Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **March 2021**

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 March 2021 series for most Cambridge IGCSE™, Cambridge International A and AS Level components and some Cambridge O Level components.

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[Turn over

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 Calculation questions:

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

4 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 Dement and Kleitman (sleep and dreams):** **Name the stage of sleep when participants recalled most of their dreams.** 1 mark for correct answer. REM/paradoxical/5	**1**
1(b)	**Outline <u>one</u> dream reported by a participant that had vertical eye movements.** 2 marks for detailed answer 1 mark for brief answer One participant reported a dream of standing at the bottom of a cliff operating a hoist and looking at climbers on the cliff (2 marks); One participant reported a dream of standing at the bottom of a cliff (1 mark). One participant reported climbing up a ladder and looking up and down as he climbed (2 marks); One participant reported climbing up a ladder (1 mark). One participant reported playing basketball and looking up at the hoop as they shot/looking down to pick it up (2 marks) One participant reported playing basketball (1 mark).	**2**
1(c)	**Outline <u>one</u> conclusion from this study.** 2 marks for detailed conclusion 1 mark for partial/brief conclusion e.g. People can judge the duration of their time in REM with accuracy (2 marks); Dreams are not instant events but are reported/experienced in real time (2 marks); Eye movements during sleep do correspond with the content of a dream (2 marks); Dreaming happens more in REM (1 mark); People can judge REM length (1 mark); Eye movements match dreams (1 mark); Participants recall more dreams in REM compared to NREM (0 marks: a result); There are other creditworthy responses.	**2**

Question	Answer	Marks
2(a)	**In the study by Piliavin et al. (subway Samaritans), one observer watched passengers in the critical area.** **Name <u>two</u> variables this observer recorded about these passengers.** 1 mark per correct point made Race; Sex; Location; Number of individuals; Number who came to help.	**2**
2(b)(i)	**Piliavin et al. investigated the idea of 'diffusion of responsibility'.** **Outline what is meant by 'diffusion of responsibility'.** 2 marks detailed definition 1 mark brief definition e.g. People are less likely to help in an emergency when there are more people around as they believe other people will help out instead (2 marks); When there are more people around we help less (1 mark); Responsibility is shared amongst the group/people (1 mark); There are other creditworthy responses.	**2**
2(b)(ii)	**Outline <u>one</u> finding that did <u>not</u> support diffusion of responsibility in this study.** 2 marks detailed answer including evidence from the study 1 mark brief answer or no evidence from the study e.g. 2 marks The seven person groups responded faster than the three person groups; The seven person groups were faster to respond than the hypothetical seven person groups; The majority of participants helped the victim before the model had a chance to step in and help first; 60% of trials had <u>more than</u> one person helping the victim. e.g. 1 mark Larger groups responded faster (than smaller groups); Three people groups responded slower; Most people helped before the model; More than one person helped most of the time.	**2**

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>3</td><td>Explain one or more real-world applications of the study by Bandura et al. (aggression). Do <u>not</u> refer to more than three applications in your answer.

Suitable examples include: helping to reduce aggression, helping to promote prosocial behaviour, helping TV programmers be more responsible.

<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></tr>
</table>

Question	Answer	Marks
4(a)	**From the study by Canli et al. (brain scans and emotions):** **Name <u>two</u> characteristics that were used to match the foil scenes and the previously viewed scenes.** 1 mark per characteristic: Valence (ratings)/negativity. Arousal (ratings)/emotional arousal/emotional intensity.	**2**
4(b)	**Describe the participants used in this study.** 1 mark for each correct point: Right-handed; Healthy; Female; Volunteers; Ten (in total).	**3**

Question	Answer	Marks
4(c)	**Explain why this study is from the biological approach.** 2 marks = clearly linked to biological approach (either through example or assumption) 1 mark = partially linked to biological approach e.g. Canli was investigating the brain function/amygdala (1 mark) meaning that they were looking at how our biology affects our emotion (1 mark); They were conducting brain scans on the participants (1 mark) to see how the amygdala affected our memory/emotion (1 mark); It is based on how the amygdala is activated when exposed to emotional scenes (2 marks); There are other creditworthy responses.	**2**

Question	Answer	Marks
5	**In the study by Milgram (obedience), there was a victim (learner) and a participant (teacher).** **Describe the procedure the victim followed to give feedback to the participant during the learning task.** 1 mark per correct procedural point These were predetermined responses; There tended to be three wrong answers to one correct; No vocal response is heard up until Shock Level 300; When 300v given, the learner pounds on the wall; From this point on there are no answers from the learner; The learner pounds again at 315v; After that there is no pounding or answers given.	**4**

Question	Answer	Marks
6	**Describe the psychology being investigated in the study by Pepperberg that used Alex the parrot as a participant.** 1 mark available for identifying an element of psychology being investigated 1 mark per correct statement made. 1 mark available for an example from the study by Pepperberg e.g. Social Learning (1 identification mark) is when someone observes the behaviour of someone else/pay attention to behaviour (1 correct statement mark); They retain this information for use at a later date; The organism/person/animal must feel capable of replicating that behaviour; The need to be motivated is vicarious reinforcement; Operant conditioning (1 identification mark) is when an animal/person learns by the consequences of its behaviour (1 correct statement mark); If a behaviour is followed by a reward they are more likely to repeat; If a behaviour is followed by punishment then they are less likely to repeat; Looked at the cognitive skill of distinguishing same and different in a parrot (1 example mark); There are other creditworthy responses.	**5**

Question	Answer	Marks
7(a)	**From the study by Yamamoto et al. (chimpanzee helping).** **Outline <u>one</u> aim of this study.** 2 marks full aim 1 mark partial/brief aim e.g. To see if chimpanzees can respond to the needs of another with targeted helping (2 marks); To see if chimpanzees can help another chimpanzee with no immediate gain from doing so/show altruistic behaviour (2 marks); To see if chimpanzees can help each other/provide targeted help (1 mark); To investigate is chimpanzees show altruism/pro social behaviour (1 mark); To investigate if chimpanzees understand the needs of a conspecific (1 mark); There are other creditworthy responses.	**2**

Question	Answer	Marks
7(b)	**Outline <u>one</u> methodological weakness of this study.** 1 mark = appropriate methodological weakness 1 mark = applying it to Yamamoto e.g. the task lacked mundane realism (1 mark); the task of giving a stick or straw to another chimpanzee in the wild is very unlikely to happen (1 mark) There were only five pairs of chimpanzees used in the study therefore the sample may lack generalisability (1 mark); as they were in a laboratory and may not represent those on the wild (and their helping behaviour) (1 mark)/ might not represent chimpanzees in the wild (1 mark: alternative); There are other creditworthy responses.	**2**
7(c)	**Suggest <u>one</u> real-world application based on the procedure of this study.** 1 mark for **what** the application is about 1 mark for **how** it will be implemented/used e.g. The procedure could be used in schools to teach about helping behaviour (1 mark: what); teachers could set up a similar scenario so that children have to interact/understand the needs of others to be able to complete the task (1 mark: how)/help each other to gain a reward (1 mark: alternative how); There are other creditworthy responses.	**2**

Question	Answer	Marks
8(a)	**Outline what is meant by the nature versus nurture debate, using any examples.** **Do <u>not</u> refer to the study by Schachter and Singer (two factors in emotion) in your answer.** 1 mark = defining nature + 1 mark example (non-Schachter & Singer) 1 mark = defining nurture + 1 mark example (non-Schachter & Singer) e.g. Nature means a behaviour that we are born with/genetic/hard-wired (1 mark). For example, a person may be born with genetics that cause them to develop schizophrenia (1 mark) Nurture means a behaviour that has been learned by an organism after birth (1 mark); For example, in the Pepperberg study, Alex the parrot learned the concept of Same/Different (1 mark); There are other creditworthy responses.	**4**

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>8(b)</td><td>
Explain how <u>one</u> result from the study by Schachter and Singer (two factors in emotion) supports the nature side of the nature-nurture debate and how <u>one</u> result supports the nurture side of the nature-nurture debate.

e.g. Nature 4 marks
In all of the epinephrine conditions, the pulse rate increased for all participants. This is a biological reaction as it is a hormone being released into the blood stream/humans are ‘hard-wired’ to react to epinephrine in this way.

e.g. Nurture 4 marks
In the euphoria condition, the misinformed group produced the highest activity index score compared to all other groups. This is because the participants may have been choosing environmental/behavioural cues to explain their feelings so acted in this way to as a result of external forces.

<table>
<tr><th>Level</th><th>Criteria</th><th>Marks</th></tr>
<tr><td>4</td><td>The result presented has a meaningful comparison and the candidate clearly explains why it supports/does not support the named concept</td><td>4</td></tr>
<tr><td>3</td><td>The result presented has a meaningful comparison and there is a brief attempt at explaining why it supports/does not support the named concept
The result presented has no meaningful comparison but the candidate clearly explains why it supports/does not support the named concept</td><td>3</td></tr>
<tr><td>2</td><td>The result presented has a meaningful comparison but there is no attempt at explanation;
The result presented is not clear but there is an implicit attempt at explaining why it supports/does not support the named concept</td><td>2</td></tr>
<tr><td>1</td><td>The result presented has no meaningful comparison or there is a basic attempt at explaining</td><td>1</td></tr>
<tr><td>0</td><td>No creditworthy answer</td><td>0</td></tr>
</table>
</td><td>8</td></tr>
</table>

Question	Answer	Marks
9	**Evaluate the study by Laney et al. (false memory) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about independent measures.** Suitable strengths include: internal validity, reliability, quantitative data Suitable weaknesses include: independent measures, external validity, self-reports, ethics **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**