



GCE AS MARKING SCHEME

SUMMER 2025

**AS
PSYCHOLOGY – UNIT 2
2290U20-1**

About this marking scheme

The purpose of this marking scheme is to provide teachers, learners, and other interested parties, with an understanding of the assessment criteria used to assess this specific assessment.

This marking scheme reflects the criteria by which this assessment was marked in a live series and was finalised following detailed discussion at an examiners' conference. A team of qualified examiners were trained specifically in the application of this marking scheme. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners. It may not be possible, or appropriate, to capture every variation that a candidate may present in their responses within this marking scheme. However, during the training conference, examiners were guided in using their professional judgement to credit alternative valid responses as instructed by the document, and through reviewing exemplar responses.

Without the benefit of participation in the examiners' conference, teachers, learners and other users, may have different views on certain matters of detail or interpretation. Therefore, it is strongly recommended that this marking scheme is used alongside other guidance, such as published exemplar materials or Guidance for Teaching. This marking scheme is final and will not be changed, unless in the event that a clear error is identified, as it reflects the criteria used to assess candidate responses during the live series.

GCE PSYCHOLOGY – UNIT 2
SUMMER 2025 MARK SCHEME

Question	AO1	AO2	AO3	Total
1	10		10	20
2	3			3
3		2		2
4	2			2
5		7		7
6	3			3
7	4	9		13
8		11	8	19
9	2	9		11
Total	24	38	18	80

SECTION A

Contemporary Debate

1	Infants form primary attachments to the adult who holds them and interacts with them most frequently. Therefore, the mother does not need to be the primary caregiver. Discuss the extent to which psychological evidence agrees or disagrees with this statement.	20
This debate is linked to the psychodynamic approach. However, the materials used in the responses may be taken from any approach and perspective within psychology. Some reference could also be made to economic, social and political evidence (as long as it is explicitly linked to the psychological issue), as well as the consideration of social and cultural diversity. Credit will be given for: • Named research into attachment (must be contextualised) e.g. Mother as primary caregiver through the views of Freud's personality development, Bowlby's Maternal Deprivation Hypothesis, Monotropy and Internal Working models, and the influence of day care (Belsky, 2006; Sigman, 2011). • Consideration of other approaches within the debate e.g. the behaviourist view of conditioning during feeding, Harlow's (1959) research into monkeys, and Shaffer and Emerson's (1964) research into multiple attachments. • Discussion of alternative primary caregivers e.g. the role of the father (Feldman, 2010; Abrahams, 2014; Gettler et al., 2011; Frodi et al., 1978), the influence of adoptions (Rutter's (1998) Romanian orphans), or the role of the extended family/multiple attachment theories (Rutter, 1970). • Any other appropriate content.		
Marks	AO1	
10	• Exemplars used are well chosen to support the points made. • Level of accuracy is thorough. • There is depth and range to material included. • Effective use of terminology throughout.	
7-9	• Exemplars used are appropriate. • Level of accuracy is reasonable. • There is depth and range to material used, but not in equal measure. • Good use of terminology.	
4-6	• Exemplars may not always be appropriate. • Level of accuracy is basic. • There is depth or range only in material used. • There is some use of appropriate terminology.	
1-3	• Exemplars are limited and not always made relevant. • Level of accuracy is superficial. • Very little use of appropriate terminology.	
0	• Inappropriate answer given. • No response attempted.	

Criteria for AO3 content of this question is on the next page

Credit **will** be given for:

- Cultural diversity – discussions about changes in the makeup of society e.g. the increase in single parent families, the role of grandparents, and males who take on the role of the caregiver.
- Economic implications – The impacts of the cost of childcare and government incentives (e.g. tax relief) that encourage parents to work e.g. comments on the implications of wide scale, short-term separations on future generations, comparisons to different generations etc.
- Social implications – Influence of the evidence on political decisions e.g. changes to maternity/paternity rights in the UK make sharing of responsibility possible. Candidates may discuss how this influences the view of mother as primary caregiver or redresses gender stereotypes.
- Ethical implications – risks to values, beliefs, relationships, status or privacy e.g. single-sex couples (particularly males) are disadvantaged by the view of the mother as primary caregiver, and mothers who work are stigmatised.
- Appropriateness of the historical evidence applied to modern society – is early research, e.g. Freud/Bowlby, relevant?
- Evaluation of the research (must be contextualised) e.g. validity/reliability issues e.g. Freud, Bowlby and Rutter reviewed disturbed individuals and/or utilised case study methodologies.
- Evaluative statements and comparisons about the view of the mother as the primary caregiver.
- Any other appropriate content.

Marks	AO3
10	• A thorough discussion is made of both sides of the debate. • Evaluative comments are evidently relevant to the context. • Structure is logical throughout. • An appropriate conclusion is reached based on evidence presented.
7 - 9	• A reasonable discussion is made of both sides of the debate. • Evaluative comments show some relevance to the context. • Structure is mostly logical. • A reasonable conclusion is reached based on evidence presented.
4 - 6	• A basic discussion of both sides of the debate. OR • A reasonable discussion of only one side of the debate. • Evaluative comments are generic and not appropriately contextualised. • Structure is reasonable. • A basic conclusion is reached.
1 - 3	• A superficial discussion is made of the debate. • Evaluative comments are superficial. • Answer lacks structure. • No conclusion.
0	• Inappropriate answer given. • No response attempted.

SECTION B

Principles of Research

2	Using an example, define what is meant by a repeated measures experimental design.	3
Exemplar answers: • In repeated measures, the same participants would complete a memory task in a quiet environment and also in a noisy environment, to compare their results across the two conditions to see the effects of noise on memory [3 marks]. • A repeated measures experimental design is where the same participants take part in both the control and experimental conditions, and their responses are compared [2 marks]. • The same participants take part in both conditions [1 mark]. • A participant might complete a memory task in quiet and noisy conditions [1 mark]. • Any other appropriate content.		
Marks	AO1	
3	• Description and level of accuracy is thorough and clearly linked to an example.	
2	• Description and level of accuracy is thorough, with no link to an example. OR • Description and level of accuracy is basic and linked to an example.	
1	• Description and level of accuracy is basic, with no link to an example. OR • Only an example is given.	
0	• Inappropriate answer given. • No response attempted.	

3	Suggest an aim for Kohlberg's (1968) research, '<i>The child as a moral philosopher</i>'.	2
Exemplar answers: • To establish whether moral reasoning of boys develops universally with age [2 marks]. • To extend existing stage theories of moral development, by studying boys across a number of cultures [2 marks]. • To establish whether morals are universal [1 mark]. • Any other appropriate content.		
Marks	AO2	
2	• A clear and detailed aim is given, which is contextualised.	
1	• A basic aim is given, which is contextualised.	
0	• Inappropriate answer given. • No response attempted.	

4	Briefly explain why social desirability has a negative effect on the validity of psychological research.	2
Exemplar answers: • Social desirability negatively impacts validity of research because when respondents change their behaviour or answers to present themselves in a better light, the findings no longer paint a true picture of real-life behaviour [2 marks]. • When participants give a different answer to their true feelings to look better, this isn't valid [1 mark]. • Any other appropriate content.		
Marks	AO1	
2	• Basic explanation of why social desirability has a negative effect on validity.	
1	• Superficial explanation of why social desirability has a negative effect on validity.	
0	• Inappropriate answer given. • No response attempted.	

5(a)	Qualitative data was collected as part of Milgram's (1963) '<i>Behavioral study of Obedience</i>'. Explain why collecting qualitative data was a strength of this research	2
Exemplar answers: • Qualitative data such as signs of extreme stress (digging fingernails into hands, nervous laughter etc.) give us more depth and detail about the reactions of participants asked to obey, making the research more valid [2 marks]. • Qualitative data is more in depth. Milgram could see that some participants had extreme responses to stress [1 mark]. • Any other appropriate conclusion.		
Marks	AO2	
2	• Basic explanation of why qualitative data is a strength, is given in context.	
1	• Superficial explanation of why qualitative data is a strength, is given in context.	
0	• Basic/superficial explanation of why qualitative data is a strength is given but not contextualised. • Inappropriate answer given. • No response attempted.	

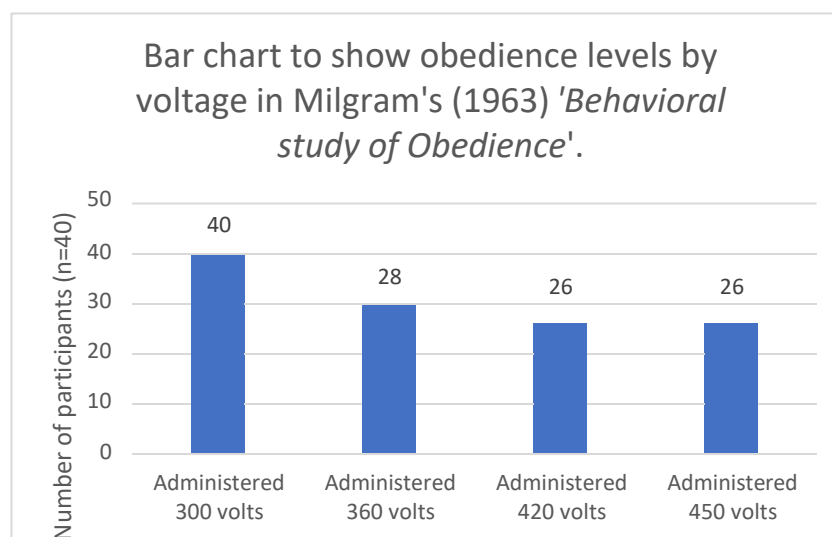
Some quantitative results of Milgram's (1963), '*Behavioral study of Obedience*', can be seen in the Figure 1 below.

Figure 1: Frequency table to show obedience levels by voltage.

Administered	Number of participants (n=40)
300 volts	40
360 volts	28
420 volts	26
450 volts	26

5(b)	Use the information from Figure 1 to draw and label a bar chart.	5
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Exemplar answer:



AO2

1 mark given for each of the following:

- Title of bar chart
- Correct labelling of axes
- Suitable scale

Up to 2 marks given for:

- Accurate plotting of data (2 marks)
- Mostly accurate plotting of data (1 mark)

Any other appropriate content.

0 marks for:

- Inappropriate answer given.
- No response attempted.

6	Briefly explain the role of an ethics committee.	3
Credit will be given for: • Usually found in universities, hospitals or other locations that conduct research. • Consists of a group of people from various disciplines/backgrounds (not just psychology). • Allows for a different interpretation of ethical guidelines from the individual researcher (who may be biased). • They look at psychological research that has been proposed and decide whether it is acceptable and ethical. • Ensure that proposed research meets the standards of the current ethical codes of conduct and guidelines, completing a cost-benefit analysis. • May require researchers to amend their procedures or they may refuse permission to researchers. • Funding might not be provided to the researcher to complete research if it does not received approval from the committee. • Any other appropriate content.		
Marks	AO1	
3	• Description and level of accuracy is thorough. • Depth and range of points included. • Effective use of terminology.	
2	• Description and level of accuracy is basic. • Depth or range. • Some use of appropriate terminology	
1	• Description and level of accuracy is superficial. • Very little use of appropriate terminology.	
0	• Inappropriate answer given. • No response attempted.	

7(a) (i)	A health psychologist was interested in finding out whether exercise could reduce symptoms of depression. 200 individuals, with a diagnosis of depression, were selected using a systematic sample. The psychologist created two groups. The first group spent four weeks attending High Intensity Interval Training (HIIT) classes and the second group spent three weeks attending yoga classes. Outline what is meant by the term ‘internal reliability’.	2
Exemplar answers: - The extent to which a test or measure is consistent within itself. Internal reliability is often achieved through the use of standardised instructions and procedure for all participants [2 marks]. - Internal reliability is concerned with consistency inside the study [1 mark]. - Any other appropriate content.		
Marks	AO1	
2	Clear and detailed outline.	
1	Basic outline.	
0	- Inappropriate answer given. - No response attempted.	

7(a) (ii)	Explain <u>one</u> issue of reliability that may have arisen in this research.	2
Exemplar answers: - Patients with depression often lack motivation and withdraw socially, meaning they may not attend the yoga or HIIT classes consistently [2 marks]. - The research may not get the same results if it was completed at a different time/location, using different exercise classes, and so would lack external reliability [1 mark]. - The number of classes each patient attended may not have been standardised [1 mark]. - The research might lack a standardised procedure [0 marks]. - Any other relevant issue and its affect.		
Marks	AO2	
2	Explanation of an issue of reliability that has been fully contextualised.	
1	- Explanation of an issue of reliability that has been partially contextualised. OR - Issue of reliability identified and contextualised, but not explained.	
0	- A reliability issue is identified, but not explained or contextualised. - Inappropriate answer given. - No response attempted.	

7(b)	Define what is meant by the term ‘target populations’.	2
Exemplar answers: • The group of individuals that a researcher is interested in studying. For example, people living in the UK or specific subsections of society, such as differing ethnicities/genders etc. [2 marks]. • A subsection of society that a researcher aims to investigate [1 mark]. • Any other appropriate content.		
Marks	AO1	
2	• Clear and detailed definition.	
1	• Basic definition.	
0	• Inappropriate answer given. • No response attempted.	

7(c)	Briefly describe how the health psychologist might have collected their systematic sample.	2
Exemplar answers: • The health psychologist would first find a list of patients who are known to have depression. They would then select every 5th person from that list and ask them if they would like to participate in their study on exercise until they had found all 200 participants [2 marks]. • Select every 10th person with depression [1 mark]. • They might select every nth person from a list [0 marks]. • Any other appropriate content.		
Marks	AO2	
2	• Description of how the systematic sample might be collected is fully contextualised.	
1	• Description of how the systematic sample might be collected is partially contextualised.	
0	• An appropriate description that is not contextualised. • Inappropriate answer given. • No response attempted.	

7(d)	At the end of the study, all patients were asked to consider whether they would continue with the exercise classes. They could choose between the answers 'yes' and 'no'. State the level of measurement used to record the patients' answers.	1
Marks	AO2	
1	Nominal data is stated.	
0	- An inappropriate level of measurement is stated. - No response is given.	

7(e)	Identify and explain <u>one</u> weakness of asking patients to self-report changes to their depressive symptoms at the end of the study.	2
Exemplar answers: - Self-reports are prone to demand characteristics and so it is likely that the patients will say that their depressive symptoms have improved, even if they have not, because they believe this is what the researcher wants them to say, weakening validity [2 marks]. - Social desirability bias could weaken the validity of the study, where participants want to be seen in a better light and so they change their answer [1 mark]. - Patients may lie about their depressive symptoms after completing HIIT or yoga classes to be a 'good participant' [1 mark]. - Any other appropriate content.		
Marks	AO2	
2	An appropriate weakness is identified and fully explained in context.	
1	- An appropriate weakness is identified and explained, but not fully contextualised. OR - A contextualised weakness is explained, but not identified using psychological terminology.	
0	- Inappropriate answer given - No response attempted	

7(f) (i)	The effects for the two types of exercise are shown in the pie charts below. Using the data in Figure 2, state one finding. Figure 2: Pie chart to show the impact of HIIT classes on depressive symptoms (n=100).	1
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Exemplar answers:

- 75% of the participants in the group who took HIIT classes had decreased depressive symptoms [1 mark].
- 25 participants in the HIIT group had an increase in their depressive symptoms [1 mark].
- 75% of participants who took HIIT classes had worse depression after the study [0 marks].
- Any other appropriate content.

Marks	AO2
1	• An appropriate and accurate finding is stated.
0	• Inappropriate answer given. • No response attempted.

7(f) (ii)	Using the data in Figure 3, state one finding. Figure 3: Pie chart to show the impact of yoga on depressive symptoms (n=100).	1
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Exemplar answers:

- 50% of participants in the yoga classes had decreased depressive symptoms [1 mark].
- 50 participants in the yoga classes had an increase in their depressive symptoms [1 mark].
- Any other appropriate content.

Marks	AO2
1	• An appropriate and accurate finding is stated.
0	• Inappropriate answer given. • No response attempted.

8(a)	A nutritional psychologist was interested in whether the colour of the bowl from which food was served would impact how it tasted. They brought 50 students to a psychology laboratory at a university and asked them about their food preferences. They were split into one of two categories; 'picky-eaters' (people who only like a limited variety of foods) and a control group. All students then tasted portions of a bag of salted crisps, equally split between three different coloured bowls: red, white, and blue. After each bowl, they rated the saltiness and desirability of the snack, before rinsing their mouth with water and moving to the next bowl. The students were told each bowl contained a different brand of crisps, when this was not the case. Evaluate the use of a laboratory environment in psychological research	6
Credit will be given for: • Strengths of laboratory environments e.g. high in internal validity and reliability as it studies behaviour in a controlled environment allowing researchers to measure the effects of changes to the IV on the DV, allows for standardised procedure, use of large equipment that would not be feasible in a natural/field setting, easier to replicate. • Weaknesses of laboratory environments e.g. low on external/ecological validity as the environment does not paint a true picture of real-life settings such as the home/school etc. • Comparisons to other types of environment e.g. the relative merits/problems of lab environments in comparison to the field or online research. • Any other appropriate content.		
Marks	AO3	
5-6	• Consideration of the strengths and weaknesses of the laboratory environment is thorough. • There is depth and range to the material included.	
3-4	• Consideration of the strengths and weaknesses of the laboratory environment is reasonable. • There is depth and range to the material but not in equal measure. OR • Consideration of the strengths or weaknesses of the laboratory environment is thorough.	
1-2	• Consideration of the strengths and/or weaknesses of the laboratory environment is superficial.	
0	• Inappropriate answer given. • No response attempted.	

8(b)	Explain why the nutritional psychologist might justify the use of deception in this research.	2
Exemplar answers: - The nutritional psychologist could have believed that telling the participants the true aim (to find out if the colour of the bowl affected the taste and desirability of the crisps) would jeopardise the validity of their research [2 marks]. - The psychologist might not want to affect the answers of the picky-eaters by telling them the aim in advance [1 mark]. - Psychologists use deception to ensure they minimise demand characteristics and social desirability from their participants [0 marks]. - Any other appropriate content.		
Marks	AO2	
2	Basic justification of the use of deception is contextualised.	
1	Superficial justification of the use of deception is contextualised.	
0	- An appropriate justification that is not contextualised. - Inappropriate answer given. - No response attempted.	

8(c) (i)	The nutritional psychologist created the following conclusion: Picky-eaters rated the crisps as saltier (on average) in blue and red bowls, than in the white bowl. Figure 4: Table to show mean scores for perceived saltiness of the crisps by bowl colour. <table><tr><td></td><td colspan="3">Mean scores for saltiness (5 = <i>very salty</i>, 1 = <i>bland/not salty</i>)</td></tr><tr><td></td><td>Red bowl</td><td>White bowl</td><td>Blue bowl</td></tr><tr><td>Picky-eaters</td><td>4.6</td><td>3.6</td><td>4.8</td></tr></table> Use data from Figure 4 to justify whether the conclusion given by the psychologist is true or false.		Mean scores for saltiness (5 = <i>very salty</i> , 1 = <i>bland/not salty</i>)				Red bowl	White bowl	Blue bowl	Picky-eaters	4.6	3.6	4.8	2
	Mean scores for saltiness (5 = <i>very salty</i> , 1 = <i>bland/not salty</i>)													
	Red bowl	White bowl	Blue bowl											
Picky-eaters	4.6	3.6	4.8											
Exemplar answers: • The mean saltiness scores for the blue (4.8) and red bowls (4.6) are higher than the score for the same crisps in the white bowl (3.6), therefore the conclusion is true [2 marks]. • True. The mean saltiness scores for the blue and red bowls are at least one point higher than for the crisps in the white bowl [2 marks]. • The conclusion is true, because the mean scores for the blue and red bowls are higher than for the white bowl [1 mark]. • True [0 marks]. • Any other appropriate content.														
Marks	AO2													
2	• An appropriate justification is given and fully contextualised.													
1	• An appropriate justification is given, but is not fully contextualised.													
0	• Inappropriate answer given. • No response attempted.													

- Step 5: Calculation of the square root of 6.5 to get a standard deviation of 2.55.

Award 0 marks for:

- ☐ Inappropriate answer given.
- ☐ No response attempted.

- Any other appropriate content.

NOTE 1: Full calculations of each step should be shown to achieve each mark.

NOTE 2: If a student miscalculates at any point in the chain only 1 mark will be deducted for each error e.g. if a student uses the incorrect mean but all other calculations are correct from this point, 4 out of 5 marks can be achieved.

NOTE 3: If only the standard deviation is given, with no calculations, maximum 1 mark.

8(d) (ii)	Briefly evaluate one advantage of the nutritional psychologist choosing to calculate the standard deviation in this research	2
Exemplar answers: • The standard deviation is a single value that gives the psychologist a good idea of the spread of the data in relation to the mean value. This would be beneficial as the deviation in this research (2.55) implies that the majority of picky-eaters had similar opinions about the desirability of crisps in the blue bowl [2 marks]. • The standard deviation is less likely to be skewed by anomalous results than the range. In this data, the range would be skewed by 'Picky-eater E' who only gave a desirability score of 2, but this has less of a negative effect on the standard deviation [2 marks]. • Allows analysis of the reliability of the saltiness measuring tool [1 mark]. • Standard deviation is useful when comparing different data sets, to see the spread of data from the mean score, for more than one bowl/crisp group [1 mark]. • Any other appropriate content.		
Marks	AO2	
2	• A basic advantage is briefly evaluated in context.	
1	• A superficial advantage is briefly evaluated in context.	
0	• An appropriate advantage is briefly evaluated but not contextualised. • Inappropriate answer given. • No response attempted.	

9(a)	A positive psychologist was interested in whether smiling during a task could increase self-confidence. They asked a class of university students to either complete a maths task whilst holding a pen in their teeth (forcing a smile like position) or to do the same task holding a pen between their lips (creating a neutral facial position). The psychologist created a directional hypothesis: students who smile whilst completing a task will report themselves as more confident in their ability, than those who adopt a neutral facial position. Explain what is meant by the term ‘directional hypothesis’.	2
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Exemplar answers:

- Directional hypotheses predict a difference/change will occur in the behaviour being measured, and it also states what that difference will be e.g. whether it will increase/decrease, or be higher/lower [2 marks].
- Directional hypotheses predict specifically how the IV is expected to influence the DV in research, showing the expected change in behaviour [2marks].
- A hypothesis which predicts a change [1 mark].
- Any other appropriate content.

Marks	AO1
2	• A basic explanation of directional hypotheses is given.
1	• A superficial explanation of directional hypotheses is given.
0	• Inappropriate answer given. • No response attempted.

9(b)	Identify and briefly explain how the independent variable (IV) was operationalised in this research.	2
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Exemplar answers:

- The IV (physically smiling) was operationalised by either forcing a smile (holding a pen between their teeth) or holding a neutral expression (holding a pen between the lips) [2 marks].
- Facial expression [1 mark].
- The IV was smiling or a neutral expression [1 mark].
- Whether they were holding a pen in between their teeth or lips [1 mark].
- Any other appropriate content.

Marks	AO2
2	• Appropriate IV is identified and fully operationalised.
1	• Appropriate IV is identified, but not fully operationalised. OR • Operationalisation has been given, but the IV has not been identified.
0	• Inappropriate answer given. • No response attempted.

9(c)	The psychologist used a structured interview to gather information about the students' confidence after the maths task. Briefly outline <u>one</u> strength and <u>one</u> weakness of using a structured interview to collect data in this research.	2+2
Exemplar strengths: - Structured interviews are standardised, which creates a reliable source of information about student confidence levels. For example, each student is asked identical questions about their self-confidence after the maths test [2 marks]. - We can use a structured interview to more easily test the reliability of the students' confidence by replicating the research [1 mark]. Exemplar weaknesses: - Poorly designed structured interviews may contain leading questions, or questions open to interpretation by the students. Because the students can't ask questions for clarification, their responses may not be a valid reflection of their self-confidence during the maths test [2 marks]. - Structured interviews are prone to demand characteristics/social desirability bias. Thus, the findings about the students' self-confidence may be invalid [1 mark]. - Any other appropriate content.		
Marks (per strength/ weakness)	AO2	
2	An appropriate strength/weakness is given and is fully contextualised.	
1	An appropriate strength/weakness is given but is partially contextualised.	
0	- Inappropriate answer given. - No response attempted.	

9(d)	Identify <u>one</u> ethical issue that may have arisen in this research and explain how the positive psychologist might have dealt with that issue.	3
Exemplar answers: - This research is concerned with the impact of behaviour on self-confidence, as such there is a risk to the participants' status and beliefs. To deal with this issue the positive psychologist could offer the students the right to withdraw at any time during the study (either during the maths task or the interview) [3 marks]. - The students may be unaware their facial expression and confidence levels are going to be compared (deception by omission). Therefore, the psychologists could debrief them about the true aims of the research [2 marks]. - The students may feel anxious or distressed whilst completing the maths task [1 mark]. - The participants are lied to about the aims of the research, so the psychologist needs to debrief them [1 mark]. - Any other appropriate content.		
Marks	AO2	
3	- The ethical issue has been identified and dealt with. - Both aspects have been contextualised.	
2	- The ethical issue has been identified and dealt with. - Only one aspect is contextualised.	
1	- The ethical issue has been identified or dealt with. - This aspect has been contextualised.	
0	- The ethical issue had been identified and dealt with, but neither are contextualised. - Inappropriate answer given. - No response attempted.	