Mark Scheme (Results)

Summer 2018

Pearson Edexcel GCE
In Psychology (9PS0)
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.

GCE A-Level Psychology Paper 3 Mark Scheme 1806

Question Number	Answer	Mark
1(a)	**AO2 (1 mark)** One mark for identification of the experimental/research design used in the lecture notes and learning study. For example: • They used an independent groups design as participants were given either a skeletal outline or notepaper (1).	**(1)**

Question Number	Answer	Mark
1(b)	**AO2 (1 mark), AO3 (1 mark)** One mark for identification a relevant participant variable applied to the stimulus (AO2). One mark for justification of how the participant variable could affect the findings (AO3). For example: • Prior knowledge of the student regarding how car brakes function could affect the score on the test (1) as those with prior knowledge score a higher mark on the test regardless of learning aid provided (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 (1 mark), AO3 (2 marks)**	**(3)**
	One mark for identification of a relevant way to make the lecture notes and learning study generalisable (AO2). Up to two marks for justification/exemplification of how this could improve generalisability (AO3).	
	For example: • The researchers could use a stratified sample of students (1) which could involve recruiting proportional numbers of students from each subject at the university (1) so the final sample is representative of all students from different subjects, not just those taking a single course (1).	
	Look for other reasonable marking points.	
	Answers must relate to the scenario.	
	Generic answers score 0 marks.	

Question Number	Answer	Mark
1(d)	**AO2 (4 marks)**	**(4)**

Experimental Group		Control Group	
Score on test with skeletal outline	Rank	Score on test with notepaper	Rank
Total	**129**	Total	**81**

- One mark for correct totals (both the control and the experimental groups must be correct for mark).

- One mark for $10 \times 10 + \frac{10 \times 11}{2}$

- One mark for correct figure for U_a (i.e. minus the total of the ranks).
  $U_a = 10 \times 10 + \frac{10(10+1)}{2} - 129 = 26$ (U_a and U_b can be the other way around and mark still given)

- One mark for correct figure for U_b (i.e. minus the total of the ranks).
  $U_b = 10 \times 10 + \frac{10(10+1)}{2} - 81 = 74$

Note: U = the smaller value i.e. = 26. No marks for this but if given and no other working then full marks credited.

Question Number	Answer	Mark
1(e)	**AO1 (1 mark), AO3 (1 mark)** One mark for identification of what a Type I error is (AO1) One mark for exemplification/reasoning of what a Type I error would be in the lecture notes and learning study (AO3) For example: • A type I error is when the researcher incorrectly accepts the experimental hypothesis rather than the null (1), so the researchers may incorrectly conclude that a skeletal outline is better than notepaper when there is no difference (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(f)	**AO2 (2 marks), AO3 (2 marks)** Up to two marks for explanation of review process for the researchers of the lecture notes study (AO2) Up to two marks for reasoned judgements regarding the likelihood of the research being published (AO3) **Application of peer review to the study (AO2)** For example: • The lecture notes study would be sent to be scrutinised by (other) experts in the same area of educational research to judge its scientific credibility (1). • Experts in the same field of Educational Psychology will judge the quality of the lecture notes study in terms of its experimental approach (1). • Experts in the same field of Educational Psychology will judge the originality of the lecture notes study in terms of its contribution to educational research (1). **Judgement of likelihood of the study being published (AO3)** • The use of quantitative data gives scientific credibility as this is how students are normally assessed through exams so it is more likely to be published (1). • The study is experimental with a comparison between lecture notes and notepaper so there is a greater likelihood of the study being published in this journal (1). • It is a novel way to experimentally assess the impact of learning aids so is likely to contribute significantly to educational research which means it is likely to be published (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.**	**(4)**

Question Number	Answer	Mark

Question Number	Answer	Mark
2(a)	**AO2 (2 marks), AO3 (2 marks)** Candidate responses have to be drawn from evidence presented in Figure 1. One mark for identification of each conclusion (AO2) One mark for justification of each conclusion (AO3). For example: • The Fijian bars are below the American bars from 9 years old to 14 years old (1), so American children from 9-14 years were more likely to share the reward and were therefore more prosocial (1). • The Fijian adults were approximately 35% likely to share the reward compared to roughly 15% of American adults (1). This suggests that as adults Fijians are more prosocial than Americans (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 (2 marks), AO3 (2 marks)** One mark for identification of each weakness up to a maximum of two marks (AO2) One mark for justification of each weakness up to a maximum of two marks (AO3) For example: • Prosocial behaviour such as sharing a reward does not usually take place in controlled, artificial setting (1), so therefore the participants may not act naturally which means the findings lack ecological validity (1). • Participants may guess that the study is about prosocial behaviour so they may change their decision to share/not share the reward (1). This means there is potential for demand characteristics and the findings of the study would lack validity (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(4)**

Question Number	Answer	Mark
3(a)	**AO2 (1 mark), AO3 (1 mark)** One mark for identification of a relevant ethical guideline applied to the study (AO2) One mark for justification of the potential for the guideline being violated (AO3) For example: • The student being asked to vandalise the book would not be aware they are in a research study (1), so there may be a lack of informed consent as the student is unaware of the study aims and has not given permission to be involved (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
3(b)	**AO2 (3 marks), AO3 (3 marks)** Up to three marks for application of social impact theory to the findings of the study (AO2). Up to three marks for judgement/justification of social impact theory to the findings of the study (AO3). **Application of social impact to the study (AO2)** For example: • Social Impact theory would agree with the findings that two sources would have greater social impact than a single source on the participant, due to there being a greater number (of social sources) instructing the student (1). • The strength of the relationship between source and target is important and can explain why the unethical act was more likely to be carried if there was a close relationship compared to when there was a single unknown confederate (1). • The theory would support a higher number of unknown sources giving a 25% greater obedience (87-62) than when there was a single unknown source acting on the target individual (1). **Judgement/justification of how far social impact theory is a suitable explanation for the findings (AO3)** For example: • Berkowitz et al. (1969) also showed that a greater number of sources had a larger social impact on participants when gawking at a sixth floor window which supports the finding of the study (1). • However, agency theory could equally explain the findings as the participant may have been acting on behalf of the confederates in an agentic state to vandalise the book (1). • However, social impact theory cannot explain *why* more sources have a greater social impact and it is just a predictive model rather than an understanding of why conformity/obedience occurs (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(6)**

Question Number	Indicative content	Mark
4	**AO1 (6 marks), AO3 (10 marks)**	**(16)**
	AO1	
	• Psychology can be used as a form of social control either in a positive way or a negative way in society.	
	• Raine et al. (1997) used PET scans to examine the activity of the brains of 41 people charged with murder but pleaded NGRI	
	• Before the PET scan participants in Raine et al. (1997) were required to work at a continuous performance task (CPT) that was based around target recognition for 32 minutes	
	• Raine et al. (1997) concluded that violent behaviour could not be attributed to a single brain region and that multiple regions were involved as well as environmental factors	
	• Watson and Rayner (1920) attempted to condition emotional responses to an infant child who was approximately 9 months before testing	
	• Testing began in Watson and Rayner (1920) at 11 months and 3 days where a steel bar (the UCS) was struck behind Little Albert's head when paired with a white rat (the NS)	
	• Watson and Rayner (1920) reported that Little Albert showed fear to the rat and other stimuli over a period of time due to the association with the loud noise which caused fear (the UCR / CR)	
	AO3	
	• Raine et al. (1997) found abnormal cortical/subcortical brain processes in murderers which could be used to screen the population.	
	• Identifying potential criminals through brain scanning could lead to interventions being put in place which could help prevent serious crimes like murder.	
	• The sample used in Raine et al. (1997) may lack generalisability so any form of screening may not be useful for most of the population.	
	• The continuous performance task (CPT) and being in a brain scanner in Raine et al. (1997) may not be valid compared to real life so any measures of social control may not be useful.	
	• The difficulty of isolating a single brain region for violent behaviour means that screening the population for violent behaviour would be very difficult and subjective.	
	• As Watson and Rayner (1920) found a child could be conditioned to fear various stimuli, this could be used to condition society to buy products / link to advertising	

	- Advertising or public health messages can be considered a form of classical conditioning through association of a product to positive outcomes - Aversion therapy is a treatment which uses classical conditioning principles to attempt to socially control/minimise drug use - Phobias can be treated using systematic desensitisation which is a form of control using relaxation techniques - Only one 11 month old male was tested in Watson and Rayner (1920) which is not representative of the general population so any treatments that are developed from this research may not be helpful for a lot of people - Little Albert's mother withdrew him from the study so his fear of rats (or other stimuli) cannot be tested to see if it can be extinguished so negative forms of social control could be long lasting **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)

Question Number	Indicative content	Mark
5	**AO1 (4 marks), AO2 (4 marks), AO3 (4 marks)** **AO1** • Social learning is about behaviour being observed and then imitated. • Social learning theory suggests we learn by observing and modelling those who are similar to us, such as same gender. • Operant conditioning proposes positive reinforcement which is when behaviour that is rewarded is more likely to be continued in future • Classical conditioning is when a neutral stimulus (NS) becomes associated with a response after repeated pairings with an unconditioned stimulus (UCS). **AO2** • People may have observed significant others avoiding eye contact with others on public transport so imitated this. • Sam may have noticed a male of a similar age who had a trait he wanted like being handsome communicate with others so began talking to others to model them. • Communication after an incident on public transport may be reassuring and act as a positive reinforcer. • People may have learned not to communicate on the bus as they had experienced repeated harassment (UCS) when communicating with others on public transport (NS) leading to fear (UCR/CR). **AO3** • Bandura (1961, 1963) showed behaviour can be learned through modelling with children copying adult role models to perform aggressive or non-aggressive acts, so this may also be the case with communication. • Skinner (1948) found pigeons learnt superstitious behaviour through food pellets which was reinforcing, so communication may serve as positively reinforcement so is continued. • However, studies such as Skinner (1948) used animals which may lack generalisability so this may not be helpful to explain the behaviour of humans on Sam's bus. • Caspi et al. (2002) found individuals possessing the MAOA-L gene showed greater antisocial behaviour when they experienced severe childhood maltreatment, which shows the influence of both internal and external factors on human behaviour and could be the same with communication. **Look for other reasonable marking points.**	**(12)**

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)**	**(20)**
	AO1	
	• The Scientific Procedures Act (1986) and the Home Office regulate psychological research with animals	
	• Reduction is where the number of animals must be kept to a minimum	
	• The accommodation/caging must be suitable for the animal being used in the research	
	• The likely benefits of the research are compared to costs to the animals when assessing if the study can go ahead	
	• Endangered species can be used if there is appropriate justification that other species cannot be used	
	• Practically, animals may be selected with consideration given to similarity to humans (such as genes, brain)	
	• Animal research can be controlled very precisely through keeping temperature and lighting regulated	
	• Pavlov (1927) used dogs to show how a salivation response can be conditioned to various stimuli	
	• Beeman (1947) found that aggressive responses reduced in rodents when they had been castrated, and aggressiveness increased when they were injected with testosterone	
	AO3	
	Ethical	
	• Damage to the brain of a human to study drugs would not be ethical	
	• The likely benefits of research focus on the benefits for humans and not animals which is unfair	
	• Ryder coined the term 'speciesism' and proposed it is morally wrong to treat animals differently to humans	
	• Humans should protect their own species so if this means sacrificing animals then this is justified	
	• Pavlov's (1927) experiment with dogs involved invasive procedures which would be difficult to justify with current guidelines	
	• Harlow's (1958) research with monkeys violated the current Scientific Procedures Act (1986) and Home	

Office guidelines as the animals suffered extreme distress and early death

Practical

- Differences in human and animal species means results may lack generalisability/validity

- For example, the morning sickness drug thalidomide showed negative outcomes for humans but not for animals

- Multiple generations can be studied with animals which would be impractical with humans

- Drugs have been developed from animal research which has benefitted both animals and humans, such as insulin for diabetes (for animals and humans) and drugs for Parkinson's disease (for humans)

- Pavlov's (1927) experiment with dogs lead to the discovery of classical conditioning which may justify the invasive procedures

- Harlow's (1958) surrogate mother studies had important implications for adoption so perhaps the benefits outweighed the costs

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)