

**A LEVEL PSYCHOLOGY****UNIT 2****Psychology: Using Psychological Concepts****MARK SCHEME****GENERAL MARKING GUIDANCE**

- Every candidate's script must be treated in the same way throughout the whole marking session.
- The mark scheme should be applied positively. It is not required for an answer to be 'perfect' to gain full marks. Candidates should be rewarded for what they have included and not penalised for leaving things out. The process is very different to marking as a teacher (i.e. it is about rewarding rather than guiding).
- Examiners should read answers carefully and not make any presumptions. Original thoughts and unusual exemplars can be credited; however, do check for accuracy of unusual answers.
- The full range of marks should be used. If the answer shows the features of the top band with no significant issues, full marks can be given. Similarly, an answer which does not answer the question should be given zero marks.
- The subjective nature of psychology inevitably requires examiners to use their professional judgement. Care should be taken however not to decide on value of the answer due to personal opinions. If the material is used appropriately to answer the question then credit should be given in accordance with the skills demonstrated and indicated in the various bands.
- Crossed out work should be marked unless the candidate has made another attempt at answering the question.
- Any rubric errors should work to the candidates advantage i.e. mark all answers completed and credit the highest scoring valid combination.
- If at any time during the marking the examiner has a concern regarding content of an answer the Team Leader or Principal Examiner should be consulted.

Indicative content

It is essential to acknowledge the subjective nature of psychology and therefore there are not always specific answers that can be included in the mark scheme. The indicative content is simply advice on each specific question outlining some possibilities; it is not prescriptive or hierarchical and candidates are not expected to mention all the materials mentioned. They are also able to refer to other studies, theories, issues etc. which would be credited based on skills shown in accordance with the guidance in the grids.

Which mark within a band?

Having decided on the overall band that is appropriate for the response given the examiner should start with the top mark in the band. If there are aspects of the answer which may not be fully representative of the band, the mark given may be lower in the band.

Quality of written communication

This issue should have a bearing only if the quality of written communication is inconsistent with the descriptor for the band in which the answer falls decided on the psychological content. In this situation, examiners may decide not to award the higher mark within the band.

Annotation to be used

√ - correct material

√+ - correct material developed

x – incorrect material

? – unclear

EV – evaluation

GEV – generic evaluation

EX – example used is appropriate

NREL – does not answer question (i.e. not relevant)

SECTION A – Contemporary Debate

1. 'Neuroscience has many positive applications in contemporary society; however the ethical implications are debatable'. Discuss. [20]

This debate is linked to the biological 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).

Credit **could** be given for:

- Named research into e.g. emotion, attention, cognition, learning and / or memory
- Study normal behaviours in animals and humans as well as pathological cause of disorders (e.g. dementia, schizophrenia)
- Use of functional and structural neuroimaging (e.g. fMRI, PET)
- Application e.g. explaining shell shock from First World War
- Work of Adrian Raine in identifying differences in brains of murderers
- Any other appropriate material

Marks	AO1
10	<ul style="list-style-type: none"> • Exemplars used are well chosen to support the points made • Details are accurate throughout • There is depth and range to material included • Effective use of terminology throughout
7 - 9	<ul style="list-style-type: none"> • Exemplars used are appropriate • There may be minor inaccuracies which do not distract from overall meaning • There is depth and range to material used, but not in equal measure • Good use of terminology
4 - 6	<ul style="list-style-type: none"> • Exemplars may not always be appropriate • There are inaccuracies throughout • There is depth or range only in material used • There is some use of appropriate terminology
1 - 3	<ul style="list-style-type: none"> • Exemplars are limited and not always made relevant • There are inaccuracies throughout • Little use of appropriate terminology
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

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

1. continued

Credit could be given for:	
<ul style="list-style-type: none"> • Appropriateness of the historical evidence applied to modern society due to changes in technological advances • Ethical implications of not using the information appropriately • Ethical implications of using the information inappropriately (e.g. screening for potential criminals) • Influence of the evidence on political decisions (e.g. treatment of neurological disorders) • Evaluation of the research (must be contextualised) • Any other appropriate analysis 	
Marks	AO3
10	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • A good 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	<ul style="list-style-type: none"> • A reasonable discussion of both sides of the debate OR a good 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	<ul style="list-style-type: none"> • A superficial discussion is made of the debate • Evaluative comments are superficial • Answer lacks structure • No conclusion
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

SECTION B – Principles of research

2. Explain what is meant by 'social desirability'. [2]

Exemplar definition:

Social desirability is a term that describes the tendency of participants to respond in a manner that will be viewed favourably by others. It can take the form of exaggerating "good behaviour" or minimising undesirable behaviour.

- Any other appropriate definition

Marks	AO1
2	<ul style="list-style-type: none"> • Complete definition given in the context of research in experimental psychology
1	<ul style="list-style-type: none"> • Undeveloped / Crude definition given which may lack link to psychology
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

3. Describe the findings and conclusions of Milgram's (1963) '*Behavioral study of obedience*'. [8]

Credit **could** be given for:

- Milgram's survey of Psychology Majors showed estimates of between 0% and 3% of participants would administer 450 volts

Voltage level	Number obeying
Up to 300	40
315	35
330	31
345	29
360	28
375	27
390-450	26

- Remarks and behaviour indicated the participants were behaving against their own values, e.g. 14 of the 40 showed nervous laughter and smiling; sweating, stuttering, biting lips and digging fingernails into flesh
- Milgram concluded that '*the phenomenon of obedience must rest on the analysis of the particular conditions in which it occurs*'.
- Milgram concluded that there were 13 elements of the situation that contributed to these levels of obedience e.g. payment, location of Yale University with its '*unimpeachable reputation*'.
- Any other appropriate finding and / or conclusion

NB Credit can only be given to details from the original article.

Marks	AO1
7 - 8	<ul style="list-style-type: none"> • Description of the findings and conclusions are accurate and well detailed • There is depth and range material used • There is excellent use of terminology
4 - 6	<ul style="list-style-type: none"> • Description of the findings and conclusions are mostly accurate and detailed • There is depth and range material used • There is good use of terminology
1 - 3	<ul style="list-style-type: none"> • Description of the findings or conclusions are mostly accurate and detailed OR • Basic description of the findings and conclusions with many inaccuracies • Limited use of terminology
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

4. Identify what is being described in the two following instances:

- (a) an experimental design where the same participants are used in all conditions. [1]

Marks	AO1
1	<ul style="list-style-type: none"> • Repeated measures (design) • Related measures • Related samples • Within groups design
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

- (b) a statement which predicts there will be no difference between conditions in an investigation. [1]

Marks	AO1
1	<ul style="list-style-type: none"> • Null hypothesis OR • H_0
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

5. Identify **two** ways to assess the validity of a measuring tool. [2]

Marks (per way)	AO1
1	<ul style="list-style-type: none"> • Concurrent validity • Predictive validity • Face validity • Content validity • Construct validity
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

6. A psychologist was interested in whether drinking water during the school day would have an effect on children's cognitive performance. He was given permission by the head teacher of a local high school to carry out his investigation on 100 of the 15 year olds studying Mathematics GCSE. The students were put into pairs based on their gender and their performance on a previous maths test. One from each pair was put into condition A; Condition A was each given a litre of bottled water to drink through the school day. The other person from the matched pair was assigned to condition B; Condition B received no bottle of water. During the last lesson of the day, all of the students were given the same maths test (maximum marks of 50) to determine how much they had learnt during that day's maths lesson. The results are shown in *Table 1* below.

Table 1: Summary table of scores in the maths test of students given water and not given water.

Score in the maths test (/ 50)	Number of students	
	Condition A (water given)	Condition B (no water given)
0 - 10	0	2
11 - 20	6	13
21 - 30	23	15
31 - 40	14	17
41 - 50	7	3
Total number	50	50

- (a) Identify a confounding variable in this study.

[2]

Credit **could** be given for:

- Amount of sleep the student had the night before
- Who they are sitting with during the lessons
- Menstruation for the girls
- Any other appropriate confounding variable

Marks	AO2
2	<ul style="list-style-type: none"> • The confounding variable is clearly identifiable • There is a logical link made to the context of the study
1	<ul style="list-style-type: none"> • The confounding variable to identified • There is no link made to the context of the study
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

- (b) Suggest a suitable directional hypothesis for this study. [2]

Credit could be given for:	
Students who drink water through the school day will score higher on a maths test than students who do not drink water throughout the school day. (2 marks)	
'Condition A will do better on the maths test than condition B'. (1 mark)	
<ul style="list-style-type: none"> Any other appropriate directional hypothesis linked to this research 	
Marks	AO2
2	<ul style="list-style-type: none"> Appropriate directional hypothesis is suggested, with good use of appropriate psychological terminology
1	<ul style="list-style-type: none"> Basic directional hypothesis is suggested which uses some appropriate psychological terminology
0	<ul style="list-style-type: none"> Inappropriate answer given (e.g. a non-directional hypothesis) No response attempted

- (c) (i) Identify the experimental design used in this study. [1]

Marks	AO2
1	<ul style="list-style-type: none"> Matched pairs (design)
0	<ul style="list-style-type: none"> Inappropriate answer given No response attempted

- (ii) Explain **one** advantage of the experimental design used in this study. [3]

Credit could be given for:	
<ul style="list-style-type: none"> The differences between the two groups are minimised through the matching process, so there are fewer participant (confounding) variables There are no order effects as you may get with repeated measures since there are different people in both groups Any other appropriate advantage linked to this study 	
Marks	AO2
3	<ul style="list-style-type: none"> Appropriate advantage explained Applied well to the study
2	<ul style="list-style-type: none"> Appropriate advantage explained Some link with this study
1	<ul style="list-style-type: none"> Appropriate advantage identified only No link with the study
0	<ul style="list-style-type: none"> Inappropriate answer given (e.g. quick) No response attempted

- (d) Draw a graph to represent the data in the table above. [6]

Marks	AO2
1 mark given for each of the following aspects:	
<ul style="list-style-type: none"> Title for graph Correctly labelled X axis Correctly labelled Y axis Suitable scale Accurate plotting of data (2 marks) Mostly accurate plotting of data (1 mark) 	
0	<ul style="list-style-type: none"> Inappropriate graph used No graph attempted

- (e) Analyse the ethical issues of this study. [8]

Credit could be given for:	
<ul style="list-style-type: none"> Consent gained by head teacher but should it come directly from the students or their parents? Familiar environment thereby reducing stress to participants Physical risk of dehydration for those not drinking water Need to ensure test results kept confidential to minimise embarrassment of a poor performance Any other relevant ethical issue 	
Marks	AO3
6 - 8	<ul style="list-style-type: none"> A good analysis is made of the ethical issues in this study The arguments are balanced Structure is logical A reasonable conclusion is reached based on evidence presented
3 - 5	<ul style="list-style-type: none"> Basic analysis is made of the ethical issues in this study The argument may be one sided Structure is reasonable A basic conclusion is reached
1 - 2	<ul style="list-style-type: none"> A superficial analysis is made of the ethical issues in this study The issues are not always made relevant to this study Answer lacks structure No conclusion
0	<ul style="list-style-type: none"> Inappropriate answer given No response attempted

7. A psychologist conducted a questionnaire amongst first time mothers to investigate their experiences against their expectations. The psychologist advertised for first time mothers using posters displayed at 4 different hospitals around the UK. An extract from the advert can be seen below:

Are you a first time mum?

Would you be willing to take part in research about the experiences and expectations of first time mothers?

The research would require you completing two questionnaires; one questionnaire when you are 6 months pregnant and another questionnaire when your baby is 6 months old.

Your results will remain confidential. If you decide to participate you can still withdraw from the research at any time.

If you would like more information or would like to take part in the research, please contact

A.Researcher@wjec.ac.uk

The psychologist used the first 10 women to respond to her advert. She emailed the first questionnaire when the women were 6 months pregnant and then emailed the second questionnaire when the babies were 6 months old.

One of the questions included in both questionnaires was 'How satisfied are you with your life at present?' The women responded to this question on the scale shown below and the results are given in *Table 2*.

0	1	2	3
Not satisfied	Slightly satisfied	Mostly satisfied	Completely satisfied

Table 2: Responses to "How satisfied are you with your life at present?"

Woman's ID number	Satisfaction score	
	At 6 months pregnant	When baby 6 months old
1	3	3
2	2	3
3	1	3
4	3	1
5	2	3
6	3	3
7	0	0
8	3	3
9	2	3
10	3	2

- (a) Using the data from *Table 2* above:
- (i) Identify the modal scores for both questionnaires. It should be made clear which questionnaire the score relates to. [2]

Credit given for: At 6 months pregnant: 3 When baby 6 months old: 3	
Marks (per score)	AO2
1	<ul style="list-style-type: none"> • 3 • three
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

- (ii) The standard deviation for the 'At 6 months pregnant' condition was 1.2; calculate the standard deviation for the 'When baby was 6 months old' condition. You should show your calculations in full. [5]

Credit given for:

$$\bar{x} = \frac{3 + 3 + 3 + 1 + 3 + 3 + 0 + 3 + 3 + 2}{10} = \frac{24}{10} = 2.4$$

x	\bar{x}	$x - \bar{x}$	$(x - \bar{x})^2$
3	2.4	0.6	0.36
3	2.4	0.6	0.36
3	2.4	0.6	0.36
1	2.4	-1.4	1.96
3	2.4	0.6	0.36
3	2.4	0.6	0.36
0	2.4	-2.4	5.76
3	2.4	0.6	0.36
3	2.4	0.6	0.36
2	2.4	-0.4	0.16
			Total: 10.4

$$s = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n - 1}}$$

$$SD = \frac{10.4}{9} = 1.15$$

NB as this is the SD of a population it must be $n - 1$ (i.e. 9)

Marks	AO2
1 mark for each of the following (max 5 marks)	<ul style="list-style-type: none"> • Accurate calculation of \bar{x} • Accurate inclusion of data in column $x - \bar{x}$ • Accurate inclusion of data in column $(x - \bar{x})^2$ • Correct total • Correct denominator • SD of 1.15
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

- (b) During peer review, a colleague noted that there were issues with the validity of this research.

- (i) Identify **two** issues of validity that might arise in this study. [4]

Credit could be given for:	
<ul style="list-style-type: none"> • Use of scaling in the questionnaire – definition of ‘satisfied’ • Social desirability of questionnaires – first time mother’s concerns about being judged • Self-selecting sample – invitation to participate may not be considered by all members of the community (e.g. linguistic understanding) • Any other appropriate issue of validity 	
Marks	AO2
3 - 4	<ul style="list-style-type: none"> • Two issues of validity are identified • There is a clear description of how both issues of validity are relevant to this study
1 - 2	<ul style="list-style-type: none"> • There may be only one issue of validity identified with a clear link to this study • There is a generic description of two issues of validity
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

- (ii) Discuss how both these issues of validity can be improved in this study. [4]

Credit could be given for:	
<ul style="list-style-type: none"> • Use of unstructured interviews allowing opportunities to clarify meaning of words • Question others (e.g. partners, midwives) as well to validate responses given • Choose a stratified sample from a local hospital to ensure representation from different social groups • Any other appropriate way of improving the validity 	
Marks	AO2
3 - 4	<ul style="list-style-type: none"> • Improvement of both issues of validity are clearly and fully discussed • There is clear reference to the study
1 - 2	<ul style="list-style-type: none"> • Improvement of only one issue of validity is clearly and fully discussed with clear reference to the study OR • Improvements to both issues of validity are identified only with no link to the study
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

- (c) Explain an alternative way in which the participants could have been sampled in this research. [3]

Exemplar answer:

Due to the specific population from which the sample could be obtained there is a clear need to target the sampling within particular contexts. Doctor's surgeries, hospital waiting rooms would be suitable whereas nursery schools may not be as those there are already parents. To ensure a representation from all social groups a stratified sampling method could be adopted; surgeries and/or hospitals in different areas could be targeted with equal amounts of women accepted from each.

Credit **could** be given for:

- Snowball sampling: where each participant brings another pregnant woman with her to the research
- Opportunistic: approaching those women attending pre-natal classes and using those happy to participate
- Any other appropriate sampling method

Marks	AO2
3	<ul style="list-style-type: none"> • Full explanation given in relation to an alternative sampling method • There is a logical application of the sampling method used for the purpose of this research
2	<ul style="list-style-type: none"> • Good explanation given in relation to an alternative sampling method • Lacks some application of the sampling method used for the purpose of this research
1	<ul style="list-style-type: none"> • Basic explanation given in relation to an alternative sampling method • No application to the purpose of their investigation (i.e. a generic explanation)
0	<ul style="list-style-type: none"> • Identification only of a sampling method • Inappropriate answer given • No response attempted

(d) The data collected by this researcher was primary data.

(i) Give **one** advantage of using primary data in this research. [3]

Credit **could** be given for:

- Greater control by the experimenter of gaining necessary information
- Addresses specific research issues rather than depending on similar issues raised previously
- Up to date information and therefore more valid in terms of application of findings
- Any other relevant advantage

NB An issue considered as a disadvantage can be credited here if description is clearly an advantage.

Marks	AO2
3	<ul style="list-style-type: none"> • Full explanation of an advantage of primary data • There is a logical application to this research
2	<ul style="list-style-type: none"> • Good explanation of an advantage of primary data • Lacks some application to this research
1	<ul style="list-style-type: none"> • Basic response of an advantage of primary data • No application to the purpose of their investigation (i.e. a generic reason)
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

(ii) Give **one** disadvantage of using primary data in this research. [3]

Credit **could** be given for:

- Time consuming – sampling method
- Takes time to gather data which makes it expensive
- Inaccurate feedback – social desirability may result in unreliable information as dealing with a sensitive matter such as feelings about being a parent
- Any other appropriate disadvantage

NB An issue considered as an advantage can be credited here if description is clearly a disadvantage.

Marks	AO2
3	<ul style="list-style-type: none"> • Full explanation of a disadvantage of primary data • There is a logical application to this research
2	<ul style="list-style-type: none"> • Good explanation of an advantage of primary data • Lacks some application to this research
1	<ul style="list-style-type: none"> • Basic response of a disadvantage of primary data • No application to the purpose of their investigation (i.e. a generic reason)
0	<ul style="list-style-type: none"> • Inappropriate answer given • No response attempted

