GCE AS MARKING SCHEME

SUMMER 2018

AS (NEW)
PSYCHOLOGY - COMPONENT 2
B290U20-1

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INTRODUCTION

This marking scheme was used by WJEC for the 2018 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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GCE AS PSYCHOLOGY

SUMMER 2018 MARK SCHEME

Question	AO1	AO2	AO3	TOTAL
1	2			2
2	8			8
3	2			2
4	2			2
5	6			6
6			10	10
7		19		19
8		21	10	319
TOTAL	**20**	**40**	**20**	**80**

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Mark Scheme

1. Explain **one** difference between conducting research in the field and conducting research on-line. **[2]**

Exemplar answers:

- Research in the field can utilise the full range of methodologies however conducting research on-line tends to be more limited in the methods it can use, mainly using questionnaires. [2 marks]
- On-line research allows the researcher to include participants from around the world, whereas field research tends to be limited to one specific setting with participants from one geographical region. [2 marks]
- Field research tends to have fewer participants than on-line. [1 mark]
- Any other appropriate difference.

N.B. Where an answer **only** juxtaposes the definitions of field and online research, such as "Field research is research conducted in a natural, non-laboratory environment, whereas online research is research which takes place through social media", maximum mark awarded should be 1.

Marks	**AO1**
2	• Thorough explanation of a difference.
1	• Basic explanation of a difference.
0	• Inappropriate answer given. • No response attempted.

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2. Describe how psychologists use ethics committees and ethical guidelines to manage the risk posed by ethical issues. **[4+4]**

Credit **could** be given for:

Ethics Committees
- Usually found in universities, hospitals or other locations that conduct research.
- Consists of a group of people from various disciplines/backgrounds (not just psychology)
- Allow for a wider interpretation of ethical guidelines and disperse the responsibility of interpreting ethical guidelines from the individual researcher (who may be biased).
- May require researchers to amend their procedures or refuse permission to researchers.

Ethical Guidelines
- Clearly state what is and is not acceptable practice for psychologists.
- Offers external bodies and participants know what is and is not acceptable practice in psychological research.
- Are produced by the professional bodies representing psychologists, such as the BPS, APA etc.

- Any other appropriate content.

N.B. This is an AO1 question and as such, evaluative commentary regarding the usefulness of ethical guidelines or ethics committees are not relevant here.

Marks	AO1
4	• Description and level of accuracy is thorough. • Depth and range of points included. • Effective use of terminology. • Logical structure.
3	• Description and level of accuracy is reasonable. • Depth and range, but not in equal measure. • Good use of terminology. • Mostly logical structure.
2	• Description and level of accuracy is basic. • Depth or range. • Some use of appropriate terminology. • Reasonable structure.
1	• Description and level of accuracy is superficial. • Very little use of appropriate terminology. • Answer lacks structure.
0	• Inappropriate answer given. • No response attempted.

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3. Identify what the following symbols represent:

(a) $\leq$ **[1]**

Marks	AO1
1	• Less than or equal to.
0	• Inappropriate answer given. • No response attempted.

(b) > **[1]**

Marks	AO1
1	• More than.
0	• Inappropriate answer given. • No response attempted.

4. Identify which level of measurement is being described:

(a) The measurement scale has equal intervals, however there is no absolute zero. **[1]**

Marks	AO1
1	• Interval.
0	• Inappropriate answer given. • No response attempted.

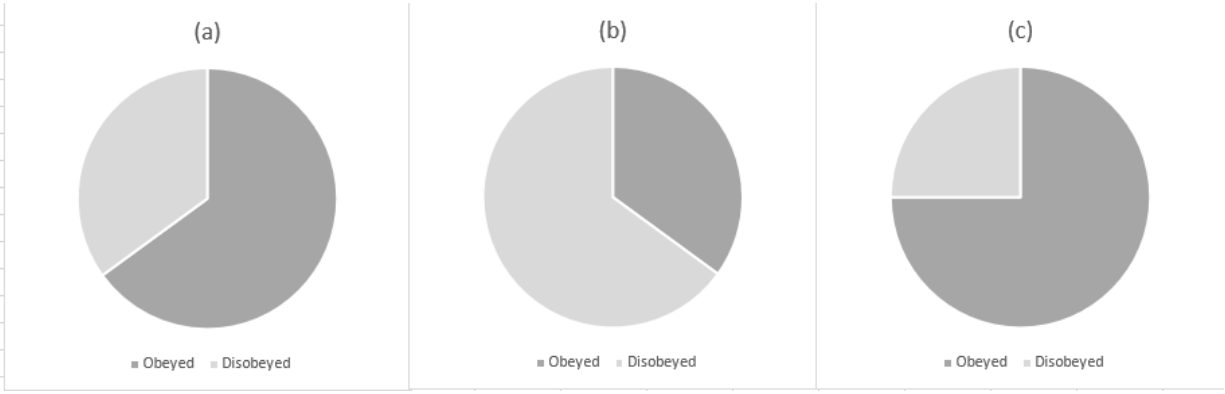
(b) The measurement scale can be put in order, however the intervals on the measurement scale are not equal. **[1]**

Marks	AO1
1	• Ordinal.
0	• Inappropriate answer given. • No response attempted.

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5. (a) Milgram (1963) found that 14 of his 40 participants disobeyed. Which of the following pie charts best represents the amount of participants who obeyed and disobeyed? **[1]**

Fig.1. Pie Charts



Marks	AO1
1	• 'Pie Chart A' or 'A'.
0	• Inappropriate answer given. • No response attempted.

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(b) Outline Milgram's (1963) sample and explain how he selected them for his (1963) '*Behavioral Study of Obedience'.* **[5]**

Credit **could** be given for:

Sample:

- 40 male participants.
- Between the ages of 20 and 50.
- Range of occupations, including “postal clerks, high school teachers, salesmen, engineers, and *labourers”.*
- Range of educational level, from “one who had not finished elementary school, to those who had a doctorate and other professional degrees.
- Some answers may include data from ‘TABLE 1: DISTRIBUTION OF AGE AND OCCUPATIONAL TYPES IN THE EXPERIMENT’ on page 372 of the original article - this should receive credit if used.

Sample selection:

- Advertisement placed in a New Haven newspaper.
- Direct mail solicitation.
- Participants took part in research "voluntarily".

- Any other appropriate description of the sample or how it was selected – although it must be cited in the original article.

N.B. It is likely that most of detail in this answer will come from the characteristics of the sample rather than how the sample was selected

Marks	AO1
5	• Accurate and detailed description of **both** the sample **and** how the sample was selected.
4	• Reasonably accurate and detailed description of **both** the sample **and** how the sample was selected.
3	• Basic description of **both** the sample **and** how the sample was selected. **OR** • Accurate and detailed description of **either** the sample **or** how the sample was selected.
2	• Superficial description of **both** the sample **and** the sample was selected. **OR** • Basic description of **either** the sample **or** how the sample was selected.
1	• Superficial description of **either** the sample **or** how the sample was selected.
0	• Inappropriate answer given. • No response attempted.

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6. Evaluate the validity of Milgram's (1963) 'Behavioral Study of Obedience'. **[10]**

Credit **could** be given for:

Internal validity issues:
- Use of electrical punishment in a learning task (an unrealistic task).
- Demand characteristics.
- Unrealistic responses from the Experimenter.
- Appropriate confounding variables.

External validity:
- Use of volunteers.
- Use of only male participants.
- Lack of mundane realism for everyday obedience.
- Relevant to examples of extreme obedience e.g. Genocide in Rwanda, Nazi Germany.
- Lack of relevance to modern society/historical bias.

- Any other appropriate content.

N.B. Validity issues discussed may be just internal; just external or include both internal and external validity issues.

Marks	AO3
9-10	• Thorough discussion of validity issues. • Evaluative comments are evidently relevant to the context. • Structure is logical throughout. • Depth and range included. • An appropriate conclusion is reached based on evidence presented.
6-8	• Reasonable discussion of validity issues. • Evaluative comments show some relevance to the context. • Structure is mostly logical. • Depth and range, but not in equal measure. • A reasonable conclusion is reached based on evidence presented.
3-5	• Basic evaluation discussion of validity issues. • Evaluative comments are generic and not appropriately contextualised. • Structure is reasonable. • Depth or range. • A basic conclusion is reached.
1-2	• Superficial discussion of validity issues. • Evaluative comments are superficial. • Answer lacks structure. • No conclusion
0	• Inappropriate answer given • No response attempted

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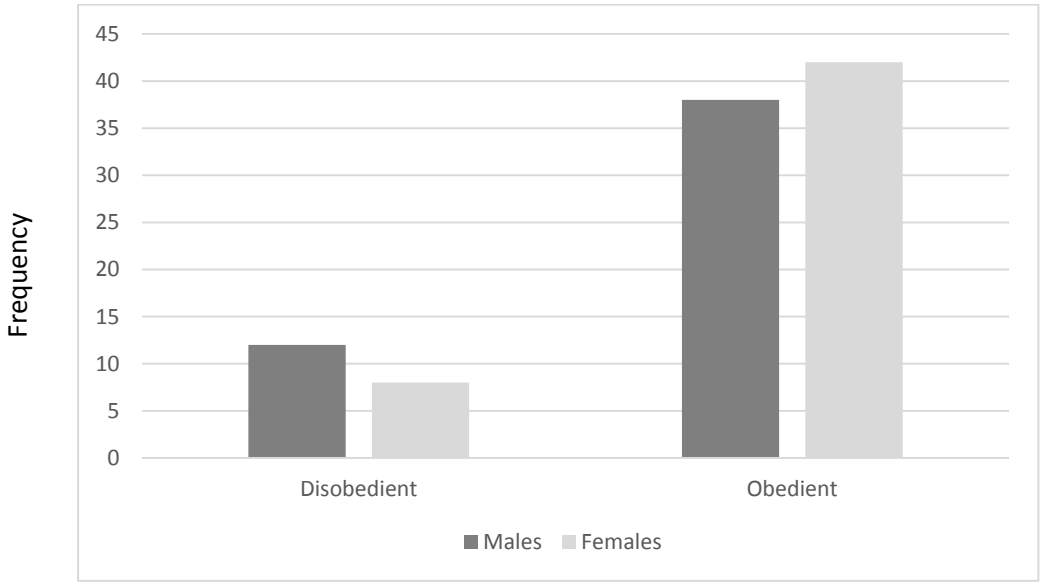
Section B

*Answer **all** questions*

7. A social psychologist wanted to investigate if there was a difference in the disobedience levels of males and females. She conducted her research in the field, in a school canteen. When paying for their food, a member of canteen staff told each student to "*clear away your plates and cutlery when you finish eating*". The social psychologist and two teachers from the school sat in the canteen pretending they had just finished their lunch whilst undertaking their observations. They observed the 100 students (50 females and 50 males), recording the sex of any children that were being disobedient by not clearing away their plates and cutlery after they have finished.

They displayed their results in the following bar chart (Fig.2):

Fig.2. Bar chart showing the frequency of obedience and disobedience in male and female students.



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(a) Explain why this research might be considered to be a participant observation rather than a non-participant observation. **[2]**

Credit **could** be given for:

- Relevant features of participant observations.
- Relevant features of non-participant observations.

Exemplar answers:

Participant observations are when the researcher is part of the group being observed, the three observers in this research were all in the same environment (the school canteen) when they were observing the behaviour of the students; whereas in non-participant observations, the researcher tends to be more removed from those they are observing, so you would expect these three observers to be observing remotely via a one-way mirror or CCTV feed from the school canteen. [2 marks]

Researchers in participant observations are more involved with those they are observing, in contrast in non-participant observations the observer is more removed. [1 mark]

Any other appropriate content.

Marks	AO2
2	• Appropriate explanation with a link to this research.
1	• Brief explanation that has been linked to this research. **OR** • Appropriate explanation with no link to this research.
0	• Inappropriate answer given. • No response attempted.

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(b) As part of the research the social psychologist checked for inter-rater reliability. Explain how the social psychologist might have done this. **[2]**

Credit **could** be given for:

- Description of process of inter-rater reliability.

Exemplar answers:

The social psychologist might record the behaviour of ten students. She would then assess the obedience levels of the ten students. She would then show her colleague the recordings she had made and would ask them to assess the students' obedience levels using the same criteria that she had used. If there is a strong positive correlation between what the social psychologist rated and the colleague rated, then there is inter-rater reliability in these obedience observations. [2 marks]

The researchers could correlate their obedience observations. [1 mark]

Any other appropriate content.

Marks	AO2
2	• Appropriate explanation with a link to this research.
1	• Brief explanation that has been linked to this research. **OR** • Appropriate explanation with no link to this research.
0	• Inappropriate answer given. • No response attempted.

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(c) One ethical issue relevant to this research is the risk posed when working with vulnerable individuals (including children).

Explain **two** other possible ethical issues in this research and suggest how the risk posed by **each** issue could be managed by this social psychologist.

[4+4]

AO2
Credit **could** be given for: Issues: • Confidentiality – Students may not want their obedient/disobedient status known to a third party. • Deception – Students are unaware that their behaviour is being observed by the three researchers. • Risk of stress, anxiety, humiliation or pain – if a student notices an unknown person staring at them in the school canteen it may make them feel uncomfortable and stressed or anxious. • Risk to the participants' values, beliefs, relationships, status or privacy – Being known as a 'disobedient' student may affect the status of a particular student in the eyes of their teachers. • Any other relevant ethical issue. Ways to manage risk posed by ethical issues: • Confidentiality – Assure anonymity: Ensure that any recognisable features such as name, photos of or descriptions of students are not included with the observation of dis/obedience. • Deception – Seek prior general consent: Inform all students that their behaviour may be being observed in public areas around the school, such as the canteen. • Risk of stress, anxiety, humiliation or pain – Use staff to act as potential intermediaries: Have members of staff on duty to ensure that the students don't appear to be uncomfortable, stressed or anxious; if any students do display discomfort, have these staff explain the purpose of the study and offer appropriate support. • Risk to the participants' values, beliefs, relationships, status or privacy – Assure anonymity: Ensure that any recognisable features such as name, photos of or descriptions of students are not included with the observation of dis/obedience. • 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 ethical issue to the novel scenario. 1 mark for suggesting an appropriate way of managing the risk posed by ethical issue identified. 1 mark for linking the appropriate way of managing the risk posed by ethical issue to the novel scenario.

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(d) Explain why the bar chart (fig2.) is an appropriate way to graphically represent the results from this research. **[2]**

Credit **could** be given for:

- Frequency of category data.
- Frequency of nominal data.

Exemplar answers:

The Obedient/Disobedient frequency of male and female students is an example of category data therefore a bar chart is appropriate. [2 marks]

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

Any other appropriate content.

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

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(e) Critically consider possible issues of validity that may arise in this research.**[5]**

Credit **could** be given for:

Internal validity issues
- Is not clearing away their plates and cutlery after they have finished really disobedience?
- Do the canteen staff usually give instructions/orders to students?
- Any other appropriate internal validity issue.

External validity
- Population validity – Is a student sample a fair representation of the general population?
- Ecological validity – Is a school canteen an appropriate venue that can be applied to other venues?
- Any other appropriate external validity issue.

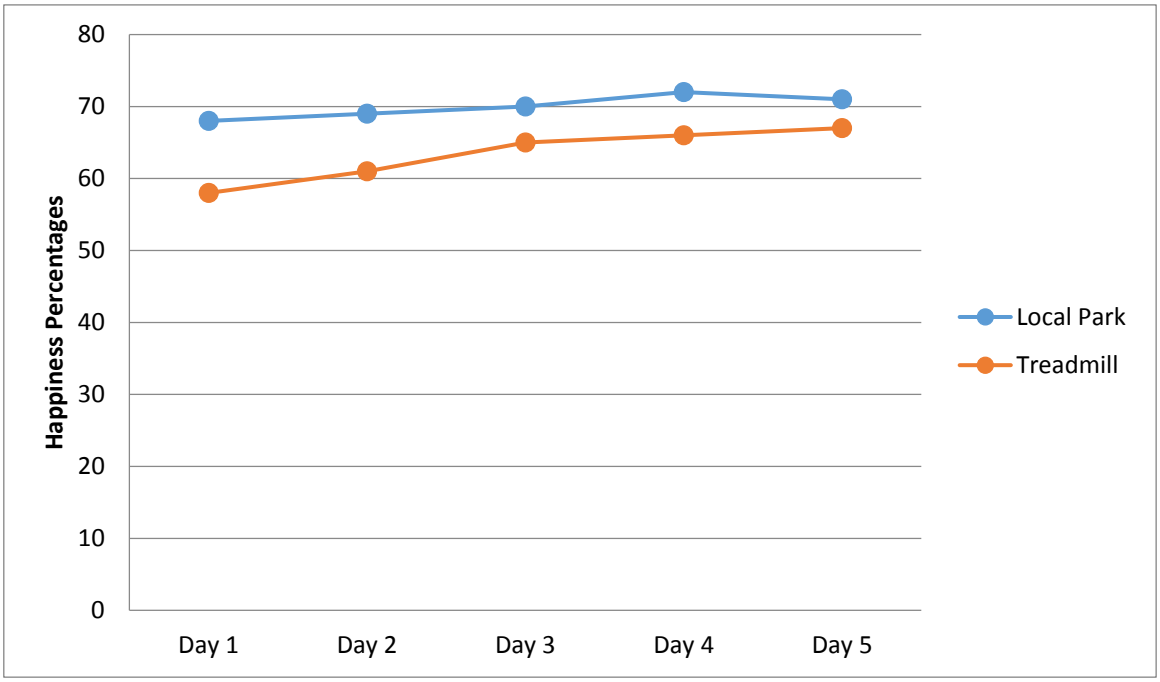
- Any other appropriate content

Marks	AO2
5	• Thorough discussion of validity issues. Comments are evidently relevant to the context.
4	• Reasonable discussion of validity issues. Comments show some relevance to the context.
3	• Basic evaluation of validity issues. Comments are generic and not appropriately contextualised. **OR** • Thorough discussion of one of validity issue. Comments show some relevance to the context.
2	• Superficial discussion of validity issues. **OR** • Basic discussion of one validity issue. Comments are generic and not appropriately contextualised.
1	• Validity issue identified but not contextualised.
0	• Inappropriate answer given. • No response attempted.

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8. Psychologists have known for a long time that walking has a beneficial impact on our mood. However, a psychologist wanted to investigate if walking on a treadmill is as beneficial as walking in a local park. The psychologist advertised in a local coffee shop for volunteers. She then randomly allocated 15 participants to walk on a treadmill and 15 participants to walk in a local park. All participants agreed to take a one-hour walk each day for five days. All participants recorded their mood in terms of a happiness percentage following their walk (0% = no happiness to 100% = most happy they have ever been).

Fig. 3. Graph representing the daily mean happiness percentages of those walking on a treadmill and those walking in a local park.



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(a) Describe **one** ethical issue that may arise when conducting this research. **[2]**

Credit **could** be given for:

- Risk of stress, anxiety, humiliation or pain – if a participant does not notice any increase in happiness after walking, they may feel stressed or too embarrassed to tell the researcher and report a made-up happiness rating.
- Risk of stress, anxiety, humiliation or pain – a participant might hurt themselves whilst using the treadmill or whilst walking in the local park.
- Confidentiality – Participants might not want third parties to know what their happiness ratings were, especially if those ratings were not very high. Any other appropriate content.

Marks	AO2
2	• Appropriate description of an ethical issue with a link to the research.
1	• Appropriate description of an ethical issue not linked to this research. **OR** • Brief description of an ethical issue that has been linked to this research.
0	• Inappropriate answer given. • No response attempted.

(b) Suggest a suitable operationalised directional hypothesis for this research. **[2]**

Credit **could** be given for:

Exemplar answers:

- Happiness percentages for those participants who walk in a park will be higher than those who walk on a treadmill. [2 marks]
- Happiness percentages for those who walk on a treadmill will be lower than those who walk in a park.
- Happiness is higher amongst those who walk in a local park than in those who walk on a treadmill. [1 mark]
- Happiness is higher amongst those participants who use a treadmill than those who walk in a park. [1 mark]

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

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

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(c) Explain **one** strength and **one** weakness of using the sampling method used in this research. **[2+2]**

Credit **could** be given for:

Self-selected:
Strength: The only sampling method where the researcher knows the selected participant will definitely want to take part, unlike randomly selected participants.
Weakness: Self-selected volunteers are likely to be unrepresentative as they might be too nice.

Opportunity:
Strength: The sample is unlikely to be representative.
Weakness: Even if asked, a person selected opportunistically can still refuse to participate.

N.B The strength/weakness needs to reflect either self-selected OR opportunity. The strength/weakness should relate to the same sampling method.

- Any other appropriate strength or weakness.

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

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

Credit **could** be given for:

Strength: There is a lower chance of demand characteristics as participants only take part in one condition.
Strength: There are no order effects as participants only take part in one condition.
Weakness: Different groups of participants use in the conditions so any difference may be due to an unknown intergroup difference.
Weakness: Requires more participants than the repeated measures experimental design

- Any other appropriate strength or weakness.

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

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(e) (i) Identify the type of graphical representation used in Fig.3. to display the daily mean happiness percentages of those walking on a treadmill and those walking in a local park. **[1]**

Marks	AO2
1	• Line graph. • Frequency polygon.
0	• Inappropriate answer given. • No response attempted.

(ii) Explain why the graphical representation you identified in (e) (i) was appropriate for this research. **[2]**

Credit **could** be given for:

Exemplar answers:

A line graph is appropriate as it is showing changes in mean happiness percentages over 5 days. [2 marks]
Line graph is appropriate because it is showing changes in data over time [1 mark].

Marks	AO2
2	• Appropriate explanation linked to this research.
1	• Appropriate explanation not linked to this research. OR • Brief explanation linked to his research.
0	• Inappropriate answer given. • No response attempted.

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(iii) State what the graphical representation (Fig.3) suggests about the daily average happiness percentages of those walking on a treadmill and those walking in a local park. **[2]**

Credit **could** be given for:

Exemplar answers:

Over the five days, the mean happiness percentages for those walking in their local park are higher than the mean happiness percentages for those walking on the treadmill. [2 marks]

The mean happiness percentages for those walking on the treadmill increase over the five days but are always slightly lower than the happiness percentages for those walking in their local park. [2 marks]

Those walking in the park were happier than those walking on a treadmill. [1 mark]

- Any other interpretation.

Marks	AO2
2	• Appropriate interpretation.
1	• Appropriate but basic interpretation. • Inferential interpretation.
0	• Inappropriate answer given. • No response attempted.

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(f) Apart from it being a test of difference, explain **two** other reasons why a Mann-Whitney U test would be an appropriate inferential test for this research. **[4]**

Credit **could** be given for:

- Independent data: The scores are from participants who are either walking on a treadmill or walking in the park, so is only part of one condition.
- Data is at ratio level: the happiness ratings are percentages, hence equal intervals and 0% means 'no happiness'.

OR

N.B.Data is at least ordinal: some candidates may claim the happiness percentages are at least ordinal level – this is acceptable as well.

Marks	AO2
4	• Answer contains two elements to justify the use of a Mann Whitney U test and both elements are linked to the data collected in this research.
3	• Answer contains two elements to justify the use of a Mann Whitney U test but only one is linked to the data collected in this research.
2	• Answer contains two elements to justify the use of a Mann Whitney U test but there is no link to the data collected in this research. **OR** • Answer contains one element to justify the use of a Mann Whitney U test and there is a link to the data collected in this research.
1	• Answer contains one element to justify the use of a Mann Whitney U test but there is no link to the data collected in this research.
0	• Inappropriate answer given. • No response attempted.

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(g) Apart from sampling and experimental design, critically consider **two** weaknesses with this research and suggest how these weaknesses could be improved. **[5+5]**

Credit **could** be given for:

Weaknesses:

- Lack of control: The researchers are not present when the participants are walking. This may present many possible confounding variables, such as those walking in a local park may walk with other people or with their dogs and this company may be responsible for greater happiness, not the fact that they are walking outside in a park. Another possible confounding variable might be the way in which the participants time their one-hour walk; some participants might time their walk 'in a local park' from when they leave their home, rather than just the walking they do in the park.

- Assessment of happiness is problematic: The participants assessment of their happiness levels is likely to be affected by many factors such as social desirability (they may increase their happiness ratings to avoid being seen as mopey); demand characteristics might influence the happiness ratings as participants might pick up on cues from the researcher or previous research as to whether walking affects happiness. The rating system issued to participants, 0% no happiness to 100% most happy they have ever been, is incredibly basic and as such may be highly subjective.

- Any other appropriate weakness.

Ways to improve:

- Lack of control – The researchers could supervise the participants when they are completing their walking activity to ensure that all participants complete the walking session by themselves. They could also issue standardised instructions to all participants as to how they should time their walking activities (i.e. not include any time taken to walk to their local park or gym).

- Assessment of happiness is problematic – The researchers could give more detailed guidance as to how to accurately assess happiness. They could also be assured that their results are confidential and reminded that honest responses are required when making judgement of happiness percentages. Alternative methods to assess happiness could be used, such as looking at the levels of physiological measures of 'happiness' such as dopamine, serotonin and endorphins.

- Any other appropriate improvement.

N.B. If included, any discussion relating to changes to sampling or experimental design should not be considered when assessing which mark band best reflects the answer.

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

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