



Mark Scheme (Results)

June 2022

Pearson Edexcel

GCE Psychology 9PS0/01

Paper 1: Foundations in Psychology

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June 2022

Publications Code 9PS0_01_rms_20220818

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General Marking Guidance

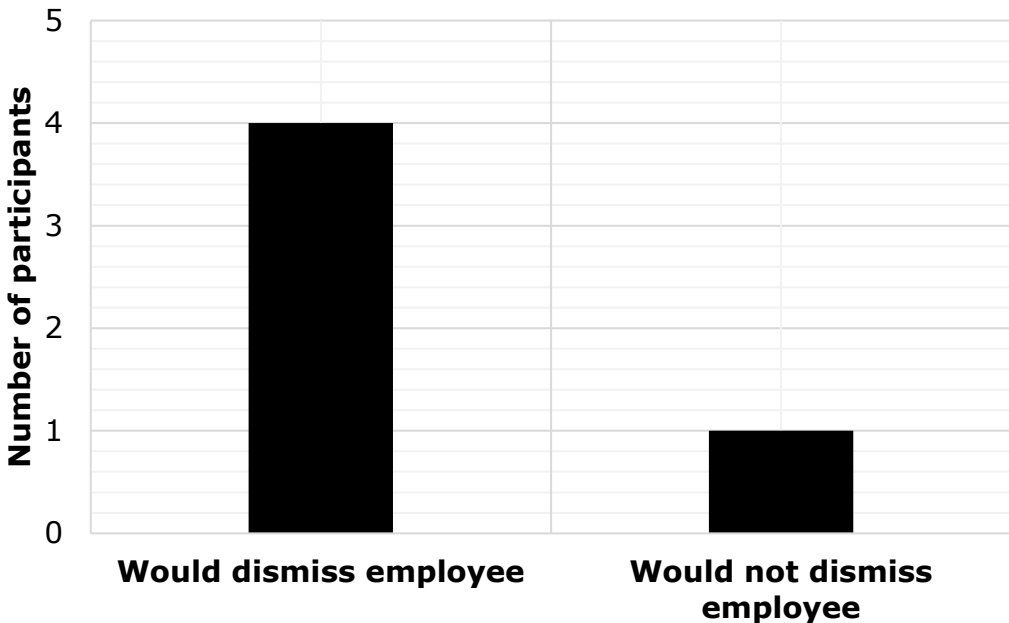
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should 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.

Social Psychology

Question Number	Answer	Mark
1 (a)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Up to two marks for a description of how qualitative data was gathered in their social psychology practical investigation.</p> <p>For example:</p> <ul style="list-style-type: none"> We used open ended questions about favouritism towards other groups of students in college (1) and gathered detailed opinions from the respondents on their views about students from different groups in college (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the social psychology practical investigation.</p>	(2)

Question Number	Answer	Mark
1 (b)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Up to two marks for a description of how quantitative data was gathered in their social psychology practical investigation.</p> <p>For example:</p> <ul style="list-style-type: none"> We used statements with Likert scales ranging from 0 to 10 to gather a score for in-group favouritism (1) where respondents rated how far they agreed or disagreed with statements about student groups in college (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the social psychology practical investigation.</p>	(2)

Question Number	Answer	Mark
1 (c)	<p style="text-align: center;">AO2 (1 mark), AO3 (1 mark)</p> <p>One mark for identification of an improvement to the social psychology practical investigation (AO2). One mark for justification of the improvement to the social psychology practical investigation (AO3).</p> <p>For example:</p> <ul style="list-style-type: none"> • We could have conducted a pilot study and tested our questions about in-group favouritism before distributing them to the students we sampled (1) which would have increased the validity of the findings by making sure the questionnaires we used could be accurately understood by the students answering the questions (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the social psychology practical investigation.</p>	(2)

Question Number	Answer	Mark						
2	<div><div>A02 (3 marks)</div><div><p>One mark for correct/appropriate title (see graph below for a suitable example)</p><p>One mark for correct/appropriate labelling of axes (see graph below for a suitable example)</p><p>One mark for correct plots of data points (see graph below for correct plotting)</p><p>For example:</p><div><div>A bar chart to show the number of participants with high scores for authoritarian personality who would or would not dismiss the employee</div><table><tr><th>Decision</th><th>Number of participants</th></tr><tr><td>Would dismiss employee</td><td>4</td></tr><tr><td>Would not dismiss employee</td><td>1</td></tr></table></div></div><div>Look for other reasonable marking points.</div></div>	Decision	Number of participants	Would dismiss employee	4	Would not dismiss employee	1	(3)
Decision	Number of participants							
Would dismiss employee	4							
Would not dismiss employee	1							

Question Number	Indicative Content	Mark
3	<p style="text-align: center;">AO1 (4 marks), AO3 (4 marks)</p> <p>AO1</p> <ul style="list-style-type: none"> • Culture incorporates the values, ideas, customs, and behavioural norms of a particular group of people or a society. • Individualistic cultures emphasise individualism within the group, while collectivist cultures stress the importance of the whole group as a collective. • Multiculturalism is where the diversity of all cultures is accepted within a society and one group is not considered to be superior. • Intergroup prejudice are negative attitudes about different cultural groups and intragroup prejudice are beliefs within a culture about different subcultural groups. <p>AO3</p> <ul style="list-style-type: none"> • Adorno et al.'s (1950) concept of authoritarian personality claims that specific characteristics may result in hostility to people of a different race, social group, age, sexuality, or other minority group, so prejudice may be a personality difference and not due to culture. • Al-Zahrani and Kaplowitz (1993) found Saudis, a collectivist culture, tended to self-report more negative out-group bias than Americans, an individualistic culture, so prejudice may develop because of different types of culture. • Guimond (2013) looked at cultural norms and government policy within multicultural societies and found that anti-Muslim attitudes were reduced when the pro-diversity policy was high, so prejudice can be reduced when diversity and multiculturalism is promoted. • Negative attitudes within a culture to those who are unemployed may not be intragroup subcultural prejudiced beliefs about values but could be a result of situational forces such as conflict over access to material resources. <p>Look for other reasonable marking points.</p>	(8)

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.		
	0	No rewardable material.
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 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	5–6 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 may be imbalanced. (AO3)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Cognitive Psychology

Question Number	Answer	Mark
4 (a)	<p style="text-align: center;">AO2 (2 marks)</p> <p>One mark for stating the fully operationalised independent variable. One mark for stating the fully operationalised dependent variable.</p> <p>For example:</p> <p>Independent variable (IV)</p> <ul style="list-style-type: none"> Whether the words are monosyllabic or polysyllabic (1) <p>Dependent variable (DV)</p> <ul style="list-style-type: none"> The number of words recalled correctly from the list of 14 (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the scenario.</p>	(2)

Question Number	Answer	Mark												
4 (b)	AO2 (4 marks)	(4)												
	<table><tr><td colspan="2">Condition A: monosyllabic words</td><td colspan="2">Condition B: polysyllabic words</td></tr><tr><td>Number of words correctly recalled</td><td>Rank</td><td>Number of words correctly recalled</td><td>Rank</td></tr><tr><td colspan="2">Total = 145.5</td><td colspan="2">Total = 64.5</td></tr></table>		Condition A: monosyllabic words		Condition B: polysyllabic words		Number of words correctly recalled	Rank	Number of words correctly recalled	Rank	Total = 145.5		Total = 64.5	
	Condition A: monosyllabic words		Condition B: polysyllabic words											
	Number of words correctly recalled		Rank	Number of words correctly recalled	Rank									
	Total = 145.5		Total = 64.5											
	$U_a = 10 \times 10 + \frac{10 \times 11}{2} - 145.5 = 9.5$													
	$U_b = 10 \times 10 + \frac{10 \times 11}{2} - 64.5 = 90.5$													
	One mark for correct totals (both must be correct for the mark).													
	One mark for $10 \times 10 + \frac{10 \times 11}{2}$													
	One mark for correct figure for U_b 90.5													
One mark for correct figure for U_a 9.5														
Note: U = the smaller value 9.5														

Question Number	Answer	Mark
4 (c)	<p style="text-align: center;">AO2 (1 mark)</p> <p>One mark for correct determination of significance.</p> <ul style="list-style-type: none"> The calculated U value (9.5) is less than the critical value (27), so the results are significant (1). <p>Look for other reasonable marking points.</p>	(1)

Question Number	Answer	Mark
5	<p style="text-align: center;">AO1 (3 marks)</p> <p>Up to three marks for a description of working memory model (Baddeley and Hitch, 1974).</p> <p>For example:</p> <ul style="list-style-type: none"> The central executive is said to control the subsystems while also being involved in tasks such as problem solving and attention (1). The visuospatial sketchpad is a subsystem that processes visual input such as images or light, and spatial information such as direction (1) and the phonological loop processes auditory information using the articulatory control to subvocalise and the phonological store to temporarily hold sound (1). <p>Look for other reasonable marking points.</p>	(3)

Question Number	Indicative Content	Mark
6	<p style="text-align: center;">AO1 (4 marks), AO3 (4 marks)</p> <p>Schmolck et al. (2002)</p> <p>AO1</p> <ul style="list-style-type: none"> • The sample included 8 male controls and 1 female, 5 male participants with brain damage. • All participants were given nine tests based on the same line drawings of 24 animals and 24 objects which could further be assigned to one of 8 categories; e.g. 6 birds. • For tests 8 and 9, the number of correct statements and incorrect statements were calculated, then they assigned a quality score (0–4) to each definition. • Schmolck et al. (2002) concluded that deficits in semantic knowledge is related to damage in anterolateral temporal cortex and not medial temporal lobe structures. <p>AO3</p> <ul style="list-style-type: none"> • Brain damaged patients are not representative of the wider population so findings about the role of brain regions in semantic knowledge may not be generalisable to all human memory. • The procedure was standardised with all participants seeing the same drawings which controls for variables increasing the reliability of the findings about semantic memory. • Quantitative data is an objective measure of memory performance which reduces subjectivity in the interpretation of the data about memory functioning. • They were unable to test semantic memory prior to brain damage so the conclusions do not consider individual differences in memory as there was no baseline measure before brain damage. <p>Steyvers and Hemmer (2012)</p> <p>AO1</p> <ul style="list-style-type: none"> • A random sample of 22 participants for the verbal cue condition and 25 participants for the visual cue condition was recruited from an experimental participant pool at the University of California. • A verbal cue condition with no image was used where participants had to list objects that came to mind that they expected to see in a given scene, such as a kitchen, or hotel room. • There was a separate group in the experimental condition who made perceptual judgements based on visual cues recalling what they could see. • They found that participants had strong prior expectations from schemas that are in line with occurrences of the objects in natural environments. <p>AO3</p> <ul style="list-style-type: none"> • The sample may only be representative of university students in a western society and may not be generalisable to the way prior expectation affects schema cross-culturally. • The verbal cue test for the prior expectations of participants gave Steyvers and Hemmer (2012) data to compare to the findings of the experimental condition increasing reliability. • Using an independent measures design means that the impact of individual differences may have affected the results about prior expectations, reducing the validity of the findings. • The study is supported by research from Bartlett (1932) who also found that prior expectation and schema affected the recall of information from the 'War of the Ghosts' story. 	(8)

Sebastián and Hernández-Gil (2012)**A01**

- The sample was 570 volunteer, or volunteered, children aged between 5 and 17 years old from a range of schools, such as public and private, in Madrid.
- Participants were divided into five different age groups and then each child was read the digits independently.
- Each participant was read increasing sequences of digits to recall in the correct order with digit span recorded as the maximum digits recalled in the correct order without error.
- Digit span in the Spanish population is significantly shorter than Anglo-Saxon culture, probably due to the word length effect associated with digits.

A03

- The sample is only representative of Spanish speaking children in the Madrid region, so it cannot be generalised beyond this population to speakers of other languages.
- The use of cross-sectional groups allowed them to track the development of digit span over time without the extended duration of conducting a longitudinal study.
- Digit sequence recall is artificial and has limited task validity as children are unlikely to learn random sequences of numbers in their day-to-day experiences.
- The study can be replicated to test verbal digit span across cultures to understand cross-cultural developmental and individual differences in phonological processing in working memory.

Look for other reasonable marking points.

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer		
	0	No rewardable material.
Level 1	1-2 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	3-4 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	5-6 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	7-8 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)

Biological Psychology

Question Number	Answer	Mark
7 (a)	<p style="text-align: center;">AO2 (2 marks)</p> <p>Up to two marks for describing how Tabitha could use a volunteer sampling technique.</p> <p>For example:</p> <ul style="list-style-type: none"> Tabitha could post a notice on social media advertising for female participants aged between 20 years old and 30 years old (1) and provide her contact details for them to respond and offer to take part in her research about brain activity and aggression (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the scenario.</p>	(2)

Question Number	Answer	Mark
7 (b)	<p style="text-align: center;">AO2 (3 marks)</p> <p>Up to three marks for describing the use of a PET brain-scanning technique in the investigation.</p> <p>For example:</p> <ul style="list-style-type: none"> Tabitha would give the female participants a radioactive tracer before they took part so the PET scan can measure their brain activity in response to the stimuli (1). Tabitha would need to take a measure of the resting brain activity prior to any aggressive or non-aggressive stimuli being presented to the participants (1). She would then show each participant the film scenes, such as an aggressive car chase or calm walk in a park to measure the brain activity in response to each scene (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the scenario.</p>	(3)

Question Number	Answer	Mark
7 (c)	<p style="text-align: center;">A02 (1 mark), A03 (1 mark)</p> <p>One mark for identification of a strength in relation to the scenario (A02) One mark for justification of the strength (A03)</p> <p>For example:</p> <ul style="list-style-type: none"> A PET scan will give Tabitha an image of the participant's brain activity when they are watching the scenes from the films that can be checked by other researchers (1) which increases the reliability of her findings about aggression as multiple researchers can interpret the scan to achieve consistency (1). <p>Look for other reasonable marking points.</p> <p>Generic answers score 0 marks.</p> <p>Answers must relate to the scenario.</p>	(2)

Question Number	Answer	Mark
7 (d)	<p style="text-align: center;">A02 (1 mark), A03 (1 mark)</p> <p>One mark for identification of an improvement in relation to scenario (A02) One mark for justification of the improvement (A03)</p> <p>For example:</p> <ul style="list-style-type: none"> Tabitha could use a more representative sample of participants by including different ages from 18 years old to 75 years old (1), which would improve the generalisability of her findings about brain activity and aggression to a wider target population of different generations of people (1). <p>Look for other reasonable marking points.</p> <p>Answers must relate to the scenario.</p> <p>Generic answers score 0 marks.</p>	(2)

Question Number	Indicative Content	Mark
8	<p style="text-align: center;">A01 (4 marks), A02 (4 marks)</p> <p>A01</p> <ul style="list-style-type: none"> • Correlational research measures two variables to see if there is a relationship between them. • Correlations can use the same individual participants where each participant will be measured on both co-variables. • The results of correlation research can be plotted on a scatter diagram to show a direction, such as positive correlation, which is when one variable increases the other variable increases. • A correlation can be considered strong or weak, which shows the strength of the relationship between the covariables being tested. <p>A02</p> <ul style="list-style-type: none"> • Jinal could measure nicotine through cigarette use or vaping and count the number of negative life experiences in childhood to see if one increases alongside the other. • She could give a questionnaire to participants to gather data on how many cigarettes are smoked per day and measure the number of negative childhood experiences the same participants had at different ages. • Jinal may use a scatter diagram to plot her data about the volume of recreational drug use and how many negative childhood experiences they had to see if there is a positive correlation. • She could determine the strength of the relationship between nicotine and negative childhood experiences, if this is weak she could then investigate other factors involved in nicotine use. <p>Look for other reasonable marking points.</p>	(8)

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer		
	0	No rewardable material
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments, but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures (AO2)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Learning Theories

Question Number	Answer	Mark
9	<p style="text-align: center;">AO2 (2 marks)</p> <p>Up to two marks for a description of operant conditioning in relation to the scenario.</p> <p>For example:</p> <ul style="list-style-type: none">• Reward points are positive reinforcement that encourage Ruhee to work hard in order to receive the desirable consequence of the points for things like homework (1). The points are a secondary reinforcer that Ruhee wants to accumulate to exchange for the primary reinforcer of snacks at break time (1). <p>Look for other reasonable marking points. Generic answers score 0 marks. Answers must relate to the scenario.</p>	(2)

Question Number	Answer	Mark
10 (a)	<p style="text-align: center;">AO2 (4 marks)</p> <p>Up to four marks for a description of classical conditioning in relation to the scenario.</p> <p>For example:</p> <ul style="list-style-type: none"> The unconditioned stimulus would be the pasta in fish sauce that resulted in an unconditioned response of being sick (1). The restaurant was the neutral stimulus that produced no instinctive reaction from Victor (1). When the unconditioned stimulus of fish sauce was paired with the neutral stimulus of the restaurant it became a conditioned stimulus (1), resulting in the restaurant triggering Victor's conditioned response of feeling sick, so he no longer wants to go (1). <p>Look for other reasonable marking points. Generic answers score 0 marks. Answers must relate to the scenario.</p>	(4)

Question Number	Answer	Mark
10 (b)	<p style="text-align: center;">AO1 (2 marks), AO3 (2 marks)</p> <p>One mark for identification of each weakness (AO1) One mark for justification of each weakness (AO3)</p> <p>For example:</p> <ul style="list-style-type: none"> Classical conditioning cannot explain behaviours such as a fear where an individual has not encountered the stimulus for pairing to take place (1), so it cannot be applied to a wider range of learned behaviour unlike social learning theory which explains the process of learning behaviour through observing the actions of others (1). Evidence supporting classical conditioning has largely taken place on animal subjects which may not be representative of how human associations form during learning (1), such as stages of classical conditioning being explained using the salivation responses of dogs in confinement which when extrapolated may not fully explain how humans are conditioned (1). <p>Look for other reasonable marking points.</p>	(4)

Question Number	Indicative Content	Mark
11	<p style="text-align: center;">A01 (4 marks), A03 (4 marks)</p> <p>A01</p> <ul style="list-style-type: none"> • The participants were 33 boys and 33 girls aged between 42 months and 71 months from the Stanford University Nursery school. • The children were randomly assigned to three different groups with 11 boys and 11 girls in each group. • A 5-minute film of a male role model being aggressive to the Bobo doll was shown to the children after which they watched the model be either rewarded, punished or given no consequences. • Two observers then observed the children's behaviour for 10 minutes in a different room playing with the Bobo doll. <p>A03</p> <ul style="list-style-type: none"> • The participants were of an equal gender mix which prevents androcentric bias in findings, so they are more generalisable to children of both genders. • Randomisation means they were not matched for prior aggression levels so one group may have had higher aggression prior to exposure to the role model. • The standardised film clip showing the process of vicarious reinforcements give internal consistency in the exposure to the role model conditions, increasing the reliability of the findings. • A 10-minute observation may not reflect how vicarious reinforcement influences children's learned behaviour in the long-term, limiting the application of the findings about learned aggression. <p>Look for other reasonable marking points.</p>	(8)

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer		
	0	No rewardable material.
Level 1	1-2 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	3-4 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	5-6 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	7-8 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)

Issues and Debates

Question Number	Indicative Content	Mark
12	<p style="text-align: center;">A01 (4 marks), A03 (4 marks)</p> <p>A01</p> <ul style="list-style-type: none"> • Reductionism means looking at the smaller, isolated parts of human behaviour when studying and measuring it. • Holism looks at the whole person instead as it considers the influences of experience/culture/socialisation on human behaviour. • Watson and Rayner (1920) focussed on the pairing of a stimulus and response between a rat and Little Albert's emotional reaction. • Scientific research may reduce complex human actions into isolated specific variables when testing the learning of behaviour. <p>A03</p> <ul style="list-style-type: none"> • Operant conditioning reduces learning to simplistic rewards and punishments in suggesting that a desired consequence can sufficiently explain learned behaviour. • Social learning theory suggests learning is more holistic and includes cognitive processes involved attention to role models that individuals identify with, so not all theories of learning are reductionist. • As Watson and Rayner (1920) only focussed on stimulus-response associations they ignored possible external factors for Little Albert's emotional reaction, some features of learning theory could be considered reductionist. • Learning theories may ignore the whole picture involved in learning behaviours because of their focus on the isolated components of behaviour as they are underpinned by empiricism and scientific testing, such as Skinner's (1948) study of pigeons. <p>Look for other reasonable marking points.</p>	(8)

Level	Mark	Descriptor
A01 (4 marks), A03 (4 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.		
	0	No rewardable material.
Level 1	1–2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 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	5–6 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 may be imbalanced. (AO3)
Level 4	7–8 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Question Number	Indicative Content	Mark
13	<p style="text-align: center;">A01 (6 marks), A03 (6 marks)</p> <p>A01</p> <ul style="list-style-type: none"> • Nurture refers to the environment, interactions, and experiences that a person has over the duration of their lifetime. • Nature refers to the internal, innate aspects of a person that they are born with such as their physiological attributes. • Amnesia may occur following damage to brain regions because of an environmental influence. • Brain functioning can be influenced by nurture such as drug taking behaviour to achieve reward pathway excitation. • Nurture can include cultural experiences that change memory process through building individual schemas. • The environment can influence brain functioning, such as through exposure to toxins in the womb resulting in early developmental damage to the brain. <p>A03</p> <ul style="list-style-type: none"> • Nurture is difficult to isolate when studying memory or brain functioning and so the influence of nurture on these components of human behaviour may never be completely measurable. • Raine et al. (1997) found differences in the brains of murderers (NGRI's) suggesting that violence is a result of brain functioning in the prefrontal cortex, so nurture may not have a strong influence. • The case of HM shows that human memory is a function of the brain but that an environmental process can change the operation of human memory, so nature and nurture are linked. • Olds and Milner (1954) found that stimulation of neural pathways resulted in the experience of pleasure, so while a neural response is an innate process it is the drug intake that triggers this, which would be nurture. • Bartlett's (1932) theory of reconstructive memory highlights how we use prior experiences and schemas that are part of individual personal history, so memory is highly influenced by nurture. • The influence of cannabis during pregnancy has been claimed by Chia-Shan Wu et al. (2011) to interfere in pre-natal brain maturation leading to deficits in higher-order cognitive functions, meaning nurture can influence both biological and cognitive psychology simultaneously. <p>Look for other reasonable marking points.</p>	(12)

Level	Mark	Descriptor
AO1 (6 marks), AO3 (6 marks) Candidates must demonstrate an equal emphasis between knowledge and understanding vs judgement/conclusion in their answer.		
	0	No rewardable material.
Level 1	1–3 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A judgement/decision 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) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material leading to a judgement/decision being presented. Candidates will demonstrate a grasp of competing arguments but response may be imbalanced. (AO3)
Level 3	7–9 Marks	Demonstrates accurate knowledge and understanding. (AO1) Displays a mostly developed and logical argument, containing mostly coherent chains of reasoning. Demonstrates an awareness of competing arguments, presenting a judgement/decision which may be imbalanced. (AO3)
Level 4	10–12 Marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to a balanced judgement/decision. (AO3)