

Examiners' Report

June 2025

Int Advanced Level Psychology WPS02 01

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Introduction

This paper provided a range of questions over the biological section and the learning theories and developmental section, as well as extended writing questions in Section C.

Many candidates showed good psychological knowledge across all areas. There were very few unanswered questions, with most candidates attempting all of the questions, indicating that candidates are managing the time.

Some candidates still do not explain strengths and weaknesses across the paper. Centres should remind candidates that 'explain' questions need a justification/exemplification.

Some candidates did not give specific details of the contemporary studies and wrote answers that could be true of several studies. Centres should ensure candidates know to include details from the actual study in their answers.

Candidates are improving at applying the context within an answer, although it is missing in some responses, especially when applying a research method scenario. Candidates should be reminded of the fact that A02 questions require application to details given in the context throughout their answer.

Some candidates were able to gain high marks through demonstrating their psychological knowledge in terms of the requirements of the command word. Other candidates did not always understand the requirements of the command word; candidates should be referred to the taxonomy of command words in the specification.

This was noticeable in some of the extended open-response questions of 8 marks or above, where there was sometimes isolated knowledge and understanding. Centres can see the assessment objectives required for the extended response answers, in the levels-based marking document on the Pearson website. For Assessment Objective (AO) 3, points were sometimes not developed.

The remainder of this Examiner Report will focus on each individual question and specific examples. The aim is to highlight areas of good practice and some common errors, that can be used to help prepare candidates for future WPS0/02 examinations.

Question 1(a)

There was a wide variety of hormones stated by candidates. Testosterone and cortisol were the most popular. Serotonin was a common mistake made by candidates.

- 1 In your studies of biological psychology, you will have learned about the role of hormones in aggression.

(a) State **two** hormones that play a role in human aggression.

(2)

- 1 ~~Explain~~ testosterone levels can increase human aggression due to uneasiness and not trusting others; seeing anyone as a threat and responding with aggression.
- 2 cortisol can play a role in aggression since ^{high} ~~high~~ levels can lead to an increase of anxiety and impulse, not letting us think about our actions and responding violently.



This answer gains both marks. 1 mark is given for each hormone identified correctly.

Question 1(b)

For this question candidates had to identify two strengths and then go on to justify/exemplify those two strengths.

The most frequent way this was answered was through the use of research, with the best answers being able to justify/exemplify their points. Other answers could identify the research findings and say how it increased the credibility of the theory, but did not say how or why it did so, and therefore did not gain the AO3 marks.

Weaker answers used research that did not look at hormones and aggression, or describe how hormones affected aggression, rather than identify a strength.

(b) Explain **two** strengths of hormones as an explanation of aggression.

(4)

1 One strength of hormones as an explanation of aggression is that there is empirical evidence showing that there is a link between high ~~levels of testosterone~~ babies in the womb being exposed to ~~test~~ high levels of testosterone and aggression.

2 Another strength is that it has been found that people who commit violent crimes have higher levels of testosterone on average.

(Total for Question 1 = 6 marks)



This answer receives 2 marks:

- 1 mark for the first strength – identifying that there is empirical evidence of a link between exposure to testosterone in the womb and aggression. There is no further justification.
- 1 mark for identifying that people who commit violent crimes have more testosterone. There is no further justification of this point.



Studies can be used to justify or exemplify identified strengths.

(b) Explain two strengths of hormones as an explanation of aggression.

1. One strength of hormones is that it ^{has} ~~is~~ scientific and objective measurements. Hormone levels like testosterone and cortisol can be measured by blood or saliva tests, which are objective and reliable. This increases the scientific credibility of the explanation.
2. ~~So~~ Another strength is practical application. Understanding the role of hormones ~~relationship~~ in aggression can lead to a real-world benefit, such as developing medical treatments for individuals with aggressive or impulsive behaviours, making the explanation useful in managing aggression.

(Total for Question 1 = 6 marks)



This answer receives 3 marks:

First Strength

- 1 mark for identifying that hormone levels can be measured in the blood, which is objective.
- 1 mark for the justification that this makes it more reliable and increases the scientific credibility of the explanation.

Second Strength

- 1 mark for identifying that the explanation can be used to develop medical treatments for those who are aggressive, so it has application. There is no further justification; saying it is useful is not enough for the justification/exemplification.



Always ensure that the strengths that are identified are explained, to gain the AO3 marks.

Question 2(a)

The best answers were able to name independent groups correctly. However, many answers did not name an experimental design but would name a research method or a sampling technique.

- 2** Amadeus carried out an experiment to see if there was a difference in the types of online games males and females played. He used a volunteer sample by posting a link to a questionnaire online. Those who were interested could click on the link and answer the questionnaire.

The questionnaire asked participants to name the three online games they played the most. Amadeus then counted the number of responses for the three most popular online games played by males and played by females.

(a) Name the experimental design used by Amadeus in his experiment.

(1)

independent measures design



This response receives 1 mark for 'independent measures'.

The candidate has applied their knowledge to details from the context to reach the correct answer.

Question 2(b)

Candidates needed to apply details from the scenario to identify a weakness of the investigation and then justify/exemplify that weakness.

The most frequent weakness concerned the use of a volunteer sample. Others included the use of online links or a lack of internet access. The best answers gained both marks thorough applying the context to their weakness and explaining why it was a weakness.

Those answers that received 1 mark could identify a weakness in relation to the scenario but did not justify or exemplify that weakness. Often, they only used a term such as not generalisable and did not explain how or why it was not generalisable or why it was a weakness.

Some answers did not apply details from the scenario to the weakness and so did not gain any credit.

(b) Explain **one** weakness of Amadeus using a volunteer sampling technique for his experiment.

(2)

One weakness for Amadeus of using a volunteer sample would be that a volunteer sample has no control over participant number, gender, age and other variables which have to be taken into account when aiming for high generalisability especially when using a post online which may bring generalisability problems.



This answer receives 1 mark.

There is a link to the scenario through the term link online so marks can now be accessed.

1 mark is given for identifying that he has no control over participant variables so limiting the generalisability.

There is no further justification/exemplification about how or why it limits generalisability or why this is a weakness.



Always ensure that you are explaining why something is a weakness.

(b) Explain **one** weakness of Amadeus using a volunteer sampling technique for his experiment.

(2)

there is a chance of sample bias skewing Amadeus' results as ~~no~~ the people who would respond to a questionnaire online are possibly more extroverted and have to be using the online platform where he posted the link, which is not representative of all the ~~gamers~~ people who play games.



This answer receives 2 marks.

The candidate writes about posting the questionnaire online so there is a link and marks can be accessed.

- 1 mark is given for identifying that people who respond to the questionnaire online may be more extroverted.
- 1 AO3 mark is given for the justification that this leads to a chance of sample bias (at the top of the answer) so it is not representative of the target population (at the bottom of the answer).

Question 2(c)

Candidates had to identify the level of measurement, with some being able to identify nominal data correctly.

Some answers gave an incorrect level of measurement.

Common errors included writing a research method such as questionnaire or that it was quantitative data.

(c) Identify the level of measurement used in Amadeus's experiment. ' '

(1)

Nominal data



This answer receives 1 mark for nominal data, because they have had to apply their knowledge to the scenario to reach the correct answer.



Candidates should ensure they know the different levels of measurement.

Question 2(d)

The most frequent answer focussed on being able to gather more in-depth data.

The best answers were able to identify the reason for collecting qualitative data and apply this to the context of the investigation, and then go on to explain this.

Other answers only identified that the qualitative data gave more in-depth data in relation to the scenario but they did not add any elaboration to their answer.

Some answers did not apply details from the scenario to the reason and so did not gain any credit.

Amadeus conducted a follow-up investigation to gather qualitative data. He sent a second questionnaire to those who had responded to the first questionnaire. In the second questionnaire, Amadeus asked his participants to explain why they liked playing the games they played.

(d) Explain **one** reason why Amadeus collected qualitative data in his follow-up investigation.

(2)

qualitative data allows to explain more the ~~answers~~ answers of the participants, especially using open questions. Amadeus collected this data in order to understand more the difference between females' males' ~~interests~~ ~~interests~~ online games that they are interested and why.

Total for Question 2 = 6 marks)



This answer receives 1 mark.

The first sentence is a repetition of the second sentence.

The second sentence has the link, so this receives the mark, for identifying that he can understand the difference between males and females and the games they play more.



Do not repeat what has already been written: the mark will only be given once.

Amadeus conducted a follow-up investigation to gather qualitative data. He sent a second questionnaire to those who had responded to the first questionnaire. In the second questionnaire, Amadeus asked his participants to explain why they liked playing the games they played.

- (d) Explain **one** reason why Amadeus collected qualitative data in his follow-up investigation.

(2)

He did this to gather a wider amount of info about the specific games and participants themselves. ~~This may have been to lower the research bias~~ This may have been to understand more specifically why they liked the games with gender becoming a broader
Space.

(Total for Question 2 = 6 marks)



This answer receives 2 marks because there is a link to the scenario through the term 'games', therefore marks can be accessed.

It receives:

- 1 mark for identifying that he can gather a wider amount of information.
- 1 mark is given for the exemplification that this enables him to understand more specifically why they like the games.

Question 3(a)

Candidates were required to give four descriptive points for this question.

The best answers were able to focus on a variety of regions of the brain and describe how they affected aggression.

Some answers did not give enough detail to access all of the marks. Weaker answers often listed areas of the brain but offered minimal description concerning how they affected aggression. Others used case studies of people with brain damage as part of their answer, rather than focussing on the question asked.

3 In your studies of biological psychology, you will have learned about the structure of the brain as an explanation of aggression.

(a) Describe the structure of the brain as an explanation of aggression.

(4)

The prefrontal cortex lobe is involved in decision making, planning and impulse control and it develops ~~thru~~ during childhood until the age of 25. Damage in prefrontal cortex may alter the ability to think about the consequences of our behaviour which could lead to ~~a~~ impulsive behaviour. Gray matter is an outer layer of tissue in the prefrontal cortex. A lowered gray matter is associated with anti-social personality which is characterised with emotional and impulsive behaviour. Limbic system is a set of brain structures like the amygdala that is involved in emotion and memory, damage can affect emotion regulation, leading to emotional reactivity.



This response receives no marks.

There is no reference to aggression in the answer.

Impulsive behaviour is not enough because this does not have to be aggressive.

Emotional behaviour is not enough because this does not have to be aggressive.

Emotional reactivity is not enough because this does not have to be aggressive.



When asked a question about aggression make sure your answer includes points about aggression.

3 In your studies of biological psychology, you will have learned about the structure of the brain as an explanation of aggression.

(a) Describe the structure of the brain as an explanation of aggression.

(4)

The Thalamus receives sensory information & processes it, it then relays that information to the amygdala which decides whether that situation is threatening or not, if yes hypothalamus produces hormones such as Adrenaline to trigger fight or flight response. The prefrontal cortex analyzes the situation & decides whether to inhibit aggressive reaction or amplify. If damage occurs to prefrontal cortex the person will have less impulse control & less likely to practice delayed gratification or emotional regulation which can lead to aggression. Poor connection between thalamus & amygdala may lead to misinterpretation of threat which can also lead to aggression. If hypothalamus is damaged it may release more hormones like testosterone which may increase aggression.



This answer receives 4 marks.

- 1 mark for the sentence concerning the thalamus, amygdala and hypothalamus producing hormones such as adrenaline
- 1 mark for prefrontal cortex deciding to inhibit aggression and the sentence about if it is damaged we have less impulse control
- 1 mark for poor connection between the thalamus and amygdala leading to misinterpretation of threats
- 1 mark for hypothalamus and testosterone



When asked to describe the structure of the brain in relation to aggression do not just list the areas of the brain. Describe how they may affect aggression.

Question 3(b)

Candidates had to identify a strength and a weakness of brain functioning as an explanation of aggression to gain the two AO1 marks, and then justify the strength and weakness for the two AO3 marks.

The most frequent strengths included the use of research, often Raine et al, Phineas Gage or Charles Whitman.

The most frequent weakness was the use of an alternative explanation, with the most usual alternative being social learning theory.

The best answers were able to gain all four marks because they justified/exemplified their strength and their weakness. Some answers were able to gain the AO1 marks but then did not gain the AO3 marks, often only using a term but offering no explanation in relation to the term.

(b) Explain one strength and one weakness of the structure of the brain as an explanation of aggression.

(4)

Strength

One strength is that ~~Raine~~ ^{Baine} found that there was a link between damage to the prefrontal cortex and aggression. He studied 41 criminals with convictions of murders and found differences in the functioning of the limbic system and lower activity in the prefrontal cortex.

Weakness

One weakness is that research in the structure of the brain comes from animal research. This could be criticized as unethical. For example lesions in brain areas of animals may cause ~~stress~~ suffering. Research using animals now require a cost benefit analysis which indicates the the potential benefits* should outweigh risks to animals.

(Total for Question 3 = 8 marks)

* for humans.



This answer receives 2 marks for the strength.

- 1 mark for identifying that Raine et al found a link between damage to the brain and aggression.
- 1 mark for the exemplification of the results in the comparison between the two groups.

It receives nothing for the weakness because this is a weakness of a research method and has not been linked to why this is a weakness of brain structure as an explanation.



When giving a weakness of a theory make sure the weakness is in relation to the theory , and not just a weakness of a study with no reference to the theory.

(b) Explain **one** strength and **one** weakness of the structure of the brain as an explanation of aggression.

(4)

Strength

A lot of research into brain as an explanation for aggression involves the usage of brain imaging using techniques like PET, CAT, and fMRI scanning, which provide objective and replicable results that do not involve subjective interpretations, adding validity to the theory of brain as an explanation for aggression.

Weakness

Brain as an explanation for aggression focuses on nature and ignores nurture - ~~the~~ other factors such as environment and other social or psychological factors. As Raine ^{concludes} ~~points out~~, it seems that brain dysfunction or damage doesn't cause aggression, but predisposes to it when combined with ~~other~~ other social and environmental factors, supporting the idea that brain's not a complete explanation for aggressive behaviour.

(Total for Question 3 = 8 marks)



This answer receives 3 marks.

- 1 mark for the strength for identifying that the use of scans is objective and reliable.

Here, the candidate clearly links the research methods to the explanation. No marks are given for it not being subjective because there is some subjectivity in the human interpretation. Increasing validity on its own is not enough.

It receives 2 marks for the weakness.

- 1 mark for identifying that it focusses on nature and ignores other factors such as the environment.
- 1 mark for the exemplification that Raine concluded that brain damage predisposes, but does not cause, violence but needs to be combined with environmental or social factors.



Make sure that what you write is accurate.

Question 4(a)

Candidates had to fully operationalise the two variables for both marks, with the best answers being able to do so. Other answers only operationalised one variable or neither.

- 4 Sunshine conducted a correlation to investigate whether there is a relationship between the number of absences from university lectures and the grade from the examination at the end of the year.

She went to her local university and asked psychology students in their first year at university to estimate how many lectures they had missed in the previous term. Sunshine then asked the university to provide her with the percentage of marks each student received in the end of year examination.

(a) Identify the **two** fully operationalised variables in Sunshine's correlation.

- 1 Number of absences from University lectures (2)
- 2 Grade from the examination at the end of the year



This response receives 0 marks.

The first variable needs to refer to the previous term to be fully operationalised.

The second variable needs to refer to the percentage to be fully operationalised.



Make sure you include all details of the variables to ensure they are full operationalised.

- 4 Sunshine conducted a correlation to investigate whether there is a relationship between the number of absences from university lectures and the grade from the examination at the end of the year.

She went to her local university and asked psychology students in their first year at university to estimate how many lectures they had missed in the previous term. Sunshine then asked the university to provide her with the percentage of marks each student received in the end of year examination.

(a) Identify the two fully operationalised variables in Sunshine's correlation.

(2)

- 1 The ~~less~~ number of hours of missed lectures in the previous term. (h)
- 2 And ~~each~~ ~~are~~ the marks ^{each} student received in the end of the year examination measured as a percentage (%).



This response receives 2 marks: 1 mark for each variable because they have both been operationalised.

Question 4(b)

For this question, candidates were required to give a conclusion based on the data given and then use the data in relation to this.

The best answers were able to conclude that there was a negative correlation between the two variables and then use the data from the graph to support this conclusion.

Some answers only stated the conclusion and did not use the data, so limiting the number of marks they could gain.

Some answers did not give a conclusion but only gave the results from the graph and so could not gain any credit.

The results from Sunshine's correlation are shown in **Figure 1**.

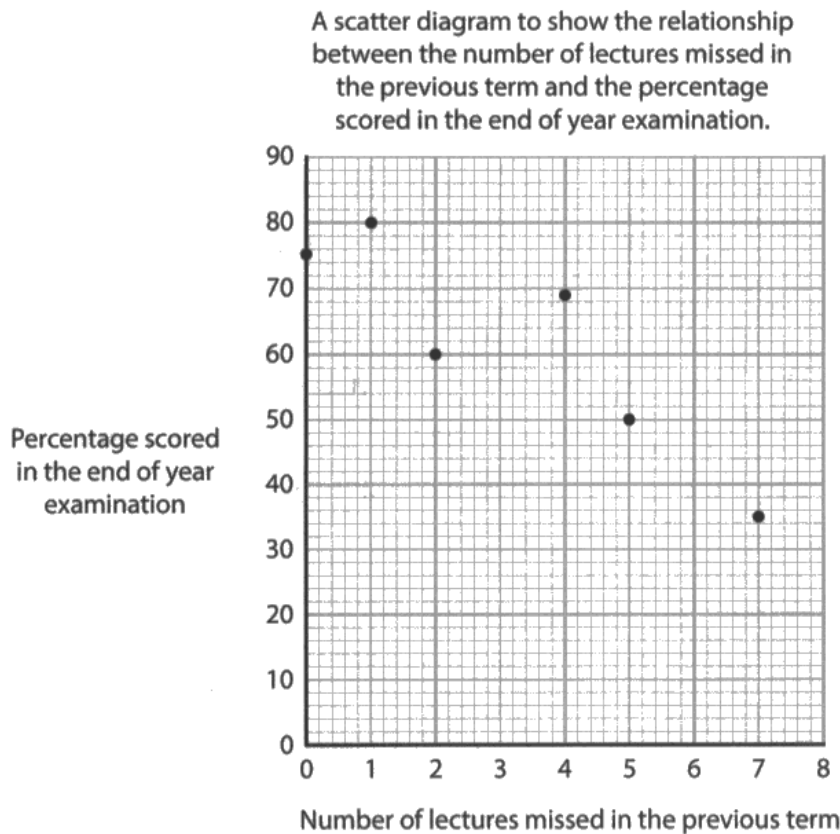


Figure 1

(b) Explain one conclusion Sunshine could make using the data in **Figure 1**.

One conclusion⁽²⁾ is that Sunshine found a negative correlation between the number of lectures missed and the mark achieved in the examination. So, the ~~more~~ higher the number of lectures missed from the lectures the lower will be the score achieved in the examination.



This answer receives 2 marks.

- 1 mark for the conclusion that she got a negative correlation.
- 1 mark for the higher the number of lectures missed, the lower the grade.



When asked to write a conclusion, use the data given to justify the conclusion you have made.

The results from Sunshine's correlation are shown in **Figure 1**.

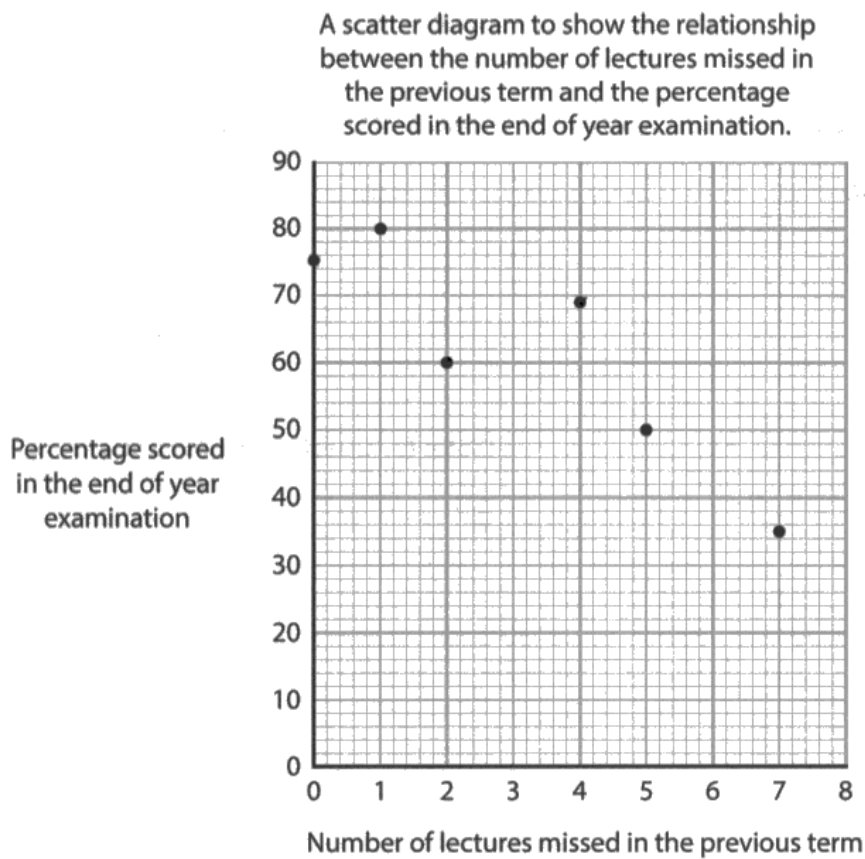


Figure 1

(b) Explain **one** conclusion Sunshine could make using the data in **Figure 1**.

(2)

A conclusion sunshine could make is the number of ^{lecture} absences in a term could ~~the~~ negatively affect ~~there~~ a students final exam grade



This response receives 0 marks because Sunshine is looking at correlational data. She is not looking to see if missed lectures affect grades because this is experimental, not correlational.



Know that a correlation looks at a relationship between two variables, not if one variable affects another.

Question 4(c)

This question required candidates to identify an improvement that could be made to the study and then explain how/why this would improve the study.

There were very few generic answers to this question. The most frequent improvements were in relation to the sample including using other universities, other subjects or other years.

The best answers were able then to justify how this would increase the generalisability of the study. Some answers gave a weakness of the study and then identified an improvement but did not explain their identified improvement.

Other answers only focussed on increasing the sample size. This does not necessarily make the sample more representative, if the increased sample comprises the same type of participants as the original sample. Eg having 50 first-year psychology students from the one university does not make it more generalisable.

(c) Explain **one** improvement Sunshine could make to her investigation.

One improvement that Sunshine could make is to gather information about number of lectures missed and marks achieved by a larger sample. Not only ~~the~~ from the local university but also from other universities from other cities, so that her findings were representative of the whole population. (2)

(Total for Question 4 = 6 marks)



This answer receives 1 mark for identifying that she could obtain a larger sample from other universities.

It needs the other universities to receive the mark. A larger sample on its own may not make the sample better if they were still the same type of person.

No marks are given for saying this would make it more representative: there needs to be an explanation regarding how/why it is more representative or why this is an improvement.



Be sure to explain fully the point you are making, for the AO3 mark.

(c) Explain **one** improvement Sunshine could make to her investigation.

(2)

Sunshine could have asked people not only from a local university, but also ~~be at from~~ a university from another city or country. That way results could be more likely to generalize and represent a bigger sample of students.

(Total for Question 4 = 6 marks)



This answer receives 2 marks.

- 1 mark for identifying that she could ask people from other universities, the local university acting as the link.
- 1 mark for the justification that this would make the sample more representative so more generalisable.

Question 5

The first essay on the paper covered AO1, knowledge and understanding and AO3 assessment.

The best answers were able to show accurate and thorough knowledge of Brendgen et al. Then, they offered a logical well-developed assessment in relation to the study, that had competing arguments and a judgement.

Some AO1 was not accurate in terms of how many twins were in the study, with some answers stating there were 234 twins, when there were 234 pairs of twins.

Some responses also lacked accuracy when writing about the results. They did not add the detail needed, for example how the teachers and peers rated the twins' aggression.

The AO3 did require an assessment of how effective the study was in explaining aggression. Weaker answers did not offer the assessment and gave an 'evaluate' answer, without any judgement.

The weakest answers provided very little detail about the study. This then impacted the AO3 mark because they became generic due to the lack of AO1.

- 5 In your studies of biological psychology, you will have learned about Brendgen et al. (2005).

Assess the effectiveness of the study by Brendgen et al. (2005) in explaining aggression.

(8)

Brendgen et al. aimed to investigate whether social and physical aggression could be explained ~~thru~~^{by} genetic factors, ~~same~~^{or} environmental factors, or non-shared environmental factors through MZ and DZ twins. 234 pairs of twins from Montreal Canada were gathered ~~there~~ for the study through opportunity sampling. At 18 months, same gender twins were ~~tested~~ observed for physical resemblance. Some (not all) of the twins were DNA tested to find out if they were MZ or DZ twins. At the age of 6, data was collected from twin's kindergarten about their behaviour. Questionnaires were used to see if they were displaying social or physical aggression. Teachers and classmates were asked to ~~fill out~~ about twins. Written consent was gathered before they asked anything. Teachers ~~were asked questions~~ filled out questionnaires that ~~measured social~~ To measure social aggression, they were asked 'has child spreads nasty rumours about other children'. Physical aggression was measure through questions such as 'gets into fights'. Classmates were shown 3 photographs and were told to circle the photo that best fit their description. Social aggression was measured by using questions like 'spreads mean secrets about another child'. physical aggression was measured through question 'gets into fights' Brendgen found that ~~when~~^{when} teachers ~~rated~~ ~~ratings on~~ physical aggression, genetic factors seemed to account 63%. Brendgen concluded that physical aggression was mostly caused by genetic factors while social aggression was caused by environmental factors.

One strength of Brendgen's study was that he used a large sample size. This allows his findings to be generalised to a wider population to explain how social & physical aggression can be caused by genes, shared or non shared environments. However, most of his sample's family were of European descent. ~~They~~ All the twins were from Canada ~~therefore Brendgen's findings showing that Brendgen had a biased sample and cannot generalise~~ Therefore we do not have a complete understanding of how social and physical aggression can be explained by nature or nurture factors for different people ^{with} ~~from~~ different cultures or backgrounds.

Asking children ^{to circle} ~~whether~~ one of their classmates and to point them out in that way for the way they behave can be considered unethical. Children might feel stressed out or go through psychological harm because they might feel like they do not have a choice but to 'snitch' on their friends. This could lead to distress or to them not wanting to ~~not~~ circle who they really thought displayed a certain behaviour. This could reduce the effectiveness of Brendgen's study when explaining aggression.

~~The~~ ^{He} ~~sample was~~ ^{Additionally} Most of the twins were not DNA tested to check whether they were MZ or DZ twins. This means that there is a chance twins were ^{not actually} ~~the opposite~~ MZ or DZ which would reduce the reliability ~~and~~ of the Brendgen's findings. This would reduce Brendgen's effectiveness of the study when explaining aggression.

In conclusion, Brendgen's study is not very effective when explaining aggression due to its unreliable findings, its biased sample and its ethical issues.

(Total for Question 5 = 8 marks)

TOTAL FOR SECTION A = 34 MARKS



This essay is Level 4 and 7 marks.

AO Level 4: it is accurate and thorough.

AO3 Level 3: there are well-developed arguments that show assessment throughout. However, it is not balanced so it achieves Level 3.

These put the response at the top of Level 3 or the bottom of Level 4.

Starting at the bottom of Level 4 there is no reason to take it down to Level 3.

Total: 7 marks



Make sure the AO3 points are balanced to gain Level 4 in essays.

Question 6(a)

Candidates had to identify the secondary reinforcer, with those who gained the mark identifying the stamps correctly.

Some answers included both the stamps and the sweets in such a way that it was unclear which they thought was the secondary reinforcer.

- 6** Jorge behaves badly at school. His teacher has decided to try and use operant conditioning to change his behaviour.

When Jorge sits still and concentrates on his work for five minutes, he is given a stamp on a reward card. After Jorge has collected 20 stamps, he can have a sweet. If Jorge distracts other children he is put on a table on his own, which he does not like.

(a) Identify the secondary reinforcement that is used with Jorge.

(1)

Jorge is given a stamp after he concentrates on his work for five minutes. After he has collected 20 stamps, he can have a sweet.



This response receives 1 mark for the first sentence.

Question 6(b)

Those candidates who gained the mark for this question were able to identify the negative reinforcer correctly as avoiding sitting on his own. However, there were many candidates who wrote about punishment, rather than negative reinforcement.

(b) Identify the negative reinforcement that is used with Jorge.

(1)

Jorge being put on a table on his own when distracting
~~the other~~ other children.



This response receives 0 marks because it is punishment.



Know that negative reinforcement rewards a person for a desired behaviour.

(b) Identify the negative reinforcement that is used with Jorge.

(1)

When Jorge does not distract the other
students, he is not put on a ~~seper~~ separate
table.



This response receives 1 mark for "he is not put at a separate table".

Question 6(c)

This question required candidates to identify a reason why continuous reinforcement may not be effective with reference to the scenario and then exemplify/justify that reason.

The best answers were able to do so, with the most usual answer being that he would expect the reward all of the time. Some answers focussed on a different schedule of reinforcement whilst others wrote about using reinforcement in general, rather than focussing on continuous reinforcement.

(c) The teacher will use a continuous reinforcement schedule with Jorge.

Explain **one** reason why this may ~~not~~ be the most effective reinforcement schedule to use with Jorge.

(2)

Continuous reinforcement is then Jorge will be rewarded every time he displays the desirable behaviour. One reason why it may not be the most effective reinforcement is because it may only cause temporary suppression of the undesirable behaviour, and the desirable behaviour may not persist (Total for Question 6 = 4 marks)
~~over the pass of time~~ as the time passes.



This response receives 0 marks because it is not linked to the scenario.

The name is not enough on its own so it is generic.



Always add details from a scenario to your answer to access the AO2 marks.

(c) The teacher will use a continuous reinforcement schedule with Jorge.

Explain **one** reason why this may not be the most effective reinforcement schedule to use with Jorge.

(2)

Using continuous reinforcement means that Jorge may get used to getting the reinforcement after anytime he is working for five minutes, meaning that when Jorge's teacher no longer gives him the reinforcement, he stops working, meaning ~~he would have to get the reinforcement~~ the behaviour would not be learned in the long term. (Total for Question 6 = 4 marks)



This answer receives 2 marks.

- 1 mark for identifying that he gets used to receiving a reinforcement for when he sits still for 5 minutes.
- 1 mark for the justification that this means if he no longer receives the reinforcement he will stop working.
- 1 mark for the justification that this means if he no longer receives the reinforcement he will stop working.

Question 7(a)

Candidates who gained all four marks calculated the standard deviation correctly and gave the answer to two decimal places as asked.

The most frequent mistake was totalling the sum of the differences incorrectly, which then impacted candidates' ability to gain further marks.

7 Einor carried out an investigation to see if cats could be classically conditioned. He had two groups of different cats.

- Condition A: The cats heard the sound of a dog barking just before they were presented with food.
- Condition B: The cats heard no sound just before they were presented with food.

After four weeks of classically conditioning the cats in Condition A, Einor presented both groups of cats with the sound of dogs barking. He measured the saliva of all the cats in millilitres.

Einor's results for Condition A are shown in **Table 1**.

- (a) Calculate the standard deviation for the cats in Condition A to **two** decimal places for the data gathered by Einor by completing **Table 1**.

The formulae and statistical tables can be found at the front of the paper.

You **must** show your working out.

(4)

	Condition A: Amount of saliva, in millilitres, in the cats that heard the dog barking when presented with food after four weeks of classical conditioning	$x - \bar{x}$	$(x - \bar{x})^2$
A	4	-1.4	1.96
B	7	1.6	2.56
C	4	-1.4	1.96
D	9	3.6	12.96
E	3	-2.4	5.76
Mean = 5.4		Sum of differences ² = 25.2	
Standard deviation = 2.51			

Table 1

Space for calculations

$$\sqrt{\frac{25.2}{n-1}} = \sqrt{\frac{25.2}{5-1}} = 2.51$$



This response receives all four marks because the correct answer is given.

All of the calculation must be correct to reach the correct answer.

7 Einor carried out an investigation to see if cats could be classically conditioned. He had two groups of different cats.

- Condition A: The cats heard the sound of a dog barking just before they were presented with food.
- Condition B: The cats heard no sound just before they were presented with food.

After four weeks of classically conditioning the cats in Condition A, Einor presented both groups of cats with the sound of dogs barking. He measured the saliva of all the cats in millilitres.

Einor's results for Condition A are shown in **Table 1**.

- (a) Calculate the standard deviation for the cats in Condition A to **two** decimal places for the data gathered by Einor by completing **Table 1**.

The formulae and statistical tables can be found at the front of the paper.

You **must** show your working out.

(4)

Condition A: Amount of saliva, in millilitres, in the cats that heard the dog barking when presented with food after four weeks of classical conditioning		$x - \bar{x}$	$(x - \bar{x})^2$
A	4	-1.4	1.96
B	7	1.6	2.56
C	4	-1.4	1.96
D	9	3.6	12.96
E	3	-2.4	5.76
Mean = 5.4		Sum of differences ² = 25.2	
Standard deviation = 2.5			

Table 1

Space for calculations

$$\frac{25.2}{4}$$



This response receives 2 marks.

- 1 mark for the last column
- 1 mark for the correct sum of differences

The final answer is not to two decimal places and there is nothing to show how the candidate reached 2.5, therefore there are no further marks available.



Always show your working-out in case the answer is incorrect.

The working-out can gain credit if it is correct.

Question 7(b)

This answer needed to be applied to the scenario and focus on ethical issues in relation to animals.

The best answers were able to identify an ethical issue in relation to the scenario and then justify/exemplify this. The most frequent answers were reduction of numbers and living conditions.

Some answers wrote about reduction of harm, but some answers wrote that animals cannot be harmed. They should have minimal harm for the purposes of the study.

The weakest answers discussed human ethical issues such as consent.

(b) Explain **one** ethical issue Einor should have considered before conducting his investigation with the cats.

(2)

Ensure that the procedure doesn't cause any psychological harm to the cats. For example, if the sound of dog barking is too loud, it could scare the cats, which should be prevented.



This answer receives 0 marks because it says that harm should not be caused to the cats.

Ethically, harm can be caused as long as it is justified.



Be accurate in any statements you make about the ethics of using animals in research.

(b) Explain **one** ethical issue Einor should have considered before conducting his investigation with the cats.

(2)

~~She~~ He should ~~also~~ have considered the number of cats used and tried to reduce the number so that ~~a~~ less animals are used in the investigation. This minimises the harm caused to ~~the cats~~ a smaller number of cats and reduces the number that have to go through the process to measure saliva or psychological harm from the barks.



This answer receives 2 marks.

- 1 mark for identifying that he should minimise the number of cats used.
- 1 mark for the justification that this minimises the number of cats that have harm from the dogs' barks.

Question 7(c)

This question required candidates to identify an improvement that could be made to the study and then explain how/why this would improve the study.

The most usual improvements suggested using the same breed of cat in both conditions or using a different sound such as a bell. The best answers were then able to explain how or why this would improve the study.

Some answers gave a weakness of the study and then identified an improvement but did not explain their identified improvement.

Other answers only focussed on increasing the sample size. This does not necessarily make the sample more representative, if the increased sample is made up of the same type of cat.

Some answers gave ethical improvements, rather than a practical improvement as required by the question.

(c) Explain **one** practical improvement Einor could have made to his investigation with the cats.

(2)

He could have used a different sound instead of dogs barking because the cats might be scared of dogs which could cause them to feel more alert and lose appetite. Instead he could have used a metronome or a bell which would give a more natural reaction.



This answer receives 2 marks.

- 1 mark for identifying that they could have used a metronome to obtain a more natural reaction. This would not receive the mark if it were on its own because there is no link. The link comes for the justification therefore all of the marks can be accessed.
- 1 mark for justifying this, because the cats might be scared of the dogs, which may cause them to lose their appetite.



Make sure there is a link to the scenario in your answers, in order to gain the marks.

(c) Explain **one** practical improvement Einor could have made to his investigation with the cats.

(2)

Einor could have made sure that all cats used in the investigation are of the same breed, which would reduce the confounding variable such as genetic factors.



This answer receives 1 mark for making sure all the cats were the same breed to reduce a confounding variable.

There is no justification/exemplification as to how this would improve the study.



Always justify or exemplify your answer when the question asks you to explain.

Question 7(d)

Candidates had to explain a reason why the salivation increased.

The best answers were able to do this, often through describing the process of classical conditioning. Frequently, they went on to justify/exemplify their answer, often through the use of research such as Pavlov's dogs or Watson and Rayner.

Other answers gained the AO2 mark but did not offer anything further. Some answers wrote incorrectly that the food was the neutral stimulus and the bark was the unconditioned stimulus.

- (d) Einor then presented food to the cats without the sound of a dog barking. Three weeks later, the cats in Condition A heard a dog barking. When Einor measured the saliva, he found that the amount of salivation the cats produced after they heard the dog barking was increased.

Explain, using classical conditioning, **one** reason why the amount of saliva the cats produced had increased.

(2)

Food is the UCS, it naturally produces a response. Dog barking naturally produces no response (in some cases fear), so it's the unconditioned response (UCR). When UCS stimulus (US). When US is combined with the UCS, they produce a CR-conditioned response (salivation after barking). In Pavlov's case the NS was the bell, which, combined with food, caused salivation.

(Total for Question 7 = 10 marks)



This answer receives 2 marks.

- 1 mark for identifying the process of classical conditioning.
- 1 mark for the use of Pavlov's study to show it works as the exemplification.

- (d) Einor then presented food to the cats without the sound of a dog barking. Three weeks later, the cats in Condition A heard a dog barking. When Einor measured the saliva, he found that the amount of salivation the cats produced after they heard the dog barking was increased.

Explain, using classical conditioning, **one** reason why the amount of saliva the cats produced had increased.

(2)

~~The~~ Extinction happened after a few weeks but when they heard the dog barking again, ~~sp~~ spontaneous recovery occurred which means that once ~~the~~ the cats are conditioned, the reaction may reappear even after extinction. so the cats salivated again even after weeks because they ~~re-ex~~ experienced spontaneous recovery.



This response receives 1 mark for identifying the process of spontaneous recovery.

There is no further justification/exemplification.

Question 8(a)

Several answers showed good knowledge of psychoanalysis and were able accurately to describe the processes involved. Free association, dream analysis, transference and counter transference were the most frequently described.

Some answers did not gain all four marks because they did not write enough descriptive points. Others were unclear about the process of free association.

The weakest answers either confused psychoanalysis with systematic desensitisation, or only named techniques, without describing them.

8 In your studies of learning theories and development, you will have learned about psychoanalysis as a therapy/treatment.

(a) Describe psychoanalysis as a therapy/treatment.

(4)

Psychoanalysis involves a client ~~the~~ lying on a couch, the therapist then asks the client to talk freely about anything, in the hope that something from the unconscious, becomes conscious. The therapist then will uncover symbols or common things the client experience and analyse them. The therapist aims to uncover unconscious feelings and thoughts and see how the client may use or experience these unconscious feelings in their day to day life. The therapist may also use dream analysis, as these can reflect unconscious feelings and put them into consciousness.



This answer receives 3 marks.

- 1 mark for describing free association at the start (they do not have to name it: the description is enough).
- 1 mark for the sentence on uncovering common themes and analysing them.
- 1 mark for the aim to bring the unconscious to the conscious.

There is nothing to credit in the last sentence because it adds nothing new, apart from naming dream analysis with no description of what it is.



When asked to 'describe' make sure you do not just name something but that you give some description.

8 In your studies of learning theories and development, you will have learned about psychoanalysis as a therapy/treatment.

(a) Describe psychoanalysis as a therapy/treatment.

(4)

Psychoanalysis is an indirect treatment (therapy aimed to access the unconscious in order to interpret the patient's true desires by ^{protective mechanisms} breaking a. It includes free association, which is when the patient is encouraged to talk freely about their thoughts, feelings, dreams with no censorship in order to reveal their unconscious. Dream analysis aims to discover the latent content or inner dreamwork of the surface content of the dream to reveal the patient's unconscious. Transference and countertransference refers to the patient telling her thoughts to the therapist, the therapist interprets the unconscious desires of the patient, and feedback with emotional response. During the process, resistance may occur as a protection mechanism to prevent the reveal of the unconscious, yet the therapist must calm the patient down for them to reveal it.



This answer receives 4 marks, for the sentences about:

- accessing the unconscious (1)
- free association (1)
- dream analysis (1)
- transference and counter-transference interpreting the unconscious thoughts in an emotional way (counter-transference) (1)

The last sentence would also be creditworthy if all the marks had not been gained.

Question 8(b)

In order to gain both marks candidates had to identify a weakness of psychoanalysis and then justify/exemplify this weakness.

The most frequent weaknesses were that it is:

- a subjective process
- time-consuming
- costly
- requiring client-motivation

The best answers were then able to explain this weakness. Others did not justify/exemplify their weakness and so did not gain the AO3 mark.

(b) Explain **one** weakness of psychoanalysis as a therapy/treatment.

(2)

In the psychoanalysis, psychoanalyst's interpretations are subjective, meaning they cannot be verified and are unfalsifiable, so they may give misleading advice if they interpret something the wrong way.

(Total for Question 8 = 6 marks)



This answer receives 2 marks.

- 1 mark for identifying that the psychoanalyst's interpretations are subjective and therefore unfalsifiable.
- 1 mark for the justification/exemplification that they may give the wrong advice if they interpret something incorrectly.

(b) Explain one weakness of psychoanalysis as a therapy/treatment.

(2)

Different therapists might have different interpretations of what the client says therefore it could be considered quite subjective and therefore a meaning or interpretation will not be found instantly but only after a long time of analysis.



This response gains 1 mark for identifying that different therapists may have different interpretations, so it is subjective.

This point is not justified/exemplified for the AO3 mark.

The rest of the answer is about the time taken, which is a new point.

Because this is also not justified, it is not better than the first weakness and therefore cannot receive any credit.



Only write about one weakness if the question asks for one weakness.

Question 9(a)

The most frequent weaknesses identified were in relation to the sample of Little Albert, the ethics of the study or the controlled conditions.

The best answers were able to identify two weakness, and have details about Watson and Rayner included in the answer and then explain how or why these were weaknesses.

Other answers did not gain the AO3 marks because they could identify two weaknesses but did not offer any further explanation.

The weakest answers were generic with no detail about this study in them. They could have been written about other studies that had one participant.

9 In your studies of learning theories and development, you will have learned about the study by Watson and Rayner (1920).

(a) Explain **two** weaknesses of the study by Watson and Rayner (1920).

(4)

1 The experiment was done in a lab which could induce demand characteristics because it's not a natural setting, this lowers ecological validity.

2 They could have also gathered a more generalizable sample. The generalizability because they could have used a larger sample. ~~with this means~~ This means the study isn't generalizable to other races.



This response receives 0 marks because there is nothing specific to Watson and Rayner.

Both weaknesses could be applied to several studies, therefore it is too vague.



Make sure there are specific details about the named study in your answer, when asked to describe it or explain strengths and weaknesses of it.

9 In your studies of learning theories and development, you will have learned about the study by Watson and Rayner (1920).

(a) Explain **two** weaknesses of the study by Watson and Rayner (1920).

- 1 Watson and Rayner created a ^{long-term} phobia of white, furry objects on Little Albert, a child, causing him distress as he cried to the presence of rats and ~~a white~~ ^{even a white} teddy bear. This goes against the BPS guidelines of preventing psychological harm to participants and, as Little Albert ~~was~~ suffered a long term phobia, it makes the study unethical. (4)
- 2 Study used only a participant, Little Albert; a white male child. This limits the generalisability of results on classical conditioning as females children or older people may not respond the same way to the pairing of loud noises and a rat, making the study lack generalisability.



This answer receives 4 marks.

- 1 mark for the first weakness for identifying that they caused him distress because he cried in the presence of rats.
- 1 mark for the further exemplification that this did not prevent the causing of psychological harm because he developed a long term phobia of white rats.

The second weakness also receives 2 marks.

- 1 mark for identifying that there was only one white male child which limits the generalisability.
- 1 mark for the further justification that this is because females or older people may not react in the same way.

Question 9(b)

This question required candidates to identify an improvement that could be made to the study and then explain how/why this would improve the study.

The most frequent improvements suggested making it more ethical or increasing the sample size. The best answers were then able to explain how or why this would improve the study.

Some answers gave a weakness of the study and then identified an improvement but did not explain their identified improvement.

Other answers only focussed on increasing the sample size. This does not necessarily make the sample more representative if the increased sample comprises 11-month old boys that are emotionally stable.

(b) Explain **one** improvement that could be made to the study by Watson and Rayner (1920).

(2)

They could have deconditioned Albert's fear after the experiment. This would have been ~~more~~ more ~~ethically~~ ~~clear~~ ethical ensuring Albert did not suffer long-term distress and allowing the researcher to study how phobias can also be unlearned, improving the study's usefulness and ethical standards.

(Total for Question 9 = 6 marks)



This answer receives 2 marks.

- 1 mark for identifying that they could have deconditioned Little Albert, making it more ethical.
- 1 mark for justifying this so he did not have long term distress, and it could have provided more useful knowledge.

(b) Explain **one** improvement that could be made to the study by Watson and Rayner (1920).

(2)

one improvement that could be made to Watson and Rayner's study is to conduct it in a more natural environment. Men as little Alberts have as a playground, as this would increase the ecological validity of Watson and Rayner study on classical conditioning.

(Total for Question 9 = 6 marks)



This answer receives 1 mark for identifying that they could use a more natural setting, such as Little Albert's playground.

There is no credit for the exemplification because there needs to be a comment regarding how or why making it more ecologically valid is an improvement.



Just adding terms does not achieve the AO3 mark: there needs to be some explanation with them.

Question 10

This essay required candidates to show their knowledge and understanding of observations and then apply that to details from the scenario.

The best answers showed accurate and thorough knowledge of observations, including details about the different types of observation such as overt, covert and participant and non-participant. They were also able to apply evidence from the context in a sustained manner throughout their essay.

Some AO1 involved answers only stating the different types of observation, but showing no knowledge and understanding of what they were, so limiting the level received for the AO1. Some answers incorrectly described overt observations as covert and vice versa.

Some answers did not consistently apply details from the scenario, or offered superficial application.

Other answers included evaluation of observations, which is not needed for a discuss question, and therefore could not gain credit.

10 Navya has conducted an observation at a football match to see if male or female supporters behave differently during the match. She gained permission from the football club to carry out the observation, but the supporters did not know they were ^{participating} part of an observation. ^{covert}

Navya was in the crowd watching the match and wearing the colours of the local team. Her participants were the football supporters who sat in the three rows in front of her. Navya noted down every time males insulted the referee or a member of the opposing team, and every time females did the same.

Discuss Navya's use of the observational research method to see if male or female supporters behaved differently at the football match.

You **must** make reference to the context in your answer.

(8)

~~Navya~~ Navya observational research methods are used when an individual wants to gain insights into certain behaviours by observing them.

As Navya did this by watching a football match because she wanted to see whether there was a difference between how males or females behaved during a football match.

~~Navya used~~ a ^{naturalistic} observation involves the researcher observing the participants in their natural environment, a structured observation involves the researcher creating and structuring an experiment.

Navya used a naturalistic observation, as she was observing males and females at the football match. As this is a natural environment, this would help her study increase in ecological validity, as they are in their natural environment and they are not acting differently. ^{likely to act}

covert observations include researchers watching the pps without them knowing they are being watched, whereas overt observations include the pps knowing they are being observed.

Nauyga used a covert observation, as the supporters did not know they were being watched and part of an observation. However this means that Nauyga could not gain valid informed consent from the pps, but this may be necessary as otherwise the supporters may have reacted differently due to demand characteristics as they know they're being observed also. Nauyga did ask for consent from the football club, and he could be told to supporters before the game.

Participant observations include researchers being part in the experiment and observe behaviour from inside, non-participant observations include researchers observing from outside.

Nauyga used a participant observation, as he was in the crowd watching the match and wearing local colours, when he was watching the football supporters in the three rows in front of him. However this could be led to him becoming distracted when hearing the noise down everytime male and female insulted the referee or member of the opposing team, Nauyga may have felt less involved, this could be led to her

missing some of the times the behaviour happens meaning the results could be different between males and females less valid.

In conclusion, Naugle's use of covert and naturalistic observation makes her study valid and reduces likelihood of demand characteristics meaning results, however a participant observation may have reduced validity as he may have missed some of the times the subjects, imitated the violence or opposing team.

(Total for Question 10 = 8 marks)

TOTAL FOR SECTION B = 34 MARKS



This essay is Level 3 and 6 marks.

AO1 is accurate but not thorough therefore it is Level 3.

AO2 is Level 3 because:

- relevant evidence is applied
- different parts of the scenario are applied showing a grasp of competing arguments
- there are coherent chains of reasoning

Ignore the evaluative comments because they are not relevant to a 'discuss' question.

This puts the answer in Level 3.

There is no reason to move the mark.



Do not include AO3 when the essay is an 8-mark discuss essay.

Question 11

This essay required candidates to demonstrate all three assessment objectives.

The best answers were able to offer accurate and thorough knowledge and understanding of the role serotonin and melatonin play in seasonal affective disorder, as well as accurately describe what an infradian rhythm is.

They also offered well-developed logical evaluative points that showed an awareness of competing arguments. This was often effected through the use of relevant research and how it is reductionist or other possible explanations. The application from the context was sustained throughout the essay.

Some AO1 was not thorough, and some was not accurate. Some answers focussed on light therapy, rather than infradian rhythms.

The weaker AO3 commented only that it was supported by a named study but then did not elaborate on this to develop their answer.

The weaker AO2 often did not go beyond repeating the name and did not use the details from the scenario to apply relevant evidence from the scenario to their answer.

SECTION C

Answer ALL questions in this section. Write your answers in the spaces provided.

- 11 Noah has been diagnosed with seasonal affective disorder. Every winter he feels depressed. Noah's symptoms include lacking the motivation to see his friends, or go to the gym. He also sleeps more during the winter months. Noah does not eat as much food in the winter months as he does not feel hungry.

Evaluate infradian rhythms as an explanation of Noah's seasonal affective disorder.

You **must** make reference to the context in your answer.

(12)

Infradian rhythms are biological rhythms which last longer than 24 hour period. In humans examples include seasonal affective disorder as well as Menstrual cycle in women. The menstrual cycle lasts about 28 days.

It starts off with menstruation which last 5-7 days, then the pituitary gland releases FSH to stimulate the ovaries to produce eggs. Then one mature egg is released into the fallopian tube where if not fertilised can lead to lower levels of oestrogen and progesterone and the lining of the womb being shed. Seasonal affective disorder is where people face higher levels of depression in winter and autumn months. This is said due to the shorter day lengths and less levels of lights which increase the melatonin levels within people with SAD even during the day leading to them feeling less motivated and more tired.

Noah can't be affected by the menstrual cycle as he is a boy and he suffers from SAD. This may mean that Noah has increased levels of melatonin within his

body which is making him constantly tired which is seen by him sleeping less in the winter months. Additionally his lack of motivation can be seen through his reduced outings with friends and less frequent gym usage. It may be that during the winter Noah stays inside of his house more due to it being cold which reduces the levels of sunlight Noah gets which further reduces levels of motivation due to the increase in melatonin levels. Additionally Noah may be staying within the dark often during the winter months which increases melatonin production and release within the body.

Infradian rhythms ignore other factors which may effect levels of motivation and energy within Noah such as situational factors. It may be that Noah has gotten disturbing news or has fallen out with his friends which leads to him being less motivated to hang out with his friends. Therefore it can be seen as an incomplete explanation for Noah's seasonal affective disorder symptoms.

Golder and Macy ~~found~~ studied 509 million tweets on twitter (now x) across 84 different countries and found that ~~lower levels of~~ the countries with less daylight and shorter days had less positive comments. This supports Noah's case.

Additionally, Danilenko found that there were high levels of melatonin ~~in~~ within participants with seasonal affective disorder during mornings of winter months in comparison to control groups which led to them also being constantly depressed and tired.

Rosenthal found that exposure to light for 2 weeks within SAD patients ~~led~~ led to reduced levels of depression significantly but when they stopped the bright light exposure during ~~the~~ mornings and evenings levels of depression started to rise once again. This supports the idea of Noah being exposed to less light during winter months has led to these symptoms.

It may be that the change in circadian rhythms is leading to Noah's symptoms. Noah may be seeing less light causing the SCN to produce more melatonin to regulate his sleep wake cycle which makes him sleep more.

It may also be that Noah is eating large meals at the start of the day leading him to be more tired and less hungry later on in the day.

To conclude I believe that circadian rhythms well explain Noah's seasonal affective disorder and is very effective however it can be considered as an incomplete explanation.



This essay is Level 3 and 9 marks.

AO1 Level 3: there is accurate knowledge and understanding

AO2 a good Level 3: lines of argument are supported by relevant evidence from the context

AO3 Level 3: it is imbalanced but there is an awareness of competing arguments and the arguments are developed. However this is at the top of Level 3

The AO1 and AO3 are top of Level 3, the AO2 keeps it there.

Total: 9 marks

Question 12

This essay required candidates to demonstrate all three assessment objectives.

The best answers were able to offer accurate and thorough knowledge and understanding of both Freud's theory and the role of genes. They also offered well-developed logical evaluative points that showed an awareness of competing arguments. This was often achieved through the use of relevant research and how it is reductionist, lacks objective data in the case of Freud or other possible explanations.

The very best answers were able to offer counter points to their answer, thereby showing well-developed arguments. The application from the context was sustained throughout the essay.

Some AO1 was imbalanced and not thorough, often being more focussed on Freud's theory and lacked detail about the role of genes.

The weaker AO3 often said only that it was supported by a named study but then did not elaborate on this to develop their answer.

The weaker AO2 often did not go beyond repeating the name and did not use the details from the scenario to apply relevant evidence from the scenario to their answer.

12 Mila is 22 years old and has been arrested for fighting after she hurt a woman whilst in a restaurant. Mila said the other woman was rude to her. Mila's mother has been rude to Mila in the past.

Mila has previously thrown a book at a person in her local book club after disagreeing with what the person said about a book. Mila was warned that if she was aggressive again, she would no longer be able to go to the book club. After the arrest, Mila can no longer go to her local book club.

Mila became homeless after the arrest when her father threw her out of the house because she was rude and aggressive to her stepmother. Mila said it was her stepmother's fault that Mila was rude and aggressive, as the stepmother takes all her father's attention away from Mila.

To what extent can genes and Freud's psychosexual stages of development explain Mila's aggressive behaviour?

You **must** refer to the context in your answer.

(16)

~~the MAOA gene~~ produces the MAOA-L hormone, which, ~~the~~ the MAOA gene, ~~has~~ at low levels, has been linked to aggression. This is because it ~~breaks down~~ ~~the amount of~~ aids in the breakdown of neurotransmitters. At low levels, it cannot complete this function. This means that ~~the~~ feelings of anger and resentment, linger for long time periods, increasing aggression. Caspi et al. completed a study that was longitudinal on the effect of the MAOA gene on aggression.

Mila's aggression could be explained by a faulty MAOA gene. This could lead to her being more aggressive, over longer time periods, explaining why she was rude and aggressive to her stepmother.

A strength of the MAOA gene as an explanation for aggression is its empirical support. The study-

Caspi et al. found that low levels of the MAOA-L ~~gene~~ hormone, combined with childhood trauma, leads to aggression and violent crimes, strengthening ^{the} ~~an~~ explanation. This particularly describes Mila as she was arrested for violence. Moreover, Mila's mother was rude and aggressive to her, which could have caused childhood trauma. Therefore, the MAOA gene is an excellent explanation for Mila's behaviour.

Twin studies have been used to link genetics to aggression. Many studies have been conducted, for example, Brendgen et al., which link genetics to aggression. Particularly physical aggression has been suggested to have a genetic basis. This is possible through MZ twins, who share genetics, but not environment.

Mila's mother is aggressive. Mila therefore could have aggressive tendencies due to her mother's genetics. As shown by Brendgen et al., and other twin studies, physical aggression has a large genetic basis, which could explain why Mila fought a woman in a restaurant.

~~be~~ Twin studies have been criticised due to their poor controls. Most twins also share environments, due to growing up in the same household, having the same everyday life and going to the same school. Twin studies assume

that all similarities are as a result of genetics; however, similarities in environment could be the true cause of these overlaps between twins.

Moreover, another weakness of genetics as an explanation for Mila's aggression is that it is disproved by social learning theory. Mila could share her mother's aggression due to her imitating her role-model. If the mother is mean to the step-mother, perhaps Mila is simply imitating this behaviour, as suggested by social learning theory, rather than sharing her genes.

Freud's psychosexual stages are 5 stages that make up phases in every one of our lives. They are oral, anal, phallic, latent, and genital. At each stage, a conflict arrives, for example in the latent phase, this is socialising and creating relationships. If this conflict is not resolved, in each phase, fixations can occur later in life.

Fixations involve a deep-rooted problem that can be explained by not resolving a conflict, for example, if the conflict in the latent phase is not resolved, individuals may struggle to find partners or have good relationships in adulthood. The phallic phase is a stage in childhood where ~~the conflict is not resolved~~ conflict is the oedipus and electra complexes. Without resolving this, individuals may have poor relationships with their parents later in life.

Mila could have an unresolved Electra complex. She could have 'penis envy' of her father and resent her step-mother for replacing her mother in the family. This explains her aggression and rude behaviour towards her.

Alternatively, Mila could have an unresolved conflict in the latent phase due to a difficulty making friends or forming relationships in teenage years. This explains why Mila has found it difficult to stay in her book club as she is rude to these people, this and throws books at them. Due to the fixation in the latent phase.

A strength of this theory is that there is a lot of case study support, by Freud & which supports this idea. Freud's case ~~studies~~ studies all provide evidence that the psychosexual stages exist.

However, these studies are generally biased as they are Freud's subjective interpretation of his patients. Therefore, weakening this theory as an explanation for Mila's behaviour.

Moreover, they are unscientific and unfavourable. Meaning they cannot be proven, unlike genes as an explanation.



This essay is Level 3 and 11 marks.

The AO1 Level 3: there is accurate knowledge and understanding of both explanations. There would need to be more on genes for it to be accurate and thorough.

AO2 Level 3: lines of argument are supported by applying relevant evidence from the context.

AO3 Level 3: it shows mostly developed and logical arguments with an awareness of competing arguments and judgements throughout.

This puts the response at Level 3.

Start at 11 and there is no reason to take it up or down.



When asked to write about two theories make sure both are in equal depth.

Paper Summary

Based on their performance in this paper candidates are offered the following advice:

- In scenario questions, candidates should ensure there are links to details from the scenario in their answers to access the AO2 marks, especially when the scenario is about a research method
- When answering about a strength and/or weakness of a named study candidates must ensure that their answer relates explicitly to that study and is not generic
- When answering a question about an improvement, candidates should explain how their improvement will make the study better, not which aspect was a weakness of the study without the improvement
- In extended response questions, candidates should ensure they know what assessment objectives are required for the different types of questions

Grade boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:
<https://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html>

