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# **GCE A LEVEL MARKING SCHEME**

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**AUTUMN 2020**

**A LEVEL  
PSYCHOLOGY - COMPONENT 2  
A290U20-1**

## **INTRODUCTION**

This marking scheme was used by WJEC for the 2020 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.

**GCE A LEVEL PSYCHOLOGY - COMPONENT 2**

**AUTUMN 2020 MARK SCHEME**

<b>Question No</b>	<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>Total</b>
1.	6			6
2.	2			2
3.	6			6
4.	6			6
5.			12	12
6.			4	4
7.			4	4
8.		18		18
9.		12		12
10.		15	4	19
11.		5	6	11
	20	50	30	100

1. Describe the process of peer review. [6]

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 is also an expert 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.

N.B. A definition of peer review can receive only superficial credit (1-2 marks).

Marks	AO1
5-6	<ul style="list-style-type: none"> <li>• Reasonable description of the process of peer review.</li> <li>• Good use of appropriate terminology.</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• Basic description of the process of peer review.</li> <li>• Some use of appropriate terminology.</li> </ul>
1-2	<ul style="list-style-type: none"> <li>• Superficial description of the process of peer review.</li> <li>• Very little use of appropriate terminology.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

2. Identify what the following symbols mean:

- (i)  $\leq$  [1]

Marks	AO1
1	<ul style="list-style-type: none"> <li>• Less than or equal to.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (ii)  $>$  [1]

Marks	AO1
1	<ul style="list-style-type: none"> <li>• Greater than.</li> <li>• More than.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

3. Define the following techniques that are used to assess the reliability in research:

(a) Test re-test reliability [2]

Credit could be given for:	
<ul style="list-style-type: none"> <li>Involves testing and retesting the same participants over time, with the same test, and comparing their scores. If the scores are the same the test has external reliability.</li> <li>Any other appropriate content.</li> </ul>	
<b>Marks</b>	<b>AO1</b>
2	<ul style="list-style-type: none"> <li>Reasonable definition.</li> </ul>
1	<ul style="list-style-type: none"> <li>Basic definition.</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>

(b) Inter-rater reliability [2]

Credit could be given for:	
<ul style="list-style-type: none"> <li>Where two or more psychologists produce consistent results by using a standardised procedure, agreed coding system, or correlation of their data.</li> <li>Any other appropriate content.</li> </ul>	
<b>Marks</b>	<b>AO1</b>
2	<ul style="list-style-type: none"> <li>Reasonable definition.</li> </ul>
1	<ul style="list-style-type: none"> <li>Basic definition.</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>

(c) Split-half reliability [2]

Credit could be given for:	
<ul style="list-style-type: none"> <li>Involves splitting a participant's test answers in half and seeing whether s/he got the same or similar scores on the two halves. If so, internal reliability is high; if not, it is low and individual questions would need to be redesigned.</li> <li>Any other appropriate content.</li> </ul>	
<b>Marks</b>	<b>AO1</b>
2	<ul style="list-style-type: none"> <li>Reasonable definition.</li> </ul>
1	<ul style="list-style-type: none"> <li>Basic definition.</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>

4. (a) Explain how psychologists use ethics committees to manage the risk posed by ethical issues. [3]

<p>Example answers:</p> <p>Ethics committees are normally found in Universities or any places that do research. Their role is to approve the design of research before the researcher completes the research, they are likely to use ethical guidelines like those published by the BPS to assess if the research proposal is ethical or not. If they don't approve first time, they may ask the psychologist to make amendments to their research design, or it may not allow them to conduct their research if their proposal has too many ethical issues. Ethics committees are normally made up of researchers and lay people. [3 marks]</p> <p>These are groups of people that judge whether a piece of research can be done or not. [1 mark].</p>	
Marks	AO1
3	<ul style="list-style-type: none"> <li>• Reasonable explanation of how psychologists use ethics committees to manage the risk posed by ethical issues.</li> <li>• Good use of terminology.</li> <li>• Structure is logical.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Basic explanation of how psychologists use ethics committees to manage the risk posed by ethical issues.</li> <li>• Some appropriate terminology is evident.</li> <li>• Structure is mostly logical.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Superficial explanation of how psychologists use ethics committees to manage the risk posed by ethical issues.</li> <li>• Infrequent use of appropriate terminology.</li> <li>• Answer lacks structure.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (b) Explain how psychologists use ethical guidelines to manage the risk posed by ethical issues. [3]

Example answers:

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 may risk being censured by the BPS. The guidelines provide a set of recommendations about how psychologists should and should not conduct research. Current BPS guidelines emphasise the need to respect the autonomy, privacy and dignity of individuals and communities involved in psychological research. [3 marks]

Psychologists design their research to make sure it meets the guidelines, such as making sure the participants give valid consent. [1 mark].

Marks	AO1
3	<ul style="list-style-type: none"> <li>• Reasonable explanation of how psychologists use ethical guidelines to manage the risk posed by ethical issues.</li> <li>• Good use of terminology.</li> <li>• Structure is logical.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Basic explanation of how psychologists use ethical guidelines to manage the risk posed by ethical issues.</li> <li>• Some appropriate terminology is evident.</li> <li>• Structure is mostly logical.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Superficial explanation of how psychologists use ethical guidelines to manage the risk posed by ethical issues.</li> <li>• Infrequent use of appropriate terminology.</li> <li>• Answer lacks structure.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

5. Evaluate the issues of validity and ethics raised by Milgram's (1963) research '*Behavioural study of Obedience*'. [12]

Credit could be given for:

*Validity issues:*

- The obedience task completed in the research isn't typical of obedience in everyday life, it is more typical of 'extreme obedience' situations such as genocide.
- The sample in the original study is 40 males so these results may not be applicable to females.
- The sample had a variety of ages, occupations and educational backgrounds, so may be quite representative of males in the local area.
- Milgram's family experiences may have led to researcher bias in his interpretation of behaviours.

*Ethical issues:*

- 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.
- Risk of stress, anxiety, humiliation or pain: 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".
- Risk to the participants' values, beliefs, relationships, status or privacy: the teachers may have left this research with a negative opinion of their own capabilities which may have had a long-term impact on their own values and beliefs.
- Any other appropriate content.

N.B. This question requires evaluation, so where candidates only describe ethical and validity issues, the answer will be limited to the 1-3 marks band.



Marks	AO3
10-12	<ul style="list-style-type: none"> <li>• Thorough discussion of the validity and ethical issues raised by Milgram's 1963 research.</li> <li>• Critical comments are evidently relevant to the context.</li> <li>• Structure is logical throughout.</li> <li>• Depth and range included.</li> <li>• An appropriate conclusion is reached based on evidence presented.</li> </ul>
7-9	<ul style="list-style-type: none"> <li>• Reasonable discussion of the validity and ethical issues raised by Milgram's 1963 research.</li> <li>• Critical comments show some relevance to the context.</li> <li>• Structure is mostly logical.</li> <li>• Depth and range, but not in equal measure.</li> <li>• A reasonable conclusion is reached based on evidence presented.</li> </ul>
4-6	<ul style="list-style-type: none"> <li>• Basic discussion of the validity and ethical issues raised by Milgram's 1963 research.</li> <li>• Critical comments are generic and not appropriately contextualised.</li> <li>• Structure is reasonable.</li> <li>• Depth or range.</li> <li>• A basic conclusion is reached.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Thorough discussion of the validity OR ethical issues raised by Milgram's 1963 research.</li> <li>• Critical comments are evidently relevant to the context.</li> <li>• Structure is logical throughout.</li> <li>• Depth and range included.</li> <li>• An appropriate conclusion is reached based on evidence presented.</li> </ul>
1-3	<ul style="list-style-type: none"> <li>• Superficial discussion of the validity and ethical issues raised by Milgram's 1963 research.</li> <li>• Evaluative comments are superficial.</li> <li>• Answer lacks structure.</li> <li>• No conclusion</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Reasonable discussion of the validity OR ethical issues raised by Milgram's 1963 research.</li> <li>• Critical comments show some relevance to the context.</li> <li>• Structure is mostly logical.</li> <li>• Depth and range, but not in equal measure.</li> <li>• A reasonable conclusion is reached based on evidence presented.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

6. Evaluate the use of primary sources in psychological research.

[4]

Credit could be given for:	
<ul style="list-style-type: none"> <li>• The researcher can control the format in exactly how data is collected.</li> <li>• It will specifically relate to the aims of the research.</li> <li>• Data collected may lack validity due to social desirability or demand characteristics.</li> <li>• Research from primary sources takes time and effort to prepare, administer and analyse.</li> <li>• Research from primary sources may contain methodological problems that corrupt the findings they produce.</li> <li>• May take a single point of view arguing in support of a particular theory.</li> <li>• Any other appropriate content.</li> </ul>	
Marks	AO3
4	<ul style="list-style-type: none"> <li>• Thorough evaluation of primary sources.</li> <li>• Structure is logical throughout.</li> <li>• Depth and range included.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Reasonable evaluation of primary sources.</li> <li>• Structure is mostly logical.</li> <li>• Depth and range, but not in equal measure.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Basic evaluation of primary sources.</li> <li>• Structure is reasonable.</li> <li>• Depth or range.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Superficial evaluation of primary sources.</li> <li>• Answer lacks structure.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

7. Explain **one** strength and **one** weakness of the use of brain scans in psychological research. [2+2]

Credit could be given for:

**Strengths**

- Allows for objective assessment of brain structure/function.
- Allows investigation of live brains, rather than waiting for post mortem.
- MRI is best suited for cases when a patient is to undergo the examination several times successively in the short term, because, unlike PET, it does not expose the patient to the hazards of radiation.
- PET scans reveal chemical information that is not available with other imaging techniques.

**Weaknesses**

- Scans take a long time and can be uncomfortable for patients, not good for those with claustrophobia.
- These are extremely costly techniques and therefore not easily available for research.
- With PET, the patient has to be injected with a radioactive substance, the technique can be used only a few times.
- Only a range of activities can be investigated, due to limitations of being stuck in a machine.
- Any other appropriate content.

N.B. Candidates may present evaluative material more relevant to other types of brain scans used in psychological research, such as EEG's, and this should be credited appropriately.

<b>Marks</b>	<b>AO3</b>
2	<ul style="list-style-type: none"> <li>• Reasonable explanation of the strength/weakness.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic explanation of strength/weakness.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

## SECTION B - Personal Investigations

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

**INVESTIGATION ONE:** An experiment on noise and performance.

8. (a) Explain how you operationalised 'performance' in your experiment. [2]

Exemplar answers:

Performance was operationalised by how many items on the word list that the participants could remember correctly. There were 20 terms on the word list and they had 60 seconds to try to revise the terms, so each participant's score was marked out of 20. (2 marks)

Performance was how many words the participant could remember. (1 mark)

- Any other appropriate content.

Marks	AO2
2	<ul style="list-style-type: none"><li>• Appropriate, clearly operationalised explanation of performance.</li></ul>
1	<ul style="list-style-type: none"><li>• Appropriate, yet basic explanation of performance.</li></ul>
0	<ul style="list-style-type: none"><li>• Inappropriate answer given.</li><li>• No response attempted.</li></ul>

- (b) Identify and justify the choice of experimental design used in your experiment on noise and performance. [1+3]

Marks	AO2
1	<ul style="list-style-type: none"> <li>• Repeated Measures.</li> <li>• Matched Pairs.</li> <li>• Independent Groups.</li> <li>• Any other appropriate experimental design.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>
<p>Credit could be given for:</p> <p>Exemplar answers for justification:</p> <p>Independent group. As the test was investigating the recording of a crying infant on the revision of a 20-term word list, the participants might have experienced a practice effect if they had taken part in both the crying and silent conditions. By using an independent group design I didn't have to worry about practice or other order effects such as boredom of revising two sets of 20 terms on the performance of the Year 12 students as they only took part in one condition. This would have been a problem if I'd used a repeated measures design. (3 marks)</p> <p>As I used a repeated measures design, I didn't need to worry about any intergroup differences being responsible for any difference I found between the crying and silent conditions. If I had used an independent groups design I would have. (2 marks)</p> <p>Matched pairs allowed me to rule out order effects and to minimise intergroup differences. (1 mark)</p> <ul style="list-style-type: none"> <li>• Any other appropriate content.</li> </ul>	
Marks	AO2
3	<ul style="list-style-type: none"> <li>• Appropriate justification clearly linked to this research.</li> </ul>
2	<ul style="list-style-type: none"> <li>• Appropriate justification with some link to this research.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Appropriate justification with no link to this research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (c) Explain **two** ethical issues that occurred in your experiment and explain how you dealt with each issue. [4+4]

Credit could be given for:

**Issues:**

- Confidentiality.
- Deception.
- Risk of stress, anxiety, humiliation or pain.
- Risk to the participants' values, beliefs, relationships, status or privacy.
  
- Any other relevant ethical issue.

**Ways to manage risk posed by ethical issues:**

- Confidentiality – Assure anonymity.
- Deception – Seek prior general consent:
- Risk of stress, anxiety, humiliation or pain – Use staff to act as potential intermediaries.
- Risk to the participants' values, beliefs, relationships, status or privacy – Assure anonymity.
  
- Any other relevant ways to manage risk posed by the identified ethical issue.

For each issue:

1 mark for explaining appropriate ethical issue

1 mark for linking the appropriate ethical issue to this research

1 mark for suggesting an appropriate way of managing the risk posed by ethical issue.

1 mark for linking the appropriate way of managing the risk posed by ethical issue.

- (d) Identify and fully justify the inferential statistical test that you used when analysing the data collected in your experiment. [1+3]

Marks	AO2
1	<ul style="list-style-type: none"> <li>• Appropriate inferential statistical test identified.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inferential statistical test not identified.</li> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>
<p>Exemplar answers:</p> <p>I used a Mann Whitney test as I was looking for a difference in performance on the 20-word test of those in the crying infant and silence conditions; the number of words correctly recalled is at least ordinal level data; I also used an independent groups design to investigate the difference in performance on the 20-word test, so the data is independent. (4 marks)</p> <p>I used a repeated measures design and the number of words recalled was ratio data and the scores each participant attained in the silent and infant crying conditions were compared, so the data is related. I therefore used a Wilcoxon test. (3 marks)</p> <p>A Chi-square test was appropriate as the test was a test of difference, the data was independent and nominal. (1 mark)</p>	
Marks	AO2
3	<p><b>All</b> of the following conditions included in the justification:</p> <ul style="list-style-type: none"> <li>• Test of difference noted and linked to this research.</li> <li>• Level of measurement noted and linked to this research.</li> <li>• Independent or related data noted and linked to this research.</li> </ul>
2	<p><b>Two</b> of the following conditions included in the justification:</p> <ul style="list-style-type: none"> <li>• Test of difference noted and linked to this research.</li> <li>• Level of measurement noted and linked to this research.</li> <li>• Independent or related data noted and linked to this research.</li> </ul>
1	<p><b>One</b> of the following conditions included in the justification:</p> <ul style="list-style-type: none"> <li>• Test of difference noted and linked to this research.</li> <li>• Level of measurement noted and linked to this research.</li> <li>• Independent or related data noted and linked to this research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

**INVESTIGATION TWO:** A content analysis on gender and advertising.

9. (a) Explain how you used a content analysis in your research on gender and advertising [6]

<p>Example Answers:</p> <p>I watched a variety of TV adverts but decided to focus my research on investigating the genders used in products designed for use in the home (e.g. cleaning products). I then collected 17 television adverts that were advertising home products and then created an observational grid. In the grid I used the following roles frequently seen in adverts as my behavioural categories: the 'product expert' the 'product consumer'. I recorded the gender of each the individuals acting or voice-overing these roles. I chose male, female and other as the gender types that I observed. (6 marks)</p> <p>I created an observational grid where I recorded the gender of people driving the car in car adverts in TV and magazine adverts. (2 marks)</p>	
Marks	AO2
5-6	<ul style="list-style-type: none"> <li>• Thorough explanation clearly linked to this research</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• Reasonable explanation with some link to this research.</li> </ul>
1-2	<ul style="list-style-type: none"> <li>• Basic explanation with limited links to this research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>



- (b) (i) Identify and explain the choice of graphical representation that you used to display the data collected from your content analysis. [1+2]

<p>Graphical representation could include:</p> <ul style="list-style-type: none"> <li>• Frequency table.</li> <li>• Line graphs.</li> <li>• Histograms.</li> <li>• Bar charts.</li> <li>• Pie charts.</li> <li>• Scatter diagrams.</li> </ul> <p>Any other appropriate graphical representation.</p>	
Marks	AO2
1	<ul style="list-style-type: none"> <li>• Appropriate graphical representation identified.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>
<p>Credit could be given for:</p> <p>Example answers:            I chose to display my results in the form of a bar chart as the data was in categories boys/girls and whether they were pictured playing with an aggressive play toy or a non-aggressive play toy. (2 marks)</p> <p>A bar chart was appropriate as the data was nominal. (1 mark)</p>	
Marks	AO2
2	<ul style="list-style-type: none"> <li>• Appropriate explanation of graphical representation and linked to this research.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Appropriate explanation of graphical representation identified but no link to this research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (ii) Identify and explain the choice of descriptive statistics that you used to describe the data collected from your content analysis. [1+2]

<p>Descriptive statistic could include:</p> <ul style="list-style-type: none"> <li>• Mean</li> <li>• Median</li> <li>• Mode</li> <li>• Range</li> <li>• Standard deviation</li> </ul> <p>Any other appropriate descriptive statistics.</p>	
Marks	AO2
1	<ul style="list-style-type: none"> <li>• Appropriate descriptive statistic identified.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>
<p>Credit could be given for:</p> <p>Example answers:</p> <p>I chose to use the modal value as this is the only measure of central tendency that can be used with nominal level data such as boys/girls and whether they were pictured playing with an aggressive play toy or a non-aggressive play toy. (2 marks)</p> <p>I chose the mean score as a descriptive statistic as, unlike the mode, I knew there would definitely be a mean score of minutes advertising female grooming products and male grooming products during daytime and evening tv. (2 marks)</p>	
Marks	AO2
2	<ul style="list-style-type: none"> <li>• Appropriate explanation of descriptive statistic identified and linked to this research.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Appropriate explanation of descriptive statistic identified but no link to this research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

10. An Occupational Psychologist investigated if working patterns could affect wellbeing. Research was undertaken in an office with 120 workers; each worker completed an eight-hour shift, each day from Monday to Friday.

In the first month of the research, the psychologist asked a sample of 20 workers to maintain strict working hours of 09:00 to 17:00, every day for one month. The wellbeing of the workers was assessed using a wellbeing scale (0-50, where the higher the score the better the wellbeing).

In the second month, the same sample of 20 workers were given more flexible working hours where they could choose the time that they would start their eight-hour shift. The workers wellbeing was assessed again using the same wellbeing scale.

The Occupational Psychologist calculated the mean, median and modal wellbeing scores for each month.

	Mean	Median	Mode
Wellbeing score following month of strict working hours	25.4	24	24
Wellbeing score following month of flexible working hours	27	29	36

- (a) (i) Identify the experimental design used by the Occupational Psychologist in this research [1]

Marks	AO2
1	<ul style="list-style-type: none"> <li>• Repeated Measures.</li> <li>• Repeated Groups.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (ii) Explain **one** advantage of using this experimental design in this research. [2]

Exemplar answers:

Research using a repeated measures design requires fewer workers to act as participants than an independent groups design would to produce the same amount of results. (2 marks)

There will be less chance of participant variables between the two types of working conditions. (2 marks)

There is no chance that any difference detected is due to intergroup differences. (1 mark)

- Any other appropriate content.

Marks	AO2
2	<ul style="list-style-type: none"> <li>• Appropriate advantage with a link to the research.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Appropriate advantage not linked to the research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (iii) Explain **one** disadvantage of using this experimental design in this research. [2]

Exemplar answers:

Demand characteristics might mean that the office workers may realise what the research is about and so give a higher wellbeing rating in the second month. (2 marks)

The participants' performance may suffer from order effects, such as practice or fatigue. (1 mark)

- Any other appropriate content.

Marks	AO2
2	<ul style="list-style-type: none"> <li>• Appropriate disadvantage with a link to the research.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Appropriate disadvantage not linked to the research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (b) State **one** conclusion that can be drawn from the median scores in this research. [2]

Example answers:

The median wellbeing score of office workers for the month with strict working hours (24) was lower than the median wellbeing score for the office workers for the month with flexible working hours (29). [2 marks]

The median wellbeing score of office workers for the month with flexible working hours (29) was higher than the median wellbeing score for the office workers for the month with strict working hours (24). [2 marks]

The median wellbeing score of for the month with flexible working hours (29) was higher. [1 mark]

Office workers were happier when they had flexible office hours than when they had strict office hours. [1 mark]

- Any other appropriate conclusion.

Marks	AO2
2	<ul style="list-style-type: none"> <li>• Appropriate conclusion is stated and clearly linked to this research.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Partial conclusion is stated and has some link to this research.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Inferential conclusion is offered.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

- (c) Explain how content validity could have been used to assess the validity of this research. [2]

Example answers:

The Occupational Psychologist could ask an expert in the field of wellbeing in the workplace if the research was designed appropriately to measure whether working hours could improve the wellbeing of workers, and if they agreed it did their research would have content validity. [2 marks]

Content validity is where you ask an expert in that specific area of behaviour to check the test is valid. [1 mark]

- Any other appropriate explanation.

<b>Marks</b>	<b>AO2</b>
2	<ul style="list-style-type: none"><li>• Appropriate explanation with a link to the research.</li></ul>
1	<ul style="list-style-type: none"><li>• Appropriate explanation not linked to this research.</li></ul>
0	<ul style="list-style-type: none"><li>• Inappropriate answer given.</li><li>• No response attempted.</li></ul>

- (d) The Occupational Psychologist analysed their data using a Wilcoxon test. Fully justify why this inferential test was appropriate for this research. [3]

Example answers:

A Wilcoxon was appropriate as the wellbeing data is at least ordinal level data; the occupational psychologist was looking for a difference between strict and flexible working hours; all office workers completed both strict and flexible working hours conditions, so the data is related. [3 marks]

Test of difference between strict and flexible hours; wellbeing score is ordinal level data and is related. [2 marks]

You use it when you have a test of correlation between flexible and strict working hours, when the data is related and the wellbeing scores were at least ordinal. [1 mark]

- Test of difference;
- Related data;
- Data is ordinal level or above. [0 marks]

Marks	AO2
3	<p><b>All</b> of the following conditions included in the justification:</p> <ul style="list-style-type: none"> <li>• Test of difference noted and linked to research.</li> <li>• Level of measurement noted and linked to research.</li> <li>• Related data noted and linked to research.</li> </ul>
2	<p><b>Two</b> of the following conditions included in the justification:</p> <ul style="list-style-type: none"> <li>• Test of difference noted and linked to research.</li> <li>• Level of measurement noted and linked to research.</li> <li>• Related data noted and linked to research.</li> </ul>
1	<p><b>One</b> of the following conditions included in the justification:</p> <ul style="list-style-type: none"> <li>• Test of difference noted and linked to research.</li> <li>• Level of measurement noted and linked to research.</li> <li>• Related data noted and linked to research.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Conditions noted but not linked to research.</li> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

(e) The Occupational Psychologist found that after analysing the data with a Wilcoxon test, the observed (calculated) value was 43.

(i) Identify if the Occupational Psychologist should accept or reject their null hypothesis using the information from the critical value table below: [1]

Level of significance	0.05
	52

Marks	AO2
1	<ul style="list-style-type: none"> <li>Reject the null hypothesis.</li> <li>Reject.</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>

(ii) Justify the answer you gave in (e) (i). [2]

Example answers:

The null hypothesis can be rejected as the observed value (43) was less than the critical value (52) when  $p=0.05$ , which is the usual level of significance used by psychologists. [2 marks]

The  $H_0$  can be rejected as the observed value is less than the critical value. [1 mark]

The null hypothesis should be accepted as the observed value (43) is more than the critical value of 52. [0 marks]

It can be rejected as the result was not supported. [0 marks]

- Any other appropriate explanation.

Marks	AO2
2	<ul style="list-style-type: none"> <li>Appropriate justification with a link to the research.</li> </ul>
1	<ul style="list-style-type: none"> <li>Appropriate justification not linked to this research.</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>



- (f) Explain **one** strength and **one** weakness of conducting research in the field. [2+2]

Credit could be given for:	
<i>Strengths:</i>	
<ul style="list-style-type: none"> <li>• By conducting research in a more natural environment, you may see more natural behaviour, which may mean the research is more valid.</li> <li>• Some research can't be done in a laboratory, because of the nature of the behaviour.</li> </ul>	
<i>Weaknesses:</i>	
<ul style="list-style-type: none"> <li>• It is more difficult for the researcher to control for confounding or extraneous variables in the field, than it might be in a laboratory.</li> <li>• It makes it more difficult for researchers to utilise large or delicate equipment, such as brain scanners.</li> <li>• Any other appropriate content.</li> </ul>	
<b>Marks</b>	<b>AO3</b>
2	<ul style="list-style-type: none"> <li>• Reasonable explanation of the strength/weakness.</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic explanation of strength/weakness.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>

11. A waiter had noticed that there had been an increase in the number of customers buying vegetarian options at the restaurant where he worked. He was asked by the owner of the restaurant to briefly interview customers who chose a vegetarian dish about their choice.

The owner wanted the waiter to ask: "Are you a vegetarian?"

However, the waiter thought it would be better to ask: "Why have you chosen this vegetarian option?"

- (a) Which of the above questions is more likely to produce qualitative data? [1]

Marks	AO2
1	<ul style="list-style-type: none"> <li>The waiter's question.</li> <li>The waiter's.</li> <li>Waiter's.</li> <li>"Why have you chosen this vegetarian option?"</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>

Having discussed the two questions the owner insisted that the waiter ask the question 'Are you a vegetarian?' to every customer who ordered a vegetarian meal. After collecting data from customers for the week, the waiter produced a frequency table.

- (b) Using the information from the frequency table, construct a bar chart to represent the data. [4]

Yes	56
No	9

Credit could be given for:

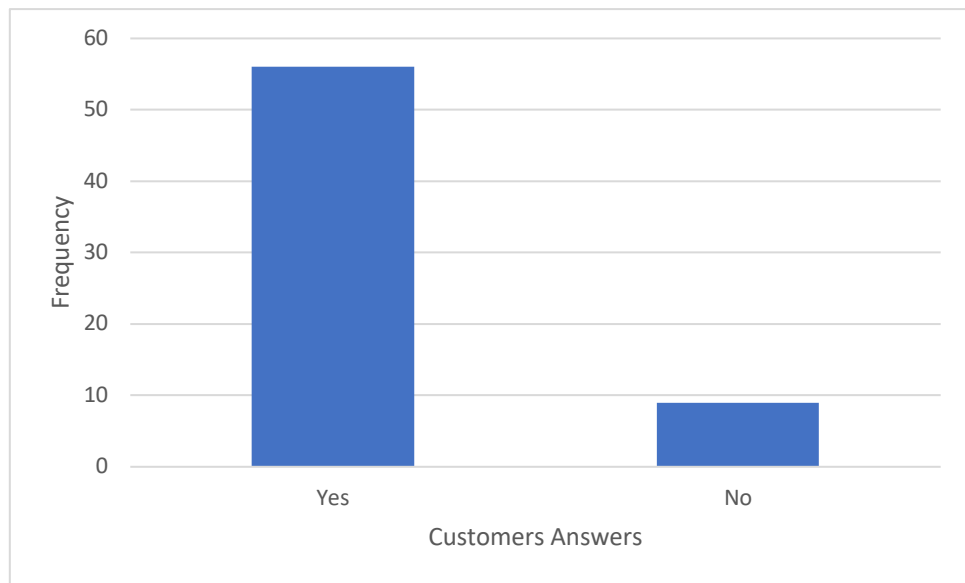
Features:

- Appropriate title.
- Appropriate label and scale of x-axis.
- Appropriate label and scale of y-axis.
- Appropriate plotting of data.

Marks	AO2
4	<ul style="list-style-type: none"> <li>Four of the features noted above.</li> </ul>
3	<ul style="list-style-type: none"> <li>Three of the features noted above.</li> </ul>
2	<ul style="list-style-type: none"> <li>Two of the features noted above.</li> </ul>
1	<ul style="list-style-type: none"> <li>One of the features noted above.</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given.</li> <li>No response attempted.</li> </ul>

Example graphical representations:

Bar Chart to show frequency of responses to “Are you a vegetarian?”



Four features (Title, plotting of data, key, y – axis label) so 4 marks

(c) Evaluate the strengths and weaknesses of using semi-structured interviews.

[6]

Credit could be given for:

**Strengths:**

- More detailed information can be obtained from each respondent than in a structured interview as the interviewer can tailor the questions to the respondent's responses, get deeper insights into the respondent's feelings and thoughts.
- Can avoid asking irrelevant questions.
- Allows the researcher to investigate topics which may vary greatly amongst participants with more sensitivity.

**Weaknesses:**

- Semi-structured interviews require interviewers with more skill than a structured interview because the interviewer must develop new questions on the spot. The 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.
- Any other appropriate content.

Marks	AO3
5-6	<ul style="list-style-type: none"> <li>• Reasonable evaluation of both strengths and weaknesses of using semi-structured interviews.</li> <li>• Structure is logical.</li> <li>• Depth and range</li> </ul>
3-4	<ul style="list-style-type: none"> <li>• Basic evaluation of both strengths and weaknesses of using semi-structured interviews.</li> <li>• Structure is reasonable.</li> <li>• Depth or range.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Reasonable evaluation of strengths OR weaknesses of using semi-structured interviews.</li> <li>• Structure is logical.</li> </ul>
1-2	<ul style="list-style-type: none"> <li>• Superficial evaluation of both strengths and weaknesses of using semi-structured interviews.</li> <li>• Answer may lack structure.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Basic evaluation of strengths OR weaknesses of using semi-structured interviews.</li> <li>• Structure is reasonable.</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given.</li> <li>• No response attempted.</li> </ul>