CAMBRIDGE
International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **February/March 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.

Cambridge International is publishing the mark schemes for the February/March 2024 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 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.

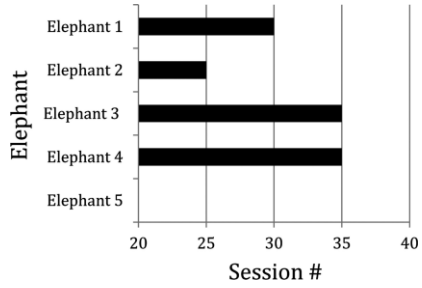
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Question	Answer	Marks	Guidance
1(a)	**From the study by Baron-Cohen et al. (eyes test):** **Identify the sampling technique used to recruit participants for Group 1 (adults with AS or HFA).** 1 mark for the correct answer Volunteer/self-selecting	**1**	Take the <u>first</u> answer only. Do not credit 'newspaper advertisement'. Do not credit 'selective'.
1(b)	**Outline <u>one</u> hypothesis in relation to the sex of the participants.** 2 marks for full prediction/hypothesis 1 mark for brief/partial prediction/hypothesis Females in Groups 2/3 will score higher than males on the Eyes Test (2 marks). Females in Groups 2/3 will score higher on the Eyes Test (1 mark). Females will score higher (0 marks: no mention of the test). Males in Group 3 will score higher than females on the AQ (2 marks). Males in Group 3 will score higher on the AQ (1 mark). Males will score higher (0 marks: no mention of the test).	**2**	Group 2 = normal/community/library users Group 3 = normal/student Need indication of group to be awarded full credit. Females > males on ET = 1 Males > females on AQ = 1 Neurotypical is fine for 2. Do not accept 'better' or 'worse'. Do not credit any result.
1(c)	**Outline the instructions that were given to participants on how to use the glossary.** 1 mark per correct point made. They could read through/refer to the glossary. They could indicate any word meanings they were unsure about. They could read those particular meanings (ones unsure of)/help understand words. They were told they could use the glossary throughout the test.	**2**	List is definitive. Do not credit 'told to use it' as this is too close to the question

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Question	Answer	Marks	Guidance
2(a)	**From the study by Fagen et al. (elephant learning):** **Outline what is meant by the term 'positive reinforcement'.** 2 marks full definition 1 mark partial/brief definition 1 mark available for an example e.g. This is the addition of something nice/reward after a behaviour to increase the probability of repeating a behaviour (2 marks). It is giving a reward to someone/the elephants were given (chopped) bananas (1 mark: positive part of the definition). It is trying to help someone repeat a behaviour (1 mark: reinforcement part of the definition).	**2**	Credit can be given to an example from the study or an invented one.

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Question	Answer	Marks	Guidance
2(b)	**Outline <u>one</u> result in relation to the number of sessions it took for the elephants to pass the full trunk wash test. You <u>must</u> use data in your answer.** 2 marks for the result with a meaningful comparison 1 mark for result with no meaningful comparison 1 mark for correct data e.g., 3 marks (meaningful comparison plus data): Elephant 2 took fewer sessions to pass the trunk compared to Elephant 4. It took elephant 2, 25 sessions. The juvenile elephants passed within 25–35 sessions/all within 35 sessions whereas as the older elephant never passed. e.g., 2 marks (meaningful comparison but no data or data but no group comparison): Elephant 2 took fewer sessions to pass the trunk compared to Elephant 4. The juvenile elephants passed within 25–35 sessions. e.g., 1 mark (no meaningful comparison and no data): Elephant 2 required the least number of sessions (to pass).	**3**	No tolerance on data. Use tick-d annotation when awarding the data mark. The answer **must** refer to the number of sessions rather than whether they passed it or not (however, can credit elephant 5 not passing). If comparison is based on correct data then award maximum marks. 

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Question	Answer	Marks	Guidance
3(a)	**From the study by Piliavin et al (subway Samaritans):** **Identify <u>two</u> features of one of the victims.** 1 mark per correct feature Male Aged 26–35 White/black Wore Eisenhower jacket/old slacks/no tie Drunk condition – smelled of liquor (1 mark) and held a bottle (in a bag) (1 mark) **OR** ill condition – carried a cane.	**2**	List is definitive. Do not accept 'were ill/drunk'. Do accept 'acted as if ill/drunk'. Accept 'casual clothing'. Either drunk or ill/with cane = 0 3 white males = 0
3(b)	**Explain why this study is from the social approach in psychology.** 2 marks = clearly linked to social approach (either through example or assumption) 1 mark = partially linked to social approach/assumption of the social approach only e.g. One of the assumptions of the social approach is that behaviour is influenced by other individuals. This was clearly shown here as fewer people helped when a model had already offered help (compared to when no model was present) (2 marks). They were affected by the social context of witnessing a drunk person needing help (1 mark). When there was a larger group, it affected their behaviour as they were faster at helping (1 mark).	**2**	The 2 assumptions are: Behaviour, cognitions, and emotions are influenced by social contexts, social environments, and groups. Behaviour, cognitions, and emotions are influenced by the actual, implied or imagined presence of others.

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Question	Answer	Marks	Guidance
4(a)	**From the study by Hölzel et al (mindfulness and brain scans):** **Outline <u>one</u> aim of the study.** 2 marks for full aim 1 mark for partial/brief aim e.g. To investigate the effect of mindfulness stress reduction on brain density (2 marks); To investigate the benefits of mindfulness (1 mark); To investigate changes in brain density in people (1 mark) To investigate mindfulness (0 marks as this is in the question) There are other creditworthy responses.	**2**	Accept 'changes in brain structure'.
4(b)	**'Acting with awareness' was measured by the 'Five Facet Mindfulness Questionnaire'.** **Outline <u>one</u> other factor of mindfulness measured by this questionnaire.** 1 mark for naming the factor. 1 mark for outlining the factor. e.g. Observing/observation (1 mark). This is about attending to internal/external stimuli (1 mark) Describing (1 mark). This is labelling a stimulus with word(s) (1 mark) Non-judging (of inner experiences) (1 mark). Not evaluating one's emotions (1 mark) Non-reactivity (of inner experiences) (1 mark). Allowing thoughts to just come and go (1 mark)	**2**	List is definitive.

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Question	Answer	Marks	Guidance
5(a)	**Outline <u>one</u> assumption of the cognitive approach in psychology.** 2 marks for full assumption. 1 mark for partial/brief assumption. e.g., 2 marks Information is processed through the same route in all humans: input – process – output, in a similar way to how information is processed by a computer. People have individual differences in their cognitive processing such as with attention, language, thinking and memory (1 named). e.g., 1 mark Information is processed through the same route in all humans: input – process – output. People have individual differences in their cognitive processing. There are other creditworthy responses.	**2**	
5(b)	**Explain how <u>one</u> finding from the study by Pozzulo et al. (line-ups) supports the assumption you outlined in part (a).** 1 mark for result/conclusion. 1 mark for linking it to an assumption explicitly (not by name only: a relevant concept needs to be mentioned). e.g. Children correctly identified 99% of the cartoon faces (1 mark result). This could follow the principles of input (see cartoon), process (memory of cartoon) and output (recall cartoon) (1 mark supported link). Adults correctly identified 66% of human faces (1 mark result). This shows that people do have individual differences in memory recall (1 mark supported link). There are other creditworthy responses.	**2**	If the link is not with an assumption from 5a, can only be awarded the result/conclusion mark. Cannot simply re-state the assumption for the 2nd mark.

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Question	Answer	Marks	Guidance
5(c)	**Outline the term 'false positive responses', using an example from the study by Pozzulo et al. (line-ups)** 1 mark for definition 1 mark for example e.g., This is when a person believes they are making an accurate choice, but it is not (1 mark: definition). In the Pozzulo study this would be the children choosing a person in a line-up even though the culprit is not in the line-up (1 mark: example).	**2**	

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Question	Answer	Marks	Guidance
6(a)	**In the study by Milgram (obedience), participants took a piece of paper from a hat. They were told that this would decide whether they would be the teacher or the learner.** **Describe the procedure from this point until the 'learning task' began.** 1 mark per correct point Both pieces of paper/slips said teacher Both the teacher and learner went into an adjacent room The learner was strapped to an 'electric chair'. The experimenter explained that the straps were to prevent excessive movement. An electrode was attached to the wrist of the learner. Electrode paste was attached to the learner's wrist. They were told that this would preventing blistering/burns. They were told that the electrode was attached to a shock generator. They were told that the shocks would be painful but cause no permanent damage. The teacher (true participant) received a 45v shock. This was achieved by pressing the third button on the shock generator.	**4**	List is definitive.
6(b)	**Explain <u>one</u> strength of this study in relation to reliability.** 1 mark for standardisation <u>and</u> replication (identification of the strength) 1 mark for example from the study e.g. The procedure was standardised so could be replicated (1 mark). For example, <u>all</u> participants received a 45v shock (1 mark link) There are other creditworthy responses.	**2**	Ignore reference to controls.

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Question	Answer	Marks	Guidance
7	**Your friend, Taara, needs your help. She has volunteered to take part in a study that is replicating Dement and Kleitman (sleep and dreams). She wants to know how she will be woken up and then asked about her dreams.** **Outline this part of the procedure for Taara.** 1 mark per correct point based on the following: Up to 3 marks for how will be woken. Up to 3 marks for being asked about dreams. e.g., how woken: You will be woken up by a doorbell. It will be loud enough to wake you up. e.g., asked about dreams: You will then be asked if you were having a dream or not. Then you will be asked to tell the experimenter about the content of your dream. You will be asked to talk into a recording device. The experimenter may come in if they want more information about your dream. You may be asked to estimate dream duration.	**4**	Go with the intentions of the candidate. For example, if they use more technologically advanced ways to wake up Taara or help her record the dreams, this is creditworthy. Do not credit pure repetition of the stem. Woken via a loud bell = 2 marks. Annotate: Tick = how she will be woken up. Tick-d = how she will be asked about her dreams.

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Question	Answer	Marks	Guidance
8	**Saira is talking about the study by Saavedra and Silverman (button phobia). She says that the findings were subjective.** **Explain why Saira is correct that the findings were subjective, using evidence from this study in your answer.** Up to 1 mark available for defining subjective. Up to 4 marks available per correct point made based on evidence. e.g., Being subjective is about feelings/emotions from the viewpoint of the individual (1 definition mark) The boy rated his fear of each button himself. But his level of fear for certain buttons are not comparable with other people with the same phobia. He also had an experience that he felt affected him in the classroom. There was no objective measure of fear (for example heart rate), so it was all based around how the boy felt about his disgust towards buttons. The mother may have exaggerated the severity of the boy's symptoms. He said that he did not like the smell of the buttons. The researchers may have formed a bond with the boy (during the time helping him with his phobia). The interviews about the buttons required interpretation of qualitative data. There are other creditworthy responses.	**4**	Go with the intention of the candidate. Ignore answers about it <u>not</u> being subjective/being objective. Accept subjectivity of the researchers <u>and</u> subjectivity of the boy/his mother. Ignore tautological responses. Accept any example from the study that is about his experiences/feelings before, during, or after the study. A 'comparison to others/lacks generalisability' mark can only be awarded <u>once</u>. Do not credit 'subjective as he was the only participant'. Responses that focus on bias or 'difficult to know if he is telling the truth' are creditworthy.

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Question	Answer	Marks	Guidance
9(a)	**Describe the sample used in the study by Andrade (doodling).** 1 mark for each correct point It was an opportunity sample. They had just finished a different study (before being asked to participate in this one) n=40. Members of a university participant panel. General population. Aged 18–55 years. Paid for participation. Majority female/35 female 5 male/doodle: 18F 2M/control: 17F 3M.	**4**	List is definitive. Accept 'males and females'. No tolerance on age range.

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Question	Answer	Marks	Guidance
9(b)	**Explain <u>one</u> similarity and <u>one</u> difference between the study by Andrade (doodling) and the study by Pozzulo et al. (line-ups). Do <u>not</u> refer to the sample in your answer.** Use the marking grid below. 4 marks for the similarity, e.g., experimental, lack mundane realism, quantitative data collection, experimental design used, ethics, cognitive skills being tested. 4 marks for the difference, e.g., experimental design used, cognitive skills being tested, ethics. e.g., similarity e.g. 4 marks Both Andrade and Pozzulo studies were experimental in nature. For example, both studies had manipulated IVs. In the Andrade study there were two conditions of doodling and non-doodling. In Pozzulo study there was also two conditions of age/type of face/degree of familiarity. Therefore, both were trying to establish cause and effect (explanation). e.g. 3 marks Both Andrade and Pozzulo studies were experimental in nature. For example, both studies had manipulated IVs. In the Andrade study there were two conditions of doodling and non-doodling/in Pozzulo study there was also two conditions of age/type of face/degree of familiarity. e.g. 2 marks Both Andrade and Pozzulo studies were experimental in nature. For example, both studies had manipulated IVs and measured DVs. e.g. 1 mark Both Andrade and Laney were experimental in nature.	**8**	Do not credit any answer about the sample. Award L1–L4 for similarity. Award L1–L4 for difference. For Level 4 there must be some attempt at *explaining* the similarity or difference. Two descriptions of the studies with no logical link = L1 max. Different aims = L1 max. Similarity of cognitive approach with examples from each study without terms = L3 max. If the candidate mixes up the names of the studies and/or terminology then L2 max and annotate with NBOD. Auditory vs visual task is a legitimate comparison but likely to be L3 max.

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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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<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>10</td><td>
Evaluate the study by Hassett et al. (monkey toy preferences) 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), observations.
Weaknesses include: validity (external), sample, ethics.

Example: in detail
The sample only had 34 rhesus monkeys as part of it. This could make generalisations difficult. This is because some of the troop were not used in the study as they were too young to be reliably identified and these may have played differently/chosen different toys/from a captivity troop. Therefore, the findings about monkey toy preferences may only apply to those in the sample/not apply to monkeys who live in the wild where toy choice is not available.

Example: brief but in context
The sample only had 34 rhesus monkeys as part of it. This could make generalisations difficult as they might not represent the whole troop.

Example: no context
The study followed a standardised procedure making it easier to replicate.

<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>
</table>
</td><td>10</td><td>
Ignore arguments about the ethics of not being in the wild. They were captive bred.

The list of ethical guidelines that are creditworthy are:
Minimising harm
Replacement
Species
Numbers
Pain/Distress
Housing
Reward/deprivation/aversive.

Ignore human ethical guidelines.

Main evidence includes:

Housing
• Size of enclosure (25x25)
• Fed monkey chow every day/water present/fruit and veg available.
• Socially housed in troop.

Minimising harm/distress
• Use of video cameras.
• Familiarity with keepers in enclosure/lived in enclosure for 25+ years.
• One monkey tore toy apart (broken)
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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><th>Level</th><th>Description</th><th>Mark</th></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>
<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>
</table>
</td><td></td><td>Mention of knowing the monkey’s gender is tick-b only.

Observer bias – needs a specified behaviour from the checklist to be explained as to how it could be observed with bias to get tick-d, otherwise tick-b</td></tr>
</table>

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