Cambridge Assessment International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/12**

Paper 1 Approaches, Issues and Debates **February/March 2022**

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 2022 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 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):** **Participants were woken at two different time intervals during REM sleep and asked to estimate their dream-duration. One of the time intervals was five minutes.** **State the other time interval.** 1 mark for correct answer. 15 (minutes).	**1**
1(b)	**Name the apparatus used to measure brain activity in this study.** 1 mark for correct answer. EEG/Electroencephalogram	**1**
1(c)	**Outline <u>one</u> dream reported by a participant that had horizontal eye movements.** 2 marks full outline 1 mark partial/brief outline 0 marks vertical dream e.g. Watching two people throwing tomatoes at each other (2 marks) Driving a car and at an intersection a car sped from left (2 marks) Driving a car and looking ahead then a man appeared on left/stood on pavement (2 marks) Throwing tomatoes (1 mark) Tomato fight (1 mark) Driving a car (1 mark)	**2**

Question	Answer	Marks
2(a)	**From the study by Pepperberg (parrot learning):** **Name <u>two</u> items that Alex the parrot had to verbally request when he wanted them.** 1 mark per correct item named. (Fresh) fruit; Vegetables; Nuts (cashews/almonds/pecans/walnuts); Keys; (pieces of) wood; Paper; Rawhide.	**2**

Question	Answer	Marks
2(b)	**Outline <u>one</u> strength of this study in relation to reliability.** 1 mark for standardised procedure (training or tests) 1 mark for an example from Pepperberg e.g. The procedure during the training phase was standardised (1 mark). For example, during the training phase all objects were red, green, or blue (1 mark) The procedure during the testing phase was standardised (1 mark) For example, the principal trainer was always present during a test, but she sat with her back to Alex (1 mark)	**2**

Question	Answer	Marks
3(a)	**From the study by Bandura et al. (aggression):** **Describe the sample used in this study.** 1 mark per correct point made 72 in total; Split evenly across gender/36 male and 36 female; Enrolled at Stanford University Nursery School; Age range of 37–69 months; Mean age of 52 months; Split into eight experimental groups (and one control).	**3**
3(b)	**Describe <u>one</u> result about aggressive gun play in this study.** 2 marks full result (with meaningful comparison) 1 mark partial/brief result (no meaningful comparison) e.g. Males showed more aggressive gun play than females (across all conditions) (2 marks); Males showed more aggressive gun play when the model was male and aggressive than females (2 males); There was little difference in aggressive gun play in male participants when the model was aggressive or non-aggressive (2 marks); Male participants showed more gun play (1 mark); Female participants showed less gun play (1 mark)	**2**

Question	Answer	Marks
4(a)	**From the study by Milgram (obedience):** **Describe the shock generator used in this study.** It consisted of 30 lever switches/buttons; Each switch was clearly labelled with a voltage; The volts ranged from 15 V to 450 V; Each button went up by 15 V levels; Verbal designations for groups of four voltage levels; Last two were labelled (simply) XXX; Upon depressing a switch a red light appeared; An electric buzzing was emitted; A blue light labelled voltage energizer would light up; Labelled Slight Shock to Danger Severe Shock (any two of these can be credited for max 1 mark)	**4**
4(b)	**Suggest <u>one</u> real-world application based on this study. Your suggestion <u>must</u> be ethical.** 1 mark for what the real-world application is 1 mark for stating how it would be done based on the procedure of Milgram e.g. A teacher could get students to be more obedient in the classroom (1 mark: what) by wearing clothes that show authority like a technician's coat (1 mark: how) Soldiers could be encouraged to be more obedient (1 mark: what) as an authority figure can give out commands in a firm tone/stern voice (1 mark: how)	

Question	Answer	Marks
5(a)	**From the study by Andrade (doodling):** **Outline the aim of this study.** 2 marks full aim 1 mark partial aim e.g. To investigate whether doodling affects concentration by enabling people to attend more effectively/by enhancing their memory (2 marks) To investigate whether performing a concurrent task (doodling) would help memory recall (primary task) (2 marks) To investigate whether doodling aids concentration (or not) (1 mark) To investigate if doodling affects the recall of places/names (1 mark)	**2**

Question	Answer	Marks
5(b)	**Explain <u>one</u> reason why the procedure was standardised in this study.** 1 mark for identifying a reason 1 mark for explaining why it is a reason 1 mark for linking it to the study It would allow the study to be more easily replicated (1 mark) Therefore, it could be tested for reliability (1 mark) For example, knowing what was contained in the mock telephone message means that the study can be replicated exactly. (1 mark) It would increase the (internal) validity of the study (1 mark) Therefore, cause and effect are (more) likely to be seen (1 mark) For example, knowing it was whether doodling affected concentration/memory (1 mark) It can help to reduce extraneous/uncontrolled variables (1 mark) So that we know it is probably doodling – the IV (1 mark) causing the change doodling/concentration – the DV (1 mark)	**3**

Question	Answer	Marks
6	**The debate about individual and situational explanations relates to the study by Schachter and Singer (two factors in emotion).** **Outline what is meant by this debate. Include <u>one</u> example from the individual explanation and <u>one</u> example from the situational explanation from the study by Schachter and Singer.** 1 mark for the individual side of argument; 1 mark for example from study 1 mark for the situational side of argument; 1 mark for example from study e.g. definitions The individual side refers to behaviours from factors within the person (dispositional); The situational side refers to behaviour from factors in the external environment. e.g. examples Some participants may have joined in the activities because of their personality type, e.g. being more extraverted (individual); Some participants may have joined in the activities because of the environment of having the stooge act in a certain way (situational)	**4**

Question	Answer	Marks
7	**From the study by Laney et al. (false memory):** **Describe the procedure from the point when participants had to view slides in Experiment 2.** The (20) slides were photographs of (common) food items For example spinach, strawberries, pizza, asparagus (need 2 to gain the mark) Each slide was shown for 30s They had to rate each photograph on four scales How appetizing/disgusting they found the photograph (1 mark for either of these) Whether the photographer was novice, amateur or professional (2 needed for mark) Artistic quality of the photo was rated/photography rated They were rated on an 8 point scale/from 1–8 1 = not at all, to 8 = very much (need both to gain this mark) They then completed the RQ, FPQ, FHI, Memory of Belief? Questionnaires (any 2 to gain mark) They were then debriefed about the study.	**4**

Question	Answer	Marks
8(a)	**From the study by Canli et al. (brain scans and emotions):** **Outline how participants were asked to respond to pictures during the recognition test in this study.** 1 mark per correct point made They were asked if they had seen the picture before There were three response categories 'Remembered' – if they were certain they had seen it 'Know' – if they were familiar with it/may have seen it before 'Forgotten' – if they do not remember seeing it.	**2**

Question	Answer	Marks
8(b)	**Two friends, Govinda and Ansh, are discussing this study in terms of validity** **Govinda believes the study does have validity but Ansh believes the study does <u>not</u> have validity.** **Outline why you think <u>either</u> Govinda <u>or</u> Ansh is correct, using evidence from the study.** 1 mark per point made, with: Up to 2 marks for any relevant finding(s)/aspect of the study linked to validity Up to 3 marks for explanation(s) e.g. Govinda There were strict controls in the study meaning cause-effect could be established (1 mark). Pictures were chosen within a range of valence scores to help conclude if the intensity rating was affecting remembering (1 mark). They used an fMRI scan to collect information about brain activity (1 mark). This was an objective measure of activity so it could be compared across pictures/participants (1 mark) e.g. Ansh The task given to the participants lacked mundane realism (and validity) (1 mark). This is because they had to rate pictures whilst having a brain scan which is not a typical everyday activity (1 mark). The sample has low population validity/generalisability (1 mark). This is because the sample was only right-handed females (1 mark). It had low ecological validity as it was in a laboratory (1 mark).	**4**

Question	Answer	Marks
9(a)	**Describe the psychology being investigated in the study by Yamamoto et al. (chimpanzee helping).** 1 mark for each correct statement Example from the study by Yamamoto et al. can gain credit (max 1) e.g. Altruism was investigated which is helping another chimpanzee out without any benefit to themselves; For example, one chimp gave another chimp a straw to drink the juice even though the chimp giving the straw never got the juice (example mark); The study was about prosocial behaviour which is about helping others who may need it; Empathy was looked into which is understanding the emotional state of another organism (by imagining themselves in 'their shoes'); Looked into targeting helping which is the ability to help someone else in a situation; Looked at targeting helping and seeing if organisms would use altruism to help/help without expecting a reward; Can an organism comprehend the specific needs of another organism;	**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 Yamamoto et al. (chimpanzee helping):

housing
numbers
reward
species

Use the following Levels marking for each guideline <u>separately</u>
<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>
Housing
Housing should take into account the social behaviour of species (e.g. caging);
The chimpanzees were socially housed at Kyoto University (not broken).

Numbers
Psychologists should use the least number of animals (as possible to accomplish goals);
Only five pairs of chimpanzees were used in the study (not broken).

Rewards
Behaviours cannot be controlled by the use of rewards only;
In this case it could be argued that one chimpanzee did get a reward at the expense of the other (broken).

Species
Researchers should choose an appropriate species for their study;
All chimpanzees were in captivity and had taken part in studies before/they are social animals and still lived in a group in captivity (not broken).
</td><td>8</td></tr>
</table>

Question	Answer	Marks
10	**Evaluate the study by Saavedra and Silverman (button phobia) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points <u>must</u> be about self-reports.** Suitable strengths include: quantitative data, application to real world, reliability, self-reports Suitable weaknesses include: social desirability, generalisability, self-reports 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**