GCE AS MARKING SCHEME

SUMMER 2025

AS
PSYCHOLOGY – COMPONENT 2
B290U20-1

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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.

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GCE AS PSYCHOLOGY – COMPONENT 2

SUMMER 2025 MARK SCHEME

Question	AO1	AO2	AO3	Total
1.(a)	2			**2**
(b)	2			**2**
(c)	2			**2**
(d)	2			**2**
2.(a)	1			**1**
(b)	1			**1**
3.			6	**6**
4.(a)	2			**2**
(b)	4			**4**
5.(a)	4			**4**
(b)	4			**4**
6.			10	**10**
7.(a)		2		**2**
(b)(i)		1		**1**
(ii)		2+2		**2+2**
(c)		3		**3**
(d)		4		**4**
(e)(i)		2		**2**
(ii)		2		**2**
(f)		2+2		**2+2**
8.(a)(i)		1		**1**
(ii)		2		**2**
(iii)		2		**2**
(b)		1		**1**
(c)		4		**4**
(d)		2		**2**
(e)(i)		2		**2**
(ii)		2		**2**
(f)		2		**2**
TOTAL	**20**	**40**	**20**	**80**

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1. (a)	Define the following terms: 'sampling frames'.	2

Exemplar answers:

- A population that is identified when it is unrealistic to study the whole target population e.g. people in London. [2 marks]
- A group that is studied from the whole target population. [1 mark]
- Any other appropriate content.

Marks	AO1
2	• Reasonable definition.
1	• Basic definition.
0	• Inappropriate answer given. • No response attempted.

1.(b)	'independent variables'.	2

Exemplar answers:

- The variable the psychologist manipulates and controls to see how it affects behaviour. [2 marks]
- The variable that is manipulated. [1 mark]
- Any other appropriate content.

Marks	AO1
2	• Reasonable definition.
1	• Basic definition.
0	• Inappropriate answer given. • No response attempted.

1.(c)	'social desirability'.	2

Exemplar answers:

- Where participants give the response that they think will show them in the best possible light. This may mean that they are not a true reflection of their real thoughts/feelings. [2 marks]
- The participants respond in a way to make them look good. [1 mark]
- Any other appropriate content.

Marks	AO1
2	• Reasonable definition.
1	• Basic definition.
0	• Inappropriate answer given. • No response attempted.

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1.(d)	‘external reliability’.	2

Exemplar answers:
- The extent to which a test produces consistent results over several occasions. [2 marks]
- When the researcher gets the same results. [1 mark]
- Any other appropriate content.

Marks	AO1
2	• Reasonable definition.
1	• Basic definition.
0	• Inappropriate answer given. • No response attempted.

2. (a)	Identify what the following symbols represent: <	1

Credit will be given for:
- Less than.
- Any other appropriate content.

Marks	AO1
1	• Appropriate identification.
0	• Inappropriate answer given. • No response attempted.

(b)	≥	1

Credit will be given for:
- More than or equal to.
- Any other appropriate content.

Marks	AO1
1	• Appropriate identification.
0	• Inappropriate answer given. • No response attempted.

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3.	**Using psychological knowledge, critically assess whether conducting research on-line is more appropriate than conducting research in a laboratory environment.**	**6**

Credit will be given for:

Comparison of the strengths and weaknesses of conducting research on-line and conducting research in a laboratory environment.

- Conducting research on-line means the sample will be less culturally biased as the researcher can access a larger group of participants than conducting research in a laboratory environment.
- Conducting research on-line uses free, cheap software so it is more cost effective than conducting research in a laboratory environment.
- However, conducting research in a laboratory environment means the researcher can be certain participants have read and understood the debrief so it is more ethical than conducting research on-line.
- Conducting research in a laboratory environment means the researcher is present and can control for extraneous variables throughout the duration of the study so it is more valid than conducting research on-line.

- Any other appropriate content.

N.B. If the answer contains a description of just one location, the candidate cannot gain marks as this question requires comparison.

N.B. If strengths and weaknesses of each are juxtaposed with no comparison then the response will be limited to 2 marks.

Marks	AO3
5-6	• Thorough assessment. • Depth and range included. • Structure is logical.
3-4	• Reasonable assessment. • Depth and range, not in equal measure. • Structure is mostly logical.
1-2	• Superficial assessment. • Answer lacks structure.
0	• Inappropriate answer given. • No response attempted.

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4.(a)	**Explain what is meant by a 'matched pairs' experimental design.**	**2**

Exemplar answers:

- A form of independent groups design where the experimental and control participants are deliberately similar, e.g. there is a balance between gender and IQ levels in each group/condition. [2 marks]
- Matched pairs is a type of experimental design where participants are matched on characteristics that are relevant to the study (e.g. they could have similar age). One member of the pair completes one condition and the other completes the second condition. [2 marks]
- Participants are matched on key characteristics. [1 mark]

- Any other appropriate content.

Marks	AO1
2	• Reasonable explanation.
1	• Basic explanation.
0	• Inappropriate answer given. • No response attempted.

4.(b)	**Evaluate the use of a 'matched pairs' experimental design in psychological research.**	**4**

Credit **will be** given for:

Strengths, such as:

- No order effects as participants only take part in one condition.
- Less chance of demand characteristics as participants only take part in one condition.
- May be fewer participant variables as the researcher has matched participants for characteristics that are relevant to the study.

Weaknesses, such as:

- No complete control over all participant variables - differences between the groups could be due to characteristics that were not matched on.
- The researcher needs more participants than repeated measures design in order to end up with the same number of results.
- It can be time consuming and difficult for the researcher to match participants on characteristics that are relevant to the study.

- Any other appropriate content.

Marks	AO3
3-4	• Reasonable evaluation. • Structure is mostly logical. • Depth and range, but not in equal measure.
1-2	• Basic evaluation. • Structure is reasonable. • Depth or range.
0	• Inappropriate answer given. • No response attempted.

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5.(a)	**Using examples from psychology, explain the ethical issue 'valid consent'.**	**4**

Credit will be given for:

- Giving participants enough information (in a form they can understand) so that they can make an informed choice about whether they wish to participate.
- Any other appropriate content.

Marks	AO1
3-4	• Reasonable explanation. • Example(s) from psychology used.
1-2	• Reasonable explanation. • No example from psychology used. **OR** • Basic explanation. • Example from psychology used.
0	• Inappropriate answer given. • No response attempted.

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5.(b)	**Using examples from psychology, explain the following ethical issue 'working with animals'.**	4

Credit will be given for:

- Following relevant legislation e.g. the Animals (Scientific Procedures) Act 1986.
- Replacing the use of animals e.g. video records from previous work or computer simulation will be used as alternatives.
- Choice of species and strain e.g. choose a species that is ethically and scientifically suitable to the area being studied.
- Number of animals e.g. use only the smallest number of animals necessary to complete the research goals.
- Procedures e.g. obtaining relevant licenses which are granted after weighing up the benefits and costs to the animals.
- Use of animals for therapeutic purposes e.g. consideration given to the animal's temperament and training for the planned task.

- Any other appropriate content.

Marks	AO1
3-4	• Reasonable explanation. Example(s) from psychology used.
1-2	• Reasonable explanation. • No example from psychology used. **OR** • Basic explanation. Example from psychology used.
0	• Inappropriate answer given. • No response attempted.

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6.	**Evaluate the methodology and sample used in Milgram's (1963) research '*Behavioural study of Obedience*'.**	**10**

Credit **will be** given for:

Evaluation of the methodology (observation):

- Several observers were used, increasing the internal reliability of the method but the observers did discuss their surprise at what they were witnessing which could have affected their interpretation of the behaviour.
- Objective measures to record the behaviour of the participant, increasing validity but this does not give an insight as to how they were feeling or what they were thinking.

Evaluation of the sample:

- The sample was all male so prone to beta bias, meaning the findings could not be generalised to women but this was acceptable scientific research at the time.
- The sample contained a range of ages, occupations and backgrounds, but it was limited by location (New Haven, USA) meaning the findings cannot be generalised to other cultures; cross cultural studies have produced mixed findings.
- The sample was self-selecting which may have meant that the participants were more likely to take the research seriously; however, only certain people might volunteer for research.

- Any other appropriate content.

Marks	**AO3**
9-10	• Thorough evaluation of the methodology and sample. • Structure is logical throughout. • Depth and range included. • A clear and appropriate conclusion is reached based on evidence presented.
6-8	• Reasonable evaluation of the methodology and sample, but not in equal measure. **OR** • Thorough evaluation of the methodology or sample. • Structure is mostly logical. • Depth and range, but not in equal measure. • A reasonably clear and appropriate conclusion is reached based on evidence presented.
3-5	• Basic evaluation of the methodology and sample. **OR** • Reasonable evaluation of the methodology or sample. • Structure is reasonable. • Depth or range. • A basic conclusion is reached.
1-2	• Superficial evaluation of the methodology and sample. **OR** • Basic evaluation of the methodology or sample. • Answer lacks structure. • No conclusion.
0	• Inappropriate answer given. • No response attempted.

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7.	**A dance teacher investigated if dancing impacted happiness. He asked 20 of his dance students (aged 16 years old) to participate. All participants were tested at the same time in their dance studio. In condition one, every participant listened to pop music for 20 minutes whilst sitting quietly. In condition two, the same participants listened to the same pop music for 20 minutes whilst copying dance moves from the dance teacher. After each condition, the participants were asked to self-report their ratings of happiness using the following scale: 0 = no happiness to 10 = highest level of happiness.**	
(a)	**State an operationalised null hypothesis for this research.**	**2**

Exemplar answers:

- There will be no significant difference in ratings of happiness from 0 = not happy to 10 = highest level of happiness between participants who listened to pop music whilst copying dance moves and participants who listened to pop music whilst sitting quietly. [2 marks]
- Any difference in ratings of happiness from 0 = not happy to 10 = highest level of happiness between participants who listened to pop music whilst copying dance moves and participants who listened to pop music whilst sitting quietly will be due to chance factors. [2 marks]
- There will be no difference in the happiness levels of participants who dance and those who sit quietly. [1 mark]

- Any other appropriate content.

N.B. No credit for alternative hypothesis.

Marks	AO2
2	• Appropriate null hypothesis, with both the independent variable and dependent variable operationalised, linked to this research.
1	• Appropriate null hypothesis with either the independent or dependent variable operationalised, linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

7.(b) (i)	**Identify the sampling technique used to select participants in this research.**	**1**

Credit will be given for:

- Opportunity or opportunity sampling.

- Any other appropriate content.

Marks	AO2
1	• Appropriate identification.
0	• Inappropriate answer given. • No response attempted.

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7.(b) (ii)	**Explain <u>one</u> strength and <u>one</u> weakness of the sampling technique used in this research.**	**2+2**

Exemplar answers:

Strengths:

- It is less time consuming than other sampling techniques, such as self-selected, as the researcher collects a rating of happiness from his dance students. The students are readily available to the dance teacher in his dance studio so it is very convenient for him. [2 marks]
- Cost effective, as no money has been spent by the dance teacher to get his sample for his research on dancing impacting happiness. [1 mark]

Weaknesses:

- The sample is likely to include sample bias, such as culture, as the dance students have been selected from one dance studio. This makes the sample unrepresentative so the dance teacher would struggle to generalise the results on dancing and happiness. [2 marks]
- It is open to researcher bias – the dance teacher might only select 'helpful looking' dance students. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation of one appropriate strength/weakness linked to this research.
1	• Basic explanation of one appropriate strength/weakness linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

7.(c)	**Identify and explain <u>one</u> issue that could affect the validity of this research.**	**3**

Exemplar validity issues:

- Researcher bias: The dance teacher may have beliefs about what he will find out before he conducts the research, and these ideas may affect the way in which they interact with the dance students.
- Ecological validity: Participants all copied dance moves in a dance studio setting, but it does not actually assess whether they are happy while dancing in a more realistic setting, like on a stage.
- Order effects: Participants may be happier listening to pop music whilst sitting quietly as they did this first and then they got bored listening to the pop music whilst copying dance moves as it was the same pop music in condition two as condition one.

- Any other appropriate content.

Marks	AO2
3	• Identification of an appropriate issue of validity. **AND** • Reasonable explanation of this issue of validity linked to the research.
2	• Identification of an appropriate issue of validity. **AND** • Basic explanation of this issue of validity linked to the research.
1	• Identification of an appropriate issue of validity.
0	• Answer not linked. • An inappropriate issue is identified/explained. • No response attempted.

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7.(d)	**Identify and fully justify which inferential statistical test that would be the most appropriate to analyse the data in this research.**	**4**

Exemplar answers:

- They should use a Wilcoxon as the participants listened to music whilst following dance moves and listened to music whilst sitting quietly, so it's a repeated measures design. The happiness scores are ordinal level or above, and the dance teacher is looking for a difference. [4 marks]
- Wilcoxon test. The happiness ratings are ordinal level; the same dance students take part in both the sitting and dancing conditions, so the data is related. They are looking for a difference. [3 marks]
- A Wilcoxon would be an appropriate test as the dance teacher is looking for a difference between sitting and dancing. The data is ordinal and related. [2 marks]
- Wilcoxon matched test. Because it's used when investigating differences, related and ordinal data. [1 mark]

- Any other appropriate content.

Marks	AO2
4	• Appropriate inferential statistical test identified. **All** of the following conditions included in the justification: • Type of test (difference) noted and linked to research. • Level of measurement noted and linked to research. • Related data noted and linked to research.
3	• Appropriate inferential statistical test identified. **Two** of the following conditions included in the justification: • Type of test (difference) noted and linked to research. • Level of measurement noted and linked to research. • Related data noted and linked to research.
2	• Appropriate inferential statistical test identified. **One** of the following conditions included in the justification: • Type of test (difference) noted and linked to research. • Level of measurement noted and linked to research. • Related data noted and linked to research.
1	• Appropriate inferential statistical test identified. • Justification is missing, inaccurate or has not been linked to research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

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7.(e) (i)	**Following the initial research, the dance teacher decided to collect some qualitative data on the happiness of participants after they danced. He decided to use a structured interview. Suggest <u>one</u> question that could be used in this structured interview that would produce qualitative data.**	**2**

Exemplar answers:

- Please explain why you were happier when listening to music whilst dancing. [2 marks]
- Explain why you think dancing whilst listening to music may impact happiness. [2 marks]
- How did you feel after you danced? [1 mark]

- Any other appropriate content.

N.B 'Questions' do not need to have a ? to receive credit.

Marks	AO2
2	• Appropriate question that would produce qualitative data referencing happiness AND dancing.
1	• Appropriate question that would produce qualitative data referencing happiness, dancing or another related element from the stimulus material.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

7.(e) (ii)	**Explain why the question you suggested in (e) (i) would produce qualitative data.**	**2**

Exemplar answers:

- Question (e) (i) would produce descriptive data (words) about how happy they felt after they danced. [2 marks]
- Question (e) (i) would produce data on happiness that is not numerical. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation linked to this research.
1	• Basic explanation linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

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7.(f)	**Explain <u>one</u> strength and <u>one</u> weakness of using a structured interview in this research.**	**2+2**

Exemplar answers:

Strengths
- Structured interviews can be easily repeated by other researchers because the questions about how happiness may change due to dancing are standardised. [2 marks]
- Structured interviews do not require well trained interviewers when asking questions on whether dancing impacts happiness. [1 mark]

Weaknesses
- Structured interviews do not allow the researcher to ask follow-up questions which they may not have thought to ask. So, the dance teacher may get an interesting response about how dancing made the participants feel happy, but he cannot ask further questions about this. [2 marks]
- When the dance teacher uses a structured interview, he may behave differently when asking two different participants about how happy they felt after they danced. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation of one appropriate strength/weakness linked to this research.
1	• Basic explanation of one appropriate strength/weakness linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

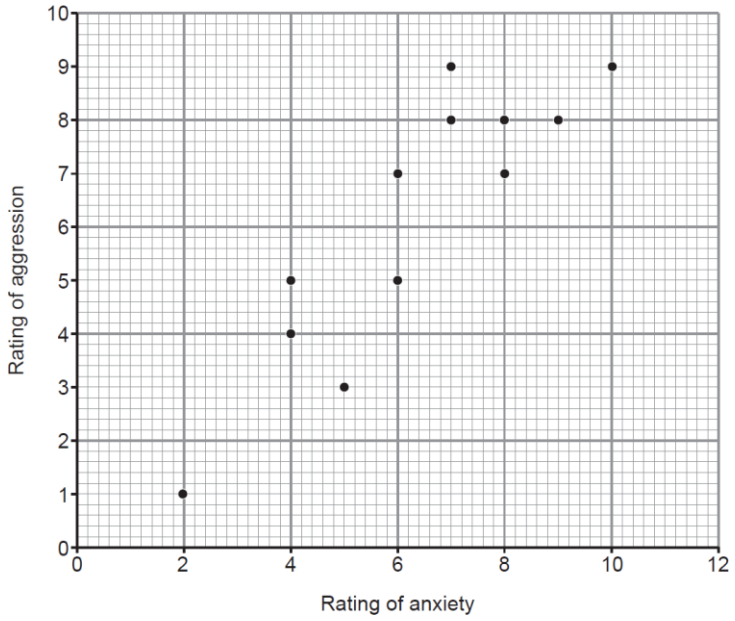
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8. A criminal psychologist hypothesised that criminals who are more aggressive will be more anxious. She visited a prison and gave inmates a questionnaire to complete which contained the following two questions:

How anxious are you on a scale of 0-10? (0 = not anxious at all, 10 = very anxious) How aggressive are you on a scale of 0-10? (0 = not aggressive at all, 10 = very aggressive)

These were her results:

Figure 1: Graphical representation displaying the aggression and anxiety ratings.



8.(a) (i)	**Identify the type of graphical representation used in Figure 1. to display the data in this research.**	**1**

Credit will be given for:
- Scatter diagram.
- Any other appropriate content.

Marks	**AO2**
1	• Appropriate identification.
0	• Inappropriate answer given. • No response attempted.

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8.(a) (ii)	**Explain why the graphical representation you identified in (a) (i) was appropriate for this research.**	**2**

Exemplar answers:

- A scatter diagram shows the relationship between the co-variables, in this case the relationship between the rating of anxiety and the rating of aggression. [2 marks]
- A scatter diagram is used when you have two co-variables (anxiety and aggression) that are both at least ordinal level. [2 marks]
- A scatter diagram is good to show the relationship between anxiety and aggression. [1 mark]
- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation linked to this research.
1	• Basic explanation linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

8.(a) (iii)	**Explain why the pattern in the graphical representation (Figure 1.) is positive.**	**2**

Exemplar answers:

- The pattern in the graph shows that as the ratings of anxiety increased, the ratings of aggression also increased. [2 marks]
- The pattern shows a positive correlation between anxiety and aggression. [1 mark]
- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation linked to this research.
1	• Basic explanation linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

8.(b)	**Identify the level of measurement of the anxiety rating in this research.**	**1**

Exemplar answers:

- Ordinal.
- Any other appropriate content.

N.B. 'Ordinal or above' would not receive credit here as the question is asking for the level of measurement to be identified, rather than for the justification of an inferential statistic.

Marks	AO2
1	• Appropriate identification.
0	• Inappropriate answer given. • No response attempted.

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8.(c)	**Explain <u>one</u> strength and <u>one</u> weakness of using a correlational study in this research.**	**2+2**

Exemplar answers:

Strengths:
- Correlations show the direction and strength of a relationship e.g. they can see if ratings of anxiety and ratings of aggression are related to each other. [2 marks]
- Correlations can establish a relationship so that future research on anxiety and aggression can be carried out. [1 mark]

Weaknesses:
- Correlations do not show cause and effect e.g. you cannot say that having high anxiety ratings causes a criminal to rate themselves as more aggressive. Instead, it only shows a relationship. [2 marks]
- Correlations can be affected by other variables e.g. perhaps those who are aggressive hang out with aggressive people. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation on one appropriate strength/weakness linked to this research.
1	• Basic explanation of one appropriate strength/weakness linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

8.(d)	**The observed (calculated) value was 0.85. The critical value at 0.05 was 0.503. Explain why the criminal psychologist should accept or reject the null hypothesis in this research.**	**2**

Exemplar answers:

- The criminal psychologist should reject the null hypothesis, as the observed value was higher than the critical value. [2 marks]
- The criminal psychologist should reject the null hypothesis. [1 mark]

- Any other appropriate content.

N.B. Where candidates identify the null hypothesis should be rejected, but do not offer any appropriate explanation as to why, 0 marks are awarded

Marks	AO2
2	• Accurate rejection of the null hypothesis. • Reasonable explanation linked to this research.
1	• Accurate rejection of the null hypothesis. • Basic explanation linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

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8.(e) (i)	**Describe <u>one</u> ethical issue that may arise when conducting this research.**	**2**

Exemplar answers:

- Third parties should not be able to trace information regarding the anxiety and aggression ratings back to individual inmates. [2 marks]
- The criminal psychologist needs to give participants enough information (in a form they can understand) so that they can make an informed choice about whether they wish to provide their anxiety and aggression ratings for this research. [2 marks]
- The criminal psychologist might not protect the very personal anxiety data she collects. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable description linked to this research.
1	• Basic description linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

8.(e) (ii)	**Explain how the risk posed by the ethical issue in (e) (i) will be managed in this research.**	**2**

Exemplar answers:

Confidentiality:

- The criminal psychologist should not record the names of the criminals completing the questionnaire on anxiety ratings and aggression ratings. She could instead refer to them by a number. [2 marks]
- She could record each participant's initials next to their anxiety data. [1 mark]

Valid consent:

- The criminal psychologist should ask the criminals to read and sign a consent form before the study, which explains that their anxiety ratings and aggression ratings will be collected. [2 marks]
- She could explain the purpose of the study so they know that they will be asked about their aggression. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation of how the risk posed by the ethical issue in (e) (i) will be managed, linked to this research.
1	• Basic explanation of how the risk posed by the ethical issue in (e) (i) will be managed, linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

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8.(f)	**The psychologist sends her research to a psychology journal and the editor tells her the research will have to undergo peer review. A sport psychologist was asked to conduct the peer review. Explain one reason why the sport psychologist may not be appropriate to conduct the peer review for this research.**	**2**

Exemplar answers:

- Peer review is carried out by an expert in the same field of research. As this research is about criminals, a sport psychologist is not an expert on criminals as they are specialists in a different field of psychology. [2 marks]
- A sport psychologist does not know enough about criminal behaviour to be experts in this research. [1 mark]

- Any other appropriate content.

Marks	AO2
2	• Reasonable explanation linked to this research.
1	• Basic explanation linked to this research.
0	• Answer not linked. • Inappropriate answer given. • No response attempted.

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