



## Cambridge International AS & A Level

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**PSYCHOLOGY**

**9990/21**

Paper 2 Research Methods

**May/June 2021**

**MARK SCHEME**

Maximum Mark: 60

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| <p><b>Published</b></p> |
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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.

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This document consists of **15** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**Social Science-Specific Marking Principles  
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

**2 Presentation of mark scheme:**

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

**3 Annotation:**

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Marks    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1        | <b>In the study by Pepperberg (parrot learning), several features of the procedure helped to improve reliability.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |
| 1(a)     | <p><b>State what is meant by ‘reliability’.</b></p> <p>1 mark for definition</p> <p>The consistency of a procedure/task/measure;<br/>whether the procedure/task/measure produces the same results with the same people each time (it is used);</p> <ul style="list-style-type: none"> <li>reliability is about consistency = 1 mark</li> <li>to be reliable, measures must measure the phenomenon in the same way each time = 1 mark</li> <li>whether a test produces the same results every time = 0 marks</li> </ul>                                                                                                                                                                                                           | <b>1</b> |
| 1(b)     | <p><b>Suggest how <u>one</u> feature of the procedure helped to make this study reliable.</b></p> <p>1 mark for feature that helped reliability<br/>1 mark for link</p> <p>standardised (questions)/question all equally hard; (feature)<br/>the questions asked were always phrased ‘what’s same?’ or ‘what’s different?’; (link)</p> <p>There was no risk of improvement within a test; (feature)<br/>because the same materials were never presented again during a test; (link)</p> <p>only (very) specific responses were accepted as correct; (feature)<br/>e.g. ‘colour’/‘shape’/‘mah mah’ for ‘matter’; (link)</p> <p>Alex could not guess; (feature)<br/>because his ‘first trial’ performance was measured; (link)</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 2        | <b>In the study by Andrade (doodling), one possible uncontrolled variable was whether the participants had friends with the same names as the people in the mock telephone call.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          |
| 2(a)     | <p><b>Suggest <u>one</u> problem this uncontrolled variable might have caused.</b></p> <p>1 mark for problem<br/>1 mark for a detail<br/>One point must be linked for full 2 marks</p> <p>Lowers validity; (generic problem)<br/>as people with friends of the same name will recall better; (linked detail)</p> <p>means Andrade could not be certain that differences were caused by the IV;<br/>(generic problem)<br/>so it is not the effect of the doodling; (linked detail)</p>                                                                                                                                                                                                                                                                                                                 | <b>2</b> |
| 2(b)     | <p><b>Suggest how the problem you referred to (a) could be solved.</b></p> <p>1 mark for solution<br/>1 mark for a detail<br/>One point must be linked for full 2 marks</p> <p>Ask people to name their friends; (linked solution)<br/>(at least a week) prior to the study/ask friends of the participants to name all their friends; (generic detail)</p> <p>Eliminate people with friends of the same name; (linked solution)<br/>by interviewing them after the study; (generic detail)</p> <p>Use really unusual/made up names in the mock telephone call; (linked solution)<br/>so that it is unlikely that anyone will have friends with those names; (linked detail)</p> <p>use another feature than names; (linked solution)<br/>e.g. use food names (of party foods); (linked solution)</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Marks |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 3(a)     | <p><b>State what is meant by a ‘case study’.</b></p> <p>1 mark for each (of two) descriptive points (definitive)<br/>one instance/one person/one individual/one unit;<br/>in detail/depth/descriptive/(lots of) qualitative data;</p> <p>Do not accept ‘lots of data’ – all methods collect lots of data</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2     |
| 3(b)     | <p><b>One type of colour blindness is when people cannot tell the difference between the colours red and green.</b></p> <p><b>Describe how a case study to investigate colour blindness could be conducted.</b></p> <p>3 marks for three points on how to conduct the study<br/>1 point must be directly linked to earn full 3 marks</p> <p>Use volunteer sampling to obtain a colour blind person; (link)<br/>advertise for colour blind people online; (link)</p> <p>Conduct interviews; (generic)<br/>to ask detailed questions about their past, e.g. how they found out that sensory experience was different; (link)<br/>Present them with coloured stimuli and ask them what they see; (link)<br/>Make observations; (generic)<br/>e.g. see what colour they say when see they red/green objects around them; (link)</p> | 3     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Marks |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 4        | <p><b>In the study by Yamamoto et al. (chimpanzee helping), quantitative data was collected.</b></p> <p><b>Suggest <u>one</u> strength of collecting quantitative data in this study.</b></p> <p>1 mark for identifying strength (can be generic)<br/>1 mark for link</p> <p>it is objective/it is not subjective/it does not require interpretation = 1 (advantage)<br/>so the measure of helping by each chimp will be consistent/reliable = 2nd mark link</p> <p>it is numerical = 1 (advantage)<br/>so helping scores can be easily compared/analysed/are more valid = 2nd mark link</p> | 2     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                 | Marks |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 5        | <p><b>Explain <u>one</u> weakness of random sampling.</b></p> <p>1 mark for weakness<br/>1 mark for detail</p> <p>It is limited by the population chosen;<br/>a random sample of students of one school may not be representative of all schools;</p> <p>It is limited by access to the population;<br/>randomly selected people can be asked to participate, but some may not (and if similar, this causes bias);</p> | 2     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Marks |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 6        | <p><b>Describe structured observations and unstructured observations, using any examples.</b></p> <p>Definitions/detail: up to a maximum of 4 marks for each observational technique.<br/>Examples: maximum of 2 marks for each technique.<br/>Examples can include examples from any studies (core studies, other studies, candidate's own studies).<br/>Max 4 if no examples</p> <p>A structured observation records a limited range of behaviours; which must be listed/defined; (definition)</p> <p>Detail:</p> <ul style="list-style-type: none"> <li>• structured observations use behaviour checklists;</li> <li>• so it is more reliable than unstructured observation;</li> <li>• they collect quantitative data;</li> <li>• they can be used as a technique to measure the DV in experiments;</li> </ul> <p>examples:</p> <ul style="list-style-type: none"> <li>• Piliavin et al. help/not help;</li> <li>• Bandura et al. specific aggressive/non-aggressive actions/verbal responses;</li> </ul> <p>An unstructured observation records all behaviours; (definition)</p> <p>Detail:</p> <ul style="list-style-type: none"> <li>• Unstructured observations are often pilot studies;</li> <li>• And may collect qualitative data (and quantitative data);</li> <li>• Used to refine the range of behaviours for further study;</li> <li>• to identify/define behavioural categories to record;</li> </ul> <p>examples:</p> <ul style="list-style-type: none"> <li>• Milgram responses when giving shocks;</li> <li>• Pepperberg Alex's actions when 'bored';</li> <li>• Yamamoto et al. additional behaviour, e.g. peeping through hole;</li> <li>• Schachter and Singer responses to stooges;</li> </ul> | 6     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7        | <b>Kira is conducting a correlational study looking for a relationship between level of creativity and the amount of time spent playing sport. Kira could find a positive or a negative correlation.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |
| 7(a)     | <p><b>State whether Kira should use a directional or a non-directional hypothesis. Include a reason for your answer.</b></p> <p>1 mark for explanation of why it should be non-directional (no marks for just stating non-directional)</p> <p>non-directional because she does not know whether there will be a positive or a negative correlation;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>1</b> |
| 7(b)     | <p><b>State what Kira would find if there was a negative correlation.</b></p> <p>1 mark for explanation</p> <p>As the amount of creativity went up, the amount of time spent playing sport would go down; ORA</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>1</b> |
| 7(c)     | <p><b>Write a null hypothesis for Kira's study.</b></p> <p>1 mark for a correlational null hypothesis<br/>It must include both variables. Hypothesis does not have to be operationalised.</p> <p>There will be no correlation/link/relationship between time spent playing sport and (level of) creativity;<br/>Any correlation/link/relationship between time spent playing sport and (level of) creativity is due to chance;</p> <p>Experimental hypotheses (or statements that are not hypotheses) = 0 marks<br/>e.g. There will be no difference between creativity in people who spent a little and a lot of time spent playing sport = 0<br/>e.g. There will be no difference between creativity and time spent playing sport = 0 marks<br/>e.g. Any difference between time spent playing sport and creativity is due to chance = 0 marks</p> <p>Alternative hypotheses = 0 marks<br/>There will be a correlation/link/relationship between time spent playing sport and (level) of creativity; = 0</p> | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7(d)     | <p><b>Kira finds a strong correlation.</b></p> <p><b>Explain whether Kira will know if one variable is causing the change in the other variable.</b></p> <p>1 mark for explaining why not (no marks for just 'no')<br/>1 mark for link</p> <p>No, because a correlation cannot demonstrate a causal relationship;<br/>(generic why)<br/>So creativity could cause people to play more sport or playing more sport could reduce creativity; (link)</p> <p>No, because a third factor could cause the change in both variables;<br/>(generic why)<br/>e.g. schooling could cause both an increase in creativity and less time spent playing sport; (link)</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Marks    |
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| 8        | <b>Ruth is planning an interview to investigate the emotional effect of being a wedding guest.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |
| 8(a)     | <p><b>Suggest <u>one</u> open question that Ruth could ask about the emotional effect of being a wedding guest.</b></p> <p>1 mark for an open question about emotions</p> <p>Describe how being a wedding guest makes you feel;<br/>Describe what emotions you experience when you see a wedding party;<br/>Why does being a wedding guest make you happy?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>1</b> |
| 8(b)     | <p><b>Suggest <u>one</u> closed question that Ruth could ask about the emotional effect of being a wedding guest.</b></p> <p>1 mark for a closed question about emotions with answer choices</p> <p>Rate how you feel when you are a wedding guest on a scale of 1 (not happy) to 1 (very happy);<br/>When you see a wedding party do you feel happy/sad/jealous/indifferent?<br/>yes/no;</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>1</b> |
| 8(c)     | <p><b>Explain <u>how</u> Ruth could ensure her procedure is ethical.</b></p> <p>1 mark for identification of what Ruth could do to ensure ethical procedure<br/>2 marks for further detail, 1 mark per point<br/>For full 3 marks, at least one point should be linked</p> <p>Enable participants to give informed consent; (identification of generic point)<br/>So they would know that they might be asked about weddings; (linked detail)<br/>So single people could choose not to participate if they didn't want to; (linked detail)</p> <p>Debrief participants afterwards; (identification of generic)<br/>So any harm done could be reversed; (generic detail)<br/>So divorced participants could be reassured to return them to their previous state; (linked detail)</p> <p>Give wedding guests the right to withdraw; (linked identification)<br/>So if they were upset by a question they could ignore it; (generic detail)<br/>So that people were not harmed; (generic detail)<br/>Invading privacy; (identification of generic point)</p> | <b>3</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Marks    |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 9        | <b>Jabir is investigating the social lives of old people and is using a questionnaire to measure their friendships.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |
| 9(a)     | <b>Jabir will use volunteer sampling but also wants to make his sample representative of old people.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |
| 9(a)(i)  | <p><b>Jabir has identified three features of old people that are relevant to his study:</b></p> <ul style="list-style-type: none"> <li>• whether they live alone or not</li> <li>• whether they belong to any group or club</li> <li>• their exact age.</li> </ul> <p><b>Suggest why each of these features is relevant to Jabir's study.</b></p> <p>1 mark per linked explanation ×3</p> <p>whether they live alone or not:<br/>people in care homes are surrounded by people they might call 'friends';<br/>people living alone are more likely to have known the people nearby for years, so call them friends;<br/>older people who had more friends when they were young might be more likely to opt for a care home (so look like they have more friends in old age);</p> <p>whether they belong to any group or club:<br/>People with sources of people from groups (e.g. religious, clubs, sports) may appear to have more friends;<br/>older people who had more friends when they were young may be more likely to join things (so look like they have more friends in old age);</p> <p>their exact age:<br/>Older people's friends might be dying more (so they would have fewer);<br/>Older people might have vision/hearing/mobility problems (so may be less able to maintain friendships);</p> | <b>3</b> |
| 9(a)(ii) | <p><b>Describe how Jabir could use volunteer sampling to obtain a sample.</b></p> <p>1 mark for each identification/detail point about how to obtain a volunteer sample.<br/>For full 3 marks, at least one point should be linked to Jabir's study.</p> <p>Place adverts (in a newspaper/on the internet); (generic identification)<br/>In old people's homes; (linked identification)<br/>on internet sites for old people/dementia/arthritis; (linked detail)<br/>Ask for volunteers for a study on friendships/deceive them about the aim; (generic detail)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>3</b> |

| Question  | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Marks    |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 9(a)(iii) | <p><b>Outline <u>one</u> reason why Jabir may exclude some old people from his sample.</b></p> <p>1 mark for reason (explained, not identified)</p> <p>If they are deaf/blind/disabled as it may be hard for them to maintain friendships;<br/>           If they are unwell/recently bereaved as it might be distressing for them;<br/>           If they have memory problems so are unable to accurately recall their friendships;<br/>           If they have no family so have greater need of friends;<br/>           If they have a large, close family so have no need for friends;</p> | <b>1</b> |
| 9(b)      | <p><b>Suggest how Jabir could define the variable of ‘friendship’ in his study.</b></p> <p>1 mark for a basic operationalisation<br/>           1 mark for detail</p> <p>Having a person you can talk to;<br/>           Somebody who helps you/who you help;<br/>           Who you have known for more than X months/years;<br/>           Who you trust;<br/>           Who you would confide in;<br/>           Who you see/talk to/communicate with regularly;<br/>           Who is not a member of your family;</p>                                                                      | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Marks    |
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| 9(c)     | <p><b>Jabir intends to collect all of his data in two days.</b></p> <p><b>Suggest <u>one</u> reason why this may reduce the validity of his findings.</b></p> <p>1 mark for the reason why<br/>1 mark for the effect on the validity of Jabir's study<br/>Must be linked to Jabir's study for 2 marks</p> <p>Deciding if someone is a friend may depend on whether you have seen/spoken to them recently; (why)<br/>So the measure would be of recent contact not friendships; (effect)</p> <p>If you feel lonely on the day you are tested you may not be able to remember any friends at all; (why)<br/>So the measure would be of immediate feelings not friendships; (effect)</p> <p>Old people may not remember so may need more time to think of their friends; (why)<br/>So the measure would be of recall ability not friendships; (effect)</p> <p>Short of time/rushed; (why)<br/>because all the old people might sleep all afternoon so he could only collect data in two mornings; (effect)</p> <p>some of the old people might be busy those two days; (why)<br/>so he would have a limited/biased sample; (effect)</p> <p>No time to interpret = 0 (irrelevant because about analysis of data not collection)</p> | <b>2</b> |
| 9(d)     | <p><b>Suggest <u>one</u> weakness of using a questionnaire for Jabir's study.</b></p> <p>3 marks for suggested weakness.<br/>For full 3 marks, answer must be linked to Jabir's study.</p> <p>Old people may have difficulty reading/concentrating; (link)<br/>So they may appear to have fewer friends; (link)<br/>Which reduces validity; (generic)</p> <p>People may not return questionnaires; (generic)<br/>So the overall number of participants could be low; (generic)<br/>So would not reflect the variability of friendships in old people, lowering generalisability; (link)</p> <p>Some types of people may be less likely to return questionnaires; (generic)<br/>e.g. people with lots of friends might be too busy to send them back; (link)<br/>Which would create bias in the data; (generic)</p> <p>Because the respondents might lie/They might give socially desirable answers; (generic)<br/>To hide the fact they have no friends; (link)<br/>So it would reduce validity/so it would look like old people have more friends than they really do;</p>                                                                                                                                                     | <b>3</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Marks     |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 10       | <b>Nuan wants to test the idea that the way words are presented affects recall. She predicts that people will recall more words from a list they hear than from a list they see.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| 10(a)    | <p><b>Describe how Nuan could conduct a laboratory experiment to test the idea that the way words are presented affects recall.</b></p> <p>Three majors for a laboratory experiment are:<br/>           What: – will be recorded, i.e. DV recall of the list (operationalisation: scoring)<br/>           How: – IV hearing or seeing a list (operationalisation: how it is presented visually and orally)<br/>                   – controls (e.g. limiting distractions, time allowed to study list)</p> <p>The minors are:</p> <ul style="list-style-type: none"> <li>• where – location of participants when data is collected (i.e. lab)</li> <li>• who – participants</li> </ul> <p>Other details for replication:</p> <ul style="list-style-type: none"> <li>• experimental design (any are appropriate here)</li> <li>• sampling technique</li> <li>• sample size</li> <li>• description of how data will analysed, e.g. use of measures of central tendency and spread, bar charts</li> <li>• ethical issues</li> </ul> <p>Other appropriate responses should also be credited.</p> <p>Mark according to the levels of response criteria below:</p> <p><b>Level 3 (8–10 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is described in sufficient detail to be replicable.</li> <li>• Response may have a minor omission.</li> <li>• Use of psychological terminology is accurate and comprehensive.</li> </ul> <p><b>Level 2 (5–7 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is in some detail.</li> <li>• Response has minor omission(s).</li> <li>• Use of psychological terminology is accurate.</li> </ul> <p><b>Level 1 (1–4 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is basic in detail.</li> <li>• Response has major omission(s).</li> <li>• If response is impossible to conduct max. 2.</li> <li>• Use of psychological terminology is mainly accurate.</li> </ul> <p><b>Level 0 (0 marks)</b><br/>           No response worthy of credit.</p> | <b>10</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Marks |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|-----|-------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------|---|------------------------------|---|
| 10(b)    | <p><b>Identify <u>one</u> practical weakness/limitation with the procedure you have described in your answer to part (a) and suggest how your study might be done differently to overcome the problem.</b></p> <p><b>Do <u>not</u> refer to ethics or sampling in your answer.</b></p> <p>Answer will depend on problem identified.</p> <p>Problems may, for example, be matters of:</p> <p>Validity</p> <ul style="list-style-type: none"><li>operationalisation</li><li>situational/participant variables factors</li></ul> <p>Reliability</p> <ul style="list-style-type: none"><li>inter-rater consistency</li><li>intra-rater consistency.</li></ul> <p>This list is not exhaustive and other appropriate responses should also be credited.</p> <table><tr><th>Marks</th><th>Comment</th></tr><tr><td>3–4</td><td>Appropriate problem identified.<br/>Appropriate solution is clearly described.</td></tr><tr><td>2</td><td>Appropriate problem identified.<br/><i>plus</i><br/>EITHER<br/>Explanation of why it is a problem<br/>OR<br/>Ineffectual but possible solution described.</td></tr><tr><td>1</td><td>Appropriate problem identified.<br/>Little or no justification.</td></tr><tr><td>0</td><td>No response worthy of credit</td></tr></table> | Marks | Comment | 3–4 | Appropriate problem identified.<br>Appropriate solution is clearly described. | 2 | Appropriate problem identified.<br><i>plus</i><br>EITHER<br>Explanation of why it is a problem<br>OR<br>Ineffectual but possible solution described. | 1 | Appropriate problem identified.<br>Little or no justification. | 0 | No response worthy of credit | 4 |
| Marks    | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 3–4      | Appropriate problem identified.<br>Appropriate solution is clearly described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 2        | Appropriate problem identified.<br><i>plus</i><br>EITHER<br>Explanation of why it is a problem<br>OR<br>Ineffectual but possible solution described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 1        | Appropriate problem identified.<br>Little or no justification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 0        | No response worthy of credit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |



## Cambridge International AS & A Level

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**PSYCHOLOGY**

**9990/22**

Paper 2 Research Methods

**May/June 2021**

**MARK SCHEME**

Maximum Mark: 60

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

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This document consists of **15** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**Social Science-Specific Marking Principles  
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

**2 Presentation of mark scheme:**

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

**3 Annotation:**

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Marks    |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1(a)     | <p><b>State what is meant by an ‘open question’.</b></p> <p>1 mark for definition</p> <p>(questionnaire, interview or test) items that produce qualitative data;<br/> Questions allowing participants give answers in full / detailed / in depth;<br/> Questions with (no categories or choices so participants have) freedom to express themselves / answer in their own words;</p> <p>Questions that ask ‘describe...’ = 1<br/> Questions that (ask participants to) ‘explain why’ = 1</p> <p>An open question is not closed = 0<br/> A question without fixed choices = 0<br/> A question without fixed choices that asks participants to describe = 1</p> | <b>1</b> |
| 1(b)     | <p><b>Outline <u>one</u> open question from the study by Dement and Kleitman (sleep and dreams).</b></p> <p>1 mark for open question or description of nature of question</p> <p>Dement and Kleitman – Asked to describe their dream (into a tape recorder);<br/> However (from Dement and Kleitman):<br/> Eg ‘Did you have a dream’ is a closed Q; Reporting ‘5 or 15 minutes’ is a closed Q = 0 marks</p> <p>Did you dream? Yes/No? = 0<br/> Did you dream about: animals, people, food? = 0</p>                                                                                                                                                            | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Marks    |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 2        | <p><b>In the study by Baron-Cohen et al. (eyes test), two of the groups of participants used were:</b><br/> <b>Group 1 – AS/HFA participants</b><br/> <b>Group 4 – participants from the general population.</b></p>                                                                                                                                                                                                                                         |          |
| 2(a)     | <p><b>State <u>two</u> similarities between the participants in Group 1 and Group 4.</b></p> <p>1 mark for a similarity × 2</p> <p>Both groups were all male;<br/> (Both were) adults / similar age (28 and 29.5 respectively);<br/> (They were matched for) IQ (116 and 115 respectively);<br/> (Both were) small groups (14 and 15 respectively);</p> <p>Age = 1<br/> IQ = 1<br/> Adults = 1<br/> Male / same gender = 1<br/> only 14/15 (of them) = 1</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                              | Marks    |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 2(b)     | <p><b>State <u>one</u> difference between how Group 1 and Group 4 were selected, other than being diagnosed with AS/HFA.</b></p> <p>1 mark for a difference</p> <p>Group 1 were volunteers or self-selected and Group 4 were randomly selected;</p> | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Marks    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 3        | <p><b>The study by Piliavin et al. (subway Samaritans) raised ethical issues of ‘right to withdraw’ and ‘deception’.</b></p> <p><b>Explain why the study by Piliavin et al. <u>raised</u> these ethical issues.</b></p> <p>1 mark for description }<br/>1 mark for link } × 2</p> <p>Right to withdraw: participants can leave a study at any time (and remove their data) / should not be pressurised to continue (if they don’t want to); (generic)<br/>Piliavin et al.’s participants could not withdraw as they did not know there were observers in the subway carriage; (link)<br/>Piliavin et al.’s participants could not withdraw as they believed the victim/drunk/cane/ill man was real; (link)</p> <p>Participants couldn’t leave the train/carriage/subway because they didn’t know they were in a study = 2</p> <p>Deception: participants should not be (deliberately) misinformed / lied to / given false information; (generic)<br/>Piliavin et al.’s participants were deceived about the role of the stooges/victim/drunk/cane/ill man; (link)</p> <p>The participants didn’t know the victims / drunk and ill men weren’t real = 2</p> | <b>4</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Marks |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 4        | <p><b>In the study by Pepperberg (parrot learning) the sample was only one parrot, Alex. This parrot could have differed from other parrots of the same species.</b></p> <p><b>Explain how <u>two</u> possible differences could have affected Pepperberg's study.</b></p> <p>1 mark for difference + 1 mark for effect on study × 2</p> <p>Alex could have been more intelligent;<br/>Which would have made grey parrots seem that they could understand concepts when they couldn't;<br/>Alex could have been less intelligent;<br/>Which would have made grey parrots seem slower to understand concepts than they really are;</p> <p>Alex was kept in a laboratory / wasn't in the wild;<br/>Alex had already been studied (for years) / had heard a lot of human speech;<br/>So had experiences that would have made his responses different from wild parrots;<br/>So he might have been less frightened of shapes / more familiar with different materials so perform better;</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Marks |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 5        | <b>The mean and the mode are measures of central tendency.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |
| 5(a)     | <p><b>Explain why the mean could be a better measure of central tendency than the mode.</b></p> <p>1 mark for a brief/muddled explanation<br/>2 marks for a clear/detailed explanation</p> <p>The mean uses values whereas the mode only looks at frequency (2)<br/>The mean uses the values of all of the data points but the mode doesn't (1)<br/>The mean uses all of the data (points) but the mode doesn't (0)</p> <p>The mean represents all the data, the mode doesn't / the mean is more representative (1)<br/>The mean represents all the data, the mode only represents the frequency / most common (2)</p> <p>The mean uses (the values of) all the scores so considers extreme scores (outliers) (1)<br/>The mean uses (the values of) all the scores so considers extreme scores (outliers) but mode does not consider these (2)</p> <p>Description of how to calculate the mean = 0<br/>The mean finds out the average = 0 [the mode finds a kind of average too]</p> | 2     |

| Question | Answer                                                                                                                                                                                                                                                                                             | Marks    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 5(b)     | <p><b>Explain why a researcher may have to use the mode instead of the mean.</b></p> <p>1 mark for explanation</p> <p>When data is nominal / is in categories / is only totals / comes from yes or no (closed) questions / not on a continuous scale;<br/>To reduce the influence of outliers;</p> | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 6        | <p><b>Describe participant observation and non-participant observation, using any examples.</b></p> <p>Definitions/detail: up to a maximum of 4 marks for each observational technique.<br/> Examples: maximum of 2 marks for each technique.<br/> Examples can include examples from any studies (core studies, other studies, candidate's own studies).<br/> Max 4 if no examples.</p> <p>participant observation:<br/> researcher watches as part of the ongoing activity; appears to be like the participants in social role; (definition)<br/> participants may or may not be aware of being observed / can be covert or overt; (detail)<br/> (often) allows more information from interactions; (detail)<br/> Interaction can give greater insight into reasons for behaviours observed; (detail)</p> <p>Piliavin et al. – the observers appeared to be passengers; (core study example)<br/> Note: Piliavin et al.'s victims/models were not observing (so not examples of participant observers)<br/> If an observer joins in with children's games to record their behaviour; (own example)<br/> Saavedra and Silverman: the researchers saw the boy performing the in vivo button tasks; (core study example)<br/> Note: Schachter and Singer's stooges were not observers (so not an example of participant observation)</p> <p>non-participant observation:<br/> observer not involved in situation being studied; uses camera / one-way mirror / distanced from social group; (definition)<br/> participants may or may not be aware of being observed / can be covert or overt; (detail)<br/> (often unobtrusive) so fewer demand characteristics; (detail)<br/> Observer can be objective because not involved in the emotions of the social situation of the participants; (detail)</p> <p>Bandura et al. used a one-way mirror to observe the children's aggression; (core study example)<br/> Milgram: observations were made through a one-way mirror; (core study example)<br/> Schachter and Singer's participants were being observed through a one-way mirror; (core study example)</p> | 6     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks    |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7        | <b>Two friends, Zvi and Bill, are conducting a natural experiment. They are collecting data by observing whether young or old people are more likely to become frustrated when trying to get on a busy train.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |
| 7(a)(i)  | <p><b>Suggest how the friends could operationalise their independent variable.</b></p> <p>1 mark for suggestion of operationalisation</p> <p>40 and under, 41 and over;<br/>(Young =) under 20, (old =) over 60;<br/>'young people and old people' = 0 marks</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>1</b> |
| 7(a)(ii) | <p><b>For the way you suggested in (a)(i):</b></p> <p><b>Explain <u>one</u> strength of operationalising the independent variable in this way.</b></p> <p>1 mark for explanation, 1 mark for detail</p> <p>It would be easy to distinguish who was young and who was old;<br/>because the categories are very different / people's appearance changes a lot between the two age groups;<br/>Because people wouldn't have to state their actual age;<br/>so (more ethical because) less invasion of privacy;</p> <p>'under 20 and over 50 are easy to tell apart; so objective/reliable/valid' = 2</p> <p>'operationalisation allows for replication' = 0 [because generic, needs to address 'in this way' in the question]</p> | <b>2</b> |
| 7(b)     | <p><b>Explain what is meant by a 'dependent variable', using Zvi and Bill's study as an example.</b></p> <p>1 mark for explanation<br/>1 mark for link</p> <p>The DV is the variable being measured; (explanation)<br/>Frustration (e.g. as 'pushing'); (link)<br/>The DV is what changes under the influence of the IV; (explanation)<br/>Frustration; (link)</p>                                                                                                                                                                                                                                                                                                                                                             | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Marks    |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7(c)     | <b>The friends agree that they should collect data over several days but have different plans for when they should do this.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |
| 7(c)(i)  | <p><b>Zvi plans to collect data at the same time each day.</b></p> <p><b>Explain <u>one</u> strength of Zvi's plan.</b></p> <p>1 mark for strength<br/>1 mark for link</p> <p>Collecting data at the same time will improve standardisation/reliability;<br/>Because other variables that could affect frustration, such as how busy the busy train is, will be constant;</p> <p>It would control for variables such as how tired people are;<br/>Making the findings more valid as this won't mask the effect of age;</p>                                                                                                                                                                                                                                                                                                  | <b>2</b> |
| 7(c)(ii) | <p><b>Bill plans to collect data over a range of different times each day.</b></p> <p><b>Explain <u>one</u> strength of Bill's plan.</b></p> <p>1 mark for strength<br/>1 mark for link</p> <p>Collecting data at different times will increase validity;<br/>by being sure that the only factor affecting frustration is age and not when people travel (e.g. busy times or not);</p> <p>Collecting data at different times will increase generalisability;<br/>As participant variables might vary over the day, e.g. (only younger passengers being) frustrated after work but not before;</p> <p>To get a more varied sample / make results more generalisable / make findings more representative;<br/>E.g. to avoid bias due to factors other than age (e.g. work, travelling alone or in pairs, time of travel);</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Marks    |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 8        | <b>Jacy is conducting a laboratory experiment to investigate the effect of eating chocolate on mood. She predicts that eating chocolate will make people happier than not eating chocolate. She has 20 participants.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |
| 8(a)     | <p><b>Explain why Jacy is able to make a causal prediction.</b></p> <p>1 mark for explanation<br/>1 mark for link</p> <p>Because (she is conducting an experiment so) she can be certain that the IV is the cause of changes in the DV;<br/>And Jacy is measuring happiness, the DV, in IV conditions of chocolate or none; (link)<br/>In experiments confounding variables are controlled so the IV must be the cause of changes in the DV;<br/>In this case the only factor affecting mood should be the eating of chocolate; (link)</p> <p>Because she is doing an experiment not a correlation = 0 [because not an explanation]</p> <p>Because she is doing an experiment not a correlation so is controlling / isolating variables not just measuring them = 1</p> | <b>2</b> |
| 8(b)     | <b>Jacy gave each participant a number from 1 to 20. She has a hat which contains cards that are numbered from 1 to 20. She takes 10 cards from the hat and uses the 10 people with those numbers as her control group. She uses the remaining 10 participants as her experimental group.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |          |
| 8(b)(i)  | <p><b>Name the process Jacy is using in this part of her study.</b></p> <p>1 mark for naming random allocation / assignment / randomisation (definitive)</p> <p>Random = 0<br/>Random sampling = 0</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Marks |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 8(b)(ii) | <p><b>Explain <u>one</u> strength of this part of Jacy's procedure.</b></p> <p>1 mark for a brief/muddled strength of random allocation<br/> 2 marks for a clear/detailed generic strength of random allocation<br/> 3 marks for a clear/detailed and linked strength of random allocation</p> <p>So no other factors / participant variables / individual differences could affect the study = 1<br/> So no other factors / participant variables / individual differences e.g. being bad tempered affect mood = 2<br/> By allocating people randomly between the two levels of the IV, different (starting) moods should be spread evenly between the two conditions = 3</p> <p>So people have an equal chance of being in the control group or experimental group = 1<br/> So people have an equal chance of being in the control group or experimental group to even out individual differences = 2<br/> So people in the sample have an equal chance of being in the control group or the chocolate group to even out individual differences = 3</p> | 3     |
| 8(c)     | <p><b>Explain the experimental design that Jacy is using.</b></p> <p>1 mark for explanation of independent measures / independent groups (does not have to be named)<br/> 1 mark for link</p> <p>(An independent measures design is) where different participants perform in each level of the IV;<br/> Jacy has different participants in the control and chocolate groups / participants either eat chocolate or do not;</p> <p>Marks are for explanation. No marks if nothing other than the identification of independent measures.<br/> Independent = 0<br/> Independent measures = 0<br/> Independent groups = 0</p>                                                                                                                                                                                                                                                                                                                                                                                                                                | 2     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                             | Marks |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 9        | <p><b>Dr Lee is measuring two variables, tiredness and generosity, on scales of 0 to 10. He finds a strong positive correlation between the two variables.</b></p>                                                                                                                                                                                                                                 |       |
| 9(a)     | <p><b>Sketch a graph on the axes below using crosses to show the pattern of Dr Lee's results. You <u>must</u> label the axes.</b></p> <p>1 mark for both 'tiredness' and 'generosity' as axis labels<br/> 1 mark for 0–10 on both axes (can just be 0 and 10)<br/> 1 mark for points/crosses in a positive correlation pattern<br/> 1 mark for line (of 'best fit') for a positive correlation</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Marks    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 9(b)     | <p><b>Write a null hypothesis for Dr Lee's study.</b></p> <p>1 mark for a null hypothesis</p> <p>Any correlation/link/relationship between tiredness and generosity is due to chance;<br/>         There will be no correlation/relationship/link between tiredness and generosity;</p> <p>Alternative hypotheses / Experimental hypotheses / reference to 'differences' / experimental nulls = 0<br/>         There will be no correlation/relationship/link between the variables = 0<br/>         There will be no correlation/relationship/link with generosity = 0<br/>         Any correlation with tiredness is due to chance = 0</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>1</b> |
| 9(c)     | <p><b>Suggest <u>one</u> advantage of using correlations compared to experiments.</b></p> <p>1 mark for a brief/muddled advantage<br/>         2 marks for a clear/detailed advantage</p> <p>Comparison to experiments does not have to be explicit, but this can add detail</p> <p>Correlations can be used to investigate variables that cannot be manipulated;<br/>         e.g. because it would be unethical;<br/>         e.g. because it would be impractical;<br/>         but in an experiment this would be essential to create the IV / controls;<br/>         Correlations can investigate variables that cannot be manipulated, because it would be unethical = 2</p> <p>Correlations can find relationships so can suggest further research = 0<br/>         Correlations can find relationships so can suggest variables to study in further research (whereas experiments must know these variables in advance);<br/>         Correlations can find relationships so can suggest controls for further studies (whereas experiments must know these controls in advance);<br/>         Correlations can find relationships so can suggest variables to study and controls to make further experiments effective = 2</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Marks     |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 10       | <b>Seth is planning a study to investigate the communication and emotion in a family. The family consists of a mother, father, grandmother and one son. They live in a remote house and do not interact with other people often.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
| 10(a)    | <p><b>Describe how Seth could conduct a case study to investigate the communication and emotion in this family.</b></p> <p>Three majors for a case study are:<br/>           (a) technique used to collect data asked (e.g. two or more of interview, observations, questionnaire e.g. multiple sessions, detailed)<br/>           (b) content e.g. questions about relationships and emotions (e.g. open/closed questions, examples, observe relationships and emotions in different combinations of the family)<br/>           (c) use of data e.g. identifying how data might be used, what sources will give qualitative and quantitative data (e.g. how open questions will be interpreted, how relationships and emotions will be analysed, triangulation or how quantitative data will be scored/analysed/used)</p> <p>The minors are:<br/>           where: location of participants when being studied (e.g. remote house)<br/>           Who: family who live in a remote house</p> <p>Other details for replication:<br/>           • ethical issues</p> <p>Other appropriate responses should also be credited.</p> <p>Mark according to the levels of response criteria below:</p> <p><b>Level 3 (8–10 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is described in sufficient detail to be replicable.</li> <li>• Response may have a minor omission.</li> <li>• Use of psychological terminology is accurate and comprehensive.</li> </ul> <p><b>Level 2 (5–7 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is in some detail.</li> <li>• Response has minor omission(s).</li> <li>• Use of psychological terminology is accurate.</li> </ul> <p><b>Level 1 (1–4 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is basic in detail.</li> <li>• Response has major omission(s).</li> <li>• If response is impossible to conduct max. 2.</li> <li>• Use of psychological terminology is mainly accurate.</li> </ul> <p><b>Level 0 (0 marks)</b><br/>           No response worthy of credit.</p> | <b>10</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Marks |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|-----|-------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------|---|------------------------------|---|
| 10(b)    | <p><b>Identify <u>one</u> practical weakness/limitation with the procedure you have described in your answer to part (a) and suggest how your study might be done differently to overcome the problem.</b></p> <p><b>Do <u>not</u> refer to ethics or sampling in your answer.</b></p> <p>Answer will depend on problem identified.</p> <p>Problems may, for example, be matters of:</p> <p>Validity</p> <ul style="list-style-type: none"><li>operationalisation</li><li>situational / participant variables factors</li></ul> <p>Reliability</p> <ul style="list-style-type: none"><li>inter-rater consistency</li><li>intra-rater consistency.</li></ul> <p>This list is not exhaustive and other appropriate responses should also be credited.</p> <table><tr><th>Marks</th><th>Comment</th></tr><tr><td>3–4</td><td>Appropriate problem identified.<br/>Appropriate solution is clearly described.</td></tr><tr><td>2</td><td>Appropriate problem identified.<br/><i>plus</i><br/>EITHER<br/>Explanation of why it is a problem<br/>OR<br/>Ineffectual but possible solution described.</td></tr><tr><td>1</td><td>Appropriate problem identified.<br/>Little or no justification.</td></tr><tr><td>0</td><td>No response worthy of credit</td></tr></table> | Marks | Comment | 3–4 | Appropriate problem identified.<br>Appropriate solution is clearly described. | 2 | Appropriate problem identified.<br><i>plus</i><br>EITHER<br>Explanation of why it is a problem<br>OR<br>Ineffectual but possible solution described. | 1 | Appropriate problem identified.<br>Little or no justification. | 0 | No response worthy of credit | 4 |
| Marks    | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 3–4      | Appropriate problem identified.<br>Appropriate solution is clearly described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 2        | Appropriate problem identified.<br><i>plus</i><br>EITHER<br>Explanation of why it is a problem<br>OR<br>Ineffectual but possible solution described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 1        | Appropriate problem identified.<br>Little or no justification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 0        | No response worthy of credit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |



## Cambridge International AS & A Level

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**PSYCHOLOGY**

**9990/23**

Paper 2 Research Methods

**May/June 2021**

**MARK SCHEME**

Maximum Mark: 60

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

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This document consists of **15** printed pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**Social Science-Specific Marking Principles  
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- a** DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
- b** DO credit alternative answers/examples which are not written in the mark scheme if they are correct
- c** DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons ...).
- d** DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
- e** DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
- f** DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
- g** DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

**2 Presentation of mark scheme:**

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

**3 Annotation:**

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1(a)     | <p><b>State what is meant by the ‘aim’ of a study.</b></p> <p>1 mark for explanation</p> <p>it tells you the purpose of the investigation / what the study intends to find out or show; (explanation)</p>                                                                                                                                                                                                                                                                                                                                                                                      | 1     |
| 1(b)     | <p><b>Outline <u>one</u> aim from the study by Piliavin et al. (subway Samaritans).</b></p> <p>1 mark for aim</p> <ul style="list-style-type: none"> <li>to investigate whether models affect altruism / to record the time it takes to help;</li> <li>to test whether race affects helping / to count numbers helping black or white victims;</li> <li>to compare helping by males and females;</li> <li>to test whether ‘reason’ (ill/drunken) affects helping / to count numbers helping ill or drunken victims;</li> <li>to test bystander effect / diffusion of responsibility</li> </ul> | 1     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Marks |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 2        | <p><b>The study by Canli et al. (brain scans and emotions) raised ethical issues of ‘right to withdraw’ and ‘protection from harm’.</b></p> <p><b>Explain why the study by Canli et al. raised these ethical issues.</b></p> <p>1 mark for description + 1 mark for link x2</p> <p>Right to withdraw: participants can leave a study at any time; for example if they are uncomfortable or distressed; and remove their data; without loss of payment; they should not be pressurised to continue;<br/> Right to withdraw may not be apparent if the participant is unaware that they are participating; and may suffer harm as a consequence;<br/> Canli et al.’s participants could not easily withdraw from the fMRI machine (as they are hard to get out of, e.g. if they became claustrophobic / because their heads were held still by the bite bar); (link)</p> <p>They were in a scanner; so couldn’t leave if they wanted; = 2</p> <p>Protection from harm: a participant should not be exposed to any greater physical or psychological risk than would be expected in their day-to-day life;<br/> Canli et al. used an fMRI machine which carries risks for people whose bodies contain metal objects (and a participant might not have known this, so have been at risk);<br/> Canli et al. (deliberately) exposed participants to negative images, (which may have been distressing); (link)<br/> Canli et al. (apparently) did not use positive images afterwards to reverse the potential mood change; (link)<br/> They saw scary/unpleasant images; which could have caused harm; = 2</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Marks    |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 3        | <b>In the study by Laney et al. (false memory) random allocation was used.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |
| 3(a)     | <p><b>Explain what is meant by ‘random allocation’, using this study as an example.</b></p> <p>1 mark for definition, 2nd mark for link</p> <p>Random allocation is a way to divide participants between levels of the independent variable such that any participant has an equal chance of being in any condition; (definition)<br/> Laney’s participants were in the ‘love’ (asparagus) / false memory group or the control group; (link)</p> <p>Laney’s participants were in the ‘love’ (asparagus) / false memory group or the control group by chance; 2<br/> Participants are put in experimental or control group without bias = 0 (because could be stratified allocation)</p> | <b>2</b> |
| 3(b)     | <p><b>Explain <u>one</u> strength of using random allocation in this study.</b></p> <p>1 mark for strength, 1 mark for link</p> <p>Random allocation reduces the effect of confounding variables such as individual differences; (strength)<br/> The participants could have really loved asparagus or not (so would be spread between the groups); (link)<br/> The participants could have differed in gullibility to false memories (so would even across groups); (link)</p>                                                                                                                                                                                                         | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Marks |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 4        | <p><b>In the study by Bandura et al. (aggression), children were shown a room full of attractive toys to play with but were told they were for other children.</b></p> <p><b>Explain <u>one</u> of the two reasons Bandura et al. gave for doing this.</b></p> <p>1 mark for a brief muddled explanation, 2 marks for a clear/detailed explanation</p> <p>From the paper:</p> <p>To make them angry/jealous/annoyed/aroused;<br/>So they were all equally likely to be aggressive;<br/>So they were likely to be aggressive in the next room;</p> <p>To ensure the children in the nonaggressive condition were feeling aggressive = 1<br/>To ensure the low(ered) aggression children could be demonstrated in the nonaggressive condition = 2</p> <p>To ensure they were likely to be aggressive/aroused = 1<br/>To ensure performance of aggressive behaviour was not reduced by having watched aggression / catharsis = 2</p> | 2     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Marks    |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 5        | <p><b>Two studies are using different methods to investigate the topic of dreaming in deaf people:</b></p> <ul style="list-style-type: none"> <li>• <b>Dr Kahlil is studying Joseph, who is deaf and has dreams about people using sign language.</b></li> <li>• <b>Dr Hart is studying six deaf people and six hearing people to compare the length of their REM periods.</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |          |
| 5(a)     | <p><b>Explain which <u>one</u> of these investigations is a case study.</b></p> <p>1 mark for reasoning (no mark for just stating 'Dr Kahlil')<br/>1 mark for link/detail/comparison</p> <p>The first study / Dr Kahlil's because he is studying one person; (reasoning)<br/>He only studies Joseph; (link)</p> <p>The first study / Dr Kahlil's because he is studying in depth; (reasoning)<br/>He studies sign language dreams in detail; (link)</p> <p>Dr Kahlil's because he studies one participant whereas Dr Hart compares two groups = 2 (comparison)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>2</b> |
| 5(b)     | <p><b>Explain <u>one</u> strength of using a case study to investigate this topic.</b></p> <p>1 mark for strength of a case study<br/>2 mark strength of a case study linked to topic (not simply to 'Joseph')</p> <p>Collects in depth data / reasons why;<br/>So can better understand deaf people's / sign language dreams;</p> <p>Case studies produce detailed data about rare cases = 1 mark (generic strength)<br/>Analysing the dreams of deaf people may be difficult because they may dream differently from hearing people and in a case study care can be taken to ensure the researcher's interpretation matches what the participant meant = 2 marks (linked strength)</p> <p>Case studies can use several different techniques / triangulation (raising validity) = 1 mark (generic strength)<br/>Case studies of deaf people can use different techniques such as interviews (in sign language), written dream diaries and EEGs which will be helpful to ensure interpretations are valid = 2 marks (linked strength)</p> <p>More data/results = 0 [case studies gain in depth data not 'more data']</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Marks |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 6        | <p><b>Describe positive correlations and negative correlations, using any examples.</b></p> <p>1 mark for what a correlation is – looks for relationships / links between variables<br/> 1 mark for each definition, up to a maximum of 2, for each type of correlation<br/> 1 mark for each example that is linked to one issue, up to a maximum of 2, for each type of correlation.<br/> Examples can be from any studies (core studies, other studies, candidate's own psychological studies).<br/> Max 4 if no examples<br/> Max 5 if only positive / only negative</p> <p>positive correlation:<br/> where two variables increase in the same direction / as one variable increases the other does too / directly proportional;<br/> has a coefficient between 0 and +1; (definition)<br/> Dement and Kleitman found a positive correlation between dream duration and dream narrative word count;<br/> Canli et al. found a left amygdala positive correlation: the greater the activation, the stronger the memory;<br/> Piliavin et al. proposed a positive correlation between number of bystanders 'diffusion of responsibility': the greater the number of bystanders, the greater the diffusion of responsibility;</p> <p>negative correlation:<br/> where two variables increase in opposite directions / as one variable increases the other decreases / inversely proportional;<br/> has a coefficient between 0 and –1; (definition)<br/> Baron-Cohen et al. found a negative/inverse correlation between eyes test score and AQ;<br/> Canli et al. found a negative correlation: the greater the emotional intensity (of the stimulus) the weaker the memory;<br/> Piliavin et al's. proposed correlation between number of bystanders and 'diffusion of responsibility' can be described as a negative correlation: the more bystanders there are, the lower the speed/frequency of helping;</p> <p>Other ideas might be:<br/> Positive:<br/> time spent watching TV and aggression;</p> <p>Negative:<br/> hours of sleep and ability to concentrate;<br/> time spent in therapy and level of symptoms;</p> | 6     |



| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Marks    |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7        | <b>Jane is planning a laboratory experiment with two groups of participants. One group speaks one language fluently and the other group speaks two or more languages fluently. Jane thinks this may affect her dependent variable of how well they learn ‘nonsense’ words. These are words that read like real words but have no meaning.</b>                                                                                                                                                                                                                                                                                                                                                                       |          |
| 7(a)     | <b>Jane has two possible ways to measure her dependent variable:</b> <ul style="list-style-type: none"> <li>• <b>by timing how quickly the participant can recall 10 nonsense words correctly</b></li> <li>• <b>by counting the number of spelling errors made when recalling 10 nonsense words.</b></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                     |          |
| 7(a)(i)  | <b>Explain <u>one</u> strength of <u>one</u> of Jane’s measures of her dependent variable.</b><br><br>1 mark for justification of candidate’s choice of measure (no mark for just choosing one of the measures)<br>1 mark for link / context<br><br>Timing / number of spelling errors is objective/valid/quantitative; (strength)<br>i.e. comparisons of speed of response to / errors in nonsense words between one and two-language groups; (link)<br><br>Timing / counting errors is objective; (strength)<br>So Jane can’t make be biased in her judgments (of time); (link)<br><br>Jane so she must be testing what she claimed to;<br>Because they’ve not learned the words if they can’t spell them; (link) | <b>2</b> |
| 7(a)(ii) | <b>Explain <u>one</u> weakness of the measure of the dependent variable that you have referred to in (a)(i).</b><br><br>1 mark for a brief muddled weakness<br>2 marks for a clear/detailed weakness<br><br>how quickly the participant can respond:<br>timing may not be valid as a measure because people learn words at different speeds;<br>so the times would depend on individual differences / participant variables not number of languages spoken;<br><br>number of spelling errors:<br>number of errors may not be valid as a measure because people differ in spelling ability anyway;<br>so the errors would depend on individual differences / participant variables not number of languages spoken;   | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Marks    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 7(b)     | <p><b>Suggest <u>one</u> way that Jane can operationalise ‘speaking a language fluently’.</b></p> <p>1 mark for a brief muddled operationalisation<br/>2 marks for a clear/detailed operationalisation</p> <p>Speaking easily and without many pauses = 2</p> <p>Being able to understand = 1<br/>Being able to understand well enough to deal with a native speaker in conversation = 2</p> <p>Coping with everyday life in that language = 1<br/>Coping with everyday life in that language, such as being able to buy food / work / study / understand a film = 2</p> <p>Having a qualification = 1<br/>e.g. British Council Certificate / IGCSE English</p>  | <b>2</b> |
| 7(c)     | <p><b>Jane used an independent measures design in her experiment.</b></p> <p><b>Explain <u>one</u> reason why it would have been better for Jane to use a matched pairs design than an independent measures design.</b></p> <p>1 mark for reason (comparison may be explicit or implicit)<br/>1 mark for link (e.g. variable relevant to ability to learn/recall words or speed of response)</p> <p>Matched pairs designs reduce/eliminate participant variables; (reason)<br/>In Jane’s experiment these might be reaction time / age / intelligence (which could affect ability to learn nonsense words / respond quickly/accurately to questions); (link)</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Marks |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 8        | <p><b>Kofi is planning an observation of aggression in sport. He will attend a range of different sporting events to record aggressive behaviour. At first, Kofi is not certain what kinds of behaviours he will see.</b></p> <p>Credit reference to players or spectators throughout Q8.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |       |
| 8(a)(i)  | <p><b>Explain why, at first, Kofi uses an unstructured observation.</b></p> <p>1 mark for explanation<br/>1 mark for link</p> <p>as he wouldn't know which behaviour categories to use = 1<br/>to decide which behaviours to choose (to observe next) = 1</p> <p>to decide which aggressive behaviours to choose (to observe next) = 2<br/>to decide which behaviours to choose for each sport = 2</p> <p>Because he can record all the different behaviours = 1 (generic explanation)<br/>as he doesn't know what aggressive behaviours he will see / will see in different sports; (link)</p>                                                                                                                                                                                                                                 | 2     |
| 8(a)(ii) | <p><b>After watching different sports, Kofi can now use a structured observation.</b></p> <p><b>Explain <u>one</u> strength of using a structured observation in Kofi's study.</b></p> <p>1 mark for strength<br/>1 mark for link</p> <p>He would have an objective / reliable list of the different behaviours (in advance); (generic strength)<br/>this is important so he can concentrate on the aggression he sees and just tally so he observes better; (link)</p> <p>He would have a specific list of the different aggressive behaviours; (link)<br/>This is better as he can focus on observing and check listing (rather than writing details); (generic strength)</p> <p>The list of behaviours makes comparison easier; (generic strength)<br/>So he can compare (the same thing about) different sports; (link)</p> | 2     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Marks    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 8(b)     | <b>Kofi has decided to be a covert observer.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |
| 8(b)(i)  | <p><b>Suggest <u>one</u> strength of being a covert observer in this study.</b></p> <p>1 mark for strength<br/>1 mark for link</p> <p>His role as an observer would not be apparent / he would be hidden/ disguised; (strength)<br/>and other spectators could limit their aggression (or exaggerate it) if they thought they were being observed (making the results less valid); (link)</p> <p>Participants won't change behaviour / respond to demand characteristics / show social desirability; (strength)<br/>So their aggression levels will be normal; (link)</p>                      | <b>2</b> |
| 8(b)(ii) | <p><b>Suggest <u>one</u> weakness of being a covert observer in this study.</b></p> <p>1 mark for weakness<br/>1 mark for link</p> <p>Keeping your role hidden might make it hard to see; (weakness)<br/>So he may not be able to access all the aggression that is happening (making the results less valid); (link)</p> <p>No consent / participants are deceived / denied right to withdraw / potential harm; (weakness)<br/>The players / spectators unaware of observation / need right to avoid being observed / might be distressed if they find out they have been watched; (link)</p> | <b>2</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                     | Marks    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 9        | <b>Naia wants to interview young people about how environmental issues make them feel. She wants to collect data about emotional responses to issues such as recycling. She has decided to conduct a structured interview.</b>                                                                                             |          |
| 9(a)     | <p><b>Suggest <u>one</u> open question Naia could ask about emotions.</b></p> <p>1 mark for open question</p> <p>Describe how do environmental issues make you feel = 1<br/>Do you recycle or not, and why? = 0</p>                                                                                                        | <b>1</b> |
| 9(b)     | <p><b>Suggest <u>one</u> closed question Naia could ask about emotions.</b></p> <p>1 mark for closed question with answer choices</p> <p>When you see litter / waste how upset do you feel on a scale of 1 (not at all) to 10 (very)? = 1<br/>Which of the following do you recycle: paper, plastic, metal, glass? = 0</p> | <b>1</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Marks |
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| 9(c)     | <p><b>Suggest <u>one</u> weakness of using a structured interview in Naia's study.</b></p> <p>1 mark for weakness      1 mark for link</p> <p>It means she cannot ask questions to follow up on a participant's answer; (weakness)<br/> Her understanding of their emotions will be incomplete if she needed more information from them; (link)<br/> She couldn't explore individual interests in environmental issues; (link)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2     |
| 9(d)     | <p><b>One participant says that Naia's questions are too personal.</b></p> <p><b>Explain <u>two</u> ethical guidelines that are important to overcome this problem.</b></p> <p><b>Do <u>not</u> refer to protection from harm or right to withdraw in your answer.</b></p> <p>1 mark for ethical problem + 1 mark for link/detail/solution x2<br/> No mark for simply naming guideline/issue</p> <p>Informed consent: participants must understand the aims/procedure; and agree to the aim / procedure (but they didn't);<br/> Naia's participants expected questions on environmental issues and emotions, which isn't very personal; (link)<br/> participants should understand and agree to the aim/procedure but perhaps they weren't brief;<br/> Naia should have told them the questions included ones on their emotions, which can be personal; (link)</p> <p>Debriefing: participants should be returned to their previous state after participation, but they weren't;<br/> Naia's participants were still upset by the questions about environmental issues and emotions; (link)</p> <p>Privacy: participants must not feel that personal thoughts are being invaded so the questions must change;<br/> Naia could ask what participants think other people are doing / not doing about environmental issues; (link)<br/> e.g. ask 'do you disapprove when your neighbours don't separate their rubbish for recycling?' (link)</p> | 4     |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Marks     |
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| 10       | <b>Riley notices that children at his school appear to be nicer to each other at morning play time than at afternoon play time.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
| 10(a)    | <p><b>Describe how Riley could conduct a natural experiment to investigate when the children are nicer.</b></p> <p>Three majors for a natural experiment are:</p> <p>(a) What: – IV: morning and afternoon play time (e.g. exact times, how many days, experimental design)</p> <p>(b) How: – DV: levels of kindness (e.g. behavioural categories, sampling method)</p> <p>(c) Where: – school (playground, classroom, field, location of observer, participant observer, e.g. in play)</p> <p>The minors are:<br/>who: school-aged children<br/>how: controls</p> <p>Other details for replication:<br/>sampling technique<br/>sample size<br/>ethical issues re. children<br/>description of how data will analysed, e.g. use of averages / bar charts</p> <p>Other appropriate responses should also be credited.</p> <p>Mark according to the levels of response criteria below:</p> <p><b>Level 3 (8–10 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is described in sufficient detail to be replicable.</li> <li>• Response may have a minor omission.</li> <li>• Use of psychological terminology is accurate and comprehensive.</li> </ul> <p><b>Level 2 (5–7 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is in some detail.</li> <li>• Response has minor omission(s).</li> <li>• Use of psychological terminology is accurate.</li> </ul> <p><b>Level 1 (1–4 marks)</b></p> <ul style="list-style-type: none"> <li>• Response is basic in detail.</li> <li>• Response has major omission(s).</li> <li>• If response is impossible to conduct max. 2.</li> <li>• Use of psychological terminology is mainly accurate.</li> </ul> <p><b>Level 0 (0 marks)</b><br/>No response worthy of credit.</p> | <b>10</b> |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Marks |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
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| 10(b)    | <p><b>Identify <u>one</u> practical weakness/limitation with the procedure you have described in your answer to part (a) and suggest how your study might be done differently to overcome the problem.</b></p> <p><b>Do <u>not</u> refer to ethics or sampling in your answer.</b></p> <p>Answer will depend on problem identified.</p> <p>Problems may, for example, be matters of:</p> <p>Validity</p> <ul style="list-style-type: none"><li>operationalisation</li><li>situational / participant variables factors</li></ul> <p>Reliability</p> <ul style="list-style-type: none"><li>inter-rater consistency</li><li>intra-rater consistency</li></ul> <p>This list is not exhaustive and other appropriate responses should also be credited.</p> <table><tr><th>Marks</th><th>comment</th></tr><tr><td>3–4</td><td>Appropriate problem identified.<br/>Appropriate solution is clearly described.</td></tr><tr><td>2</td><td>Appropriate problem identified.<br/><i>plus</i><br/>EITHER<br/>Explanation of why it is a problem<br/>OR<br/>Ineffectual but possible solution described.</td></tr><tr><td>1</td><td>Appropriate problem identified.<br/>Little or no justification.</td></tr><tr><td>0</td><td>No response worthy of credit</td></tr></table> | Marks | comment | 3–4 | Appropriate problem identified.<br>Appropriate solution is clearly described. | 2 | Appropriate problem identified.<br><i>plus</i><br>EITHER<br>Explanation of why it is a problem<br>OR<br>Ineffectual but possible solution described. | 1 | Appropriate problem identified.<br>Little or no justification. | 0 | No response worthy of credit | 4 |
| Marks    | comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 3–4      | Appropriate problem identified.<br>Appropriate solution is clearly described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 2        | Appropriate problem identified.<br><i>plus</i><br>EITHER<br>Explanation of why it is a problem<br>OR<br>Ineffectual but possible solution described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 1        | Appropriate problem identified.<br>Little or no justification.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |
| 0        | No response worthy of credit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |       |         |     |                                                                               |   |                                                                                                                                                      |   |                                                                |   |                              |   |