Mark Scheme (Results)

June 2023

Pearson Edexcel
GCE Psychology 9PS0/03
Paper 3: Psychological Skills

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.

- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.

- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.

- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.

- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A: Methods

Question Number	Answer	Mark
1(a)	AO2 (1 mark) One mark for identification of the dependent variable (DV) in the eye contact study. For example: • Whether the participant felt comfortable or uncomfortable with the duration of eye contact (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks	(1)

Question Number	Answer	Mark
1(b)	AO2 (1 mark), AO3 (1 mark) Candidate responses have to be drawn from evidence presented in Table 1. One mark for identification of a conclusion (AO2). One mark for justification of the conclusion (AO3). For example: • The most comfortable duration of eye contact for all participants was 3 seconds (1) because males had the highest number who felt comfortable at 3 seconds with 220/240 and the females also had the highest number at 3 seconds with 258/275 (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks.	(2)

Question Number	Answer	Mark
1(c)	AO2 (3 marks) One mark for correct/appropriate title (see graph below for a suitable example) One mark for correct/appropriate labelling of axes (see graph below for a suitable example) One mark for correct plots of data points (see graph below for correct plotting) For example: **A bar chart to show the percentage (%) of males and females that felt comfortable with an eye contact duration of 5 seconds** *Males: 75, Females: 80* Y-axis: Percentage (%) that felt comfortable with an eye contact duration of 5 seconds X-axis: Gender (Males, Females)	(3)

Question Number	Answer	Mark
1(d)	AO2 (1 mark), AO3 (1 mark) One mark for identification of an improvement in relation to the eye contact study (AO2) One mark for justification of the improvement (AO3) For example: • The researchers could have asked the participants to view the actor of a different sex to themselves, rather than just the same sex actor (1) because this would have enabled them to see if the participant still felt comfortable with the duration of eye contact with members of the opposite sex which would be more representative of real-life interactions (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks.	(2)

Question Number	Answer	Mark
2(a)	AO2 (2 marks), AO3 (2 marks) One mark for identification of a strength/weakness of using opportunity sampling for the helping behaviour study (AO2) One mark for justification of the strength/weakness of using opportunity sampling for the helping behaviour study (AO3) For example: Strength • By using the people exiting the luxury shops or on the ordinary street that were available at the time means that this method is very convenient (1) because the participants are readily available meaning that sampling people to check their helping behaviour does not take excessive time or effort compared to other sampling techniques (1). Weakness • As they have only used people exiting the luxury shops or on the ordinary street at the time, the participant sample may be biased and unrepresentative (1) because the people shopping or walking by may have been particularly unhelpful and so the conclusions about helpfulness would not be generalisable to the target population of people in that area (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks.	(4)

Question Number	Answer	Mark
2(b)	AO2 (1 mark), AO3 (1 mark) Candidate responses have to be drawn from evidence presented in Table 3. One mark for identification of a conclusion (AO2). One mark for justification of the conclusion (AO3). For example: • Older participants were more likely to help the confederate than the younger participants (1) because 68% of the 56-70 year olds helped compared to 51% of the 20-35 year olds (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks.	(2)

Question Number	Answer	Mark
2(c)	AO2 (1 mark), AO3 (1 mark) Candidate responses have to be drawn from evidence presented in Table 4. One mark for identification of a conclusion (AO2). One mark for justification of the conclusion (AO3). For example: • The participants exiting the luxury shop were less helpful than those on the ordinary street with no shops (1) because only 14/40 helped near the luxury shop compared to 31/40 on the ordinary street which is far more (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks.	(2)

Question Number	Answer	Mark
2(d)	AO2 (1 mark), AO3 (1 mark) One mark for comparing the observed/calculated value with a relevant critical value (AO2) One mark for justification of what this means for the findings of the study (AO3) For example: • The calculated value (1.27) is less than the critical value (2.71) at the 5% level of significance for a one-tailed test (1). This means that there was no significant difference between the helping behaviour of the males and females in the study (1). Look for other reasonable marking points.	(2)

Question Number	Answer	Mark
2(e)	AO2 (2 marks) One mark for each appropriate statement for using the chi-squared test in the helping behaviour study for the data in Table 5. For example: • They are looking for a difference between the males and females in terms of helping behaviour (1). • The data was nominal because they were placed into one of four categories (1). Look for other reasonable marking points.	(2)

Question Number	Answer	Mark
2(f)	AO2 (1 mark), AO3 (1 mark) One mark for identification of a weakness of using quantitative data in the helping behaviour study (AO2) One mark for justification of the weakness (AO3) For example: • Using the number of people helping or not helping only gives restricted information about the helping behaviour of the participants which lacks validity (1) because they cannot know the underlying reasons for their behaviour so may not truly represent the helpfulness of the participants in the study as they may have normally helped but were just in a rush so did not help (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks	(2)

Question Number	Answer	Mark
2(g)	AO2 (1 mark), AO3 (1 mark) One mark for identification of a weakness of using a field experiment in the helping behaviour study (AO2) One mark for justification of the weakness (AO3) For example: • Using a field experiment in the natural setting of Paris may have extraneous variables that affected the participant level of helpfulness so could lack validity (1) because it could be that situational variables such as the presence of others near the confederate could have influenced whether the participant helped them so may not represent their usual behaviour (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks	(2)

Section B: Review of studies

Question Number	Answer	Mark
3(a)	AO2 (1 mark), AO3 (1 mark) One mark for identification of an appropriate practical application of the anti-littering study (AO2) One mark for justification of the practical application (AO3) For example: • A practical application is that keeping the area around bins clean can reduce further littering (1) because there was a difference of 15% in the norm maintenance when the areas around the bins were clean (16%) and when it was littered (1%) (1). Look for other reasonable marking points.	(2)

Question Number	Answer	Mark
3(b)	AO2 (3 marks), AO3 (3 marks)	(6)
	Up to three marks for application of learning theories to the findings of the anti-littering study (AO2). Up to three marks for judgement/justification of research evidence in relation to the study (AO3). Application of learning theories to the study (AO2) For example: • Social learning theory could account for the greater tendency to show norm maintenance in Bern (27%) compared to New York (9%) through the citizens copying their role models who may be more likely to keep areas clean and tidy (1). • The lower amount of direct sanctions in New York (2%) than Bern (12%) could be accounted for by operant conditioning as there may be a higher possibility of positive punishment in terms of retaliation in a large city like New York if an individual directly sanctioned someone littering compared to a small city like Bern in Switzerland (1). • By having cleaner areas, people may experience self-reinforcement for keeping the areas cleaner and could account for the higher chance of norm maintenance in the clean context (16%) compared to the littered context (1%). Judgement/justification of how far research evidence can account for the findings of the study (AO3) For example: • Bandura, Ross, and Ross (1961) showed children were likely to learn to imitate a role model acting aggressively and this could be the same for the citizens of Bern in Switzerland who may learn from their role models to keep areas tidier (1). • Skinner (1938) found that if animals were positively punished for their actions then they would be less likely to repeat the behaviour and so could support the idea that people may be less likely to directly sanction others due to previous negative experiences of retaliation (1). • It could be that research investigating conformity to majority influence, such as Asch (1951), explains why people keep tidier areas cleaner and they are following the social norm and not self-reinforcement, so may be more due to social psychology than learning theories (1). Look for other reasonable marking points. Answers must relate to the scenario. Generic answers score 0 marks.	

Question Number	Indicative content	Mark
4	AO1 (6 marks), AO3 (10 marks) AO1 • In Rosenhan (1973) there were eight pseudopatients who went to 12 hospitals across the USA which varied with age and funding. • The pseudopatients in Rosenhan (1973) were all asked to **say they could hear the same words 'empty', 'hollow', and 'thud' when they went to the hospital.** • When at the hospital, the pseudopatients in Rosenhan (1973) were asked to record the behaviour of the staff and other patients in the hospital. • Sherif et al. (1954/1961) carefully selected a sample of 11 year old boys for their study in Robbers Cave state park. • The parents of the children in Sherif et al. (1954/1961) were told the aims of the study and were asked to not visit the camp to try and avoid homesickness. • The children in the Sherif et al. (1954/1961) study took part in competitive activities such as tug of war and baseball to see how this affected prejudice. • Quantitative and qualitative data were collected by camp counsellors throughout the Sherif et al. (1954/1961) **study regarding the boys' behaviour throughout the** different activities. AO3 • The decision to select a variety of real hospitals across the USA means that the results about the diagnosis of mental health issues and the treatment of patients has increased validity. • By choosing to have all the pseudopatients to say the same thing when presenting themselves to the hospitals there is a standardised approach which increased reliability. • Asking healthy people to lie about having mental health symptoms in the design and implementation of the study means that the doctors were deceived and the study may therefore not actually be measuring the reliability and validity of diagnosis. • There have been suggestions that when implementing his study Rosenhan may have removed data from a pseudopatient that would have shown positive treatment in the hospitals (Cahalan, 2019) so his reported findings	(16)

lack credibility.

- By asking the pseudopatients to take their own notes whilst in the hospitals there is the possibility that they could have been biased in what they chose to report and also Rosenhan in choosing what to report in his published study so there is subjectivity.

- Using such a rigorous method of selection for the boys when designing his study means that the differences in the behaviour of the boys could not be due to prior temperament and only due to the situation created for them by Sherif et al. (1954/1961).

- Choosing to only use boys of 11 years old and from the USA in the design of the Robbers Cave study means there is limited generalisability of the findings about prejudice to adults, females, and other cultures.

- When designing the study Sherif et al. (1954/1961) attempted to account for certain extraneous variables such as presence of parents which could have affected **the children's natural behaviour at the camp in an** attempt to increase the validity of the findings.

- Sherif et al. (1954/1961) took place in Robbers Cave state park in a natural setting for a summer camp but this means there were uncontrolled variables that could have affected the **boys'** behaviour and undermined the cause and effect relationship between competition and prejudice.

- As Sherif et al. (1954/1961) collected both qualitative **and quantitative about the boys' behaviour throughout** the different competitive and cooperative activities the data can be triangulated and inter-rater reliability established.

Look for other reasonable marking points.

Level	Mark	Descriptor
		AO1 (6 marks), AO3 (10 marks) Candidates must demonstrate a greater emphasis on evaluation/conclusion vs knowledge and understanding in their answer. Knowledge & understanding is capped at maximum 6 marks.
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Section C: Issues and Debates

Question Number	Indicative content	Mark
5	AO1 (4 marks), AO2 (4 marks), AO3 (4 marks) **AO1** • A genetic predisposition is where an individual has the genetic information to give them the ability to have an increased likelihood of developing a trait. • The brain has two hemispheres, with the left hemisphere of the brain being predominantly used when processing language and the right hemisphere more active during spatial tasks. • The dopamine reward pathway gives reinforcement to individuals who do things that they find pleasurable by releasing dopamine and gives them motivation to repeat the act. • A phenotype is where the inherited genotype from parents is combined with environmental factors in an **individual's life to give the expressed traits.** **AO2** • **Ada's mum enjoy**s reading and so does Ada so it may be that she has a gene which predisposed her to be able to have a higher level of reading development. • Ada may have greater development of her left hemisphere of the brain as she enjoys reading which requires language processing whereas Daniel may enjoy tasks involving more spatial ability like the video games as he does not like reading. • When she reads Ada may have enhanced dopamine initially to encourage her to read more but Daniel may not have the same increase in dopamine as he does not enjoy reading so he does not have the same motivation to want to read books. • **As Ada's mum enjoys reading**, her mum may have the gene(s) for enhanced reading development which may have become an expressed trait when combined with her environment where Ada may have been encouraged to read and been rewarded by her excellent reports from school. **AO3** • Chester et al. (2015) found that low functioning MAOA genotype in 277 female and male participants was linked to greater aggression, so it may be that there is also a gene for aggression, which could be the same for	(12)

		reading ability and so **could account for Ada's advanced** reading development.	
		• Studies that use PET scanning to measure brain activity for tasks such as reading take place in artificial controlled settings so may not represent the brain activity of an individual in their everyday life.	
		• Evidence from Volkow et al. (2009) supported the dopamine changes in the brain for drug abuse and addiction with short term increases for use of drugs but deficits in addicted individuals, so the same changes in dopamine could happen when Ada is reading so it motivates her to continue reading.	
		• Social learning theory could equally e**xplain Ada's enjoyment of reading or Daniel's enjoyment of television** as they could have been observing and imitating their parents as role models so biological psychology is not **the only explanation for Ada and Daniel's behaviour.**	
		Look for other reasonable marking points.	

Level	Mark	Descriptor
		AO1 (4 marks), AO2 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application vs evaluation/conclusion in their answer.
Level 0	0	No rewardable material.
Level 1	1–3 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4–6 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7–9 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	10–12 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Question Number	Indicative content	Mark
6	AO1 (8 marks), AO3 (12 marks) **AO1** • The BPS code of ethics and conduct (2009) requires psychologists to show responsibility by protecting the participants in their study. • Psychological research needs to ensure respect by allowing participants to leave the study when they wish without any pressure to remain in the research. • When conducting psychological research with humans, the researchers are expected to keep all participant records anonymous and confidential. • Research investigating psychological issues could involve telling the participants everything about the study in giving full informed consent or sometimes the researchers are allowed to purposely deceive the participants. • Psychological research involving animals requires a personal licence which requires the researcher to only kill any animals when necessary and in an appropriate way. • A majority of the research used for the review by Carlsson et al. (2000) used animals to show that there were other neurotransmitters than just dopamine involved in schizophrenia, so the benefits must have been considered against the costs for these studies before they were allowed to be conducted. • When necessary, endangered species of animals can be used in psychological research when it is considered to benefit the species as a whole in terms of its survival. • The Animal Scientific Procedures Act (1986) states that protected animals are any living vertebrate, other than humans, and any living cephalopod. **AO3** • Burger (2009) wanted to protect the participants in his study by using a two-step screening process to exclude any individuals who may have a negative reaction to the experience in his obedience study. • It could be said that Milgram (1963) did not protect the participants in his obedience experiment as they reported experiencing psychological distress and three participants had full-blown seizures. • Sherif et al. (1954/1961) allowed two of the boys from the group called the Eagles to leave the study due to	(20)

- homesickness so research can investigate prejudice whilst also being ethical.

- When conducting his research into the diagnosis of mental health disorders, Rosenhan (1973) took steps to protect the identity of the hospitals used and the pseudopatients.

- If participants or their location are identifiable in psychological research, this could negatively affect the participants or their local area if the research is considered socially sensitive.

- Fully informing participants of the aim of the study may lead to changes in their behaviour so the results will lack validity, but lying to the participants to prevent this may upset the participants and lead to them not wanting to participate in future research.

- Van den Oever et al. (2008) had their study approved by The Animal Users Care Committee (Netherlands) so they were able to show they could competently handle the rats and killed them in an appropriate way.

- **It could be argued that Harry Harlow's research into** attachment using monkeys led to unnecessary harm and suffering for the animals and led to early death that was avoidable for research purposes.

- Using animals in research studies is considered by some as controversial because animals that are considered similar to humans are not treated in the same way as humans.

- Humans have benefitted from animal research in psychology through advancement in understanding about conditions such as schizophrenia and potential treatments for this such as antipsychotic medication, so this may outweigh the costs for the animals.

- Skinner (1948) used pigeons in his research regarding operant conditioning which are considered a protected animal so his research could have been more ethical if he had not used a protected animal, such as an insect.

- Skinner (1948) used minimal animals in his research as he chose to use only eight pigeons so it could be considered ethical as he used the minimum number required.

Look for other reasonable marking points.

Level	Mark	Descriptor
AO1 (8 marks), AO3 (12 marks) Candidates must demonstrate a greater emphasis on assessment/conclusion vs knowledge and understanding in their answer. Knowledge & understanding is capped at maximum 8 marks.		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning, leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this will be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a logical assessment, containing logical chains of reasoning throughout which consider a range of factors. Demonstrates an understanding of competing arguments/factors but does not fully consider the significance of each which in turn leads to an imbalanced judgement being presented. (AO3)
Level 5	17–20 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates a full understanding and awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)