

Cambridge International AS & A Level

PSYCHOLOGY	9990/11		
Paper 1 Approaches, issues and	May/June 2025		
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 May/June 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of 22 printed pages.

PUBLISHED

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.

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.

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.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
*	A creditworthy point made by the candidate A creditworthy 'what' for a generic everyday application question
×	An incorrect response
BOD	Benefit of Doubt
REP	Repetition of a point
?	Unclear response
I	The named issue in the 10-mark essay

Annotation	Meaning
L1 L2 L3 L4 L5	Levels used for the 10-mark essay (L1–L5) Levels used for the 8-mark similarity/difference question (L1–L4)
NAQ	Not Answering the Question
SEEN	The blank page has been seen. An attached response has been seen.
+	A creditworthy strength in the 10-mark essay. A creditworthy 'how' for a generic everyday application question
_	A creditworthy weakness in the 10-mark essay.
✓ _b	A creditworthy point in the 10-mark essay that is b rief
✓ d	A creditworthy point in the 10-mark essay that is d etailed The mark for data in Q4
✓ i	A creditworthy identification mark in Q6(b)
✓ e	A creditworthy example in Q6(a)

Question	Answer	Marks	Guidance
1(a)	From the study by Fagen et al. (elephant learning): State the number of elephants that successfully passed the trunk-wash test.	1	If more than one response given, take first one only.
	1 mark for correct number. 4.		
1(b)(i)	Identify the primary reinforcer used in this study. 1 mark for correct answer. Banana.	1	If more than one response given, take first one only. Do not accept 'food'.
1(b)(ii)	Identify the secondary reinforcer used in this study. 1 mark for correct answer. Whistle (sound).	1	If more than one response given, take first one only. Do not accept 'sound' by itself.
1(c)	Outline the trained behaviour of 'steady' as used in this study. 1 mark per correct point. e.g., The elephant holds the trunk still. The previously requested (trunk behaviour) was held in the position. The elephant can move her head/ears/feet.	2	List is definitive. Do not accept 'holds the trunk steady'. 'Had to hold still' = 0 marks

Question	Answer	Marks	Guidance
2(a)	In the study by Perry et al. (personal space), in Experiment 1 each participant took a computerised test of comfortable interpersonal distance. Outline the two possible ways that this computerised test could end for a participant. 1 mark per correct way.	2	List is definitive. 'When the participant stops the figure' = 0 marks. Accept 'hit the button' to mean spacebar.
	When the two figures collided/after 3 seconds/reached the centre/reached maximum distance (Before collision) the participant pressed the spacebar.		
2(b)	Explain one weakness of this study in relation to ethics. 1 mark for explaining the weakness (generic or by guideline). 1 mark for example from the study. e.g., The study could have broken the ethical guideline of minimising harm/stress/distress (1 mark: guideline). This is because the participant may have become stressed as the figure approached them (if they needed a large personal space)/they thought they were going to discuss personal topics (1 mark: example). The study could have broken the ethical guideline of deception (1 mark: guideline). This is because the participants might have felt stressed thinking that they had to speak with someone at a later date (as they were deceived into	2	Do accept deception for the 1 mark for guideline, but to get the example the candidate must link it to feeling stressed as the deception was justifiable, and participants were debriefed. 'Deceived' as they did not know if they were taking oxytocin or placebo = 0 marks (and in this instance no ID mark can be awarded). Not debriefed = 0 marks No informed consent = 0 marks

Question	Answer	Marks	Guidance
3(a)	From the study by Saavedra and Silverman (button phobia): One aim was to investigate the role of disgust in a childhood phobia. Outline one other aim of this study. 2 marks for full/detailed aim. 1 mark for brief/partial aim. e.g., To investigate the role of classical conditioning/evaluative learning in the (button) phobia of a boy (2 marks). To investigate whether behavioural/imagery exposure to buttons would help to treat his phobia (2 marks). To investigate if positive reinforcement helped treat a boy with a phobia (of buttons) (2 marks). To investigate what caused the phobia of buttons in a boy (1 mark). To help treat his phobia of buttons (1 mark). To investigate the origin of the phobia (1 mark). To investigate the role of disgust in phobias (0 marks = already given in the question).	2	Do not credit any aim about the role of disgust in phobias. Do accept cognitive-behavioural therapy. The role of operant conditioning = 1 mark max. If disgust is mentioned as an aim about treatment = 1 mark max.
3(b)	The sample in the study was a boy with a phobia of buttons.	2	List is definitive.
	Identify two other features of the sample.		Do not accept boy or phobia of buttons.
	1 mark per correct feature.		Do credit 'got his phobia at 5 years of age/4 years prior to study.'
	9-year-old. Hispanic/American. Presented by his mum to a Child Anxiety and Phobic Program. Did not meet the criteria for OCD. Did meet the criteria (DSM–IV) for a phobia. He had experienced a bowl of buttons falling on him (at school).		

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Question	Answer	Marks	Guidance		
3(c)	Suggest one application to everyday life using evidence from this study. Your suggestion must be ethical. 1 mark for what the application is (clearly based on Saavedra and Silverman) or an element of the study that is useful to know for an application (due to the nature of this study). 1 mark for how it will be achieved (explicit). e.g.	2	Annotate with a tick for what the application is and a + for how it will be achieved. In this instance the 'what' can be a finding. Anything linked to a therapeutic <i>process</i> used in the study is ethical for this		
	The boy revealed that during an art class a bowl of buttons fell on him as he tried to get some (1 mark: what). Therefore, a therapist may need to investigate/discover a situation when the person first came into contact with their phobic stimulus to (potentially) unearth the cause (1 mark: how). After just four sessions of the mother providing positive reinforcement, the boy		question. Only accept that imagery expose therapy should be used (as behavioural increased his severity ratings).		
	could cope with his worst button fears (1 mark: what). Therefore, for children with phobias, having a parent involved in the therapy might bring about faster positive outcomes (1 mark: how).				
	Therapists can use imagery exposure therapy with people who are diagnosed with a phobia (1 mark: what).				
	There are other creditworthy suggestions.				

Question	Answer	Marks	Guidance
4	From the study by Dement and Kleitman (sleep and dreams). Outline one result about dream recall and stages of sleep. You must use	3	Do not credit answers about no dream recall.
	data in your answer.		Use tick–d for the data mark.
	2 marks for the result with a meaningful comparison1 mark for result with no meaningful comparison1 mark for correct data		Credit can be given for results from any of the 9 individuals.
	e.g., 3 marks There was more dream recall during REM sleep (152 in total) compared to		More vivid dreams in REM compared to NREM = max 1.
	NREM sleep. KK had more dream recall in REM than NREM where they recalled zero dreams.		If data presented is incorrect but it shows the correct direction of results then can be awarded up to 2 marks.
	e.g., 2 marks There was more dream recall during REM sleep compared to NREM sleep. KK had more dream recall in REM than NREM.		Dreams reported: REM – 79.6% of awakenings NREM – 6.8% of awakenings (tolerance of 1%)
	e.g., 1 mark There was more dream recall during REM sleep. KK had more dream recall in REM. e.g., 0 marks		Overall dream recall: 93% of dreams reported in REM 7% of dreams reported in NREM (tolerance of 1%)
	80% of <u>participants</u> recalled a dream in REM. Dream recall only happens in REM and <u>not</u> NREM. <u>Most</u> participants could recall dreams during REM.		No tolerance for total number of dreams recalled in REM/NREM.
			Do credit if the response reads like a conclusion (e.g., Dreams are recalled more often in REM).

Question	Answer	Marks	Guidance
5(a)	Outline one assumption of the biological approach.	2	Do accept neurotransmitters, evolution.
	2 marks: full/detailed assumption 1 mark: partial/brief assumption e.g., 2 marks Human behaviour/cognitions can be explained in terms of brain function and the effect of hormones/genes (any two of the three terms required: brain—hormone—gene). The similarities and differences seen in human behaviour can be understood in terms of internal (biological) factors and how they interact (with internal/external factors). e.g., 1 mark Behaviour can be explained via brain function. Behaviour can be explained because of genes. Behaviour can be explained via hormones. The similarities and differences seen in human behaviour can be understood in terms of internal (biological) factors.		2 marks can be awarded if the similarities and differences assumption names a biological concept instead of stating 'biological factors'.
5(b)	Explain how the study by Hölzel et al. (mindfulness and brain scans) supports the assumption you outlined in part (a). 1 mark for result/conclusion/biological example. 1 mark for linking it to an assumption explicitly. e.g., Those who practised mindfulness showed an increase in grey matter (1 mark: result) so this shows that there was an interaction between mindfulness (external factor) and brain density (internal factor) (1 mark: assumption link); scores on the FFMQ change showing that brain structure can affect behaviour (1 mark: alternative assumption link). There are other creditworthy explanations.	2	If the link is not with an assumption from 5a, it can only be awarded the result/conclusion mark. 1 mark maximum if linked to the aim of the study, rather than a finding including they measured GMC.

Question	Answer	Marks	Guidance
6(a)	Describe the psychology being investigated in the study by Pozzulo et al. (line-ups). 1 mark for each correct statement. Examples from the study Pozzulo can gain credit (max 1). e.g., Some eyewitnesses can produce false positive responses which is when a person in a line—up is chosen by an eyewitness that is not accurate, but the eyewitness believes it is (2 marks: detailed). Eyewitness testimony is when a person attempts to recall what they have seen in relation to a crime. The information can be anything from what the person looked like/what they were wearing. The information obtained from an eyewitness may be used in a court of law. Social demands are when people/children feel pressured to make a choice. Children were asked to choose a cartoon face from a line—up (1 mark: example) There are other creditworthy responses, including the use of line—ups to help recall.	3	use this when you award the 'example mark'. Anything that is about what Pozzulo did (e.g., aim, finding, conclusion) is the example mark. 1 mark maximum for computer analogy or input–process–output. Do not credit any response in relation to children being good at identifying cartoon characters for the example mark. Do credit a generic description of a line–up for 1 mark.

Two friends, Eric and Quinn are discussing the validity of the study by Pozzulo et al. (line-ups). Eric says the study has validity, but Quinn says it does <u>not</u> have validity.	4	If both Eric and Quinn feature in the answer, mark them independently and credit the highest score. If the candidate mixes up Eric and Quinn
Outline why you think either Eric or Quinn is correct, using evidence from this study. 1 mark per point made, with: 1 identification mark for a relevant type of validity. Up to 3 marks for examples in relation to why/why not valid. e.g., Eric It can be argued that the study had ecological validity (1 mark: identification) as children are used to watching cartoons and identifying characters, (1 mark). The study did have some controls like the cartoon foils were rated by three judges to ensure they were similar to the cartoon target faces (1 mark). This means that this variable was less likely to affect the DV of identification/rejection (1 mark). This also meant that it was more likely that the social pressures of target-absent line-ups affected identification/rejection rates (1 mark). e.g., Quinn The act of having to look at a line-up and choose/reject cartoon faces is not an everyday activity, even for children (1 mark). This means that the study lacks ecological validity/mundane realism (1 mark: identification) and has limited relevance to eyewitness line-up identification (1 mark). Also, there were no participant variables controlled for, like exposure to the cartoon foils/personality of the child being tested (1 mark) so it could be that a child 'went along' with the situation not because of social factors/pressures but because they are a more obedient child (1 mark) There are other creditworthy responses.		(e.g., says Quinn but gives a 'it is valid' based answer) then max 2 and annotate with? = identification mark Standardisation, reliability, replicability = 0 marks Identification mark from: Ecological validity/external Mundane realism Internal validity/IV affects DV/causal relationship Population validity Control extraneous variables

Question	Answer	Marks	Guidance
7	In the study by Hassett et al. (monkey toy preferences), each trial used a 'plush' toy and a 'wheeled' toy.	5	List is definitive.
	Describe the procedure for <u>one</u> trial.		Do not credit anything that was recorded (e.g., duration or frequency of play) as these were post-trial.
	1 mark per point made.		
	1 mark available for identification of one of the toys.		Do not credit that the observers recorded behaviours as this is incorrect
	Initially, the monkeys were kept indoors. One plush toy and one wheeled toy were already in the outdoor area. They were separated by 10 metres. Left or right placement was counterbalanced per trial. Monkeys were allowed/released into the outdoor area/let out/let into outdoor		(everything was videotaped). All of this happened post-trial.
	area. Any interaction was videotaped/the monkeys' behaviours were recorded. Using separate cameras for each toy (in the area)/used 2 cameras/observed through cameras. Each trial lasted 25 minutes.		
	One mark for <u>any</u> of these (only award once): Plush = Winnie-the-Pooh/Raggedy-Ann/koala/armadillo/bear/Scooby-Doo/turtle. Wheeled = wagon/truck/car/construction vehicle/shopping cart/dump truck.		

Question	Answer	Marks	Guidance
8 8	Your friend, Imelda, tells you about a problem with her child's behaviour. Her child keeps taking all of his toys from where they are stored in a box and throwing them aggressively around the room. When she asks him to tidy the toys his only response is to shout. Imelda wants your advice on how to improve her child's behaviour. Outline the advice you would give to Imelda, using your knowledge of the study by Bandura et al. (aggression). Your advice must be ethical. 1 mark per piece of evidence clearly based on the study by Bandura et al. e.g. Imelda could use a model that shows calm/peaceful/positive behaviour (generic mark). The child could be asked to watch the model as they tidy up the toys/play with the toys. Imelda could reward the model for their good behaviour. Imelda could make sure that she does not display negative behaviour in front of her child. Imelda could make sure the child does not get annoyed/frustrated before opening the toy box. Imelda could make sure that any model is male/her husband/an uncle (as her child is male). Imelda could try to make sure her child is not exposed to aggressive behaviours (at home). Imelda could try to find out who the child might be imitating and stop them from observing. Imelda could stop her child from watching aggressive TV shows/cartoons. Imelda could encourage her child to watch TV shows/cartoons with friendly behaviour/less aggression in them.	Marks 4	No credit for justifying advice as this is not what the question is about. Do not credit positive reinforcement directly to the children as this is operant conditioning. Any part of the study (e.g., frustration) can gain credit. Go with intentions of the candidate. Do not credit trying to explain why he might be aggressive. The question is about advising Imelda on improving behaviour. The generic examples of non-aggressive behaviours (e.g., calm/peaceful) can only be credited once.
	There are other creditworthy pieces of advice.		

Question	Answer	Marks	Guidance
9(a)	In the study by Andrade (doodling), the sample size was 40 participants.	4	List is definitive.
	Describe the sample of participants used in this study, other than the sample size of 40. 1 mark for correct point.		Do not accept members of the Medical Research Council or that they were students.
	Recruited via opportunity sampling. They had just finished a different study (before being asked to participate in this one). Members of a university participant panel/Applied Psychology Unit. General population. Aged 18–55 years. Paid for participation. Majority female/35 females/5 males. Doodling group = Female 17/Male 3 or Control group = Female 18/Male 2.		Do accept psychology panel, research panel, research unit etc.

Question	Answer	Marks	Guidance
9(b)	Explain two differences between the study by Andrade (doodling) and one other study from the cognitive approach. Do not refer to the sample of participants. Use the marking grid below. 4 marks for each difference, e.g., qualitative data collection, experimental design used, cognitive skills be assessed, individual-situation arguments, sampling techniques, use of a control group, levels of mundane realism. Each difference must be based on psychological principles. e.g., 4 marks The studies by Andrade and Pozzulo used different experimental designs within them. Andrade was only independent groups with participants being placed in the doodling or control group. Part of the Pozzulo study was repeated measures as all participants saw target absent and target present line-ups. Therefore, in Andrade Ps only participated in one level of the IV whilst in Pozzulo Ps participated in multiple levels of the IV (explanation). e.g., 3 marks The studies by Andrade and Pozzulo used different experimental designs within them. Andrade was only independent groups with participants being placed in the doodling or control group. Part of the Pozzulo study was repeated measures. e.g., 2 marks Andrade used only independent measures whilst Pozzulo used repeated measures for part of the study. e.g., 1 mark Andrade and Pozzulo used different experimental designs.	8	The other cognitive approach studies are Baron–Cohen and Pozzulo. Do not credit any answer about the sample but do credit sampling technique. Award L1–L4 for each difference For Level 4 there must be some attempt at explaining the difference. All of the following are L1 max: Different aims/psychology Andrade using deception or is unethical. Audio vs. visual The procedures were different All of the following are L0: Standardisation comparisons Different conclusions Different number of groups If response is about Baron–Cohen being Matched Pairs = L2 max.

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Question		Answer	Marks	Guidance		
9(b)	Mark/ Level	Description				
	4	The difference is well explained using both studies as examples.				
	3	The difference is well explained but only one study is used as an example OR both studies are used briefly.				
	2	The difference is brief with an attempt at using at least one study as an example OR The difference is well explained but there is no study evidence.				
	1	The difference is brief with no attempt at using the studies as examples.				
	0	No creditable response.				
	N-	•				

uestion		Answer	Marks	Guidance
10	Evaluate the study by Milgram (obedience) in terms of <u>two</u> strengths and <u>two</u> weaknesses. At least one of your evaluation points must be about the sampling technique used to recruit participants.			
	Strengths include reliability/replicability (standardisation), quantitative data, validity. Weaknesses include sample, ethics, generalisability, quantitative data, sampling technique.			
	Example: in detail Reading out word pairs is not an everyday task so lacks mundane realism. Ps had to judge accuracy and give what they thought was an electric shock. However, this is not what happens in reality. We do not think we are giving people an electric shock as punishment to a stranger in the real world.			
	Example: brief but in context In the study all were males from one geographical area of the United States. This could make it difficult to generalise to a wider population of other males/females.			
	Example: no context There was a standardised procedure meaning it could be replicated/tested for reliability.			
	Level	Description	Marks	
	5	 Very good evaluation including the named issue. Thoroughly addresses both strengths and both weaknesses in detail. Selection of evidence is very thorough and effective. 	9–10	

Question	Answer			Marks	Guidance
10	Level	Description	Marks		
	4	 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. 	7–8		
	3	 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. 	5–6		
	2	 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. 	3–4		
	1	 Little or no evaluation. Discussion of strengths and weaknesses is absent or superficial. Selection of evidence is limited. 	1–2		
	0	No creditable response.	0		