



A-LEVEL

Psychology

7182/2 – Psychology in Context
Mark scheme

7182
June 2018

Version/Stage: 1.0 Final

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

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. Answers in the standardising materials will correspond with the different levels of the mark scheme. These answers will have been awarded a mark by the Lead Examiner. You can compare the student's answer with the standardised examples 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.

Section A

Approaches in Psychology

0 1 Which of the following statements about the cognitive approach is **FALSE**?

Shade **one** box only.

[1 mark]

Marks for this question: AO1 = 1

C Mental processes are studied directly by making inferences

0 2 We use schema when we process information from the world around us.

Explain **one** reason why using schema might be useful when processing information from the world around us, and explain **one** reason why using schema might not be useful when processing information from the world around us.

[4 marks]

Marks for this question: AO1 = 4

2 marks for a clear and coherent explanation why using schema might be useful with some elaboration.

1 mark for a limited/muddled explanation why using schema might be useful.

Possible content:

- schema help us predict what will happen in our world based on our experiences
- schema enable us to process vast amounts of information rapidly
- schema prevent us from becoming overwhelmed by environmental stimuli.

Credit other relevant explanations.

Plus

2 marks for a clear and coherent explanation why using schema might **not** be useful with some elaboration.

1 mark for a limited/muddled explanation why using schema might **not** be useful.

Possible content:

- schema can distort our interpretation of sensory information
- schema lead to perceptual errors or inaccurate EWT/memories
- schema can cause biased recall/see what we expect
- negative/faulty schema may have a negative impact on mental health

Credit other relevant explanations.

Note: Definitions of schema in isolation are not creditworthy.

0 3 Identify and explain the defence mechanism Jed was displaying.

[3 marks]

Marks for this question: AO1 = 1 and AO2 = 2

1 mark for identification of displacement.

Plus

1 mark for a brief explanation of displacement.

The focus of a strong emotion is expressed on to a neutral/alternative person or object.

Plus

1 mark for relevant elaboration in the context of the stem.

Jed's anger at the detention/missing the football match is transferred to the locker.

Note: These marks can be awarded independently.

0 4 Outline the behaviourist approach. Compare the behaviourist approach with the biological approach.

[16 marks]

Marks for this question: AO1 = 6 and AO3 = 10

Level	Marks	Description
4	13 - 16	Knowledge of the behaviourist approach is accurate and generally well detailed. Comparison with the biological approach is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	9 - 12	Knowledge of the behaviourist approach is evident but there are occasional inaccuracies/omissions. Comparison with the biological approach is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	5 - 8	Limited knowledge of the behaviourist approach is present. Focus is mainly on description. Any comparison with the biological approach is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 - 4	Knowledge of the behaviourist approach is very limited. Comparison with the biological approach is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content - outline:

- basic assumptions of the behaviourist approach
- the concept/theory of classical conditioning
- Pavlov’s research
- the concept/theory of operant conditioning
- Skinner’s research.

Possible comparisons:

- focus on environmental causes and experience vs focus on internal influences (nature vs nurture). Discussion of the interactionist approach
- approaches to treatment (eg flooding vs drug therapy)
- use of scientific methods
- the issue of determinism
- the issue of reductionism
- use of animal experiments and extrapolation
- contrasting implications (eg blame, responsibility and social stigma).

Note - Use of topic examples to illustrate and elaborate on comparison points should be credited.

Credit other relevant information.

Section B

Biopsychology

0 5 Give **one** difference between the autonomic nervous system and the somatic nervous system.

[1 mark]

Marks for this question: AO1 = 1

1 mark for any **one** of the following:

- the autonomic nervous system is involuntary whereas the somatic nervous system is under conscious control.
- ANS controls smooth muscles and glands whereas the SNS controls skeletal muscles.

Credit other relevant differences such as structural differences.

0 6 Name the types of neurons labelled **A**, **B** and **C** on **Figure 1** below. Write your answers in the boxes provided.

[3 marks]

Marks for this question: AO1 = 3

1 mark for each of the following:

A = Sensory Neuron

B = Relay Neuron (accept interneurons/connector neuron)

C = Motor Neuron

0 7 Information can only travel in one direction at a synapse. Explain why neurons can only transmit information in one direction at a synapse.

[3 marks]

Marks for this question: AO1 = 3

Award **1 mark** for each of the following points (up to 3 marks):

- the synaptic vesicles containing the neurotransmitter are **only** present on/released from the presynaptic membrane
- the receptors for the neurotransmitters are **only** present on the postsynaptic membrane
- it is the binding of the neurotransmitter to the receptor which enables the signal/information to be passed/transmitted on (to the next neuron).
- Diffusion of the neurotransmitters mean they can only go from high to low concentration, so can only travel from the presynaptic to the postsynaptic membrane.

0 8 The fight or flight response enabled our ancestors to survive but can be less helpful in response to more modern stressors.

Explain how the body responds during fight or flight and why this could be unhelpful in a driving test situation.

[4 marks]

Marks for this question: AO2 = 4

Level	Marks	Description
2	3 - 4	Knowledge of the fight or flight response is clear and mostly accurate. The material is applied appropriately. The answer is generally coherent with effective use of terminology.
1	1 - 2	Some knowledge of the fight or flight response is evident. Application is not always effective. The answer lacks accuracy and detail. Use of terminology is either absent or inappropriate. Or knowledge only, at level 2.
	0	No relevant content.

Possible content:

- the fight or flight response causes adrenaline to be released which can cause an increased production of sweat and faster heart and breathing rate which could be off putting and unhelpful during a driving test (e.g. sweaty hands may make it harder to grip the steering wheel).
- the fight or flight response enable a quick reaction to fight the threat or run away from it but neither of these options would be helpful in a driving test as if you ran away or attacked the instructor you would fail the test.

Credit other relevant material.

0 9 Julia complains that her baby is sleeping all day and keeping her awake all night.

Using your knowledge of research into exogenous zeitgebers, discuss what Julia could do to encourage her baby to sleep more at night.

[8 marks]

Marks for this question: AO1 = 3 and AO2 = 2 and AO3 = 3

Level	Marks	Description
4	7 - 8	Knowledge of research into exogenous zeitgebers is accurate with some detail. Application to Julia's baby is effective. Discussion is effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5 - 6	Knowledge of research into exogenous zeitgebers is evident but there are occasional inaccuracies/omissions. Application and/or discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3 - 4	Limited knowledge of research into exogenous zeitgebers is present. Focus is mainly on description. Any discussion/application is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1 - 2	Knowledge of research into exogenous zeitgebers is very limited. Discussion/application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- external cues act as zeitgebers (Klein and Wegmann)
- these cues may influence/entrain biological rhythms (endogenous pacemakers)
- light suppresses the production of melatonin from the pineal gland which influences people's sleep/wake cycle
- knowledge of relevant studies.

Possible application:

- Julia should try to keep her baby in the dark at night (eg shutting curtains and keeping lights off) but expose her baby to light in the day time (eg keep curtains open, go outside)
- Julia should use social cues, eg ensuring verbal communication, eye contact and feeding are only in the day time.

Possible discussion:

- use of research to provide support for the importance of light as a zeitgeber, eg Vetter et al. (2011), Burgess et al. (2003), Campbell and Murphy (1998)
- use of research to provide evidence against the importance of social cues as a zeitgeber, eg Lughton Miles et al. (1977)
- discussion of methodological issues is only creditworthy if the implications are linked to the stem
- discussion for and against the role of light as an exogenous zeitgeber
- counterarguments, eg the role of endogenous pacemakers – biological clock

Credit other relevant material.

Note: Application should be sensible and reasoned

1 0 Calculate the mean number of hours slept in the night. Show your workings. Give your answer to **two** significant figures.

[3 marks]

Marks for this question: AO2 = 3

3 marks for the correct answer given to two significant figures: 8.4 (even if no correct workings are shown).

2 marks for correct answer **not** given to two significant figures, eg 8.35714, 8.3571, 8.357, 8.36 or 8.

1 mark if incorrect answer is provided but all workings are correct.

Correct workings:

$$9+8+8.5+7+7.5+10.5+8= 58.5$$

$$58.5/7 = 8.35714286$$

Answer = 8.4 hours

1 1 Explain **one** reason why the mean is the most appropriate measure of central tendency for this set of data.

[2 marks]

Marks for this question: AO2 = 2

2 marks for one elaborated reason why the mean is the most appropriate measure of central tendency for this set of data.

1 mark for a limited reason why the mean is the most appropriate measure of central tendency for this set of data.

Possible reasons:

- there are no extreme values (not skewed) so distortion will not be a problem with this data set
- the mean takes into account/uses all the data so is more representative of the data than other measures
- data is time and is therefore interval data.

Credit other relevant points.

Section C

Research Methods

1 2 Using **Figure 2**, estimate the percentage of dreams that were reported to be about being chased. Shade **one** box only.

[1 mark]

Marks for this question: AO2 = 1 maths

C 27%

1 3 What is meant by a pilot study? Explain **one** possible reason why the psychologist decided to conduct a pilot study for this investigation.

[3 marks]

Marks for this question: AO1 = 1 and AO2 = 2

1 mark for a clear and coherent definition of a pilot study.

Pilot studies are small-scale investigations conducted before research.

Plus

2 marks for a clear, elaborated reason for why the psychologist decided to conduct a pilot study for this investigation.

1 mark for a limited/muddled reason for why the psychologist decided to conduct a pilot study for this investigation.

Possible reasons:

- to identify whether there needed to be any modifications in the design, eg whether the interview questions were sufficiently relevant to dream content
- to identify whether it would be feasible to conduct a study on the differences in dream themes across gender.

Credit other possible reasons.

1 4

The interviews produced qualitative data. What is meant by qualitative data? Give **one** strength of collecting qualitative data in this study.

[2 marks]

Marks for this question: AO1= 1 and AO2 = 1 maths

1 mark for a clear and accurate description of qualitative data.

Qualitative data is non-numerical/descriptive data.

Plus

1 mark for a clear strength of collecting qualitative data in this study.

Possible strengths:

- enables the students to talk in detail about their dreams to develop deeper understanding of dream content
- enables the researcher to develop a deep understanding of the content of the dream to improve classification and identification of dream themes.

Credit any other relevant strengths.

Note – zero marks should be awarded for a generic strength (not applied to the stem).

1 5

What are investigator effects? Suggest **one** way in which they could have been minimised during the dream interviews.

[3 marks]

Marks for this question: AO1 = 1 and AO3 = 2

1 mark for a clear description of investigator effects.

Any (unintentional) influence of the researcher's behaviour/characteristics on participants/data/outcome.

Plus

2 marks for a clear and elaborated way that the psychologist could minimise investigator effects in this study.

1 mark for a limited/muddled way that the psychologist could minimise investigator effects in this study.

Possible ways:

- provide a standardised script for the interviewers to use so that they all asked the same questions in the same way to avoid any bias in the students' responses
- the interviewers could have been trained to greet the students in the same way and ask questions with a neutral tone
- ensure all interviewers were female or all interviewers were male
- ensure that the students were interviewed by someone of the same gender as themselves.

Credit any other relevant ways.

Note – Do **not** credit any answers referring to using a blind procedure (eg 'ensuring the interviewer was not aware of the purpose of the study') as this is already stated in the stem.

- 1 6** Another researcher, who did not know the purpose of the study, carried out a content analysis of the interview data. Explain how this content analysis could have been conducted.

[4 marks]

Marks for this question: AO2 = 4

Award **1 mark** for each of the following points:

- identify/devise important categories/themes (from the interviews)
- example of possible category/theme (eg references to aggressive interactions)
- work through transcribed conversations / repeatedly listen to segments of the recording
- count/tally the number of occurrences of each of the categories/themes.

- 1 7** The psychologist wanted to assess the reliability of the content analysis. Explain how the reliability of the content analysis could be assessed.

[4 marks]

Marks for this question: AO3 = 4

Test-retest reliability - Award **1 mark** for each of the following points:

- content analysis repeated on a second occasion using the same interview data
- compare the results of the two separate analysis (number of occurrences of each)
- researchers could calculate the correlation between the two ratings
- researchers generally accept 0.8 correlation (accept 0.7-0.9) between the test and the re-test.

Inter-rater reliability - Award **1 mark** for each of the following points (up to 4 marks):

- use a second person to work with the original researcher
- they could read the interviews (separately) and devise a set of categories (and agree operational definitions)
- they could tally the occurrences of each of the categories of the interviews (separately)
- they could compare their tally charts looking for agreement
- researchers could calculate the correlation between the two ratings
- researchers generally accept 0.8 correlation (accept 0.7-0.9) between the test and the re-test.

1 8 A total of 375 dreams reported by males included social interaction. Use the data in **Table 2** to calculate how many of these dreams reported by males were classified as aggressive. Show your workings.

[2 marks]

Marks for this question: AO2 = 2

2 marks for correct answer: 225 (even if no correct workings are shown).

1 mark if incorrect answer is provided but all workings are correct.

Correct workings:
 $60/100=0.60$
 $0.60*375=225$ dreams

1 9 Draw a suitable graphical display to represent the data in **Table 2**. Label your graph appropriately.

[4 marks]

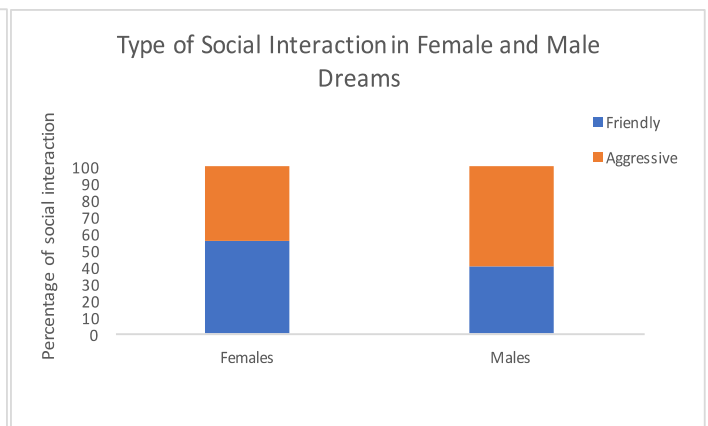
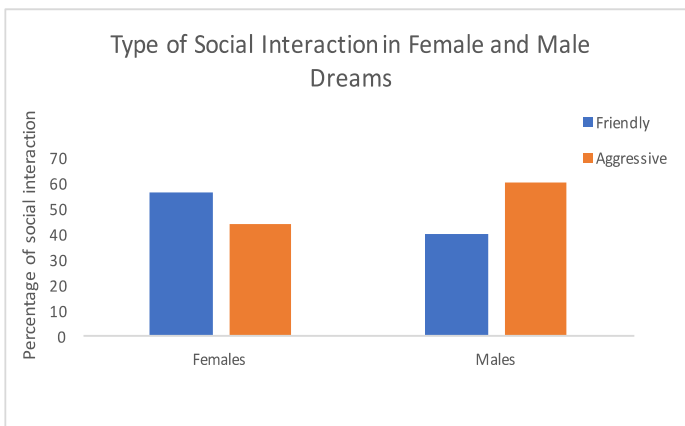
Marks for this question: AO2 = 4

1 mark for each of the following:

- appropriate title with reference to the IV and the DV
- accurately plotted data, bars must not touch
- accurate y-axis label, percentage/% is sufficient
- accurate x-axis label with key, where necessary.

Note – If the graphical display is not suitable candidates can be awarded a maximum of **1 mark** for an appropriate title.

Note – Do not credit the title if it explicitly refers to a histogram



2 0 Write a brief consent form that would have been suitable for use in this experiment. The consent form should:

- include some detail of what participants might expect to happen
- refer to ethical issues
- be in an appropriate format/style.

[6 marks]

Marks for this question: AO2 = 6

Level	Marks	Description
3	5 - 6	Consent form is well detailed and practical, showing sound understanding of the requirements of a good consent form. All three elements are appropriately represented. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and/or explanation sometimes lacking.
2	3 - 4	Consent form is mostly detailed and practical, showing some understanding of the requirements of a good consent form. The answer is mostly clear and well organised. Specialist terminology is mostly used effectively.
1	1 - 2	Consent form only includes basic details of what participants can expect to happen in the experiment or how they will be protected. Knowledge of the requirements of a good consent form is limited. The whole answer lacks clarity, has many inaccuracies and is poorly organised. Generic consent forms without link to the stem.
	0	No relevant content.

Possible content:

Outline of what the experiment entails:

- an explanation of the general purpose of the research
- they would need to watch an assigned horror film every night before going to bed for 7 nights and would need to watch an assigned romantic comedy every night before going to bed for 7 nights
- a daily requirement to truthfully respond to a text message asking whether they had experienced a nightmare
- the two-week duration of the experiment.

Ethical guidelines:

- no pressure to consent
- they can withdraw at any time
- they can withdraw their data from the experiment
- their data will be kept confidential and anonymous
- they should feel free to ask the researcher any questions at any time
- they will receive a full debrief at the end of the programme.

Format and style of consent form:

- will require the participant's agreement
- could be written as a form that participants need to sign
- could include space for the participant to sign the consent form
- could include a space for the participant to write the date
- could include a space for the participant to print their name.

Credit any other relevant information.

2 1 The psychologist proposed a directional hypothesis. Write a directional hypothesis for this experiment.

[3 marks]

Marks for this question: AO2 = 3

3 marks for an appropriate, clear and coherent directional operationalised hypothesis.

2 marks for a statement with both conditions of the IV and a DV that lacks clarity and coherence or has only one variable operationalised.

1 mark for a muddled statement with both conditions of the IV and DV present or where neither variable is operationalised.

0 marks for expressions of aim/questions/correlational/null/non-directional hypotheses or statements with only one condition of the IV present OR if the IV is incorrectly described as group 1 and group 2.

Possible content:

- participants will report more nightmares after watching a horror film before bedtime than after watching a romantic comedy film before bedtime. Accept alternative wording
- participants will report fewer nightmares after watching a horror film before bedtime than after watching a romantic comedy film before bedtime. Accept alternative wording.

2 2 The psychologist used a repeated measures design in this experiment. Explain why it was important to use a repeated measures design in this case.

[2 marks]

Marks for this question: AO2 = 2

2 marks for a clear explanation that is linked to the experiment

1 mark for a limited or muddled explanation.

Possible explanations:

- necessary to avoid the effects of individual differences in frequency of nightmares
- film viewing habits, gender, hours of sleep, personality, etc, can have a big impact on the number of nightmares recalled.

Credit other relevant explanations.

2 3

The psychologist used counterbalancing in this experiment. Explain why it was appropriate to use counterbalancing in this experiment.

[2 marks]

Marks for this question: AO1 = 1 and AO2 = 1

1 mark for each of the following points:

- order effects are likely to occur
- if you saw the horror films in the first week you may still be thinking about them/have higher levels of fear in the second week, resulting in more nightmares.

Accept alternative wording.

2 4

Explain how the psychologist could have randomly split the sample of 50 students into the two groups.

[3 marks]

Marks for this question: AO2 = 3

Award **1 mark** for each of the following points (up to 3 marks):

- all 50 participants' names/numbers are put into a hat/container/computer
- a name is drawn from the container or a random name is generated by the computer and is assigned to the first group
- a second name is selected as before but this time goes in to the second group; this process continues until there are 25 in each group.

OR

Award **1 mark** for each of the following points (up to 3 marks):

- use 50 slips of paper, label 25 'horror' and 25 'romantic comedy'
- put/mix the slips of paper in a hat/container
- each participant draws a group from the container

Note: Credit alternative methods of randomly splitting the sample

2 5

What do the mean **and** standard deviation values in **Table 3** suggest about the effect of the type of film watched on the occurrence of nightmares? Justify your answer.

[4 marks]

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

Mean:

1 mark – participants who watch horror films before going to bed report more nightmares than those who watch romantic comedies before bed. Accept alternative wording.

Plus

1 mark – mean number of nightmares reported is greater when horror films are watched than when romantic comedies are watched. Accept alternative wording.

Standard deviation:

1 mark – there is greater dispersion/variation in scores/spread of scores in the horror film condition than in the romantic comedy condition. Accept alternative wording.

Plus

1 mark – standard deviation is greater when horror films are watched before going to bed than when romantic comedies are watched before going to bed. Accept alternative wording.

Note - **0 marks** for just stating the data from the table.

Note – Justifications are not creditworthy in isolation

2 6

The psychologist found that the difference in the number of nightmares reported in the two conditions was significant at $p < 0.05$. Explain what is meant by 'significant at $p < 0.05$ ' in the context of this experiment.

[2 marks]

Marks for this question: AO2 = 2 maths

2 marks for a clear and appropriate explanation in the context of this experiment.

1 mark for a limited or muddled explanation.

This means that the difference in the number of nightmares reported after watching horror films compared to romantic comedies is significant at 0.05 level. This means there is less than 5% (1 in 20) likelihood (probability) that the difference was due to chance/due to something other than the IV.

Accept any other valid answer.

2 7

The psychologist was concerned about the validity of the experiment. Suggest **one** possible modification to the design of the experiment and explain how this might improve validity.

[3 marks]

Marks for this question: AO2 = 1 and AO3 = 2

1 mark for a modification to the design of the experiment that could improve validity.

Plus

2 marks for clear and coherent explanation for how the suggested modification might improve validity of this study.

1 mark for a limited/muddled explanation for how the suggested modification might improve validity of this study.

Possible content:

- include more than one question in the text message to the students. This would make the aim of the experiment less obvious to guess which would in turn reduce demand characteristics and improve the validity of the experiment
- make the conditions less obvious. Rather than having one film the students could be asked to watch an episode from a TV series. The episodes watched in one condition would be those which contained any scary concepts/themes whereas episodes watched in the other condition would not contain any scary themes/concepts
- guarantee anonymity so people will give honest answers and not feel embarrassed
- use a broader sample, not just students. Students may be more or less inclined to watch horror films anyway
- use a different sampling technique to avoid a self-selected sample and thus avoid volunteer bias as that may make them more susceptible to demand characteristics.

Accept alternative answers.

Note: Independent groups design would not be an appropriate modification in this study; however candidates can make the case for a matched pairs design, which could be credit worthy.

Assessment Objective Grid				
Approaches	AO1	AO2	AO3	Total
01	1			1
02	4			4
03	1	2		3
04	6		10	16
Total	12	2	10	24
Biopsychology	AO1	AO2	AO3	Total
05	1			1
06	3			3
07	3			3
08		4		4
09	3	2	3	8
10		3		3
11		2		2
Total	10	11	3	24
Research Methods	AO1	AO2	AO3	Total
12		1		1
13	1	2		3
14	1	1		2
15	1		2	3
16		4		4
17			4	4
18		2		2
19		4		4
20		6		6
21		3		3

22		2		2
23	1	1		2
24		3		3
25		2	2	4
26		2		2
27		1	2	3
Total	4	34	10	48

Paper Total	26	47	23	96
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