Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/12**

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

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
1(a)	**From the study by Pepperberg (parrot learning):** **Alex the parrot was tested for comprehension using three response labels. Two of these were colour and shape.** **Name the third response label that Alex could use.** 1 mark for the correct answer. Take the first answer only. Matter/mah-mah	**1**
1(b)	**Alex the parrot had indirect experience of novel (new) objects before the Transfer Tests. This was to reduce a fear response in Alex.** **Outline the indirect experience Alex had with novel (new) objects before the Transfer Tests.** 1 mark for each correct point. Objects were shelved in Alex's view. These were for several days (before the Transfer Test). These objects were handled by humans (in the laboratory). As part of the cleaning process. The colour/shape/material was never labelled.	**2**

Question	Answer	Marks
2	**The study by Baron-Cohen et al. (eyes test) revised the 'Reading the Mind in the Eyes' test from the original version.** **Describe the original version of the 'Reading the Mind in the Eyes' test.** 1 mark for each correct point. Participants were presented with 25 (pairs of) eyes. These were from famous people. There were male and female photographs / photographs of actors and actresses. There was a two-word choice / two options. They were <u>semantic</u> opposites / opposite <u>emotions.</u> Emotions were basic **and** complex. The participant has to choose the best word. To describe what the person was thinking/feeling.	**4**

Question	Answer	Marks
3	**Explain <u>one</u> problem that could arise if children were used as participants in the study by Milgram (obedience).** 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 Milgram. e.g. There are ethical issues with using children (1 mark: identification). This could be protection from psychological harm (1 mark: elaboration). In this study, children would have had to <u>think</u> they had given an electric shock to another child which would be very distressing (1 mark: link). Children may not understand what is being asked of them (1 mark: identification). Therefore, the children may not understand how to use the shock generator (1 mark: elaboration). As a result, the children may have seen it as a game and therefore obedience may not be measured (1 mark: link). Other creditworthy problems include: children are more vulnerable/susceptible; limited language capacity; can affect their mental state.	**3**

Question	Answer	Marks
4(a)	**From the study by Dement and Kleitman (sleep and dreams):** **Participants arrived at the laboratory before their usual bedtime.** **Outline the procedure from when a participant arrived at the laboratory until the end of the study.** 1 mark per correct point. (Two or more) electrodes were attached near to the eyes of the participant. (Two/three) electrodes were attached to the scalp. They went to bed in a quiet/dark room. All electrode lead wires were attached to top of head. This was in a single cord/ponytail. The EEG ran continuously all night. At various times during the night the participants were woken / woken in REM or NREM / woken by a bell / 5 or 15 mins into REM. And asked to recall dreams / estimate time in REM.	**4**

Question	Answer	Marks
4(b)	**Outline <u>one</u> conclusion from this study in relation to eye movement during REM sleep.** 2 marks full/detailed conclusion. 1 mark partial/brief conclusion. No credit for any actual results. Must be generic. e.g., 2 marks Eye movements during REM tend to fit with what the dreamer is looking at suggesting eye movements are not 'random' at all. e.g., 1 mark Eye movements during REM tend to fit with what the dreamer is looking at / dream content. e.g., 0 marks One participant had horizontal eye movements as they were throwing tomatoes (result).	**2**

Question	Answer	Marks
5(a)	**From the study by Yamamoto et al. (chimpanzee helping):** **One aim was to investigate whether chimpanzees only help when they can see what another chimpanzee needs to complete a task.** **Outline <u>one</u> other aim.** 2 marks full aim 1 mark partial/brief aim e.g. To investigate whether chimpanzees can respond to the needs of another with targeted helping (2 marks). To investigate whether chimpanzees can help each other (1 mark). To investigate whether chimpanzees can help each other only when they can see the other chimpanzee (0 marks as this is the question).	**2**

Question	Answer	Marks
5(b)(i)	**The results included data from one 'Cannot See' condition and two 'Can See' conditions.** **Outline <u>one</u> result from the 'Cannot See' condition.** 2 marks for result with a meaningful comparison/full result 1 mark for partial result/no meaningful comparison. e.g. An object was offered on 95.8% of the trials (2 marks) There was no difference in frequency of object offer in this condition compared to the first can see condition (2 marks). Upon-request offers were more frequent than voluntary offers (2 marks). Pal offered the correct potential tool most often compared to the other chimpanzees (2 marks). Upon-request offers were more frequent (1 mark). Pan was the worst at giving the correct tool (1 mark).	**2**
5(b)(ii)	**Outline <u>one</u> result from the second 'Can See' condition.** 2 marks for result with a meaningful comparison/full result 1 mark for partial result/no meaningful comparison. e.g. There was an object offered in over 97% of trials (2 marks). The three chimpanzees offered potential tools more frequently than nontool objects (2 marks). They offered a relevant tool more frequently than a nontool for both the stick/straw task (2 marks). Ai gave the correct tool the least (1 mark). Tools were most often given upon request (1 mark).	**2**

Question	Answer	Marks
6(a)	**From the study by Laney et al (false memory):** **Describe the background to this study.** 1 mark for each correct statement e.g., Braun et al. found that false memories can be implanted by convincing people they saw Bugs Bunny at Disneyland. Researchers have implanted (negative) false memories for actual events / entirely false ones. Little research into the effects of implanting a false *positive* memory. People may have memories for events etc. that never actually happened. People can reconstruct memories of events that have real and false memories in them. These could alter our perception of childhood memories / any memory. People can fill in the gaps using false information. The information can be post-event that gets embedded in the actual memory.	**4**
6(b)	**Explain why this study is from the cognitive approach.** 1 mark = clear assumption from the cognitive approach. 1 mark = linking Laney to the assumption explicitly. e.g. One assumption of the cognitive approach is about the way we remember information (1 mark: assumption). This study examined how well people would remember false information (1 mark: link)	**2**

Question	Answer	Marks
7	**Suggest <u>two</u> real-world applications based on the study by Bandura et al. (aggression). Your suggestions <u>must</u> be ethical.** 1 mark for <u>what</u> the application is (clearly based on Bandura) ×2. 1 mark for <u>how</u> it will be achieved / <u>why</u> it should work ×2. e.g., Children can be taught prosocial behaviour (1 mark: what). A child can observe a model engaging in prosocial behaviour/speech and they are likely to imitate this (1 mark: how). Children can be taught a new skill at school (1 mark: what). A child can observe a teacher showing them how to complete a new skill and then are given the opportunity to replicate it (1 mark: how). TV channels can help to promote prosocial behaviour / reduce antisocial behaviour (1 mark: what) by increasing the amount of good behaviour in programmes / decreasing the amount of aggressive behaviour in programmes (1 mark: how).	**4**

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Question	Answer	Marks
8	**Two friends, Himmat and Urvi, are discussing the individual and situational explanations for behaviour in relation to the study by Canli et al. (brain scans and emotions). Himmat thinks the study supports the individual explanation, but Urvi thinks the study supports the situational explanation.** **Explain <u>one</u> reason why Himmat is correct and <u>one</u> reason why Urvi is correct, using evidence from this study.** 1 mark for outlining the side of the debate ×2. up to 2 marks for explaining using evidence from the study ×2. e.g., Himmat The individual explanation states that we behave because of our personality (1 mark). Different personalities will perceive images in different ways / have different responses (1 mark). There were individual differences in how each scene was rated by participants (1 mark). e.g., Urvi The situational explanation states that we behave because of the environment we find ourselves in / our surroundings / other people around us (1 mark). The situation of experiencing similar scenes prior to the study may have affected the results (1 mark). It may have been easier for some participants to remember / be familiar with scenes that they had already experienced (1 mark). The situation of viewing slides whilst having an fMRI can may have affected recall (1 mark). Participants may have been more anxious/stressed/ emotional than usual (1 mark).	**6**

Question	Answer	Marks
9(a)	**Describe the sample used in the study by Piliavin et al. (subway Samaritans).** 1 mark per correct point. Opportunity sample (Approximately) 4450. Travelling on a New York (subway). 45% black / 55% white. Unsolicited / never knew / never asked to participate. Males **and** females. between Harlem and Bronx stations / between 11am and 3pm / in either direction. Average of 43 participants per carriage.	**4**

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>9(b)</td><td>

Explain whether each ethical guideline below was broken in the study by Piliavin et al. (subway Samaritans):
- **confidentiality**
- **informed consent**
- **protection from psychological harm**
- **right to withdraw**

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
OR The ethical guideline is implicit from the use of a well-argued example contextualised from the named study</td><td>2</td></tr>
<tr><td>1</td><td>The answer explicitly describes the ethical without correct contextualisation / no contextualisation
OR The ethical guideline is implicit 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>

Confidentiality
e.g., Any data should not be identifiable as a single participant's, responses / participants' data must not be named as theirs
The guideline was not broken as no individual data was published / all we know is that they were people on a New York subway train

Informed consent
e.g., participants should be given sufficient information about the study in order to choose if they want to participate or not.
Participants in this study did not even know that a study was taking place so could not be asked if they wanted to participate or not.

Protection from psychological harm
e.g., Participants should leave the study in the same mental/psychological state as they entered / Participants should not be potentially harmed by the procedure of a study.
The guideline was broken as the participants had to witness a person collapsing and then maybe not helping them out.
The guideline was not broken as a participant could literally turn their back on the incident and take no notice of it.
Other people did help so most passengers may have felt guilty / less guilty.

</td><td>8</td></tr>
</table>

Question	Answer	Marks
9(b)	Right to withdraw e.g., participants should be able to leave the study at any point (without penalty); The participants could not simply leave the entire subway car to escape from witnessing the collapse. Some participants did move from the critical area to effectively withdraw from the situation.	

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 generalisations.** Suitable strengths include: internal validity, reliability, quantitative data Suitable weakness include: external validity, ethics, 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**