



## General Certificate of Education

# Psychology 5181/6181 *Specification A*

### *PYA3 Social Psychology and Research Methods*

## Mark Scheme

### *2006 examination - June series*

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

**UNIT 3 (PYA3)  
QUALITY OF WRITTEN COMMUNICATION (QoWC)**

<b>2 marks</b>	<p>The work is characterised by some or all of the following:</p> <ul style="list-style-type: none"> <li>• clear expression of ideas</li> <li>• good range of specialist terms</li> <li>• few errors in grammar, punctuation and spelling</li> <li>• errors do not detract from the clarity of the material.</li> </ul>
<b>1 mark</b>	<p>The work is characterised by:</p> <ul style="list-style-type: none"> <li>• reasonable expression of ideas</li> <li>• use of some specialist terms</li> <li>• errors of grammar, punctuation and spelling</li> <li>• errors detract from the clarity of the material.</li> </ul>
<b>0 marks</b>	<p>The work is characterised by:</p> <ul style="list-style-type: none"> <li>• poor expression of ideas</li> <li>• limited use of specialist terms</li> <li>• errors and poor grammar, punctuation and spelling</li> <li>• errors obscure the clarity of the material.</li> </ul>

**ASSESSMENT OBJECTIVES ONE, TWO AND THREE**

<b>AO1</b>	Assessment objective one = knowledge and understanding of psychological theories, terminology, concepts, studies and methods and communication of knowledge and understanding of psychology in a clear and effective manner.
<b>AO2</b>	Assessment objective two = analysis and evaluation of psychological theories, concepts, studies and methods and communication of knowledge and understanding of psychology in a clear and effective manner.
<b>AO3</b>	Assessment objective three = design, conduct and report psychological investigation(s) choosing from a range of methods, and taking into account the issues of reliability, validity and ethics, and collect and draw conclusions from the data.

**SECTION A: SOCIAL PSYCHOLOGY**

**1 (a)** Explain what is meant by the terms *majority influence* and *minority influence*.

(3 marks + 3 marks)

Marking Criteria	Marks	Performance Descriptions (for each explanation)
<p>Majority influence is a form of social influence where someone's behaviour is changed as a result of group pressure. The attitudes, opinions and behaviour of the group influence the attitudes, opinions and behaviour of the individual. People may conform in order to belong, fit in and be liked by others (normative influence). Or they may conform because they are uncertain and want to be correct (informational influence).</p> <p>Minority influence is a form of social influence whereby the individual changes not only their attitudes etc but also their beliefs, as a result of being exposed to the minority opinion. Moscovici suggested that minority influence works for several reasons but that the change in the individual tends to be due to conversion rather than compliance.</p> <p>The effective use of examples can be another way of elaborating the answer.</p> <p>Some of this material is interchangeable, but candidates must use it appropriately. For example, 'changing beliefs can be relevant to both majority and minority influence'.</p>	<p><b>3</b></p>	<p><b>Accurate and reasonably detailed</b></p> <p>The candidate provides an accurate and reasonably detailed explanation of majority/minority influence that demonstrates relevant knowledge and understanding. For example, majority influence is where an individual changes their attitudes and opinions because of pressure from the group (normative influence) or because they want to be right (informational influence).</p>
	<p><b>2</b></p>	<p><b>Less detailed but generally accurate</b></p> <p>The candidate provides a less detailed but generally accurate explanation majority/minority influence that demonstrates relevant knowledge and/or understanding. For example, minority influence is where people change their private opinion as well as their behaviour, because of the pressure from the minority.</p>
	<p><b>1</b></p>	<p><b>Basic</b></p> <p>The candidate provides a basic explanation of majority/minority influence that demonstrates some relevant knowledge and/or understanding but lacks detail and may be muddled. For example, majority influence is where you change your attitudes to fit in with the group.</p>
	<p><b>0</b></p>	<p><b>Flawed or inappropriate</b></p> <p>The candidate provides an explanation which is flawed or an inappropriate explanation that fails to demonstrate any knowledge or understanding of the terms. For example, the candidate may offer an explanation of why people obey.</p>

1 (b) Outline findings of research into obedience.

(6 marks)

Marking Criteria	Marks	Performance Descriptions
<p>Findings can be taken from any of the studies of obedience, but the two identified on the specification are Milgram and Meeus &amp; Raaijmakers.</p> <p>Milgram found that:-</p> <ul style="list-style-type: none"> <li>• All participants gave a shock of at least 300 volts.</li> <li>• 65% gave the full 450 volts.</li> <li>• Moving to a less prestigious environment obedience fell to 47.5%.</li> <li>• Other findings such as the behaviour of the participants can be credited (eg sweating, nervous laughter, stress reactions etc.).</li> <li>• Results from the variations are also acceptable.</li> </ul> <p>Meeus &amp; Raaijmakers found:-</p> <ul style="list-style-type: none"> <li>• 22 out of the 24 (92%) participants gave all 15 of the “stress comments”.</li> <li>• Behavioural findings were similar to Milgrams, the participants were clearly stressed.</li> </ul>	<p><b>6</b></p> <p><b>5-4</b></p> <p><b>3-2</b></p> <p><b>1-0</b></p>	<p><b>Accurate and reasonably detailed</b> The candidate provides an accurate and reasonably detailed outline of findings of research into obedience that demonstrates relevant knowledge and understanding. For example, the candidate provides a detailed account of several findings of research into obedience.</p> <p><b>Less detailed but generally accurate</b> The candidate provides a less detailed but generally accurate outline of findings of research into obedience issue that demonstrates relevant knowledge and/or understanding. For example, the candidate provides a few findings accurately, but with less detail.</p> <p><b>Basic</b> The candidate provides a basic outline of findings of research into obedience that demonstrates some relevant knowledge and/or understanding but lacks detail and may be muddled. For example, only a few findings are offered but not elaborated. Or one finding in detail.</p> <p><b>Very brief/flawed or inappropriate</b> The candidate provides an outline of findings of research into obedience which is very brief/flawed and demonstrates very little knowledge and/or understanding. Or an inappropriate outline which fails to demonstrate any knowledge or understanding of the findings of research into obedience.</p>

- 1 (c)** Outline **two or more** ways in which psychologists deal with ethical issues and consider the effectiveness of these ways of dealing with ethical issues. (18 marks)

<p><b>Marking Criteria</b></p>	
<p><b>AO1</b> credit is given for the outline of ways that psychologists deal with ethical issues.</p> <p><b>AO2</b> credit is given for a consideration of their effectiveness.</p> <p>There are several ways that psychologists deal with ethical issues and the two suggested on the specification are the use of ethical guidelines and ethical committees. Candidates may consider these or any other ways, such as presumptive consent, prior general consent, role-playing etc. It is also acceptable for candidates to offer two ways that are derived from the use of guidelines as two different ways. For example, psychologists deal with the ethical issue of deception by debriefing, as well as allowing participants the right to withdraw their data. They deal with the issue of lack of informed consent by prior general consent or presumptive consent. It is also acceptable to outline how specific psychologists have dealt with ethical issues in their research.</p> <p>Examiners should be aware that a straightforward description of the ethical guidelines is not directly answering the question. The answer must be linked to the question, ie how psychologists <i>deal</i> with the issues. If a candidate merely gives a description of the guidelines, their AO1 mark should be a maximum of 3.</p>	<p>The AO2 can come from a consideration as to how effective such ways are. For example, it is difficult to enforce the guidelines, it is not clear exactly who is governed by the guidelines, and ethical committees themselves are not always able to weigh up the costs versus the benefits. Candidates may also use specific examples of research to illustrate their answer, showing how certain psychologists were or were not effective in dealing with ethical issues. Milgram’s thorough debriefing and the comments from post-experimental questionnaires, suggest that he was effective in overcoming the stress his participants had experienced. It could also be argued that Zimbardo was not as successful at dealing with his ethical issues. Several of his participants, when interviewed after the study, still expressed anger and resentment at their treatment.</p> <p>If only one way of dealing with ethical issues has been outlined, then the partial performance marking criteria must be used.</p>

1 (c)

Marks	Performance Descriptions	Marks	Performance Descriptions
6	<p><b>AO1:</b> Outline of two or more ways that psychologists deal with ethical issues.</p> <p><b>Accurate and reasonably detailed</b> The candidate provides an accurate and reasonably detailed outline of ways in which psychologists deal with ethical issues that demonstrates relevant knowledge and understanding. For example, the candidate provides an accurate account of presumptive consent, explaining how it is obtained and from whom, and also outlines what is involved in a thorough debrief.</p>	12-10	<p><b>AO2:</b> Consideration of the effectiveness of these ways of dealing with ethical issues.</p> <p><b>Informed commentary</b></p> <ul style="list-style-type: none"> <li>• Within the time constraints for this part of the question, there is effective use of material to address the question and provide an informed commentary.</li> <li>• Effective analysis and evaluation of material.</li> <li>• Broad range of issues and/or evidence in reasonable depth, or a narrower range in greater depth.</li> <li>• The structure is generally clear and coherent.</li> </ul>
5-4	<p><b>Less detailed but generally accurate</b> The candidate provides a less detailed but generally accurate outline of ways in which psychologists deal with ethical issues that demonstrates relevant knowledge and/or understanding. For example, the candidate correctly identifies prior general consent and the use of ethical committees, but provides only a brief account of each. If only one way in which ethical issues are dealt with is outlined, this is accurate and reasonably detailed. (Max 4 marks)</p>	9-7	<p><b>Reasonable commentary</b></p> <ul style="list-style-type: none"> <li>• There is appropriate selection of material to address the question, but this is not always used effectively to produce a reasonable commentary.</li> <li>• Reasonable analysis and evaluation of material.</li> <li>• A range of issues and/or evidence in limited depth, or a narrower range in greater depth.</li> </ul> <p>If only one way of dealing with ethical issues is evaluated, this is informed. (Max 8 marks)</p>
3-2	<p><b>Basic</b> The candidate provides a basic outline of ways in which psychologists deal with ethical issues that demonstrates some relevant knowledge and/or understanding but lacks detail and may be muddled. For example, the ways in which ethical issues are dealt with is identified but not elaborated. If a candidate merely gives a description of the guidelines, without any attempt to show how they are used to deal with the issues, maximum of 3 marks. If only one way in which ethical issues are dealt with is outlined, this is less detailed but generally accurate.</p>	6-4	<p><b>Basic commentary</b></p> <ul style="list-style-type: none"> <li>• The selection and use of material provides only a basic commentary.</li> <li>• Basic analysis and evaluation of material.</li> <li>• Superficial consideration of a restricted range of issues and/or evidence.</li> </ul>
1-0	<p><b>Very brief/flawed or inappropriate</b> The candidate provides an outline which is very brief/flawed. Or an inappropriate outline that fails to demonstrate any knowledge or understanding of the ways that psychologists deal with ethical issues.</p>	3-0	<p><b>Rudimentary/absent or irrelevant commentary</b></p> <ul style="list-style-type: none"> <li>• The selection and use of material provides only a rudimentary commentary, or commentary is absent or wholly irrelevant.</li> <li>• Analysis and evaluation just discernible or absent.</li> </ul>

2 (a) Explain what is meant by the terms *informed consent* and *protection from psychological harm*.

(3 marks + 3 marks)

<b>Marking Criteria</b>	<b>Marks</b>	<b>Performance Descriptions (For each explanation)</b>
<p>The ethical guidelines state that psychologists should give participants the chance to give their informed consent before taking part in any study whenever possible. ‘Informed’ indicates that the participant has been told all the important details about what they will have to do, what will (or might) happen to them, the purpose of the study and that they have certain rights. Participants should have all the necessary information beforehand so that they can make a knowledgeable choice whether or not to take part.</p>	<b>3</b>	<p><b>Accurate and reasonably detailed</b> The candidate provides an accurate and reasonably detailed explanation of the term that demonstrates relevant knowledge and understanding. For example, protection from psychological harm means when conducting an experiment the participant should be kept from anything that could harm them in the long term, such as loss of self-esteem or loss of confidence. This is particularly important when exposed to a situation which may not arise in their ordinary life and that they don’t know how to cope with it, so they become anxious.</p>
<p>The guidelines also state that it is the responsibility of the researcher to ensure that no ‘harm’ comes to the participants. The risk of harm should be no greater than in everyday life. Harm could include such issues as damage to self-esteem or to confidence. The researcher should make sure that the participants do not experience any negative emotions or feelings.</p>	<b>2</b>	<p><b>Less detailed but generally accurate</b> The candidate provides a less detailed but generally accurate explanation of the term that demonstrates relevant knowledge and/or understanding. For example, informed consent means telling the participant various details about the experiment and what it will involve so that they can decide whether they want to take part or not.</p>
	<b>1</b>	<p><b>Basic</b> The candidate provides a basic explanation of the term that demonstrates some relevant knowledge and/or understanding but lacks detail and may be muddled.</p>
	<b>0</b>	<p><b>Flawed or inappropriate</b> The candidate provides an outline which is flawed or an inappropriate outline that fails to demonstrate any knowledge or understanding of the terms. For example, the candidate describes what is meant by deception.</p>

2 (b) Describe the aims and findings of **one** study of majority influence.

(6 marks)

<b>Marking Criteria</b>	<b>Marks</b>	<b>Performance Descriptions</b>
<p>There are several studies that candidates may select, but it is most likely that they will choose one of those mentioned on the specification (ie Asch, Perrin &amp; Spencer). However, other studies involving majority influence are also acceptable (eg Crutchfield, Jenness, Zimbardo). The question explicitly asks for aims and findings, so no credit should be given for procedures or conclusions. Candidates do not need to cover both the aims and the findings in equal depth to achieve high marks, but for full marks they do need to explicitly consider the aims. For example, Asch’s aims were to determine whether, with an unambiguous task, a naive participant could be influenced to knowingly give the wrong answer. Zimbardo’s aims were to determine whether conformity was due to dispositional or situational factors. Candidates must make Zimbardo’s work explicitly relevant to majority influence in order to be creditworthy.</p>	<p><b>6</b></p>	<p><b>Accurate and reasonably detailed</b> The candidate provides an accurate and reasonably detailed description of the aims and findings of a study of majority influence that demonstrates relevant knowledge. For example, the candidate provides a detailed account of both the aims and findings but not necessarily in the same amount of detail.</p>
	<p><b>5-4</b></p>	<p><b>Less detailed but generally accurate</b> The candidate provides a less detailed but generally accurate description of the aims and findings of a study of majority influence that demonstrates relevant knowledge. For example, the candidate correctly identifies both aims and findings, but only provides a brief account of both. If only either aims or findings are outlined, this is accurate and reasonably detailed. (Max 4 marks)</p>
<p>The aims must go beyond simply repeating the question; ‘the aim was to study majority influence’ would receive no marks.</p> <p>Candidates who describe more than one study should have all of them marked and the best one credited. Note that variations of Asch’s studies can be counted as one study.</p>	<p><b>3-2</b></p>	<p><b>Basic</b> The candidate provides a basic description of the aims and findings of a study of majority influence that demonstrates some relevant knowledge but lacks detail and may be muddled. For example, both aims and findings are identified but not elaborated. If only either aims or findings are outlined, this is less detailed but generally accurate.</p>
<p>If candidates offer the percentages found in Asch’s studies, they do not need to be precise, although they do need to know the pattern.</p> <ul style="list-style-type: none"> <li>• On the critical trials 36% of the responses were incorrect.</li> <li>• 25% never gave a wrong answer, thus 75% conformed at least once.</li> </ul>	<p><b>1-0</b></p>	<p><b>Very brief/flawed or inappropriate</b> The candidate provides a description of the aims and findings of a study of majority influence which is very brief/flawed and demonstrates very little knowledge and/or understanding. Or it is an inappropriate description which fails to demonstrate any knowledge or understanding of the aims and/or findings of one study of majority influence.</p>

2 (c) ‘Sometimes people obey authority, but sometimes people resist it.’

Discuss what research into obedience tells us about why people obey, **and** how people might resist obedience.

(18 marks)

<p><b>Marking Criteria</b></p>	
<p><b>AO1</b> credit is given for the outline description of why people obey and how they might resist obedience</p> <p><b>AO2</b> credit is given for an evaluation of these explanations.</p> <p>There are numerous explanations of why people obey. These include:</p> <ul style="list-style-type: none"> <li>• gradual commitment</li> <li>• the agentic shift</li> <li>• the role of buffers</li> <li>• legitimate authority</li> <li>• personality factors.</li> </ul> <p>They might resist obedience:</p> <ul style="list-style-type: none"> <li>• due to a switch to the autonomous state</li> <li>• the presence of allies</li> <li>• personality factors</li> <li>• situational factors</li> <li>• threat to own moral values/freedom.</li> </ul>	<p>The commentary could come from an evaluation of the evidence that supports such explanations. Milgram’s study suggests that people obey because they see themselves as agents of the researcher. It was those participants who saw themselves as autonomous who did not obey. His study also supports the view that participants obeyed the requests because initially they gave their consent to a low-level shock (ie the foot-in-the-door technique). Hofling’s study with nurses and Bickman’s field study can be used to illustrate the power of a legitimate authority. In both cases the participants obeyed because they assumed the person giving the orders had the authority to do so. The variations of Milgram’s studies can be used to illustrate the reasons/conditions that help people to resist the pressure to obey. Zimbardo is also creditworthy as long as it is made explicitly relevant to obedience.</p> <p>Better answers are likely to look at the processes involved rather than just focusing on the studies and what happened.</p>

2 (c)

Marks	Performance Descriptions	Marks	Performance Descriptions
6	<p><b>AO1:</b> Description of why people obey and why they resist.</p> <p><b>Accurate and reasonably detailed</b> The candidate provides an accurate and reasonably detailed description of why people obey/resist that demonstrates relevant knowledge and understanding. For example, the candidate provides a detailed description of <b>both</b> why people obey and why they resist.</p>	12-10	<p><b>AO2:</b> Evaluation of these explanations (why people obey and resist).</p> <p><b>Informed commentary</b></p> <ul style="list-style-type: none"> <li>• Within the time constraints for this part of the question, there is effective use of material to address the question and provide an informed commentary.</li> <li>• Effective analysis and evaluation of material.</li> <li>• Broad range of issues and/or evidence in reasonable depth, or a narrower range in greater depth.</li> <li>• The structure is generally clear and coherent.</li> </ul>
5-4	<p><b>Less detailed but generally accurate</b> The candidate provides a less detailed but generally accurate description of why people obey/resist that demonstrates relevant knowledge and/or understanding. For example, the candidate correctly identifies why people obey/resist, but provides only a brief account. If only either why people obey or why they resist is described, this is accurate and reasonably detailed. (Max 4 marks)</p>	9-7	<p><b>Reasonable commentary</b></p> <ul style="list-style-type: none"> <li>• There is appropriate selection of material to address the question, but this is not always used effectively to produce a reasonable commentary.</li> <li>• Reasonable analysis and evaluation of material.</li> <li>• A range of issues and/or evidence in limited depth, or a narrower range in greater depth.</li> </ul> <p>If only why people obey or why they resist is outlined, this is informed. (Max 8 marks)</p>
3-2	<p><b>Basic</b> The candidate provides a basic description of why people obey/resist that demonstrates some relevant knowledge and/or understanding but lacks detail and may be muddled. Alternatively, the outline of why people obey/resist is limited, generally accurate and/or less detailed. If only either why people obey or why they resist is outlined, this is less detailed but generally accurate.</p>	6-4	<p><b>Basic commentary</b></p> <ul style="list-style-type: none"> <li>• The selection and use of material provides only a basic commentary.</li> <li>• Basic analysis and evaluation of material.</li> <li>• Superficial consideration of a restricted range of issues and/or evidence.</li> </ul>
1-0	<p><b>Very brief/flawed or inappropriate</b> The candidate provides a description which is very brief/flawed. Or an inappropriate outline that fails to demonstrate any knowledge or understanding of why people obey and why they resist.</p>	3-0	<p><b>Rudimentary/absent or irrelevant commentary</b></p> <ul style="list-style-type: none"> <li>• The selection and use of material provides only a rudimentary commentary, or commentary is absent or wholly irrelevant.</li> <li>• Analysis and evaluation just discernible or absent.</li> </ul>

**SECTION B: RESEARCH METHODS**

**3** **Total for this question: 30 marks**

A primary school teacher thought that her pupils were able to remember more in the morning than in the afternoon. She asked a group of AS psychology students to investigate this.

Before starting their investigation, the psychology students gained consent to carry out their study from the Head Teacher and the children’s parents.

The psychology students went into the class and gave all the 5-6 year olds a simple memory test. The first week they gave the memory test just before the morning break (about 11 am). The following week they gave the same 5-6 year olds a similar memory test just after the lunch break (about 1.30 pm). On both memory tests, a high score indicates a good memory.

Table 1 below shows their findings.

**Table 1**

	Memory test scores from children in the morning	Memory test scores from children in the afternoon
Mean score	14.20	13.90
Standard deviation	1.46	3.23

**Mark scheme for Question 3: where the word *one* appears in a question positive marking does *not* apply and only the first answer is credited.**

(a) What is the *operationalised dependent variable (DV)* in this study?

(2 marks)

Marking criteria	Marks	Performance Descriptions
<p><b>AO3</b> An operationalised dependent variable is one that can be measured. In this case the DV was the scores on the simple memory test.</p>	2	<p><b>Accurate and detailed</b> Outline of the operationalised DV is both accurate and detailed. For example, including all the necessary information ie scores on a simple memory test.</p>
	1	<p><b>Basic</b> Outline of the operationalised DV is basic, lacking detail and may be muddled and/or flawed. For example, simply stating memory, or test scores.</p>
	0	<p><b>Inappropriate/incorrect</b> Outline of the operationalised DV is inappropriate. For example, the candidate may outline the IV or the explanation is incorrect.</p>

(b) Write a non-directional hypothesis for this study.

(2 marks)

<b>Marking Criteria</b>	<b>Marks</b>	<b>Performance Descriptions</b>
<p><b>AO3</b></p> <p>A possible non-directional hypothesis might be:</p> <p>(The IV is time of day ie morning or afternoon, the DV is the score on the simple memory test.)</p> <p>There will be a difference in the scores for a simple memory test for the morning group and the afternoon group.</p>	<p><b>2</b></p>	<p><b>Appropriate and detailed</b></p> <p>The hypothesis is both appropriate and detailed. For example, as given above.</p>
	<p><b>1</b></p>	<p><b>Basic</b></p> <p>Within the hypothesis, explanation of each term is basic, lacking in detail, and may be muddled and/or flawed. For example, scores on a simple memory test are affected by the time of day.</p>
	<p><b>0</b></p>	<p><b>Inappropriate/incorrect</b></p> <p>Within the hypothesis, explanation of each terms is inappropriate (for example, the candidate may describe the aim) or a correct but directional hypothesis is given.</p>

- (c) The students used a repeated measures design.  
 (i) Explain **two** disadvantages of using this type of design. (2 marks + 2 marks)  
 (ii) Explain how **one** of these disadvantages could be overcome. (2 marks)

Marking Criteria	Marks	Performance Descriptions (for each disadvantage/way of overcoming the disadvantage)
<p><b>AO2</b></p> <p>(i)</p> <ul style="list-style-type: none"> <li>• Disadvantages of the repeated measures design are:</li> <li>• Order effects (having done the test once the participants may be better the second time).</li> <li>• Need different stimulus material the second time.</li> <li>• Participants may be able to guess the aim (although this is less likely with 5 – 6 year olds).</li> <li>• Loss of participants between the two conditions.</li> </ul> <p>Contextualising the answer is one way of elaborating and thus gaining full marks, however it is not necessary.</p>	<p><b>2</b></p>	<p><b>Accurate and detailed</b>                      The disadvantage/explanation is both accurate and detailed.                      (i) For example, the students would have to make sure that both versions of the simple memory test were equivalent, and make sure that one was not slightly more difficult than the other.                      (ii) For example, to overcome order effects, an explanation as described in the marking criteria.</p>
<p>(ii)</p> <p>There are several ways that the disadvantages of repeated measures designs could be overcome. Which ever a candidate offers, it must be linked to one of the disadvantages given in part (i). The standard way to deal with the problems of order effects is to counterbalance (ie half the pupils are tested in the morning first and the other half are tested in the afternoon first). It is also acceptable to suggest that an independent groups design is used (1 mark) and for 2 marks add some elaboration such as, it would eliminate order effects.</p>	<p><b>1</b></p>	<p><b>Basic</b>                      (i) The disadvantage is basic, lacking detail, and may be muddled and/or flawed. For example, some pupils might be away in the second week.                      (ii) The explanation is brief or muddled. For example, counterbalancing (ie no elaboration).</p>
	<p><b>0</b></p>	<p><b>Inappropriate/incorrect</b>                      (i) The disadvantage is inappropriate (for example, the candidate may describe what a repeated measures design is rather than the disadvantage or the disadvantage is incorrect).                      (ii) No explanation or incorrect explanation.</p>

- (d) (i) What is meant by *investigator effects*? (2 marks)
- (ii) How might investigator effects have influenced this study? (2 marks)

Marking Criteria	Marks	Performance Descriptions
<p><b>A01 + A03</b></p> <p>(i) Investigator effects are the consequences or influences the researcher (their behaviour, expectation and general characteristics) might have on the investigation. For example, the effect their presence might have on the participants. This could cause the participants to change their behaviour. There is no need to contextualise the answer.</p> <p>(ii) Investigator effects that could have affected this study are:</p> <ul style="list-style-type: none"> <li>• Presence of the psychology students could have changed the way the young children behaved, as they weren't used to having them in their class.</li> <li>• The fact that the students were expecting to find more better scores in the morning may have altered the way they treated the participants.</li> </ul> <p><b>For two marks the answer must be contextualised.</b></p>	<p><b>2</b></p>	<p><b>Accurate and detailed</b></p> <p>The explanation is both accurate and detailed.</p> <p>(i) For example, it is the way an investigator behaves (non-verbal body language) during the experiment that might affect the behaviour of a participant.</p> <p>(ii) For example, having the students in the classroom might have caused the children to behave differently, especially the first time they were tested.</p>
	<p><b>1</b></p>	<p><b>Basic</b></p> <p>The explanation is brief or muddled.</p> <p>(i) For example, it affects participants' behaviour in some way (ie no elaboration).</p> <p>(ii) For example, expecting the children to do better in the morning (ie no elaboration).</p>
	<p><b>0</b></p>	<p><b>Inappropriate/incorrect</b></p> <p>No explanation or incorrect explanation.</p> <p>(i) Or an answer, which merely re-orders the terms, ie investigator effects, are the effects an investigator has on a study.</p>

(e) (i) What is meant by *validity*?

(1 mark)

Marking Criteria	Marks	Performance Descriptions
<b>AO1</b> Validity refers to the concept of whether a test measures what it set out to measure. Ecological validity is an acceptable answer.	<b>1</b>	<b>Appropriate</b> The explanation is appropriate.
	<b>0</b>	<b>Inappropriate/incorrect</b> The explanation is inappropriate or incorrect.

(ii) Suggest one way in which the students might be able to assess the validity of their memory test.

(3 marks)

Marking Criteria	Marks	Performance Descriptions
<b>AO3</b> There are several ways that the students might check the validity of their test; face validity, content validity and criterion validity. Possibly the simplest way for the students to check the validity is to compare the findings from their simple memory test with findings obtained from some other, recognised, test of memory. If the findings are similar, then they can assume that their test is valid.	<b>3</b>	<b>Appropriate and reasonably detailed</b> The candidate provides an appropriate and reasonably detailed explanation of how the students could check the validity of their test, in the context of this study, that demonstrates relevant knowledge and understanding. For example, the students could find some other memory test that is known to be valid and give it to their group of children. They could then compare the results they obtained from their study with these results, if they are similar, and then they can feel confident that their test is valid.
	<b>2</b>	<b>Less detailed but generally appropriate</b> The candidate provides a less detailed but generally appropriate explanation of how the students could check the validity of their test, in the context of this study, that demonstrates relevant knowledge and/or understanding. For example, use the findings from another test and see if the results are similar.
	<b>1</b>	<b>Basic</b> The candidate provides a basic explanation of how the students could check the validity of their test, in the context of this study that demonstrates some relevant knowledge and/or understanding.
	<b>0</b>	<b>Flawed or inappropriate/incorrect</b> The candidate provides a flawed or inappropriate/incorrect description and explanation.

- (f) What is an *extraneous variable*? Suggest why testing the children before their morning break and after their lunch break might result in an extraneous variable.

(3 marks)

Marking Criteria	Marks	Performance Descriptions
<p><b>AO3</b></p> <p>An extraneous variable is any variable other than the IV that might affect the DV. In this study, not only were the children tested at different times of the day (IV) but also just before or just after doing something interesting/fun. In the morning they were tested just before their break, so they might not be paying much attention because they were looking forward to playtime. In the afternoon they had just had their dinner and might be feeling sleepy/very active!</p>	<p><b>3</b></p>	<p><b>Appropriate and reasonably detailed</b></p> <p>The candidate provides an appropriate and reasonably detailed description of an extraneous variable and explanation of its effect in this study that demonstrates relevant knowledge and understanding. For example, an extraneous variable is something other than the IV that affects the DV. In this study the children would have been feeling different each time they took the test (full of energy in the morning and full of food in the afternoon).</p>
	<p><b>2</b></p>	<p><b>Less detailed but generally appropriate</b></p> <p>The candidate provides a clear definition of an extraneous variable or a less detailed but generally appropriate description of an extraneous variable and explanation of its effect in this study that demonstrates relevant knowledge and understanding. For example, it's a variable that affects the DV, such as being in a different mood when taking the test.</p>
	<p><b>1</b></p>	<p><b>Basic</b></p> <p>The candidate provides a basic description of an extraneous variable or explanation of its effect in this study that demonstrates some relevant knowledge and/or understanding.</p>
	<p><b>0</b></p>	<p><b>Flawed or inappropriate/incorrect</b></p> <p>The candidate provides a flawed or inappropriate/incorrect description and explanation.</p>

(g) Which measure of dispersion was used? Referring to **Table 1**, explain what this measure of dispersion shows about the children’s performance. (3 marks)

Marking Criteria	Marks	Performance Descriptions
<p><b>AO3</b></p> <p>The measure of dispersion used was the standard deviation. There is a great difference between the standard deviation of the two conditions. The scores from the children in the morning show little variation, while those from the children in the afternoon has a great deal of variation. This suggests that there is a much wider range of individual scores in the afternoon.</p>	<p><b>3</b></p>	<p><b>Accurate and reasonably detailed</b></p> <p>The candidate correctly identifies standard deviation and provides an accurate and reasonably detailed explanation of what it says about the findings that demonstrates relevant knowledge and understanding. For example, the standard deviation; it shows that in the morning there is a small spread of scores around the mean but in the afternoon the spread of scores is much greater. This means that there is more variation in the afternoon.</p>
	<p><b>2</b></p>	<p><b>Less detailed but generally accurate</b></p> <p>The candidate correctly identifies standard deviation and provides a less detailed but generally accurate explanation of what it says about the findings that demonstrates relevant knowledge and understanding. For example, standard deviation, one group shows more variation than the other.</p>
	<p><b>1</b></p>	<p><b>Basic</b></p> <p>The candidate identifies the standard deviation or an explanation of what it says about the findings that demonstrates some relevant knowledge and/or understanding. For example, only the measure of dispersion is identified or standard deviation is not identified but the candidate provides a basic explanation.</p>
	<p><b>0</b></p>	<p><b>Flawed or inappropriate/incorrect</b></p> <p>The candidate provides a flawed or inappropriate/incorrect description and explanation.</p>

- (h) The psychology students gained consent from the Head Teacher and the children’s parents.  
 Identify **one other** ethical issue that might arise in this study. Explain how the psychology students might deal with this issue. (3 marks)

<b>Marking criteria</b>	<b>Marks</b>	<b>Performance Descriptions</b>
<b>AO3</b> Ethical issues such as protection from psychological harm (participants might feel embarrassed doing the simple memory test) and confidentiality are the two most likely issues to be offered. The participants were not deceived and consent (via their parents) had been obtained.	<b>3</b>	<b>Appropriate and reasonably detailed</b> The candidate identifies an ethical issue and provides an appropriate and reasonably detailed explanation of how it might be dealt with that demonstrates relevant knowledge and understanding. For example, psychological harm as some children might find the test hard and not do very well. They could be thoroughly debriefed and reassured that their scores do not reflect their ability to do well at school.
	<b>2</b>	<b>Less detailed but generally appropriate</b> The candidate identifies an ethical issue and provides a less detailed but generally appropriate explanation of how it might be dealt with that demonstrates relevant knowledge and understanding. For example, confidentiality, make sure all scores are kept private.
	<b>1</b>	<b>Basic</b> The candidate provides a basic identification of the ethical issue.
	<b>0</b>	<b>Flawed or inappropriate/incorrect</b> The candidate provides a flawed or inappropriate/incorrect identification and explanation. For example, the issue offered is informed consent.

- (i) Another group of students carried out a similar study using a matched participants design. Suggest how these students could match their participants in their study. (3 marks)

Marking Criteria	Marks	Performance Descriptions
<p>AO3</p> <p>Matched participants design involves creating pairs of participants who are as similar as possible to each other according to certain criteria. The participants in this study would need to be matched according to criteria that might be relevant to a memory test. There are several criteria that the participants could be matched on, for example, age, gender, IQ, reading age.</p>	3	<p><b>Appropriate and reasonably detailed</b></p> <p>The candidate provides an appropriate and reasonably detailed suggestion of how the students could match their participants that demonstrates relevant knowledge and understanding. For example, all the participants would be given an IQ test and matched according to their scores, they would also be matched according to the age and then divided into two groups, with one of each pair in each group.</p>
	2	<p><b>Less detailed but generally appropriate</b></p> <p>The candidate provides a less detailed but generally appropriate suggestion of how the students could match their participants that demonstrates relevant knowledge and understanding. For example, match them according to age and put one in each group.</p>
	1	<p><b>Basic</b></p> <p>The candidate provides a basic suggestion of how the students could match their participants that demonstrates some relevant knowledge. For example, some understanding of matched participants design without explaining how it would be carried out. Eg match according to age.</p>
	0	<p><b>Flawed or inappropriate/incorrect</b></p> <p>The candidate provides a flawed or inappropriate/incorrect suggestion.</p>

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**Assessment Grid**

<b>Question</b>	<b>Part</b>	<b>AO1</b>	<b>AO2</b>	<b>AO3</b>
1	(a)	6		
	(b)	6		
	(c)	6	12	
<b>Total for Question 1</b>		<b>18</b>	<b>12</b>	
2	(a)	6		
	(b)	6		
	(c)	6	12	
<b>Total for Question 2</b>		<b>18</b>	<b>12</b>	
	(a)			2
	(b)			2
	(c)		6	
	(d)	2		2
	(e)	1		3
	(f)			3
	(g)			3
	(h)			3
	(i)			3
Total for Question 3		<b>3</b>	<b>6</b>	<b>21</b>
QoWC		2		
<b>Total for unit</b>		<b>39</b>	<b>30</b>	<b>21</b>
% weighting AS		20.4	12.9	
% weighting A2		10.2	6.5	