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AS

# Psychology

7181/2 Paper 2 Psychology in Context  
Mark scheme

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7181  
June 2016

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Version 1.0: Final Mark Scheme

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Mark schemes are prepared by the Lead Assessment Writer and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts. Alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Further copies of this mark scheme are available from [aqa.org.uk](http://aqa.org.uk).

## **Level of response marking instructions**

Level of response mark schemes are broken down into levels, each of which has a descriptor. The descriptor for the level shows the average performance for the level. There are marks in each level.

Before you apply the mark scheme to a student's answer read through the answer and annotate it (as instructed) to show the qualities that are being looked for. You can then apply the mark scheme.

### **Step 1 Determine a level**

Start at the lowest level of the mark scheme and use it as a ladder to see whether the answer meets the descriptor for that level. The descriptor for the level indicates the different qualities that might be seen in the student's answer for that level. If it meets the lowest level then go to the next one and decide if it meets this level, and so on, until you have a match between the level descriptor and the answer. With practice and familiarity you will find that for better answers you will be able to quickly skip through the lower levels of the mark scheme.

When assigning a level you should look at the overall quality of the answer and not look to pick holes in small and specific parts of the answer where the student has not performed quite as well as the rest. If the answer covers different aspects of different levels of the mark scheme you should use a best fit approach for defining the level and then use the variability of the response to help decide the mark within the level, ie if the response is predominantly level 3 with a small amount of level 4 material it would be placed in level 3 but be awarded a mark near the top of the level because of the level 4 content.

### **Step 2 Determine a mark**

Once you have assigned a level you need to decide on the mark. The descriptors on how to allocate marks can help with this. The exemplar materials used during standardisation will help. There will be an answer in the standardising materials which will correspond with each level of the mark scheme. This answer will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the example to determine if it is the same standard, better or worse than the example. You can then use this to allocate a mark for the answer based on the Lead Examiner's mark on the example.

You may well need to read back through the answer as you apply the mark scheme to clarify points and assure yourself that the level and the mark are appropriate.

Indicative content in the mark scheme is provided as a guide for examiners. It is not intended to be exhaustive and you must credit other valid points. Students do not have to cover all of the points mentioned in the Indicative content to reach the highest level of the mark scheme.

An answer which contains nothing of relevance to the question must be awarded no marks.

Examiners are required to assign each of the students' responses to the most appropriate level according to its overall quality, then allocate a single mark within the level. When deciding upon a mark in a level examiners should bear in mind the relative weightings of the assessment objectives and be careful not to over/under credit a particular skill. This will be exemplified and reinforced as part of examiner training and standardisation.

**Section A**

**Approaches in Psychology**

**Question 1**

Which **two** of the following statements about the divisions of the nervous system are correct?  
Shade **two** boxes only.

In the human nervous system...

**[2 marks]**

**Marks for this question: AO1 = 2**

**B** the central nervous system consists of the brain and spinal cord.

**E** the somatic nervous system controls voluntary movements.

**Question 2**

Briefly outline how excitation and inhibition are involved in synaptic transmission.

**[4 marks]**

**Marks for this question: AO1 = 4**

Level	Marks	Description
2	3–4	Excitation and inhibition are explained clearly with reference to synaptic transmission. The answer is generally coherent with effective use of terminology.
1	1–2	There is limited/partial explanation of excitation and inhibition with reference to synaptic transmission or only excitation or inhibition has been outlined. The answer may lack coherence. Use of terminology may be either absent or inappropriate.
	0	No relevant content.

**Possible content**

- Neurotransmitters can be excitatory or inhibitory (most can be both but GABA is purely inhibitory).
- If the neurotransmitter is excitatory then the post synaptic neuron is more likely to fire an impulse.
- If the neurotransmitter is inhibitory then the post synaptic neuron is less likely to fire an impulse.
- The excitatory and inhibitory influences are summed, if the net effect on the post synaptic neuron is inhibitory, the neuron will be less likely to 'fire' and if the net effect is excitatory, the neuron will be more likely to fire.

Students are likely to name neurotransmitters but this is not essential for full credit.

For full credit there should be some understanding of 'summation.'

**Question 3**

How can the behaviours described in **A** and **B** above be explained by learning theories?

**[6 marks]**

**Marks for this question: AO2 = 6**

**A**

**1 mark** for recognising this as **EITHER** an example of classical conditioning/associative learning/temporal learning/Pavlovian learning **OR** an example of operant conditioning.

Plus

**1 mark** for elaboration eg reference to **EITHER** elements of Pavlovian conditioning - association between a UCS and a CS leading to a learned response to a previously neutral stimulus (the elaboration may be embedded in description of Pavlov's research) **OR** avoidance learning and negative reinforcement.

Credit reference to the 2-process model.

Plus

**1 mark** for application to Sarah's lift phobia **EITHER** eg being trapped has become associated with lifts and now the lift alone causes the CR of fear **OR** avoiding lifts is negatively reinforcing.

A correctly labelled classical conditioning diagram related to Sarah can be awarded both the elaboration and the application mark.

**B**

**1 mark** for recognising this as an example of social learning/observational learning/modelling/vicarious reinforcement/imitative learning.

Plus

**1 mark** for elaboration eg reference to aspects of social learning such as vicarious/indirect reinforcement, identification with a role model, cognitive mediators (attention, retention, motivation etc) (the elaboration may be embedded in description of Bandura's research).

Plus

**1 mark** for application to Jerry's behaviour eg the observer, Jerry, noted the reward received by the model, James. This acted as vicarious reinforcement and he decided to imitate James's behaviour.

**Question 4**

Use your knowledge of genotype and phenotype to explain the data in **Table 1**.

**[4 marks]**

**Marks for this question: AO2 = 4**

Level	Marks	Description
2	3–4	Understanding of genotype and phenotype applied to the data is clear. The answer is generally coherent with effective use of terminology.
1	1–2	There is limited/partial understanding genotype and phenotype applied to the data. The answer may lack coherence. Use of terminology may be either absent or inappropriate. Or – only genotype or phenotype has been applied.  Or 1 mark for basic understanding of genotype AND phenotype.
	0	No relevant content.

**Possible content**

- The genotype for tooth decay is the same for all the twin pairs as they are all MZ/identical so for each pair their teeth would be expected to decay in exactly the same way.
- The fact that some twin pairs have different decay to each other (52) indicates their phenotypes differ and something other than genes affected tooth decay e.g. diet/brushing teeth.

Expect to find this content embedded in the application.

**Question 5**

Outline **two** features of the cognitive approach. Explain **two** limitations of the cognitive approach.

**[8 marks]**

**Marks for this question: AO1 = 4 and AO3 = 4**

Level	Marks	Description
4	7–8	Knowledge of two features of the cognitive approach is accurate with some detail. Explanation of two limitations is effective. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and/or expansion of argument sometimes lacking.
3	5–6	Knowledge of one or two features of the cognitive approach is evident but there are occasional inaccuracies/omissions. There is some effective explanation of at least one limitation. The answer is mostly clear and organised. Specialist terminology is mostly used appropriately.
2	3–4	Limited knowledge of at least one feature of the cognitive approach is present. Focus is mainly on description. Any explanation of limitation(s) is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. <b>OR</b> just limitations done well.
1	1–2	Knowledge of at least one feature of the cognitive approach is very limited. Explanation of limitation(s) is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology either absent or inappropriately used.  <b>OR</b> just limitation(s) answered at Level 2.
	0	No relevant content.



**Possible features**

- Behaviour is influenced by thoughts that can be both conscious and non-conscious – internal mental processes.
- Schema are the mental representation of experience and knowledge and understanding.
- Mental processes are information processing and the processing can be compared to that of a computer.
- Models can be used to provide testable theories about mental processing and these can be studied scientifically and inferences made.
- Cognition and biological processes can be integrated leading to cognitive neuroscience as a way forward to understanding human behaviour.
- Methodology - use of controlled experimentation – inference about mental processes on the basis of observed behaviour.

**Possible limitations**

- The approach can be seen as mechanical in regarding human thinking as processing like the computer leaving little room for the irrationality seen in emotional behaviours.
- The focus on detail of exactly what can be recalled by participants in controlled environments means an understanding of everyday use of memory, for example, is missing from explanations. This leads to issues of generalisation.
- The process of inference may be a ‘leap too far’ in explaining thinking.
- Issue of soft determinism and little room for processes other than internal mental events affecting behaviour such as biology.
- Research findings indicate factors other than internal mental events as cause of behaviour.
- Use of self-report as a method of data collection and the subsequent issues of reliability.
- The focus on individual mental processes such as attention, leaves little room for how these mental events work together.

Limitations may overlap, one may be taken as an elaboration of another. Award credit for two limitations to the best advantage of the student.

Credit other relevant information.

**Section B**  
**Psychopathology**

**Question 6**

Read the four definitions of abnormal behaviour below (**A-D**).

- A** Failure to function adequately
- B** Deviation from social norms
- C** Statistical infrequency
- D** Deviation from ideal mental health

Choose the definition that best matches each description and complete the table by writing **A** or **B** or **C** or **D** in the box at the end of the statement.  
Use any letter only **once**.

**[3 marks]**

**Marks for this question: AO1 = 3**

Behaviour which is rare and not exhibited by many people	<b>C</b>
Behaviour which does not fit the rules of expected behaviour	<b>B</b>
Behaviour which shows an inability to cope with everyday life	<b>A</b>

**Question 7**

Describe **at least one** strategy that might be used in cognitive behaviour therapy for depression.

**[4 marks]**

**Marks for this question: AO1 = 4**

Level	Marks	Description
2	3–4	Knowledge of at least one strategy in CBT used to treat depression is clear, mostly accurate and detailed. The answer is generally coherent with effective use of terminology.
1	1–2	There is limited/partial knowledge of at least one strategy in CBT used to treat depression. The answer may lack coherence. Use of terminology may be either absent or inappropriate.
	0	No relevant content.

**Possible strategies**

- Challenging irrational thoughts by requiring the client to gather evidence of behaviours/incidents etc and then comparing the evidence with the thought expressed to check whether they match or not.
- The client as scientist/reality testing – homework assignments where the client's hypothesis/negative thinking is tested and the evidence evaluated.
- Diary records to monitor events and identify situations in which negative thinking occurs so these can be targeted.

Credit other appropriate strategies.

**Question 8**

Below are four evaluative statements about cognitive behaviour therapy. Which statement is correct? Shade **one** box only.

Cognitive behaviour therapy...

**[1 mark]**

**Marks for this question: AO3 = 1**

Answer: **B** allows the client some control over the therapy.

**Question 9**

Saira has a fear of cats. Her fear stops her from going anywhere she thinks she might see a cat.

Explain how Saira's phobia could be treated using systematic desensitisation.

**[4 marks]**

**Marks for this question: AO2 = 4**

Level	Marks	Description
2	3–4	Knowledge of how systematic desensitisation can be applied to the scenario is clear and comprehensive (the first three bullet points are covered). The answer is generally coherent with effective use of terminology.
1	1–2	There is limited/partial knowledge of how systematic desensitisation can be applied to the scenario. The answer may lack coherence. Use of terminology may be either absent or inappropriate. OR the answer is generic and not applied to this cat phobia
	0	No relevant content.

**Possible points**

- Saira must be taught to relax.
- An anxiety hierarchy must be drawn up – relevant examples should be given, such as – saying the word 'cat', holding a picture of a cat, walking the street where cats are roaming.
- Saira works through the hierarchy gradually being relaxed at each exposure until the most feared step is responded to with relaxation.
- The bond between the CS (cat) and CR (fear) must be broken by replacing the fear response with an antagonistic response – relaxation.

Maximum of 2 marks if no specific application to cat phobia.

**Question 10**

Outline and evaluate neural **and** genetic explanations for obsessive-compulsive disorder. Refer to the conversation above in your answer.

**[12 marks]**

**Marks for this question: AO1 = 6, AO2 = 2 and AO3 = 4**

Level	Marks	Description
4	10–12	Knowledge of both neural and genetic explanations is accurate and generally well detailed. Evaluation is effective. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and/or expansion sometimes lacking.  Maximum 10 marks if no reference to the conversation in the stem.
3	7–9	Knowledge of neural and/or genetic explanations is evident but there are occasional inaccuracies/omissions. There is some effective evaluation. There may be reference to the conversation. There are occasional inaccuracies. The answer is mostly clear and organised. Specialist terminology is mostly used appropriately.
2	4–6	Limited knowledge of a biological explanation is present. Focus is mainly on description. Any evaluation and/or application to the stem is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions. <b>OR</b> knowledge of neural and genetic explanations is answered at Level 3 or 4.
1	1–3	Knowledge of a biological explanation is very limited. Evaluation is limited, poorly focused or absent. There may be some attempt at application to the stem. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used. <b>OR</b> knowledge of a biological explanation is answered at Level 2.
	0	No relevant content.

**Possible content**

Neural explanations include

- Low levels of neurotransmitters eg serotonin.
- Serotonin may be removed too quickly before it has transmitted its signal.
- The basal ganglia system and others has been implicated - communication within these areas is disturbed and might account for the repetitive behaviours seen in OCD.

Genetic explanations include

- Specific gene markers eg gene 9, COMT gene, SERT gene.
- Looking for gene markers that might have been inherited – such as gene 9.
- Family studies indicate a higher percentage of first degree relatives have this disorder, 10% compared to a prevalence rate of 2%.

Credit description of evidence for neural/genetic explanations.

**Possible application**

- Melanie suggests that David might have inherited OCD because his mother displays similar behaviours and may have passed on a genetic marker to him as a first degree relative – a genetic cause.
- Emma suggests that David could have OCD due to a biological factor which would be in his brain – a neural cause.

**Possible evaluation points**

- The findings from neural explanations are problematic as drugs used to affect serotonin such as SSRIs may decrease the symptom but that does not mean that an imbalance of serotonin was the cause in the first place.
- Improvement rates from use of drugs are only at 50% so there must be other causes.
- There is a time delay in which drugs affect levels of serotonin within hours/ immediately but the effect on OCD may take up to weeks.
- Some research into brain structure has suggested the involvement of structural abnormalities such as dysfunction in the neuronal loop/lower grey matter density in people with OCD.
- Neurophysiological factors are not consistent with specific areas/circuits in the brain being implicated.
- Sometimes evidence relates only to one aspect of the disorder – the compulsions rather than the obsessions.
- Findings from family studies could be explained by shared environments as well as shared genes by SLT.
- Credit use of evidence in evaluation.

Credit other relevant information.

**Section C**

**Research methods**

A researcher wanted to compare the effectiveness of two therapies for young offenders who had been identified as having anger management issues. Offenders, who were all sentenced to two years in a Young Offenders Institution, were asked to volunteer to take part in an anger management programme. Fifty volunteers were randomly allocated to Group 1 (Therapy A) or Group 2 (Therapy B).

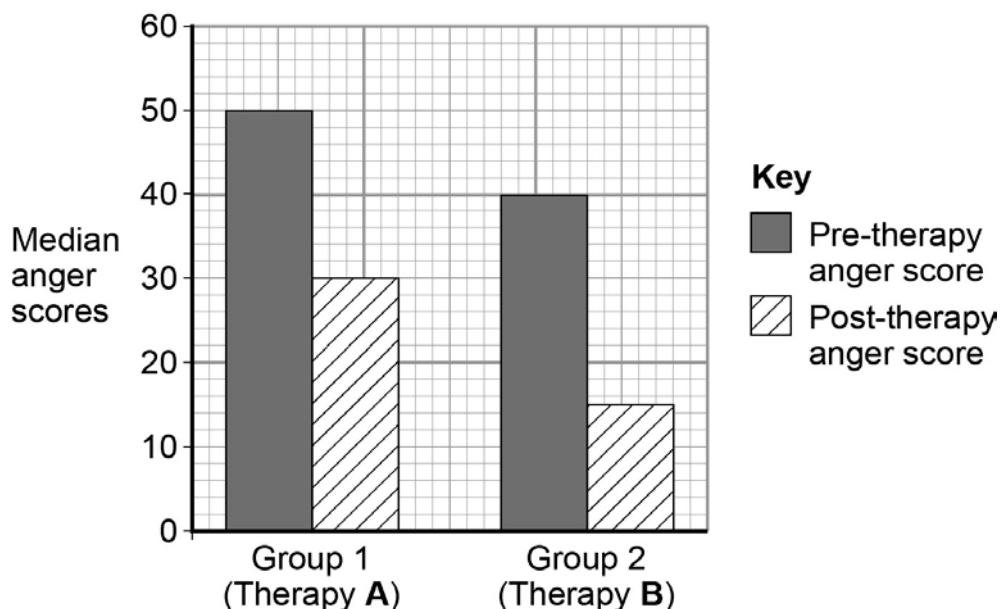
Each participant’s anger was assessed before and after therapy. For the **pre-therapy anger score** they completed an Anger Scale questionnaire and their responses were scored. A high score indicated extreme anger and a low score indicated mild anger.

For the next eight weeks, participants attended weekly sessions for either Therapy A or Therapy B.

For the **post-therapy anger score**, at the end of the treatment period, participants completed the same Anger Scale questionnaire.

The data obtained are shown in **Figure 1** below.

**Figure 1:** Median Anger scores before and after therapy for Group 1 (Therapy A) and Group 2 (Therapy B)





**Question 11.1**

The researcher used volunteers for this study. Outline **one** disadvantage of using volunteers to take part in this study.

**[2 marks]**

**Marks for this question: AO2 = 2**

**2 marks** for a clearly outlined disadvantage that is explicitly related to the study – sample is biased, lacking representativeness, more confident/helpful/curious which could affect how they respond to therapy or represent other offenders.

**1 mark** for knowledge of a disadvantage of using volunteers which could be related to the study but this is not explicitly presented.

Credit other relevant disadvantages.

**Question 11.2**

Explain how the researcher could allocate the volunteers randomly to the conditions of the experiment?

**[3 marks]**

**Marks for this question: AO2 = 3**

Award **1 mark** for each of the following points up to a maximum of 3 marks.

- All the volunteers are identified either by name or number.
- The 50 names/numbers are put in a container or computer.
- Assign alternate names/numbers drawn to Group 1 then Group 2 and so on until there are 25 in each group or alternative system **OR** set parameters for two groups of 25 to be randomly generated.

Credit alternative descriptions of a practical procedure which would result in the same outcome.

**Question 11.3**

Write a suitable hypothesis for this study.

**[3 marks]**

**Marks for this question: AO2 = 3**

**3 marks** for a clearly stated and appropriate non-directional (or directional) operationalised hypothesis: there is a difference in the reduction in anger scores of offenders who complete Therapy A and those who complete Therapy B.

**2 marks** for a statement with both conditions of the IV and the DV that lacks the clarity of the 3 mark answer.

**1 mark** for a muddled statement with both the IV and DV present.

**0 marks** for expressions of aim/questions/correlational hypotheses or statements with only the IV or DV or one condition of the IV present.

Full credit can be awarded for a null version of the hypothesis.

**Question 11.4**

What do the data in **Figure 1** seem to suggest?

**[3 marks]**

**Marks for this question: AO3 = 3**

Award **1 mark** for any of the following points up to a maximum of 3 marks.

**Possible points**

- Both therapies seem to be effective.
- The pre-therapy scores for both groups suggest that the offenders in Group 1 were more angry on average than those of Group 2 at the start of study.
- The post-therapy scores for both groups suggest that the offenders in Group 1 were more angry on average than those of Group 2 at the end of study.
- Anger scores are lower at the end of the study for both groups suggesting both therapies reduced feelings of anger.
- The improvement in Group 1 is 50-30, a decrease of 20 and in Group 2 is 40-15, a decrease of 25, which suggests that there was a greater reduction in feelings of anger in Group 2.

Credit other relevant points.

**Question 11.5**

Explain how the study might be improved by using a matched pairs design.

**[4 marks]**

**Marks for this question: AO3 = 4**

Level	Marks	Description
2	3–4	The explanation for how matched pairs would have improved the study is clear and the answer identifies the difference in the pre-therapy scores as the issue. The answer is generally coherent with effective use of terminology.
1	1–2	There is limited/partial explanation for how matched pairs would have improved the study. The answer may lack coherence. Use of terminology may be either absent or inappropriate. <b>OR</b> the answer only explains matched pairs design in the context of this study.
	0	No relevant content.

**Possible points**

- The researcher wants to be sure that the final anger scores are a result of the therapy and not participant differences between the groups.
- With independent groups participant variables might have caused the lower post-therapy scores for Group 2 rather than the therapy.
- Matching the anger scores of the participants at the pre-therapy stage would reduce this difference – seen in the Group 1 median of 50 which is ten points higher than the Group 2 median of 40.
- Other variables could also affect response to therapy e.g. gender, type of offence.

N.B. Answers that only explain a matched pairs design in the context of this study cannot be awarded above level 1.

**Question 11.6**

Outline **one** ethical issue that might have occurred in this study and explain how the researcher could have dealt with this issue.

**[4 marks]**

**Marks for this question: AO2 = 2 and AO3 =2**

**2 marks** for a clear outline of an ethical issue that might have occurred in the study.

**1 mark** for a brief or muddled outline of an ethical issue that might have occurred in the study.

- In this study the participants are all in custody so despite the suggestion that they are volunteers they may have been coerced in some way to participate, this could relate to issues of consent or stress or right to withdraw.
- Distress/psychological harm such as: finding out they have high-anger scores; the questionnaire might trigger more anger; finding out there are two therapies and finding out one might be better; therapies might cause more harm than good; the participants might have some expectation that the programme would be effective and this might not be the case.
- Reducing the anger of the participants may be more beneficial for staff than the participants, manipulation of their behaviour for this reason could be unethical.

**Plus**

**2 marks** for a clear explanation of how the issue described above could be dealt with. It is expected that withdrawal of data or debriefing would be appropriate answers but these should be clearly matched with the chosen ethical issue.

**1 mark** for a brief or muddled explanation of how the issue could be dealt with.

Credit other relevant information.

**Question 11.7**

Give **one** disadvantage of using median values as seen in **Figure 1** to represent the anger scores of participants.

**[1 mark]**

**Marks for this question: AO2 = 1**

**1 mark** for knowledge of an appropriate disadvantage of the median.

**Possible answers**

- Any outlier values/extreme values (such as the scores of 50) would be ignored/would not form part of the average measurement.
- Less sensitive than the mean.
- It does not represent all the findings.

**Question 11.8**

Explain how demand characteristics might have occurred in this study.

**[2 marks]**

**Marks for this question: AO2 = 2**

**2 marks** for a clear explanation of how demand characteristics might have occurred in the study. The explanation will make clear that participants alter their behaviour in some way because of a belief they have about their participation in the study.

**1 mark** for a limited or muddled explanation that is linked to the study.

**Possible points**

- Participants might respond to the questionnaire with answers giving a reduction in anger as they expect the therapy is to reduce anger/they know this is what the researcher expects.
- Participants might 'respond' with an increase/decrease in anger in order to 'ruin' results.
- When the researcher gives out the questionnaire for the second time, this sets up a demand characteristic that the second answers should be different to the first answers.

Credit other relevant information.



**Question 11.9**

The researcher used a questionnaire to assess the anger scores of the offenders. Briefly discuss **one** strength of using questionnaires in research.

**[2 marks]**

**Marks for this question: AO3 = 2**

**2 marks** for a clear discussion of one strength of using questionnaires in research which might include: the ability to collect large amounts of data relatively quickly and conveniently; discussion of how they might be easy to score/collate – when items are closed; reference to standardisation/replication of method.

**1 mark** for limited or muddled explanation of a possible strength.

N.B If the strength discussed relates to a particular type of questionnaire, the type of questionnaire must be made clear for the second mark.

Credit other relevant strengths.

**Assessment Objective Grid**

	<b>AO1</b>	<b>AO2</b>	<b>AO3</b>	<b>Total</b>
01	2			<b>2</b>
02	4			<b>4</b>
03		6		<b>6</b>
04		4		<b>4</b>
05	4		4	<b>8</b>
<b>Total</b>	<b>10</b>	<b>10</b>	<b>4</b>	<b>24</b>

06	3			<b>3</b>
07	4			<b>4</b>
08			1	<b>1</b>
09		4		<b>4</b>
10	6	2	4	<b>12</b>
<b>Total</b>	<b>13</b>	<b>6</b>	<b>5</b>	<b>24</b>

11.1		2		<b>2</b>
11.2		3		<b>3</b>
11.3		3		<b>3</b>
11.4			3	<b>3</b>
11.5			4	<b>4</b>
11.6		2	2	<b>4</b>
11.7		1		<b>1</b>
11.8		2		<b>2</b>
11.9			2	<b>2</b>
<b>Total</b>	<b>0</b>	<b>13</b>	<b>11</b>	<b>24</b>

<b>Paper Total</b>	<b>23</b>	<b>29</b>	<b>20</b>	<b>72</b>
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Research methods (RM) = 26 marks  
 Maths = 8 marks