GCE AS MARKING SCHEME

SUMMER 2019

AS
PSYCHOLOGY - UNIT 2
2290U20-1

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.

WJEC GCE AS PSYCHOLOGY

Unit 2

Question	AO1	AO2	AO3	TOTAL
1	10		10	20
2	2			2
3	3			3
4		12		12
5			2	2
6	2			2
7	3			3
8		7		7
9	4	3	2	9
10		16	4	20
TOTAL	**24**	**38**	**18**	**80**

WJEC GCE AS PSYCHOLOGY - UNIT 2

SUMMER 2019 MARK SCHEME

SECTION A

Contemporary Debate

1. 'In a world with increasing economic and social problems, positive psychology is entirely relevant to today's society'. Discuss. [20]

This debate is linked to the positive 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 **could** be given for the discussion of:

- Named applications of positive psychology e.g. use in therapy as either separate or complimentary to traditional methods in line with Seligman's views (mindfulness and quality of life therapy); use in schools (positive psychology curriculum (PPC), and Penn Resilience Program (PRP)); in the workplace (use of flow to enhance productivity and decrease absenteeism); use by the military (Comprehensive Soldier Fitness); uses in everyday activities (Csikszentmihalyi and LeFevre, 1989; Kubzansky and Thurston, 2007; Action for Happiness (AfH)).
- Discussion of alternative fields/approaches to psychology that could be considered relevant in today's society e.g. biological approach through advances in neuroscience, consideration of cognitive techniques etc.
- Any other appropriate material.

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 **could** be given for discussion of:

- Ethical implications of positive psychology as a discipline – projects that embed positive psychology into their principles are not always directed at/accessible to all e.g. AfH and PPC have been criticised for being targeted at wealthy social groups who have increased life chances, more research is needed into specifically targeted socio-economic groups to ensure that positive psychology is accessible to all.
- Social implications of positive psychology as a discipline – discussion about the relative merits of positive psychology to society, if it were to be successful in decreasing psychological distress for individuals. This is highly desirable considering the apparent national increase in mental health issues.
- Influence of the evidence on political decisions e.g. any potential future changes in the law regarding working hours or practices to allow for an appropriate work/life balance that enhances happiness, such as those made in Bhutan (Gross National Happiness).
- Economic implications – Increased workplace productivity could save businesses and the economy money (Oswald et al, 2009); lower levels of poor mental health could contribute to improvements in physical health, which would remove some strain on the NHS.
- Appropriateness of the evidence – is there enough data to draw reliable conclusions about the relevance of positive psychology today?
- Evaluation of the research (must be contextualised) e.g. consistency of use in regard to positive psychology's applications.
- Evaluative statements and comparisons about the relevance of positive psychology today.

- Any other appropriate analysis.

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. Identify the level of measurement defined in each statement below:

(a) The level of measurement that shows categories of data represented by frequencies. The data sets have no relative numerical value. [1]

Marks	AO1
1	• Nominal data is identified.
0	• An inappropriate level of measurement is given. • No response is given.

(b) The level of measurement that has equal intervals between scores and has an absolute or true zero point. [1]

Marks	AO1
1	• Ratio data is identified.
0	• An inappropriate level of measurement is given. • No response is given.

3. Using an example, define what is meant by the term 'external validity'. [3]

Exemplar answers:

- External validity concerns whether the study paints a true picture of real life behaviours. For example, if the tasks have mundane realism (would be carried out in day to day life) the study can be said to have external validity.
- External validity concerns whether the findings would apply to different places, times, or people. For example, research that does not contain culture, historical or sample bias can be said to be externally valid.
- Any other appropriate response.

Marks	AO1
3	• A clear definition of external validity is given, with a reasonable example.
2	• A clear definition of external validity is given, with a basic example.
1	• A clear definition of external validity is given, without an example. **OR** • A muddled definition of external validity is given, with a basic example.
0	• An inappropriate definition and/or example are given. • No response is given.

4. Discuss how a psychologist could improve the way Milgram dealt with ethical issues in his 'Behavioral study of Obedience' (1963). [12]

Credit **could** be given for discussion of:

- Ways of dealing with ethical issues, such as use of modern BPS/APA guidelines for psychological research, the use of ethics committees and alternative methods that should avoid ethical issues, such as role play.
- Deception – consideration about whether Milgram's research could have been conducted without his deceptions (links to specific examples could be given – e.g. use of role play instead of single blind procedure). Consideration of techniques to minimise harm if deception is necessary e.g. improvements to de-hoax/debriefing participants after the study is completed i.e. providing counselling to participants who showed severe signs of distress/anxiety or allowing participants to leave after fewer prods (the right to withdraw: 35% of Milgram's participants took advantage of this right as they did not go to 450 volts, even though he made it difficult with the prods of the researcher asking them to continue).
- Valid Consent – Milgram gained prior general consent from his participants to be involved in psychological research (they were advised that they may be deceived) and presumptive consent (by telling third parties the true aims and asking them if they would be willing to participate – prior to the study students estimated between 0-3% of participants would go to 450 volts). This could have been improved by making the participants aware that they may find the research distressing in advance or ensuring that all participants involved have the capability to consent.
- Confidentiality – ensuring privacy is maintained to avoid risks to participants. Use of pseudonyms, not identifying the real names of participants or publishing the videos of participant responses etc.
- Vulnerable individuals – use of screening for volunteers to ensure only those with psychological stability are included (links to consent).

- Any other appropriate explanations.

Marks	AO2
10–12	• A thorough and accurate explanation of how ethical issues could be dealt with. • Explanation evidently relevant to Milgram's research. • Depth and range are displayed. • Structure is logical throughout.
7–9	• A reasonable explanation of how ethical issues could be dealt with. • Explanation shows some relevance to Milgram's research. • Depth and range, but not in equal measure. • Structure is mostly logical.
4–6	• A basic explanation of how ethical issues could be dealt with. • Explanation is generic and not always applied to Milgram's research. • Depth or range. • Structure is reasonable.
1–3	• A superficial explanation of how ethical issues could be dealt with. • Explanation is not applied or is only superficially relevant to Milgram's research. • Answer lacks structure.
0	• Inappropriate answer given. • No response attempted.

5. Briefly explain **one** disadvantage of quota sampling. [2]

Exemplar answers:

- One disadvantage of quota sampling is that it may contain researcher bias. The researcher selects the participants from within the quota at his own convenience so they may not be representative of all people from that particular quota/subgroup.
- One disadvantage of quota sampling is that it may not be representative as it relies upon each quota being filled. If the researcher fails to find enough participants to fill each quota/subgroup proportionately the sample will lack population validity.
- One disadvantage of quota sampling is that it is more time consuming than techniques such as opportunity sampling as the researcher needs to know details about potential participants before selection. This means that the research will take longer than if the participants were just chosen at the convenience of the researcher at a particular time/location. NOTE: Slow/expensive can only be used if the technique is compared against another sampling method that is less time consuming/costly.

- Any other appropriate disadvantage.

Marks	AO3
2	• An appropriate disadvantage is briefly explained.
1	• An appropriate disadvantage is identified, but not briefly explained.
0	• An inappropriate/incorrect disadvantage is given. • No answer is given.

6. Using an example, state **one** difference between a directional and non-directional hypothesis. [2]

Exemplar answer:

- A directional hypothesis predicts only one potential outcome (e.g. 'boys will perform better than girls in a psychology exam'), whereas a non-directional hypothesis predicts there will be a difference between variables, but not what that difference will be (e.g. 'there will be a difference between the performance of boys and girls').

- Any other appropriate response.

Marks	AO1
2	• An appropriate difference is stated with an example.
1	• An appropriate difference is stated, but no example is given.
0	• An inappropriate difference is stated. • No response is given.

7. Kohlberg conducted his 1968 research 'The child as a moral philosopher' to track the development of boys, every 2-3 years, over a 12 year period.

(i) Identify the methodology used by Kohlberg. [1]

NOTE: It is likely that students will identify Kohlberg's research to be a case study. However, identification of the research as a longitudinal study, or cross sectional study or interviews are also acceptable responses (not expected knowledge at AS).	
Marks	**AO1**
1	• An appropriate methodology is identified.
0	• An inappropriate methodology is identified. • No response is given.

(ii) Briefly explain **two** features of the methodology you identified in part (i). [2]

Exemplar features of a case study: • Longitudinal in nature. • In-depth investigation of a phenomenon. • Descriptive, exploratory or explanatory analysis of a person, group or event (qualitative data). • Holistic study by one or more methodologies. • Empirical inquiry that investigates a phenomenon within its real-life context. NOTE: Features of ANY methodology identified in part (i) can be credited, even if the response to part (i) was inappropriate.	
Marks	**AO1**
2	• Two features of the methodology identified in part (i) have been briefly explained.
1	• Only one feature of the methodology identified in part (i) has been briefly explained.
0	• Inaccurate features have been briefly explained. • No response is given.

8. A head teacher gathered a sample of 360 students from a local sixth form college. They gave all students a questionnaire about happiness, which categorised the students into four groups – Very Happy, Happy, Ambivalent (neither happy nor unhappy) and Unhappy.

Happiness category	Number of students
Very Happy	180
Happy	90
Ambivalent (neither happy or unhappy)	45
Unhappy	45

(a) Identify an appropriate sampling method and explain how the head teacher could have used it to collect the participants for this research. [3]

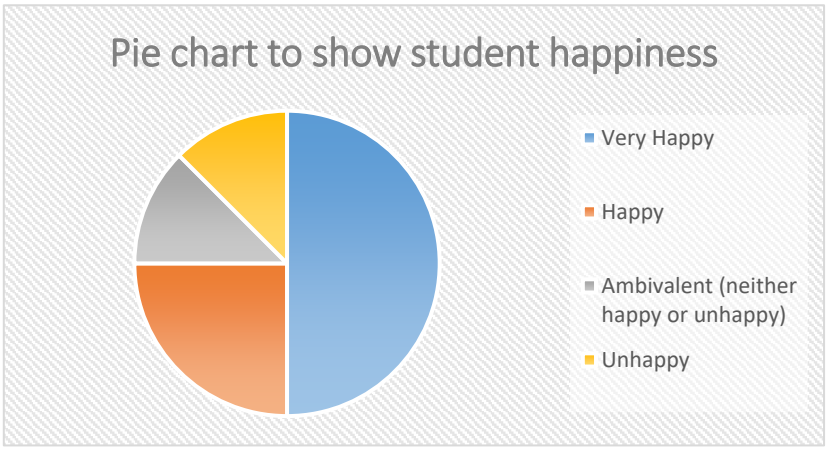
Exemplar answer:

A quota sample could have been used, where the head teacher selected participants from different year groups. This would involve splitting his participants into two target groups; participants from year 12 and participants from year 13. He would then select participants from each year group using opportunity sampling, where he/she takes the first 180 students he/she finds from each year group. He/she would continue to ask participants from each target population until they had reached his required quota.

Marks	AO2
3	• An appropriate sampling method is identified. • A reasonable explanation of the sampling method is given that has been fully contextualised.
2	• An appropriate sampling method is identified. • A basic explanation of the sampling method is given that is not fully contextualised.
1	• An appropriate sampling method is identified only.
0	• An inappropriate/incorrect experimental design is given. • No answer is given.

(b) The head teacher wanted to use a pie chart to show the different levels of happiness for the students. Using the data in the table above, draw and label a pie chart. [4]

Exemplar pie chart:



1 mark given for each of the following:

- Title of pie chart.
- Appropriate key/legend.

Up to 2 marks given for:

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

9. A psychologist was interested in whether sex differences in the play of children were innate or learned. For example, whether males and females had different styles of play, such as one sex being more physically active than another. To find out, she planned to study primates (chimpanzees). The psychologist thought that if chimpanzees showed similar differences in their play behaviour to humans, she could conclude that sex differences were evolutionary.

(a) Describe **two** ethical guidelines that must be followed by psychologists when working with animals. [2+2]

Credit **could** be given for description of:

- Following relevant legislation e.g. the Animals (Scientific Procedures) Act 1986.
- Replacing the use of animals e.g. only using actual animals if no other form of testing (such as computer simulation etc.) could be used.
- Choice of species and strain e.g. using only species that are ethically and scientifically suitable to the subject matter being studied.
- Number of animals e.g. use only the smallest number of animals that are necessary to accomplish the research goals.
- Procedures e.g. ensuring any tasks/research does not cause unnecessary death, harm or illness to the animal, obtaining relevant licences from the Home Office for research with protected species etc.
- Type of animal e.g. use of only captive bred animals wherever possible.
- Care of the animal e.g. housing of animal whilst not being studied and humane disposal of animals after use.

- Any other relevant ethical guideline/consideration.

Marks per guideline	AO1
2	• Clear and detailed description.
1	• Basic description.
0	• Inaccurate description. • No response is given.

(b) Identify and explain **one** factor that could affect the validity of this research. [3]

Exemplar validity issues:

- Impact of the researcher – as the study is an observation of chimpanzees by humans, the researcher might over/under exaggerate the sex-differences that they record reducing validity.
- The fact that the participants are chimpanzees – chimpanzees may not be used to be observed by researchers, which may alter their play behaviour lowering the internal validity of the study.

- Any other appropriate validity issue e.g. the fact that humans and animals may behave differently (issues with population validity).

Marks	AO2
3	• An appropriate issue is identified. • Reasonable explanation is given and fully contextualised.
2	• An appropriate issue is identified. • Basic explanation is given in context. OR • Reasonable explanation is given but not fully contextualised.
1	• An appropriate issue is identified, but not explained in context.
0	• An inappropriate issue is identified/explained. • No response is given.

(c) Describe **one** disadvantage of non-participant observations. [2]

Exemplar disadvantages:

- The researcher may not record all information accurately (unintentionally), leading to reliability and internal validity issues due to the subjective nature of observations.
- Researcher bias can be a problem, especially if categories are not operationalised before the study takes place and the researcher is aware of the aims of the study.
- Can be unethical, especially if participants do not know that they are being observed (lack of valid consent) or why the observation is taking place (deception).

- Any other appropriate disadvantage.

Marks	AO3
2	• Clear and detailed disadvantage.
1	• Basic disadvantage.
0	• Inaccurate disadvantage. • No response is given.

10. Researchers conducted a laboratory experiment to see how 15 minutes of device free solitude (being alone, without the use of mobile phones, tablets etc.) would impact on emotion. Their alternative hypothesis was:

Participants who spend 15 minutes alone will have decreased emotional response, compared to a group of participants who spend 15 minutes chatting to a researcher.

(a) Write an appropriate null hypothesis for the above research. [2]

Exemplar answer:

- There will be no difference between the emotional response of a group of participants who spend 15 minutes in solitude, and a group of participants who spend 15 minutes chatting to a researcher; any difference that does occur does so by chance.

Marks	AO2
2	• Appropriate null hypothesis is given, with both conditions clearly identified.
1	• Appropriate null hypothesis is given, with only one condition clearly identified.
0	• An inappropriate null hypothesis is given. • No response is given.

(b) (i) Identify the independent variable (IV) in this research. [1]

Marks	AO2
1	• Appropriate IV (solitude vs. chatting to a researcher) is identified.
0	• An inappropriate IV is identified. • No response is given.

(ii) Identify the dependent variable (DV) in this research. [1]

Marks	AO2
1	• Appropriate DV (emotional response) is identified.
0	• An inappropriate DV is identified. • No response is given.

(c) Including an example from this research, identify **and** explain the type of experimental design that has been used. [3]

Exemplar answer:

An independent groups design has been used, where different participants are used in the two conditions. For example, the participants in the solitude group are completely separate from the participants who chat to the researcher for 15 minutes. As the two groups do not complete both conditions and compare their emotional responses across variables, this shows the design is independent.

Marks	AO2
3	• An independent groups design is identified. • A reasonable explanation of independent groups is given that has been fully contextualised through an example.
2	• An independent groups design is identified. • A basic explanation of independent groups is given that is not contextualised with an example.
1	• An independent groups design is identified only.
0	• An inappropriate/incorrect experimental design is given. • No answer is given.

(d) Describe **one** strength and **one** weakness of research conducted in a laboratory environment. [2+2]

Exemplar Strengths:

- High levels of control – increased reliability (standardised procedures) and possibility of establishing cause and effect.
- High internal validity – control extraneous and/or confounding variables.
- Ability to use large equipment that would be impractical in the field/online.

Exemplar weaknesses:

- Low levels of external/ecological validity – tasks and setting usually lack mundane realism.
- Risks of validity issues as participants are aware they are being observed/measured – demand characteristics, social desirability bias etc.

- Any other appropriate strengths/weaknesses.

Marks per evaluation point	AO3
2	• An appropriate strength/weakness is described.
1	• An appropriate strength/weakness is identified, but not fully described.
0	• An inappropriate/incorrect strength/weakness is given. • No answer is given.

The researchers used a questionnaire to measure emotion both before and after the 15 minutes, which included measures of being excited, interested, scared or anxious. This provided an overall emotional response score for each participant.

(e) Identify and explain how **one** confounding variable could have affected a participant's emotional response. [3]

Exemplar confounding variables:

- Participant's home life – it could be that a participant had higher or lower emotional responses because of circumstances beyond the norm (such as an argument with friends or it was their birthday), which means their rating was invalid.
- The familiarity of the setting – as the research was completed in a lab, this could have affected SOME participants' emotional response. For example, the lab might make them nervous as the setting is unusual, which invalidates the results.
- Wording of the questionnaire – SOME participants may not have understood the questions about emotions causing them to just guess how they felt. This has negative impacts on internal validity.
- The friendliness of the researcher – participants in the control group may have liked or disliked the researcher who they were chatting to for 15 minutes, or they could have chatted about more or less stimulating topics. This could have had different effects on the emotional response of this group, making comparisons difficult.

- Any other appropriate confounding variable

NOTE: Confounding variables are those that affect some participants but not others, having negative consequences for validity/reliability of results.

Marks	AO2
3	• An appropriate confounding variable is identified and fully explained in context.
2	• An appropriate confounding variable is identified and briefly explained in context.
1	• An appropriate confounding variable is identified but is not explained in context.
0	• An inappropriate/incorrect confounding variable is given. • No answer is given.

(f) Pre-experiment results for the first five participants in the solitude group are shown in the table below. Use this table and the formula provided to calculate the standard deviation. Show your workings. [6]

Participant Number	Emotional arousal score (*x*)
1	5
2	4
3	2
4	8
5	1

$$\sqrt{\frac{\sum(x - \bar{x})^2}{n - 1}}$$

AO2

Exemplar response:

Participant Number	Emotional response score (*x*)	Mean $\bar{x}$	Score - Mean $x - \bar{x}$	Score - Mean² $(x - \bar{x})^2$
1	5	4	1	1
2	4	4	0	0
3	2	4	-2	4
4	8	4	4	16
5	1	4	-3	9

÷ by mean (4)

One mark for:

- Calculation of mean $\bar{x}$ = 5 + 4 + 2 + 8 + 1 = 20/5 = 4
- Scores minus the mean.
- Scores minus the mean, squared.
- Calculation of n – 1 = 5 – 1 = 4

- Calculation of sum of (x-x²) = scores, minus mean, squared.
- Calculation of the square root of 7.5 to get a standard deviation of 2.74 (rounding is accepted).

NOTE: If a student miscalculates at any point in the chain only 1 mark will be deducted for each error e.g. if a student miscalculates the mean but all other calculations are correct from this point, 5 out of 6 marks can be achieved.

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