

# Cambridge IGCSE™

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**PSYCHOLOGY**

**0266/02**

Paper 2

**For examination from 2027**

MARK SCHEME

Maximum Mark: 80

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**Specimen**

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This document has **14** pages.

**Generic Marking Principles**

All examiners must apply these general marking principles when marking candidate responses. Examiners must apply them alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme must 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 descriptions for the question
- the specific skills defined in the mark scheme or in the generic level descriptions 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 descriptions.

**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 descriptions in mind.

**Social Sciences-Specific Marking Principles  
(for point-based marking)**

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1 Components using point-based marking:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul> <p>From this it follows that we:</p> <ul style="list-style-type: none"> <li><b>a</b> 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)</li> <li><b>b</b> DO credit alternative answers/examples which are not written in the mark scheme if they are correct</li> <li><b>c</b> 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 <i>n</i> reasons (e.g. State two reasons ...).</li> <li><b>d</b> 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.)</li> <li><b>e</b> DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities</li> <li><b>f</b> 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).</li> <li><b>g</b> 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)</li> </ul> |
| <p><b>2 Presentation of mark scheme:</b></p> <ul style="list-style-type: none"> <li>• Slashes (/) or the word 'or' separate alternative ways of making the same point.</li> <li>• Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.</li> <li>• 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).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>3 Calculation questions:</b></p> <ul style="list-style-type: none"> <li>• 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</li> <li>• 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.</li> <li>• Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.</li> <li>• 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.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>4 Annotation:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• For levels of response marking, the level awarded should be annotated on the script.</li> <li>• Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Marks |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1        | <p><b>Yumna is walking outside in a field.</b></p> <p><b>Suggest <u>two</u> senses Yumna could experience as she is walking outside. Include an example for each sense.</b></p> <p>1 mark for each sense (× 2)<br/>1 mark for linked detail (× 2)</p> <p>For example:<br/>Seeing [1]; Yumna can see grass / plants / trees / her own body [1];<br/>Hearing [1]; hear the wind / people talking [1];<br/>Touch [1]; pick up leaves / feel soft ground [1];<br/>Smell [1]; odour of grass / scent of the soil [1].</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Marks |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 2        | <p><b>A group of students were working carefully on a visual task. The students were given multiple images full of red and blue star shapes. The students had to count the number of red star shapes in the images. However, they did not notice a large animal shape which had been added to one of the images.</b></p>                                                                                                                                                                                                                                                                                                                                        |       |
| 2(a)     | <p><b>Use knowledge of perceptual set to explain why the students did not see the large animal shape.</b></p> <p>2 marks for outline of perceptual set (generic or linked)<br/>2 marks for linked explanation</p> <p>For example:<br/>Perceptual set is prior knowledge that affects what we see (partial outline) [1];<br/>Perceptual set is when a schema makes us notice only some parts of a stimulus (full outline) [2];<br/>The students did not see the animal because they were looking for the red stars (explanation) [1];<br/>Because their schema made them notice the red stars / ignore the animal shape that did not match (explanation) [1]</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 2(b)     | <p><b>Some students were less familiar with the star shape. These students noticed the large animal shape.</b></p> <p><b>Explain how the study about familiarity and perception (Haber and Levin) supports the argument for the constructivist theory of perception.</b></p> <p>1 mark for each relevant point (× 4)<br/><i>Argument for from syllabus: familiarity and perception (Haber and Levin, experiment 2 only)</i></p> <p>For example:<br/>Haber and Levin found that participants' height estimates for the 'objects of unknown size' were much less accurate than their height estimates for the 'familiar objects which are usually similar in size' [1];<br/>For familiar objects, participants gave equally accurate height estimate from viewing the objects as they did from their past experience of the objects [1];<br/>This shows that people rely on their familiarity with objects to help them accurately perceive size [1];<br/>This supports the argument for the constructivist theory of perception that experience helps develop our perceptual abilities [1].</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Marks |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 3        | <p><b>Fred created four images with small circles, as shown in Figure 3.1.</b></p> <p><b>Explain how Fred has used <u>four</u> different Gestalt principles of perception to create images with small circles.</b></p> <p>1 mark for each different description of Gestalt principles (× 4)<br/>1 mark for each different explanation linked to images created by Fred (× 4)</p> <p>For example:<br/>Proximity suggests things that are close to one another tend to be grouped together [1];<br/>A uses proximity because we see a square/box [1].<br/>Similarity suggests things that are similar tend to be grouped together [1];<br/>B uses similarity because we see alternating black and white rows [1].<br/>Closure suggests we organise perceptions into complete objects rather than as a series of parts [1];<br/>C uses closure because we see a <b>complete</b> square/box [1].<br/>Continuity suggests we are more likely to perceive continuous, smooth flowing lines rather than uneven, broken lines [1];<br/>D uses continuity because we see a square/box [1].</p> <p>Candidates may give different Gestalt principles for different images which can be credited if accurately explained.</p> | 8     |
| 4        | <p><b>Sarah has been walking for a few hours and she is feeling tired and thirsty. She notices a sign for a shop. Sarah stops to rest and buy water.</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Marks    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 4(a)     | <p><b>The need for water is a physiological need.</b></p> <p><b>State <u>two</u> needs from Maslow’s hierarchy of needs, other than physiological needs.</b></p> <p>1 mark for each need (× 2)</p> <ul style="list-style-type: none"> <li>• Safety</li> <li>• Love/Belonging</li> <li>• Esteem</li> <li>• Self-actualisation</li> </ul>                                                                                                                                                                                | <b>2</b> |
| 4(b)     | <p><b>Use Hull’s drive reduction theory of motivation to explain Sarah’s behaviour.</b></p> <p>1 mark for explanation<br/>1 mark for each detail (× 3)<br/>One point must be linked to the scenario for 4 marks</p> <p>For example:<br/>The theory suggests that physiological needs (detail) [1];<br/>create a drive that motivates behaviour to reduce the need (explanation) [1];<br/>to restore homeostasis (detail) [1];<br/>Sarah stopped to buy water (link) [1]; to satisfy her thirst/to rest (link) [1].</p> | <b>4</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 5        | <p><b>Sam started a new job and is lacking motivation. He feels that he does not belong in the team and that he is not achieving his goals at work.</b></p>                                                                                                                                                                                                                                                                                                                                                       |          |
| 5(a)     | <p><b>Use self determination theory to explain Sam’s motivation.</b></p> <p>1 mark for explanation<br/>1 mark for each detail (× 3)<br/>One point must be linked to the scenario for 4 marks</p> <p>For example:<br/>Sam’s psychological needs are not satisfied (explanation) [1];<br/>Need for competence is not satisfied (detail) [1];<br/>as he is not achieving his goals at work (link) [1];<br/>Need for relatedness is not satisfied (detail) [1];<br/>as he does not belong in the team (link) [1].</p> | <b>4</b> |
| 5(b)     | <p><b>State <u>two</u> ways Sam’s employer could use extrinsic motivation to motivate Sam at work.</b></p> <p>1 mark for each suggestion (× 2)</p> <p>For example:<br/>Give Sam an increase in pay [1];<br/>Praise Sam’s work [1];<br/>Give Sam an employee award [1].</p>                                                                                                                                                                                                                                        | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 6(a)     | <p><b>Mr Filip is a teacher. He has noticed that learners do not always respond to his questions.</b></p> <p><b>Suggest <u>two</u> ways Mr Filip can use positive reinforcement to motivate his learners to answer questions more often.</b></p> <p>1 mark for each way (× 2)<br/>1 mark for link to scenario (× 2)</p> <p>For example:<br/>Mr Filip could use a token economy (way) [1], by giving points each time learners respond to questions which add up to a reward (link) [1].<br/>Mr Filip could use praise (way) [1] for learners who respond to questions (link) [1].</p>                                                                                                                                                                                                                                                                                                                                                                                   | <b>4</b> |
| 6(b)     | <p><b>Explain why using positive reinforcement to motivate Mr Filip’s learners may <u>not</u> be effective.</b></p> <p>1 mark for each relevant point (× 4)</p> <p><i>‘Argument against’ from syllabus: Environmental and individual factors also influence learners’ experience</i></p> <p>For example:<br/>Cannot account for environmental factors [1];<br/>Learners might not have other more basic needs met, e.g. food/safety which prevents learning [1];<br/>Individual differences can affect the effectiveness of positive reinforcement [1];<br/>Some learners with additional needs might find receiving rewards distracting/difficult [1].</p> <p>Can also credit appropriate use of other theories/arguments.<br/>For example:<br/>Self-determination theory suggests that competence also affects motivation [1]; extrinsic rewards from positive reinforcement may not be effective if students do not feel they are competent to give answers [1].</p> | <b>4</b> |

| Question | Answer                                                                                                                                                                                                 | Marks    |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7        | <p><b>State what is meant by ‘language’.</b></p> <p>1 mark for appropriate definition</p> <p>For example:<br/>System for communicating thoughts and feelings (via verbal and non-verbal ways) [1].</p> | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 8        | <b>Harry is 20 months old. He is at home with his father. Their cat, Neko, enters the room and Harry shouts, ‘rabbit here’ before saying ‘cat here’ and then ‘rabbit here’ again.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |
| 8(a)     | <b>State the stage of language development that Harry is currently in.</b><br><br>1 mark for accurate identification<br><br>Two-word stage of language development [1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>1</b> |
| 8(b)     | <b>State what is meant by ‘positive reinforcement’.</b><br><br>1 mark for appropriate definition<br><br>For example:<br>Adding a <u>pleasant</u> stimulus after a behaviour, to increase the chance of the behaviour <u>happening again</u> [1].                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>1</b> |
| 8(c)     | <b>Harry’s father wants to help Harry use the correct word ‘cat’ for Neko rather than the incorrect word ‘rabbit’.</b><br><br><b>Explain how Harry’s father can use reinforcement to help Harry to use the correct word for Neko the cat.</b><br><br>1 mark for linked explanation<br>1 mark for each linked detail (× 2)<br><br>For example:<br>Harry’s father could reward him with praise/hug/sweets when Harry says the word ‘cat’ for Neko (linked explanation) [1];<br>However, his father could ignore / not praise Harry when he says the word ‘rabbit’ for Neko (linked detail) [1];<br>Harry will use the word ‘cat’ not ‘rabbit’, so he receives the reward/praise/hug/ sweets (linked detail) [1]. | <b>3</b> |
| 8(d)     | <b>Explain how Harry’s father can encourage Harry to use the correct word for Neko the cat through observation and imitation.</b><br><br>1 mark for linked explanation<br>1 mark for each linked detail (× 2)<br><br>For example:<br>Harry’s father could say the word ‘cat’ every time Neko comes into the room (linked explanation) [1];<br>Harry will observe his father use the word ‘cat’ for Neko (linked detail) [1];<br>Which means he will imitate him by using the word ‘cat’ himself (linked detail) [1];<br>His father is a role model (detail) [1] so Harry will observe and imitate him and say ‘cat’ (linked detail) [1].                                                                       | <b>3</b> |



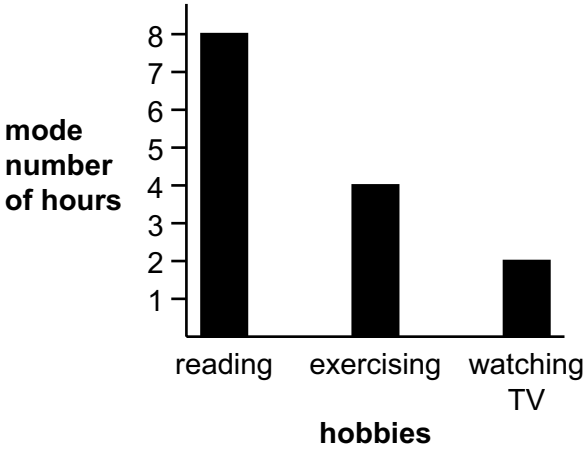
| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Marks |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 9        | <p><b>Ali has had a stroke and is having problems with language. He has difficulty saying words and forming sentences. Ali also cannot repeat words that he hears.</b></p> <p><b>Explain why Ali's stroke means he has problems with language.</b></p> <p>1 mark for linked explanation<br/>1 mark for each linked detail (× 2)</p> <p>For example:<br/>Ali may be suffering from Broca's aphasia (linked explanation) [1];<br/>Ali's stroke may have caused damage to Broca's area in his brain (linked explanation) [1];<br/>Ali is having difficulty with speech production, which is linked to the language area of the brain (linked detail) [1];<br/>meaning he is struggling to form sentences or repeat words, which is a feature of Broca's aphasia (linked detail) [1].</p> | 3     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 10(a)    | <p><b>Describe Chomsky's biological explanation of language acquisition.</b></p> <p>1 mark for each relevant point (× 4)</p> <p>For example:<br/>Suggests that the ability to learn language is innate [1];<br/>Humans are born with a capacity for language known as a language acquisition device (LAD) which predisposes them to acquire language [1];<br/>All human language shares a similar structure in a set of grammatical rules known as universal grammar [1];<br/>There is a critical period when the brain is more receptive to input making language acquisition easier [1].</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 10(b)    | <p><b>Explain <u>one</u> argument for and <u>one</u> argument against Chomsky’s biological explanation of language acquisition.</b></p> <p>1 mark for each relevant point (× 4)<br/>Max 3 marks if only one side addressed</p> <p><i>Argument for from syllabus: sign language acquisition (Senghas)</i><br/><i>Argument against from syllabus: Language acquisition is not just influenced by biology (e.g. cultural and social factors)</i></p> <p>For example:</p> <p><i>Argument for:</i><br/>The study by Senghas found that children’s sign language learning abilities decrease with age [1] which supports the argument for the importance of the critical period [1].<br/>The fact that we are born with the vocal ability to learn language biologically [1] suggests it is an innate process [1].<br/>Children learn too many words each day [1] for language to be a learnt process [1].</p> <p><i>Argument against:</i><br/>Language learning is influenced by non-biological factors such as family environment and mass media [1] suggesting that cultural and social factors influence language acquisition too [1].<br/>Very few language universals exist [1] suggesting that universal grammar is not correct [1].</p> | <b>4</b> |

| Question    | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Marks                        |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|--|--|--------------------|------------------------------|---|--|--|---|--|--|---|--|--|---|--|--|---|--|--|---|
| 11          | <p><b>Sumati is a teacher. She wants to know how new students learn to get from one classroom to another classroom. She conducts an observational study by watching five new students walk between classrooms. Sumati looks through a window in the staff office so the students do not notice her.</b></p> <p><b>Sumati writes down two pieces of data for each new student:</b></p> <ul style="list-style-type: none"> <li>• <b>whether they look at their map of the school</b></li> <li>• <b>whether they ask for help from another student.</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 11(a)       | <p><b>State <u>one</u> feature of this observation that makes it structured.</b></p> <p>1 mark for feature</p> <p>For example:<br/>Fixed list of behaviours / behavioural categories [1];<br/>Checklist [1].</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1                            |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 11(b)       | <p><b>State <u>one</u> feature of this observation that makes it covert.</b></p> <p>1 mark for feature</p> <p>For example:<br/>Sumati is hidden from the participants [1];<br/>Sumati is out of sight in the staff room [1];<br/>Sumati is behind a window [1].</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1                            |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 11(c)       | <p><b>Draw a table that Sumati could use as a checklist to collect data for the five students.</b></p> <p>1 mark for heading of 'behaviours'<br/>1 mark for behaviours from the question stem<br/>1 mark for more than one data entry row or column for behaviours (i.e. more than one participant)<br/>1 mark for 'participant' heading<br/>Max 3 marks</p> <p>For example:</p> <table border="1" data-bbox="308 1496 1029 1892"> <thead> <tr> <th data-bbox="308 1496 536 1547">participant</th> <th colspan="2" data-bbox="536 1496 1029 1547">behaviours</th> </tr> <tr> <td data-bbox="308 1547 536 1637"></td> <th data-bbox="536 1547 764 1637">look at school map</th> <th data-bbox="764 1547 1029 1637">ask another student for help</th> </tr> </thead> <tbody> <tr> <td data-bbox="308 1637 536 1688">1</td> <td data-bbox="536 1637 764 1688"></td> <td data-bbox="764 1637 1029 1688"></td> </tr> <tr> <td data-bbox="308 1688 536 1740">2</td> <td data-bbox="536 1688 764 1740"></td> <td data-bbox="764 1688 1029 1740"></td> </tr> <tr> <td data-bbox="308 1740 536 1792">3</td> <td data-bbox="536 1740 764 1792"></td> <td data-bbox="764 1740 1029 1792"></td> </tr> <tr> <td data-bbox="308 1792 536 1843">4</td> <td data-bbox="536 1792 764 1843"></td> <td data-bbox="764 1792 1029 1843"></td> </tr> <tr> <td data-bbox="308 1843 536 1892">5</td> <td data-bbox="536 1843 764 1892"></td> <td data-bbox="764 1843 1029 1892"></td> </tr> </tbody> </table> | participant                  | behaviours |  |  | look at school map | ask another student for help | 1 |  |  | 2 |  |  | 3 |  |  | 4 |  |  | 5 |  |  | 3 |
| participant | behaviours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
|             | look at school map                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ask another student for help |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 1           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 2           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 3           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 4           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |
| 5           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |            |  |  |                    |                              |   |  |  |   |  |  |   |  |  |   |  |  |   |  |  |   |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 12       | <b>Dr Zhang is designing an interview to investigate how adults spend their leisure time. He wants to investigate the adults' hobbies such as reading, exercising and watching television (TV).</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |
| 12(a)    | <p><b>State what is meant by 'an interview'.</b></p> <p>1 mark for appropriate definition</p> <p>For example:<br/>Method of collecting data by asking verbal questions to participants [1].</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>1</b> |
| 12(b)    | <p><b>Suggest <u>one</u> piece of information Dr Zhang should tell his participants before the study so that the interview is ethical.</b></p> <p><b>Include a reason for your answer.</b></p> <p>1 mark for suggestion of a piece of information about ethics<br/>1 mark for reason/ethical guideline</p> <p>For example:<br/>That it is a study about adults' hobbies in their leisure time / hobbies such as reading, exercising, watching television (information) [1];<br/>That it involves an interview (information) [1].<br/>So that they can give (informed/valid) consent / to protect their privacy / so that they can withdraw (ethical guideline) [1].</p> | <b>2</b> |
| 12(c)    | <p><b>Dr Zhang counts the number of different hobbies that each adult reports.</b></p> <p><b>Describe how Dr Zhang can calculate the range of the number of different hobbies that adults report.</b></p> <p>1 mark for generic answer<br/>2 marks for linked answer</p> <p>For example:<br/>The biggest number to the smallest [1];<br/>The biggest number of activities to the smallest (number of activities) [2].<br/>The maximum number minus the least [1];<br/>The maximum number of activities minus the least [2].<br/>The highest number minus the lowest + 1 [1];<br/>The highest number of activities minus the lowest (number of activities) + 1 [2].</p>  | <b>2</b> |

| Question    | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Marks |                      |         |   |            |   |             |   |          |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------|---------|---|------------|---|-------------|---|----------|
| 12(d)       | <p><b>Dr Zhang found the mode for the number of hours spent on different hobbies in a week. These results are shown in Table 12.1 .</b></p> <p><b>Plot a bar chart of the data in Table 12.1. You must label the axes.</b></p> <p>1 mark for X-axis label (hobbies)<br/>1 mark for X-axis categories (reading, exercising, watching television (TV))<br/>1 mark for Y-axis label (mode number of hours)<br/>1 mark for Y-axis units (2–8 minimum)<br/>1 mark for correct plotting<br/>Max 3 marks if not a bar chart (if bars are not separate)</p> <p>For example:</p>  <table border="1"><caption>Data for Table 12.1</caption><thead><tr><th>Hobby</th><th>Mode Number of Hours</th></tr></thead><tbody><tr><td>reading</td><td>8</td></tr><tr><td>exercising</td><td>4</td></tr><tr><td>watching TV</td><td>2</td></tr></tbody></table> | Hobby | Mode Number of Hours | reading | 8 | exercising | 4 | watching TV | 2 | <b>4</b> |
| Hobby       | Mode Number of Hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |                      |         |   |            |   |             |   |          |
| reading     | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |                      |         |   |            |   |             |   |          |
| exercising  | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |                      |         |   |            |   |             |   |          |
| watching TV | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |                      |         |   |            |   |             |   |          |

| Question   | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Marks    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 13         | <b>Hiro is conducting a case study of a man who has memory problems. One way Hiro obtains data is by giving questionnaires with open and closed questions to the man's friends.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |
| 13(a)(i)   | <b>State what is meant by an 'open question'.</b><br><br>1 mark for appropriate definition<br><br>For example:<br>Questions that require detailed answers in participants' own words (no answer choices are given to participants) [1].                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>1</b> |
| 13(a)(ii)  | <b>State what is meant by a 'closed question'.</b><br><br>1 mark for appropriate definition<br><br>For example:<br>Questions with a fixed set of possible responses (these responses are given to the participants) [1].                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>1</b> |
| 13(a)(iii) | <b>Write <u>one</u> closed question that Hiro could use to investigate the man's memory problems.</b><br><br>1 mark for closed question in context<br>1 mark for answer options (can be within the question)<br><br>For example:<br>Does he forget who you are? [1]; Yes / No [1].<br>Is he more likely to forget friends or family? [2].                                                                                                                                                                                                                                                                                                                                                          | <b>2</b> |
| 13(b)      | <b>The information that Hiro obtains from her questionnaire may be subjective.</b><br><br><b>Explain <u>one</u> reason why information from a questionnaire may be subjective.</b><br><br>1 mark for reason (generic or linked)<br>1 mark for detail<br><br>For example:<br>People have different perspectives (generic reason) [1];<br>People may interpret the question in different ways (generic detail) [1].<br>There may be differences between the friends (linked reason) [1];<br>They may see the man's memory problems differently (linked detail) [1];<br>e.g. some friends may know him better / have memory issues themselves / know others with memory problems (linked detail) [1]. | <b>2</b> |