GCE A LEVEL MARKING SCHEME

SUMMER 2022

A LEVEL
PSYCHOLOGY – UNIT 4
1290U40-1

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INTRODUCTION

This marking scheme was used by WJEC for the 2022 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.

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WJEC GCE A LEVEL PSYCHOLOGY – UNIT 4

SUMMER 2022 MARK SCHEME

Question	AO1	AO2	AO3
Section A			
1. (a) (i)	2		
(ii)		2	
(b) (i)	2		
(ii)		2	
(c)			3
(d) (i)		2	
(ii)		2	
(iii)		4	
2. (a)	2		
(b)		2	
(c)		2	
(d)	2		
(e)			3
Section B			
3. (a)		2	
(b)		2	
(c) (i)		6	
(ii)			6
4. (a)		2	
(b)		1	
(c) (i)		1	
(ii)	2		
(d)			8
TOTAL	**10**	**30**	**20**

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SECTION A – Personal Investigations

You should answer **all** the questions in this section with reference to the personal investigations carried out in your study of psychology.

INVESTIGATION ONE:

An experiment on helping behaviour.

1. (a) (i) Explain how the independent variable was operationalised within your experiment. [2]

Marks	AO1
Credit **will** be given for: • An explanation of how the IV was operationalised within the research. E.g. The IV was appearance and this was operationalised by having two conditions. In the first condition the confederate/actor was dressed in a suit and in the second condition the same confederate/actor was dressed in jeans and a t-shirt. In both conditions the confederate lay on the ground pretending to have collapsed. • Any other appropriate content.	
2	• Full explanation of how the IV was operationalised within the research.
1	• Basic explanation of how the IV was operationalised within the research.
0	• Inappropriate answer given. • No response attempted.

(ii) Explain why you chose to operationalise the independent variable in this way. [2]

Marks	AO2
Exemplar answers: • The IV was operationalised in this way as it gave a clear distinction between the two conditions of the IV as appearance was clearly operationalised by wearing a suit or wearing jeans and a t-shirt, it therefore allowed us to test the affect that this had on the number of people stopping to help. (2 marks) • The IV was operationalised in this way to ensure that the DV (helping behaviour) could be tested as it had two different conditions for the IV (appearance). (1 mark) • Any other appropriate content.	
2	• Full justification of why the IV was operationalised in the way outlined in part (i).
1	• Basic justification of why the IV was operationalised in the way outlined in part (i).
0	• Inappropriate answer given. • No response attempted.

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(b) (i) Explain how the dependent variable was operationalised within your experiment. [2]

Marks	AO1
Credit **will** be given for: • An explanation of how the DV was operationalised within the research. E.g. The DV was helping behaviour and this was operationalised by the amount of times the passer-by (participants) stopped to help the person in distress. (2 marks) • Any other appropriate content.	
2	• Full explanation of how the DV was operationalised within the research.
1	• Basic explanation of how the DV was operationalised within the research.
0	• Inappropriate answer given. • No response attempted.

(ii) Explain why you chose to operationalise the dependent variable in this way. [2]

Marks	AO2
Exemplar answers: • The DV was operationalised in this way to allow the data collected to be quantified by counting the number of times a passer-by stopped to help the person in distress. This allowed us to provide a cause and effect relationship between the appearance and helping behaviour. (2 marks) • The DV was operationalised in this way to allow a cause and effect relationship between appearance and helping behaviour. (1 mark). • Any other appropriate content.	
2	• Full justification of why the IV was operationalised in the way outlined in part (i).
1	• Basic justification of why the IV was operationalised in the way outlined in part (i).
0	• Inappropriate answer given. • No response attempted.

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(c) Identify **one** extraneous variable you considered before conducting your research and explain how you dealt with this. [3]

Marks	AO3
Extraneous variable: Variables in a study that are not being measured or manipulated by the researcher but affect the results (DV) of ALL participants' behaviour equally. Credit **will** be given for: Extraneous variable examples: • The weather on the day of the study could influence the likelihood of stopping to help. • Time of day – if done on a weekday morning when people are on the way to work this could influence the likelihood of stopping to help. • Any other appropriate content. Dealing with examples: • Conduct the experiment on helping behaviour on a dry day for both conditions. • Conduct the experiment on a Saturday afternoon for both conditions. • Any other appropriate content. N.B. Confounding variables will not be credited.	
3	• An appropriate extraneous variable is identified with a reasonable explanation of how it was dealt with.
2	• An appropriate extraneous variable is identified with a basic explanation of how it was dealt with.
1	• An appropriate extraneous variable is identified but not in context or dealt with appropriately.
0	• Inappropriate answer given. • No response attempted.

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(d) Justify how you analysed the data in your experiment. Your discussion should include your use of:

(i) graphical representations. [2]

Marks	AO2
Exemplar answers: • A bar chart was used to analyse the data as the data was nominal due to there being two categories to represent appearance (smart clothes and casual clothes). (2 marks) • A histogram was used to analyse the data as the data was continuous. (1 mark) • Any other appropriate content. N.B. Scatter diagram will not be credited due to the research being experimental.	
2	• Full justification of why the graphical representation was chosen.
1	• Basic justification of why the graphical representation was chosen.
0	• Inappropriate answer given. • No response attempted.

(ii) descriptive statistics. [2]

Marks	AO2
Exemplar answers: • The mean was used as a measure of central tendency this was because there were no extreme values in the data and it was therefore most sensitive measure of central tendency as every number in the data set was accounted for, representing the mean number of people stopping to help in the two conditions (smart clothing and casual clothing). (2 marks) • Standard deviation was used as a measure of dispersion as it made use of all the data making it a sensitive measure of dispersion. (1 mark) • Any other appropriate content.	
2	• Full justification of why the descriptive statistic(s) was chosen.
1	• Basic justification of why the descriptive statistic(s) was chosen.
0	• Inappropriate answer given. • No response attempted.

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(iii) inferential statistics. [4]

Marks	AO2
Exemplar answers: • Mann Whitney U test was used as it was a test of a difference between how the confederate was dressed (smart clothes or casual clothes) and the amount of people who stopped to help. An independent measures design was used as there were two different groups of participants for each condition (smart clothes and casual clothes). The helping behaviour data was at least ordinal. (4 marks) • A Wilcoxon T test was used as it was a test of a difference between appearance and helping behaviour, the data was at least ordinal, and a repeated measures design was used. (3 marks) • A Chi-Square test was used as the data was nominal and independent and it was a test of a difference. (2 marks) • A Sign Test was used as the data was nominal. (1 mark) • Any other appropriate content. N.B. Spearman's Rho test is not creditworthy due to the research being experimental.	
4	• Full justification of why the inferential statistic was chosen with clear link to the research.
3	• Full justification of why the inferential statistic was chosen with partial link to the research.
2	• Full justification of why the inferential statistic was chosen with no link to the research.
1	• Basic justification of why the inferential statistic was chosen with no link to the research.
0	• Inappropriate answer given. • No response attempted.

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INVESTIGATION TWO:

An interview on the use of social media.

2. (a) Describe the features of the participants used in your interview. [2]

Marks	AO1
Credit **will** be given for: • Number of participants. • Gender ratio of participants. • Age of participants. • Background of participants e.g. students. • Any other appropriate content.	
2	• Two or more features of the participants are clearly stated and appropriate to the investigation.
1	• One feature of the participants is clearly stated and appropriate to the investigation.
0	• Inappropriate answer given. • No response attempted.

(b) Justify the way you assessed the reliability of your interview. [2]

Marks	AO2
Exemplar answers: • To assess the reliability of the interview, we used inter-rater reliability. We used this to ensure there was an 80%, or above, agreement on the data collected through the interview on social media between interviewers. This allowed us to test the internal reliability of the research by checking the consistency of interviewers. (2 marks) • To assess the reliability of the interview, we used the spilt-half method. We used this to check the internal reliability of the questions on social media by splitting the questions in half and finding the correlation between the scores for both halves to ensure all questions were purposeful and consistent for the interview on social media. (2 marks) • To assess the external reliability of the interview, we interviewed the same participants a month later. We used this to check external reliability. (1 mark) • Any other appropriate content.	
2	• Reasonable justification of how reliability was assessed with clear link to research. • Appropriate use of terminology.
1	• Basic justification of how reliability was assessed with link to research. • Limited use of terminology.
0	• Inappropriate answer given. • No response attempted.

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(c) There are different types of interview, such as structured interviews and semi-structured interviews. Justify the type of interview used in your investigation. [2]

Marks	AO2
Exemplar answers: • We used a semi-structured interview to assess people's use of social media. This was because we wanted to gain qualitative, detailed data by allowing participants the opportunity to fully expand on their answers. (2 marks) • We used a structured interview to assess people's use of social media. This was because we wanted to gain quantitative data. (1 mark) • Any other appropriate content.	
2	• Reasonable justification of the type of interview used with clear link to research. • Appropriate use of terminology.
1	• Basic justification of the type of interview used with link to research. • Limited use of terminology.
0	• Inappropriate answer given. • No response attempted.

(d) State **one** conclusion from your interview. [2]

Marks	AO1
Credit **will** be given for: • Inferential conclusions, e.g. Participants aged between 16-18 years were more likely to use social media to interact and talk with their friends than face-to-face interaction. • Descriptive conclusions, e.g. the mean number of people using social media was higher for 16-18-year olds than it was for people over the age of 40. • Any other appropriate content. N.B. Findings are not creditworthy.	
2	• Conclusion is clearly stated and appropriate to the investigation.
1	• Conclusion is briefly stated and appropriate to the investigation.
0	• Inappropriate answer given. • No response attempted.

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(e) Discuss **one** improvement that could be made to your investigation. [3]

Marks	AO3
Credit **will** be given for: • Changes to the sampling method to improve generalisability and/or representativeness and therefore population validity. • Improvements to the procedure to increase validity and/or reliability. • Content of interview questions (questions more clearly operationalised, more/less questions, questions to generate more/less quantitative/qualitative data). • Any other appropriate content.	
3	• Thorough discussion of why this suggestion would improve the investigation. • Appropriate use of terminology.
2	• Reasonable discussion of why this suggestion would improve the investigation. • Reasonable use of terminology.
1	• Basic discussion of why this suggestion would improve the investigation. • Limited use of terminology.
0	• Inappropriate answer given. • No response attempted.

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SECTION B

3. A psychology teacher predicted that giving students regular homework improved grades in GCSE exams. To test the hypothesis, she assigned students to two groups without their knowledge. One group was given homework three times a week. No homework was given to the second group. Exam grades were compared which led to the conclusion that homework does have a positive effect on students' performance on exams.

(a) State and explain the experimental design used in this piece of research. [2]

Marks	AO2
Exemplar answers: • Independent groups design as there were two different groups used for each condition: one were given homework three times a week and the other group were not given homework. (2 marks) • Independent groups design. (1 mark) • Two separate groups were used one were given homework and one group wasn't given homework. (1 mark) • Any other appropriate content.	
2	• Experimental group design stated correctly. • Appropriate explanation with reference to the scenario.
1	• Experimental group design stated only OR • Basic explanation of design with reference to the scenario.
0	• Inappropriate answer given. • No response attempted.

(b) Describe an appropriate sampling method the teacher could have used for this research. [2]

Marks	AO2
Exemplar answers: • The psychology teacher could have used stratified sampling in this research. She could have done this by dividing the GCSE psychology students into subgroups, e.g. by sex, and then selecting the participants randomly from each subgroup. (2 marks) • The teacher could have used a systematic sample. (1 mark) • The teacher could have used her students that she had in her GCSE class for her sample as they are readily available. (1 mark) • Any other appropriate content.	
2	• Appropriate description with reference to the scenario.
1	• Basic description of sampling method with reference to the scenario.
0	• Inappropriate answer given. • No response attempted.

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(c) (i) Discuss **three** ethical issues that have arisen in this research. [2+2+2]

Marks	AO2
Exemplar answers: • Risk of stress, anxiety, humiliation or pain could be an issue as the students in the homework condition could feel overwhelmed by the amount of work being set three times a week and this could trigger a stress response. Alternatively, the students in the no homework condition could feel stressed and anxious knowing the other group are having homework that could potentially help them in their exam and therefore they may feel disadvantaged in the preparation for their psychology GCSE. (2 marks) • Valid consent wasn't given. (1 mark) • The psychology students weren't aware that this was an experiment and were assigned to the homework/non-homework group without their knowledge. (1 mark) • Any other appropriate content.	
2	• Appropriate discussion of ethical issue with reference to the scenario.
1	• Basic discussion of ethical issue with reference to the scenario.
0	• Inappropriate answer given. • No response attempted.

(ii) Explain how you would deal with the **three** ethical issues you have discussed in (c) (i). [2+2+2]

Marks	AO3
Credit **will** be given for: • Deception – fully debrief the students at the end of the research. • Risk of stress, anxiety, humiliation or pain – Do not link the research to exam results. Undertake the research with low stakes tests. • Risk to the participants' values, beliefs, relationships, status or privacy – undertake a repeated measures design. • Valid consent – Ensure that the students are fully aware of the purpose of the research at the start of the research and gain their full informed consent. • Any other appropriate content.	
2	• Clear and detailed explanation of dealing with ethical issue.
1	• Way of dealing with ethical issue is stated only. OR • Basic explanation of way of dealing with ethical issue.
0	• Inappropriate answer given. • No response attempted.

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4. A Developmental Psychologist wanted to investigate infants' colour preferences. She collected an opportunity sample of five infants (one boy and four girls) in order to observe them playing with toys. Firstly, she gave the infants blue toys. Next, she gave them pink toys. Finally, she gave them green toys. She recorded the time each infant spent playing with toys of each colour before they looked bored. The results of the research can be seen below:

	Blue toys	**Pink toys**	**Green toys**
Mean time in minutes spent playing before the infants looked bored	5	3	1

(a) Using data from the above table state an appropriate conclusion for this piece of research. [2]

Marks	**AO2**
Exemplar answers: Infants showed a greater preference for blue toys compared to pink and green toys as the mean time in minutes spent playing with the blue toys was almost double than the mean time playing with the pink toys and five times longer than the mean time playing with the green toys. (2 marks) Infants showed a greater preference for blue toys compared to pink and green toys. (1 mark) • Any other appropriate content.	
2	• Reasonable conclusion stated. • Reference to research context.
1	• Basic conclusion stated. • Minimal reference to the research context.
0	• Inappropriate answer given. • No response attempted.

(b) Identify the level of data collected in this research. [1]

Marks	**AO2**
Exemplar answer: Ratio data. (1 mark)	
1	• Level of measurement correctly identified.
0	• Inappropriate answer given. • No response attempted.

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(c) (i) Identify the experimental design of the above research. [1]

Marks	AO2
Exemplar answer: Repeated measures design. (1 mark)	
1	• Experimental design correctly identified.
0	• Inappropriate answer given. • No response attempted.

(ii) Define the experimental design you identified in (c) (i). [2]

Marks	AO1
Credit **will** be given for: • An experimental design where participants take part in both the control and experimental conditions. • Any other appropriate content. Note: Students must define the experimental design noted in (c) (i).	
2	• Clear and detailed definition.
1	• Basic definition.
0	• Inappropriate answer given. • No response attempted.

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(d) The Developmental Psychologist asked a colleague to review this research. Discuss the improvements that could be suggested by the review. [8]

Marks	AO3
Credit **will** be given for: • Change of methodology. • Change of sample/sampling method. • Change to procedure. • Change to data gathering/analysis. • Any other appropriate content.	
7-8	• Thorough discussion of the improvements that could be suggested by the review. • Depth and range included. • Clear reference to the research. • Structure is logical.
5-6	• Reasonable discussion of the improvements that could be suggested by the review. • Depth and range but not in equal measure. • Reasonable reference to the research. • Structure is mostly logical.
3-4	• Basic discussion of the improvements that could be suggested by the review. • Depth or range. • Basic reference to the research. • Structure is reasonable.
1-2	• Superficial discussion of the improvements that could be suggested by the review. • Superficial reference to the research. • Structure may be muddled.
0	• Inappropriate answer given. • No response attempted.

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