



GCE AS MARKING SCHEME

SUMMER 2019

AS (NEW) PSYCHOLOGY - COMPONENT 2 B290U20-1

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INTRODUCTION

This marking scheme was used by WJEC for the 2019 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

EDUQAS GCE AS PSYCHOLOGY - COMPONENT 2

SUMMER 2019 MARK SCHEME

Question	A01	AO2	AO3	TOTAL
1	4			4
2	6			6
3	2			2
4	6			6
5	2			2
6			3	3
7			12	12
8		30		30
9		10	5	15
TOTAL	20	40	20	80

SECTION A

Answer all questions

1. Describe the process of peer review.

Credit could be given for:

Process of peer review is likely to have the following stages:

- 1. Researcher submits article to journal.
- 2. Journal assessed by editor of journal.
- 3. If accepted by editor, article is sent to reviewers (who are also experts in the field).
- 4. Reviewers are normally kept anonymous from the article's author.
- 5. Reviewers submit their comments to the editor.
- 6. Editor may reject the article or return it to the author to make revisions.
- 7. Revised article is re-submitted to editor for publication.

• Any other appropriate content

Marks	AO1
4	 Thorough description of the process of peer review. Good use of terminology. Structure is logical.
3	 Reasonable description of the process of peer review. Good use of terminology. Structure is logical.
2	 Basic description of the process of peer review. Some appropriate terminology is evident. Structure is mostly logical.
1	 Superficial description of the process of peer review. Infrequent use of appropriate terminology. Answer lacks structure.
0	Inappropriate answer given.No response attempted.

[4]

2. Describe **two** ways in which psychologists manage the risk posed by ethical issues. [3+3]

Credit could be given for:

- Ethics committees.
- Ethical guidelines.
- Debriefing.
- Allowing participants to withdraw from research.
- Any other appropriate way in which psychologists manage the risk posed by ethical issues.

Exemplar answers:

Ethics committees are found in most institutions where research takes place and they must approve any research before it begins. The committee looks at all possible ethical issues raised in any research proposal and at how the researcher suggests that the issues will be dealt with, weighing up the benefits of the research against the possible costs to the participants. Members of the committee often include lay people as well as experts in the field. [3 marks]

Ethical guidelines are published by organisations such as the BPS and everyone who is a member of the BPS has to follow the guidelines or they will be kicked out of the BPS. One ethical guideline that the BPS proposes is that a researcher shouldn't deceive participants if it would lead to discomfort, anger or objections. [2 marks].

One way to deal with ethical issues is to tell participants that they can withdraw from research if they want to. If they want to leave you can't try and stop them. [1 mark].

N.B. Description of how psychologists in actual research have dealt with their ethical issues is credible.

Marks	AO1
3	 Reasonable description by which psychologists manage the risk posed by ethical issues. Good use of terminology. Structure is logical.
2	 Basic description by which psychologists manage the risk posed by ethical issues. Some appropriate terminology is evident. Structure is mostly logical.
1	 Superficial description by which psychologists manage the risk posed by ethical issues. Infrequent use of appropriate terminology. Answer lacks structure.
0	Inappropriate answer given.No response attempted.

3. Explain the difference between stratified sampling and quota sampling.

Exemplar answers:

After sub-groups have been identified in the target population, participants are selected opportunistically in a quota sample but are selected randomly in a stratified sample. [2 marks]

One uses opportunity sampling, the other uses random sampling. [1 mark]

• Any other appropriate difference.

N.B. Where an answer **only** juxtaposes the definitions of stratified sampling and quota sampling, maximum mark awarded should be 1 mark. E.g. Stratified sampling is where the target group is divided into subgroups, e.g. by sex, and then the participants are selected randomly from each subgroup. Quota sampling is where the target population is divided into subgroups, e.g. by sex, and the participants are chosen from each subgroup at the convenience of the researcher.

Marks	A01
2	Thorough explanation of a difference.
1	Basic explanation of a difference.
0	Inappropriate answer given.No response attempted.

- 4. Explain when it would be appropriate to use the following inferential statistics:
 - (a) Sign test.

[3]

Credit could be given for:

- Test of difference.
- Nominal level of measurement.
- Data is related (repeated measures and matched pairs design).

Marks	A01
3	Answer contains three elements to justify the use of a Sign test.
2	Answer contains two elements to justify the use of a Sign test.
1	Answer contains one element to justify the use of a Sign test.
0	Inappropriate answer given.No response attempted.

(b) Mann Whitney U test.

Credit could be given for:

- Test of difference.
- Ordinal or above level of measurement.
- Data is independent (independent groups design).

Marks	AO1
3	Answer contains three elements to justify the use of a Mann Whitney U test.
2	 Answer contains two elements to justify the use of a Mann Whitney U test.
1	• Answer contains one element to justify the use of a Mann Whitney U test.
0	Inappropriate answer given.No response attempted.

[3]

5. Describe what is meant by the term 'standard deviation'.

Exemplar answers:

A value which represents the amount of variation of results from the mean score. [2 marks]

Standard deviation is an indicator of dispersion which indicates how far values are dispersed around the mean. [2 marks]

A measure of dispersion. [1 mark]

Any other appropriate content.

N.B. As the question requires description of the term standard deviation, then no credit can be given to a formula or drawing of standard deviation.

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

6. Explain why psychologists may prefer to collect quantitative data rather than qualitative data in psychological research.

Credit could be given for:

Strengths of quantitative

- Quantitative data is generally easier to analyse and display than qualitative data.
- Quantitative data can generally be collected more quickly, especially from a large sample of participants.
- Quantitative data may be less susceptible to researcher bias during analysis.

Weaknesses of qualitative

- Qualitative data is generally more difficult to analyse and display than quantitative data.
- Qualitative data tends to be collected from smaller samples of participants.
- Qualitative data may be more susceptible to researcher bias during analysis.
- Any other appropriate content.

N.B. Where a candidate offers just the weakness of qualitative data, with no reference to quantitative data, then maximum mark is 2.

Marks	AO3
3	 Reasonable discussion of strengths of quantitative and/or weaknesses of qualitative data used in psychological research. Good use of appropriate terminology.
2	 Basic discussion of strengths of quantitative and/or weaknesses of qualitative data used in psychological research. Some use of appropriate terminology.
1	 Superficial discussion of strengths of quantitative and/or weaknesses of qualitative data used in psychological research. Muddled or little use of appropriate terminology.
0	Inappropriate answer given.No response attempted.

7. 'The reason why Milgram's 1963 research is still taught today is because it tells us so much about what a psychologist should not do'.

Critically evaluate the ethical issues raised by Milgram's 1963 research '*Behavioral Study* of Obedience'. [12]

Credit could be given for:

Deception: Milgram informed the participants the research was about memory and learning; the use of a confederate; the lack of actual electric shocks; the use of pre-recorded responses from the Teacher.

Critical commentary on Deception: without the deception the research would be invalid; socially desirable behaviour would have been shown; Milgram claimed the participants thought the deception was acceptable.

Failure to protect the participant from harm: Signs of extreme tension were observed, participants "were observed to sweat, tremble, stutter, bite their lips, groan, and dig their finger nails into their flesh".

Critical commentary on Failure to protect the participant from harm: In the original research Milgram was only expecting to find a small proportion (1-3%) of his participants to give the highest shock. Also, the participant could have stopped at any time.

Failure to allow the participant to withdraw: Participants given verbal prods, such as "It is absolutely essential that you continue", when they challenged the Experimenter about the welfare of the teacher or when they wanted to stop their participation.

Critical commentary on Failure to allow the participant to withdraw: Without the use of the standardised prods voiced in a "firm, but not impolite manner" by the experimenter, would Milgram really have been assessing obedience?

Marks	AO3
10-12	 Thorough evaluation of the ethical issues raised by Milgram's 1963 research. Critical comments are evidently relevant to the context. Structure is logical throughout. Depth and range included. An appropriate conclusion is reached based on evidence presented.
7-9	 Reasonable evaluation of the ethical issues raised by Milgram's 1963 research. Critical comments show some relevance to the context. Structure is mostly logical. Depth and range, but not in equal measure. A reasonable conclusion is reached based on evidence presented.
4-6	 Basic evaluation of the ethical issues raised by Milgram's 1963 research. Critical comments are generic and not appropriately contextualised. Structure is reasonable. Depth or range. A basic conclusion is reached.
1-3	 Superficial evaluation of the ethical issues raised by Milgram's 1963 research. Critical comments are superficial. Answer lacks structure. No conclusion.
0	Inappropriate answer given.No response attempted.

• Any other appropriate content.

SECTION B

Answer all questions

8. An advertising company wanted to investigate what would make consumers use a new brand of toothpaste. They believed that consumers are more likely to try the new brand if the benefits of the new brand of toothpaste are explained by a dentist. To test this, they produced two adverts. In 'Advert One' an actor talked about the benefits of the new brand of toothpaste dressed as a dentist. In 'Advert Two', the same actor talked about the benefits of the new brand of toothpaste dressed in a suit. The advertising company conducted a small scale study and asked 20 shoppers who were in a local supermarket to watch 'Advert One' and then 'Advert Two'. The shoppers were then asked to state which advert would be more likely to make them buy the new brand of toothpaste.

The results were as follows:

	Advert One (Actor dressed as Dentist)	Advert Two (Actor dressed in suit)
Number of shoppers who preferred the advert	15	5

(a) State an operationalised non-directional hypothesis for this research. [2]

Exemplar answers:

There will be a difference in the number of shoppers who preferred Advert One (Actor dressed as Dentist) and Advert Two (Actor dressed in suit). [2 marks]

There will be a difference in the number of shoppers who select Advert One and Advert Two. [1 mark]

N.B. No credit for directional or null hypotheses.

Marks	AO2
2	Appropriate non-directional hypothesis, with clearly operationalised IV and DV.
1	• Appropriate, yet basic non-directional hypothesis, possibly with only the IV or DV clearly operationalised.
0	Inappropriate answer given.No response attempted.

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

[1]

Credit could be given for:

- Opportunity.
- Opportunity sample.
- Sample of convenience.

	•
Marks	AO2
1	Appropriate sampling technique identified.
0	Inappropriate answer given.No response attempted.

(ii) Explain **one** strength and **one** weakness of the sampling technique used to select participants in this research. [2+2]

Credit could be given for:

Strengths, such as:

- Quicker to complete than many other sampling techniques.
- Easier to complete than many other sampling techniques.
- Any other appropriate strength.

Weaknesses, such as:

- Researcher bias might be evident in the selection of participants.
- The sample selected may not be representative of the target population.
- Any other appropriate weakness.

Marks	AO2					
2	Appropriate strength/weakness linked to this research.					
1	• Appropriate strength/weakness, however it is not linked to this research.					
0	Inappropriate answer given.No response attempted.					

(c) (i) Identify the experimental design used in this research.

Credit could be given for:

- Repeated measures.
- Repeated groups.
- Repeated.

Marks	AO2					
1	Appropriate experimental design identified.					
0	Inappropriate answer given.No response attempted.					

(ii) Explain **one** strength and **one** weakness of the experimental design used in this research. [2+2]

Credit could be given for:

Strengths, such as:

- Fewer participants are needed than if an independent groups or matched participants design had been used.
- Any difference between the two conditions should be the result of manipulating the I.V. and not intergroup differences.
- Any other appropriate strength.

Weaknesses, such as:

- Order effects are likely to occur as participants take part in more than one condition.
- Demand characteristics are more likely to occur as participants take part in more than one condition.
- Any other appropriate weakness.

Marks	AO2						
2	Appropriate strength/weakness linked to this research.						
1	• Appropriate strength/weakness, however it is not linked to this research.						
0	Inappropriate answer given.No response attempted.						

(iii) Identify and explain how **one** other experimental design could have been used in this research. [1+2]

Credit could be given for:

- Description of how independent groups design could have been used in this research.
- Description of how matched participants design could have been used in this research.

Exemplar answers:

Using an independent groups design, the advertising company could have asked 20 people to just watch Advert A (Actor dressed as Dentist) and then asked them "Would this advert make you buy this brand of toothpaste (Yes or No)?" They could then ask 20 different people to just watch Advert B (Actor dressed in suit) and then asked them "Would this advert make you buy this brand of toothpaste (Yes or No)?" They could then see if there was a difference in the number of people saying 'Yes' to the two adverts. [3 marks]

You could get a group of participants and randomly allocate 20 to watch Advert One (Dentist) and 20 to watch Advert Two (Suit). You could then see if there is a difference between the two conditions. [2 marks].

Allocate half of the participants to one condition and the other half to the second condition and then compare the results for any differences. [1 mark]

Marks	AO2					
2	• Appropriate explanation of identified experimental design with a link to the scenario.					
1	 Appropriate explanation of identified experimental design. OR Identification of experimental design. 					
0	Inappropriate answer given.No response attempted.					

(d) (i) Identify **one** graphical representation that could be used to display the results from this research. [1]

Credit could be given for:

- Bar chart.
- Pie chart.
- Any other appropriate graphical representation.

Marks	AO2				
1	Appropriate graphical representation identified.				
0	Inappropriate answer given.No response attempted.				

(ii) Explain why the graphical representation you have chosen in *(d) (i)* would be an appropriate way to display the results from this research.

[2]

Credit could be given for:

- Bar chart: shows the frequency of category/nominal data.
- Pie chart: shows the percentages/proportions of category/nominal data.

Exemplar answers:

The bar chart shows the frequency of category data, in this case whether the preferred advert was Advert One (Dentist) or Advert Two (Suit). [2 marks]

A bar chart is appropriate for nominal data. [1 mark]

Any other appropriate content.

Marks	AO2
2	Appropriate explanation with a link to the research.
1	 Appropriate explanation not linked to this research. OR Brief identification of an appropriate explanation that has been linked to this research.
0	Inappropriate answer given.No response attempted.

(iii) Construct the graphical representation you have chosen in *(d) (i)* to display the results from this research. [4]

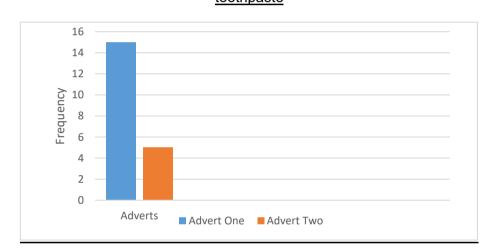
Credit could be given for:

Features:

- Appropriate title for graphical representation
- Key (if appropriate)
- Appropriate label and scale of x-axis
- Appropriate label and scale of y-axis
- Appropriate, accurate/logical depiction of the frequency of chosen advert.
- Evidence of appropriate degree calculations in pie chart.
- Evidence of appropriate percentage calculations in pie charts.

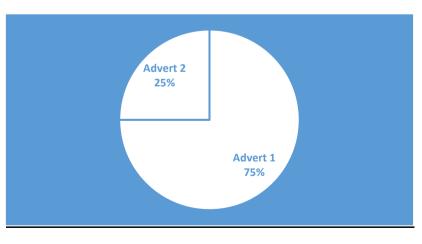
Example graphical representations:

Bar Chart to show which advert is more likely to make participants buy the new brand of toothpaste



Four features (Title, logical depiction, key, y – axis label)

Pie Chart to show the percentages of the preferred advert



Four Features (Title, logical depiction, labelled segments, percentages) so 4 marks.

N.B. If inappropriate selection has been made in d (i) credit can still be given for title and labels in (ciii) if also relevant to an appropriate method.

Marks	AO2					
4	Four of the features noted above.					
3	Three of the features noted above.					
2	Two of the features noted above.					
1	One of the features noted above.					
0	Inappropriate answer given.No response attempted.					

(e) (i) Explain **one** issue of validity in this research.

[2]

Credit could be given for:

- Researcher bias: The advertising company has beliefs about what they will find out before they conduct the research and these ideas may affect the way in which they interact with the participants.
- Ecological validity: Participants are asked to state which advert is more likely to make them buy the new brand of toothpaste, but it does not actually assess whether they do buy the toothpaste.
- Order effects: Shoppers may prefer Advert One (dentist) as they saw that version of the advert first and then they got bored watching Advert Two (suit) as it was practically the same advert as Advert One.
- Any other appropriate issue of validity.

Marks	AO2
2	• Appropriate issue of validity explained with a link to the research.
1	 Appropriate issue of validity explained not linked to this research. OR Identification of an appropriate issue of validity that has been linked to this research.
0	Inappropriate answer given.No response attempted.

(ii) Explain how you would deal with the issue of validity you have chosen in *(e) (i)*. [2]

Credit could be given for:

- Researcher bias: The advertising company could employ researchers who do not know about the company's beliefs to conduct the research and therefore any results collected from the shoppers at the supermarket will not be influenced by this.
- Ecological validity: Participants are asked to state which advert is more likely to make them buy the new brand of toothpaste, but it does not actually assess whether they do buy the toothpaste. The shoppers could be observed to see if they did/didn't buy the toothpaste as well.
- Order effects: The researchers could have shown half of the participants Advert One followed by Advert Two; the other half would see Advert Two followed by Advert One. This counterbalancing would rule out order effects.
- Any other appropriate way of deal with the issue of validity chosen in (e) (i).

Marks	AO2							
2	• Appropriate way of dealing with the issue of validity chosen in (e) (i) is explained and linked to this research.							
1	 Appropriate way of dealing with the issue of validity chosen in (e) (i) is explained, however it is not linked to this research. OR Appropriate way of dealing with the issue of validity chosen in (e) (i) is identified and linked. 							
0	Inappropriate answer given.No response attempted.							

A member of staff at the advertising company, who has studied AS Psychology, suggests that the company should conduct a semi-structured interview to investigate what would make consumers use a new brand of toothpaste.

(f) (i) Explain **one** strength of using a semi-structured interview in this research.

[2]

[2]

Credit could be given for:

Strengths, such as:

- Semi-structured interviews allow the researcher to ask follow-up questions which they may have not thought to ask.
- Semi-structured interviews allow the researcher to deal with the interviewee more sensitively.
- Any other appropriate strength.

Marks	AO2					
2	Appropriate strength linked to this research.					
1	• Appropriate strength, however it is not linked to this research.					
0	Inappropriate answer given.No response attempted.					

(ii) Explain **one** weakness of using a semi-structured interview in this research.

Credit could be given for:

Weaknesses, such as:

- Semi-structured interviews require interviewers to show more skill than a structured interview because the interviewer has to develop new questions on the spot. This requirement for well-trained interviewers makes semi-structured interviews more expensive to produce.
- Questions developed on the spot may lack objectivity more than predetermined ones because of their instantaneous nature, as the interviewer has little time to reflect on what to say or ask.
- Any other appropriate weakness.

Marks	AO2					
2	Appropriate weakness linked to this research.					
1	Appropriate weakness, however it is not linked to this research.					
0	Inappropriate answer given.No response attempted.					

9. In 1999, a team of researchers wanted to investigate how often teenagers were behaving aggressively in T.V. dramas. They conducted a content analysis of T.V. dramas watched by teenagers. They wanted to investigate the amount of times there was a scene where a teenage character behaved aggressively. They analysed five episodes of the two most popular T.V. dramas: '*Head over heels*' and '*Rebellion*'.

	Episode 1	Episode 2	Episode 3	Episode 4	Episode 5	Mean
Head over heels	1	1	1	1	2	1.2
Rebellion	2	4	2	2	9	3.8

(a) Explain **one** reason why a content analysis is an appropriate method to use in this research. [2]

Credit could be given for:

Exemplar answers:

Content analyses are one of few methods that can be used to investigate artefacts such as T.V. dramas. [2 marks]

A content analysis is where the researcher analyses the content of an artefact. [1 mark]

Content analyses have high ecological validity as they are analysing the actual TV dramas that teenagers watch. [2 marks]

The researcher could check the results are reliable quite easily, by just re-watching and analysing the same TV dramas again. [2 marks]

Research is easy to replicate. [1]

• Any other appropriate content.

Marks	AO2
2	Appropriate explanation with a link to the research.
1	 Appropriate explanation not linked to this research. OR Identification of an appropriate explanation that has been linked to this research.
0	Inappropriate answer given.No response attempted.

(b) Give **one** conclusion that could be drawn from the mean scores.

Credit could be given for:

Exemplar answers:

The mean score for Rebellion (3.4) was larger than the mean score for Head over heels (1.2).

[2 marks]

Rebellion is a more aggressive TV drama than Head over heels. [1 mark]

Rebellion has a higher mean score. [1 mark]

• Any other appropriate content.

Marks	AO2
2	Appropriate conclusion with a link to the research.
1	 Appropriate conclusion with a brief link to the research. OR Inferential conclusion.
0	Inappropriate answer given.No response attempted.

(c) Explain **one** strength of using the mean scores in this research.

[2]

Credit could be given for:

Strengths, such as:

- It is necessary for further statistical analysis like standard deviation.
- A mean score can always be calculated, unlike the modal score.
- Any other appropriate strength.

Marks	AO2
2	Appropriate strength linked to this research.
1	• Appropriate strength, however it is not linked to this research.
0	Inappropriate answer given.No response attempted.

[2]

(d) Explain why a median score might be more appropriate in this research. [2]

Credit could be given for:

A median is better than the mean as it is not affected by outlying results, like Episode 5 of Rebellion had 9 acts of aggression. [2 marks]

A median might be better than the mean as medians are not affected by anomalous results.

[1 mark]

• Any other appropriate content.

Marks	AO2
2	Appropriate explanation linked to this research.
1	• Appropriate explanation, however it is not linked to this research.
0	Inappropriate answer given.No response attempted.

(e) A psychologist decided to replicate this research. Explain why she might have decided to use a directional hypothesis in her research. [2]

Credit could be given for:

Exemplar answers:

Directional hypotheses are used when previous research has been conducted. The results from the 1999 research might be used to guide the direction of the psychologist's new hypothesis. [2 marks]

Previous research has been completed and so the results/conclusions from the original research can be used to suggest an appropriate direction for *her* research. [1 mark]

Previous research in 1999. [1 mark]

• Any other appropriate content.

Marks	AO2		
2	Appropriate explanation with a link to the research.		
1	 Appropriate explanation not linked to this research. OR Brief identification of an appropriate explanation that has been linked to this research. 		
0	Inappropriate answer given.No response attempted.		

(f) The psychologist is considering whether she should use the same procedures as the original research. Discuss **one** weakness of the original research and explain how this weakness could be improved.
 [5]

Credit could be given for:

Weaknesses:

Do teenagers watch T.V. dramas anymore? Teenagers may not choose to watch TV now as much as they did in 1999. Nowadays they may choose to watch different styles of programme, such as reality, celebrity quiz etc. and they use other forms of social media, not just TV.

Only TV role models included -The 1999 research only looks at role models that are evident in TV, and not at role models from real life. Just because a teenager may be exposed to many or few role models on TV, this does not mean that they are influenced by them. They may be more influenced by the aggressive behaviours of role models from their own lives, such as peers or parents more.

Ways to improve:

Do teenagers watch T.V. soap operas anymore? Identify the top 3 TV programmes watched by teenagers, irrespective of their genre, and then complete a content analysis of those. The researcher could also investigate forms of content on social media, such as teenagers' most visited websites, pop up adverts and celebrity news sites to analyse the number of times role models may be demonstrating aggressive behaviour.

Only TV role models included – Conduct a semi-structured interview with teenagers asking them about their experiences of seeing aggression on TV, but also about their experiences of seeing aggression by their peers and family members. This would allow the researcher to deal sensitively with this issue but also to assess which sort of role model may have the biggest influence on aggressive behaviour.

Marks	AO3
5	 Thorough discussion of a weakness and way the weakness can be improved. Comments are evidently relevant to the context.
4	 Reasonable discussion of a weakness and way the weakness can be improved. Comments show some relevance to the context.
3	 Basic discussion of a weakness and way the weakness can be improved. Comments are generic and not appropriately contextualised.
2	 Superficial discussion of a weakness and way the weakness can be improved. Comments are generic and not contextualised.
1	Weakness identified.
0	Inappropriate answer given.No response attempted.

• Any other appropriate content