CAMBRIDGE
International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/13**

Paper 1 Approaches, issues and debates **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.

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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).

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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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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
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)

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Annotation	Meaning
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
e	A creditworthy example

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Question	Answer	Marks	Guidance
1(a)	**From the study by Fagen et al. (elephant learning):** **State the number of elephants used in this study.** 1 mark for correct number. 5.	**1**	If more than one response given, take first one only. Accept '4 juvenile + 1 adult'
1(b)	**Identify <u>two</u> criteria used to select the elephants in this study.** 1 mark per correct criterion. (level of) docility. Lack of pregnancy/does not currently have calf. Willingness of mahout to participate. Trained using traditional methods. No previous experience with secondary positive reinforcement.	**2**	List is definitive. Accept 'pregnancy' by itself. Do **not** accept healthy, Nepalese, or 'not trained'.
1(c)	**Elephants were trained to do a number of behavioural tasks including 'trunk here'.** **Outline the 'trunk here' task.** 1 mark per correct point. (Distal) end of trunk placed (gently) on palm of trainer. The underside (ventral) part of the trunk must also be touching the palm of trainer.	**2**	List is definitive.

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Question	Answer	Marks	Guidance
2(a)	**In the study by Dement and Kleitman (sleep and dreams), an EEG (electroencephalogram) was used.** **Outline where on each participant's body the EEG electrodes were attached.** 1 mark per correct point. Electrodes were placed next to the eyes. Electrodes were placed on the scalp/head. All electrode lead wires were further attached to top of the head.	**2**	List is definitive. Do **not** credit 'on the eyes', 'in the brain', 'under eyes', 'in a ponytail.' Accept 'skull'.
2(b)	**Explain <u>one</u> weakness of this study in relation to validity.** 1 mark for identifying the weakness in relation to validity/identifying a type of validity. 1 mark for example from the study. e.g., Ecological validity is how well the setting for a study reflects a real-life setting (1 mark: explain) so in the study by Dement and Kleitman the setting was an artificial sleep laboratory/not at home that might have changed sleep/dream patterns (1 mark: example). There are other creditworthy responses, including do not know if they are telling the truth about dream content, could be difficult to fall asleep in the laboratory, the stress of being in a laboratory might affect dream content.	**2**	Credit population validity but **not** generalisability. The identification mark can be awarded by term or outline of the problem with validity (e.g., it wasn't real).

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Question	Answer	Marks	Guidance
3(a)	**From the study by Bandura et al. (aggression):** **One aim was to investigate whether children would reproduce the aggression shown by a model when that model is no longer there.** **Outline <u>one</u> other aim of this study.** 2 marks full/detailed aim 1 mark partial/brief aim. e.g., 2 marks To investigate whether children imitate the aggressive behaviour of an aggressive model To investigate whether children are more likely to imitate the behaviour of a same-sex model To investigate whether males imitate more aggression than females. e.g., 1 mark To investigate how children learn aggression. To see if aggression was nature or nurture. There are other creditworthy responses, including sex of model.	**2**	Do not credit responses about imitation in absence of model as this is in the question. 'Imitate' needed for the sex differences aim to be awarded 2. Terms like reproduce, copy, repeat are synonyms for imitate.
3(b)	**Identify <u>two</u> features of the sample in this study.** 1 mark per correct point. n=72 Aged 37–69 months/mean age of 52 months. Split evenly across sex/36 male and 36 female. Enrolled at Stanford University Nursery School.	**2**	List is definitive. Accept age as 3–6 years. Male + female = 0 marks. From Stanford Uni = 0 marks.

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Question	Answer	Marks	Guidance
3(c)	**Suggest <u>one</u> application to everyday life using evidence from this study. Your suggestion <u>must</u> be ethical.** 1 mark for what the application is (clearly based on Bandura). 1 mark for how it will be achieved. 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). Can be used by TV companies/video games creators/toy companies (1 mark: what) by reducing the amount of aggression in programmes/presenting more prosocial behaviour (1 mark: how). Parents can use it to sensor TV/videogame content/time for their children (1 mark: what) by restricting the time played/presenting more prosocial behaviour/not allowing them to play aggressive games (1 mark: how). There are other creditworthy suggestions.	**2**	Annotate with a tick for what the application is and a + for how it will be achieved. Do **not** credit explaining everyday behaviours, for example, we must be careful what we do around others, or it explains why some people get aggressive. A finding can be used as a 'what' if it leads logically into the 'how'.

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Question	Answer	Marks	Guidance
4	**In Experiment 1 in the study by Perry et al. (personal space), participants were given oxytocin (OT) or a placebo (PL).** **Describe <u>one</u> result from the high empathy OT condition that compares two approaching figures. 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 The mean distance for the ball invading personal space was lower than that for a stranger (40). The mean distance for the stranger invading personal space was higher than that for a friend (8.4). e.g., 2 marks The mean distance for the ball invading personal space was lower than that for a stranger. The mean distance for the stranger invading personal space was higher than that for a friend e.g., 1 mark The mean distance for a friend invading personal space was the lowest. The mean distance for the stranger invading personal space was the highest.	**3**	Tolerance for any reported mean is 2. Use tick-d for the data mark. Authority = boss/teacher **but not** parent/family. No credit for comparisons with placebo or low empathy.

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Question	Answer	Marks	Guidance
5(a)	**Outline <u>one</u> assumption of the social approach.** 2 mark full/detailed assumption. 1 mark partial/brief assumption. e.g., 2 marks Behaviour, cognitions, and emotions are influenced by social contexts, social environments and social groups (any 2 mechanisms). Behaviour, cognitions and emotions are influenced by actual, implied or imagined presence of others (any 2 of these). e.g., 1 mark Behaviour is affected by other people. Behaviour is influenced by groups.	**2**	For 2 marks need two of the 'influenced' components to be presented by the candidate. Other acceptable 'influenced by' examples include: Interaction with others Social pressure
5(b)	**Explain how the study by Piliavin et al. (subway Samaritans) supports the assumption you outlined in part <u>(a)</u>.** 1 mark for result/conclusion/concept. 1 mark for linking it to an assumption explicitly. e.g. They were affected by the social context of witnessing a drunk person needing help (1 mark). They were less likely to help as it was seen as 'self-inflicted' (1 mark). When there was a larger group, it affected their behaviour as they were faster at helping (1 mark).	**2**	If the link is not with an assumption from **5(a)**, it can only be awarded the result/conclusion mark. 1 mark maximum if linked to the aim of the study, rather than a finding, e.g., diffusion of responsibility.

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Question	Answer	Marks	Guidance
6(a)	**Describe the psychology being investigated in the study by Hassett et al. (monkey toy preferences).** 1 mark for each correct statement. Examples from the study by Hassett can gain credit (max 1). e.g., Sex differences refer to behavioural differences based on biological differences between males and female. These can be based on hormones/chromosomes. The main male hormone is testosterone/the main female hormone is oestrogen. Play is any mental/physical activity performed in leisure time for enjoyment/pleasure. Socialisation is any mechanism that changes/adapts a behaviour to societal/cultural expectations. The study looked at whether male and female monkeys preferred masculine or feminine toys (1 mark: example). There are other creditworthy responses.	**3**	✓e use this when you award the 'example mark'. Do **not** accept any answer about gender of monkeys. Accept description of nature-nurture for 1 mark.

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Question	Answer	Marks	Guidance
6(b)	**Two friends, Madison and Zach, are discussing the validity of the study by Hassett et al. (monkey toy preferences).** **Madison says the study has validity, but Zach says it does <u>not</u> have validity.** **Outline why you think <u>either</u> Madison or Zach is correct, using evidence from the 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., Madison it could be argued that the study has some ecological validity (1 mark: identification) as the enclosure was their everyday setting (1 mark). The study did have some controls like the types of toys chosen for wheeled/plush (1 mark). This means that this variable was less likely to affect the DV of toy choice/preference (1 mark). This also meant that it more likely that the idea of masculine/feminine toys was affecting the frequency/duration of play (1 mark). e.g., Zach The act of having to choose human toys to play with is not an everyday activity for monkeys (1 mark). This means that the study lacks ecological validity/mundane realism (1 mark: identification). Also, there were no participant variables controlled for like amount of previous experiences with novel objects (1 mark), it could be that a monkey/monkeys were drawn to the more exciting toys and not because of the sex-typing (1 mark)	**4**	If both Madison and Zach feature in the answer, mark them independently and credit the highest score. If the candidate mixes up Madison and Zach (e.g., says Zach but gives a 'it is valid' based answer) then max 2 and annotate with ? ✓i = 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

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Question	Answer	Marks	Guidance
6(b)	There are other creditworthy responses, including monkeys were not exposed to any societal pressures, videotaped so no effect if having an experimenter nearby, toy categorisation may have influenced toy choice, use of counterbalancing, social rank controlled.		

Question	Answer	Marks	Guidance
7	**In the study by Milgram (obedience), a shock generator was used. It consisted of 30 lever switches in a horizontal line.** **Describe the shock generator used in this study, other than these features.** 1 mark per correct point. Each switch was clearly labelled with a voltage. The volts ranged from 15 V to 450 V/minimum 15 V/maximum 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). Was connected to the learner by electrodes/wires that were 'supposed' to send a shock.	**5**	List is definitive. If XXX already awarded, then needs to be two <u>different</u> labels to gain the final marking point. Do **not** credit the 1,2,3,4 answer box.

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Question	Answer	Marks	Guidance
8	**Your friend, Alfonso, is finding it difficult to concentrate at school. He tells you that his concentration is worse when he is bored. He has come to you for advice about ways to help him improve his concentration.** **Outline the advice you would give to Alfonso, using your knowledge of the study by Andrade (doodling).** 1 mark per piece of advice clearly based on the study by Andrade. e.g. Tell Alfonso to have a piece of paper in class. Tell Alfonso that he can draw shapes on the paper. Tell Alfonso that he can shade the shapes. Alfonso can shade/draw whenever he wants/about whatever he wants. Tell Alfonso it does not matter how neat/quick he is when shading/drawing. The paper can already have shapes on it he can colour them in. He could do this when the teacher has told him that important information needs to be remembered. There are other creditworthy pieces of advice.	**4**	No credit for justifying advice as this is not what the question is about. Do **not** credit 'doodling', 'doodle' or 'secondary task' by itself. Do **not** accept scribbling. Do **not** accept go into a quiet dull room.

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Question	Answer	Marks	Guidance
9(a)	**Describe the Five Facet Mindfulness Questionnaire (FFMQ) used in the study by Hölzel et al. (mindfulness and brain scans).** 1 mark per correct point. 1 mark available for <u>naming</u> **one** of the five facets. It is a 39-item questionnaire. Measures the five factors of mindfulness: observing/describing/acting with awareness/non-judging of inner experiences/ non-reactivity to inner experience (1 mark maximum). Rated on 5-point scale/scale of 1–5/Likert scale 1=never or rarely true. 5=very often or always true.	**4**	List is definitive. No credit for <u>describing</u> any of the five facets. A response of: 1 = never; 5 = very often is 3 marks (1–5 and the two correct examples)

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Question	Answer	Marks	Guidance
9(b)	**Explain <u>one</u> similarity and <u>one</u> difference between the study by Hölzel et al. (mindfulness and brain scans) and <u>one</u> other study from the biological approach. Do <u>not</u> refer to questionnaires.** Use the marking grid below. 4 marks for the similarity, e.g., small samples, data collection techniques, experimental design, brain scans. 4 marks for the difference, e.g., brain measurement techniques, research techniques used, type of data collected (quantitative/qualitative). e.g. difference 4 marks Hölzel used an MRI scan to be able to see brain density changes after a mindfulness stress reduction course. Dement & Kleitman used a different technique called an EEG that could only monitor brain wave activity/patterns. Therefore, Hölzel's method looked at structure whereas Dement looked at (real-time) function (explanation). 3 marks Different techniques were used to measure the brain. Hölzel used an MRI scan to be able to see brain density changes after a mindfulness stress reduction course/Dement & Kleitman used a different technique called an EEG that could only monitor brain wave activity/patterns. 2 marks Hölzel used an MRI scan to measure brain density whilst Dement & Kleitman used an EEG. 1 marks Both studies used different techniques to measure the brain.	**8**	The other biological approach studies are Hassett and Dement. Do accept Perry but only for oxytocin-related comparisons. Award L1–L4 for the similarity Award L1–L4 for the difference For Level 4 there must be some attempt at *explaining* the similarity/difference. Different aims = L1. Different species = L1. Same species = L1. Both have applications = L1. Both study biology = L0. Any response where it is just describing what each study did, take as different aim = L1

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<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>9(b)</td><td>
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<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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Question	Answer	Marks	Guidance
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 subjective data.** Strengths include reliability (standardisation), quantitative data, validity, self-reports. Weaknesses include subjective data, ethics, generalisability, quantitative data, self-reports. Example: in detail The sample was one boy with a button phobia so it may be difficult to generalise/he had a 'unique' phobia of buttons. Females may react differently to the type of therapy as they tend to be more emotional, plus people with other types of phobia may not find a Feelings Thermometer useful if the phobia is not a concrete object. Example: brief but in context The participant could have lied/given false responses/shown social desirability. He could have rated some of the buttons differently to how he felt as he did not want to look as scared. Example: no context There was a standardised procedure meaning it could be replicated/tested for reliability.	**10**	

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<tr><th>Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>10</td><td>
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<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>
<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>
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<tr><td>10</td><td>
<table>
<tr><th>Level</th><th>Description</th><th>Mark</th></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>
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