyday life, not explanations/retrospective.

Implicit what = can be used by teachers/in school/in workplace (not suggest as to what it is being used for).

Implicit how = get people to ‘do mindfulness’.</td></tr>
</table>

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Question	Answer	Marks	Guidance
6	**From the study by Pozzulo et al (line-ups):** **Describe the 'line-up presentation' for the target-absent condition.** 1 mark per correct point made up to 4 marks. 1 mark for the marking point in **bold** as it is unique to the target-absent condition. **The target was replaced with a similar foil/foil had similar features to the target.** All of the pictures were shown simultaneously. The target and target replacement were always in the same position. The target's line-up position was randomised. There were four photographs/foils in the line-up. A silhouette was in the line-up (to represent the possibly of an absent target) Each participant watched four videos. These were presented on a laptop/computer/on a screen. These were in a random order. The photo array/line-up was shown after each video. The position of the replacement was counterbalanced across photo arrays/line-ups. None of the (four) photographs had been in the video.	**5**	The list is definitive. For the annotations use ticks are per usual but **use tick-b for the point in bold** to know that the response can access all available marks. 3 foils in the line-up plus a silhouette = 2 marks [4 foils and the silhouette mark are added together]. Do **not** credit how the photographs were chosen. Do **not** credit what a participant was expected to do. **Do** credit target was not in the line-up. 4 foils and a silhouette = 1 mark for the 4 foils **only**.

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Question	Answer	Marks	Guidance
7	**Suggest <u>two</u> problems that could arise if children were used as participants in the study by Perry et al. (personal space).** For each problem (max 2 per problem): 1 mark for identification/outline of the problem (generic). 1 mark for linking it to Perry et al. e.g. There are ethical issues with using children (1 mark: identification/outline). This could be protection from psychological harm (1 mark alternative: identification/outline). In this study, children may have found the situation about invading personal space stressful as it could have felt like a test or examination (1 mark: link). Children may not understand what is being asked of them (1 mark: identification/outline). Therefore, the children may not understand how the figures approaching task worked (1 mark alternative: identification/outline). As a result, the children may have seen it as a game and therefore it might not be invasion of personal space that is being measured (1 mark: link). Children might not be able to use a computer (1 mark: identification/outline). There are other creditworthy responses, including parents might get distressed with child receiving oxytocin, potential side effects of oxytocin for children, likely to drop out due to high number of trials.	**4**	Go with the intention of the candidate. Do **not** credit cannot generalise to adults. Do **not** accept anything about injecting oxytocin into children as a link as this did not happen in the study.

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Question	Answer	Marks	Guidance
8	**Two friends, Sabtu and Joyah, are discussing the validity of the study by Piliavin et al. (subway Samaritans). Sabtu says the study has validity, but Joyah says the study does <u>not</u> have validity.** **Explain why <u>either</u> Sabtu <u>or</u> Joyah is correct, using evidence from this study in your answer.** 1 mark can be awarded for the identification of a relevant example of validity/concept linked to validity. 1 mark per point explaining why valid/not valid via <u>evidence from the study</u>. e.g., Sabtu The study did have some controls like the model dressing with similarity (1 mark). This means that this variable was less likely to affect the DV of helping (1 mark). This also meant that it was more likely that the type of victim affected helping (1 mark). As the subway car was a real-world setting, it can be argued that the study had ecological validity (1 mark + 1 mark: identification) e.g., Joyah There were so many variables that could not be controlled like participant variables of experience in situations (1 mark: identification). This means that it would have been difficult to know if the type of victim was directly affecting helping (1 mark). Also, there were no black models which reduces the ecological validity of the study as it does not represent real life (1 mark). In addition, there was also wide variation in the victims across the two conditions which may have affected the dependent variable of helping behaviour more than just whether they were ill or drunk (1 mark) There are other creditworthy responses.	**4**	If both Sabtu and Joyah feature in the answer, mark them independently and credit the highest score Acceptable types of validity/concepts include: Ecological validity Mundane realism Internal validity Population validity (must be labelled this and not generalisability). Role of extraneous and participant variables. Qualitative data. Do **not** credit reliability, quantitative data, standardisation, field experiment, generalisability. If they write which friend has been chosen but they write nothing else, this is 0 and **not** NR. No ID mark for demand characteristics.

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Question	Answer	Marks	Guidance
9(a)	**Describe the psychology being investigated in the study by Fagen et al. (elephant learning).** 1 mark per correct point. 1 mark available for example from the study by Fagen et al. e.g., Operant conditioning is learning by consequence. If you are rewarded you are more likely to repeat a behaviour The elephants got chopped banana if they were successful at any task (example) If you are punished you are less likely to repeat a behaviour A primary reinforcer is one that fulfils a biological need. A secondary reinforcer can be used as an exchange for a primary reinforcer. Secondary positive reinforcement can use a sound as a secondary reinforcer that is consistently followed by a primary reinforcer/food. There are other creditworthy responses, including shaping and behavioural chaining.	**4**	No identification mark. Ignore reference to classical conditioning.

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Question	Answer	Marks	Guidance
9(b)	**Explain <u>one</u> similarity and <u>one</u> difference between the study by Fagen et al. (elephant learning) and <u>one</u> other study from the learning approach.** Use the marking grid below. 4 marks for the similarity, e.g., observational, lack mundane realism, quantitative data collection, use of rewards/operant conditioning, standardisation, lacking generalisability. 4 marks for the difference, e.g., qualitative data collection, sample, level of controls. e.g., similarity e.g. 4 marks Both the Fagen study and the Bandura study used observation as part of their data collection techniques. This means that specific behaviours could be operationalised to improve validity (explanation). For example, in Fagen there was trunk down which meant the trunk was hanging loose and in Bandura gun play was pretending to shoot at an object in the room. e.g. 3 marks Both the Fagen study and the Bandura study used observation as part of their data collection techniques. For example, in Fagen there was trunk down which meant the trunk was hanging loose/Bandura gun play was pretending to shoot at an object in the room. e.g. 2 marks Both the Fagen study and the Bandura study used observation as part of their data collection techniques. For example, in Fagen there was trunk down. e.g. 1 mark Both the Fagen study and the Bandura study used observation as part of their data collection techniques.	**8**	Award L1–L4 for similarity. Award L1–L4 for difference. For Level 4 there must be some attempt at *explaining* the similarity or difference. The other studies from the learning approach are: Bandura Saavedra and Silverman Different species = L1. Different aims = L1. Different ethical guidelines = L1 Both opportunity sampling (for Bandura and S&S comparison) = L2 For description of the sample (e.g., n=….) from the two studies with no explicit note about size differences or effect on generalisability = L2

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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>9(b)</td><td>
<table>
<tr><th>Mark/ Level</th><th>Description</th></tr>
<tr><td>4</td><td>The similarity/difference is well explained using both studies as examples.</td></tr>
<tr><td>3</td><td>The similarity/difference is well explained but only one study is used as an example
OR
both studies are used briefly.</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></tr>
<tr><td>1</td><td>The similarity/difference is brief with no attempt at using the studies as examples.</td></tr>
<tr><td>0</td><td>No creditable response.</td></tr>
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Question	Answer	Marks	Guidance
10	**Evaluate the study by Baron-Cohen et al. (eyes test) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about ethics.** Strengths include: reliability, standardisation, validity (internal), quantitative data, ethics. Weaknesses include, validity (external), sample, lack of random allocation Example: in detail (named) The study was unethical as the process of attempting to identify emotions from eyes for the AS/HFA was going to be stressful as it predicted that they would find it difficult therefore it could have been psychologically stressful for those participants. Also, not understanding the words to choose from even with the glossary may have caused unnecessary stress. Example: brief but in context The sample only had 15 AS/HFA participants and they were all male. This could make generalisations difficult as they might not represent females with AS/HFA. Example: no context The study followed a standardised procedure making it easier to replicate.	**10**	Ignore if candidate calls it a laboratory experiment but do credit controls and standardisation if argued correctly. Please note that the only ethical guidelines that are covered in the journal paper are: Adhere: minimising harm (weak), informed consent, confidentiality. Break: minimising harm **only**. The remainder: right to withdraw, deception, privacy and debriefing are **not mentioned in the journal paper**.

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<tr><td>10</td><td>
<table>
<tr><th>Level</th><th>Description</th><th>Mark</th></tr>
<tr><td>5</td><td>• Very good evaluation including the named issue.
• Thoroughly addresses both strengths and both weaknesses in detail.
• Selection of evidence is very thorough and effective.</td><td>9–10</td></tr>
<tr><td>4</td><td>• Good evaluation including the named issue.
• Addresses strengths and weaknesses but may include three or four points. The majority of the points are in depth.
• Selection of evidence is thorough and effective.</td><td>7–8</td></tr>
<tr><td>3</td><td>• Mostly appropriate evaluation but may not include the named issue.
• Addresses either two strengths or two weaknesses in detail or one of each in detail or all four briefly.
• Selection of evidence is mostly effective.</td><td>5–6</td></tr>
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<tr><td>10</td><td>
<table>
<tr><th>Level</th><th>Description</th><th>Mark</th></tr>
<tr><td>2</td><td>• Weak evaluation and may not include the named issue.
• Addresses either a strength or a weakness. Evaluation points are brief.
• Some points may have no context.
• Selection of evidence is sometimes appropriate.</td><td>3–4</td></tr>
<tr><td>1</td><td>• Little or no evaluation.
• Discussion of strengths and weaknesses is absent or superficial.
• Selection of evidence is limited.</td><td>1–2</td></tr>
<tr><td>0</td><td>• No creditable response.</td><td></td></tr>
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