GCSE (9–1)

Psychology

J203/02: Studies and applications in Psychology 2

General Certificate of Secondary Education

Mark Scheme for November 2020

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

Annotations

Annotation	Meaning
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Question			Answer	Mark	Guidance
1	**(a)**		A - case study	1	
1	**(b)**		C - MRI	1	
1	**(c)**		D - low generalisability	1	
2	**(a)**		1 mark for correctly identifying the suggestion that refers to capacity of short-term memory as '*she is trying to put too much information in to her memory*'.	1	
2	**(b)**		1 mark for an appropriate method of increasing short-term memory. Most likely answer is chunking.	1	Allow examples to illustrate chunking.
2	**(c)**		1 mark for (maintenance) rehearsal/repeating or rehearsing information. 1 further mark for an elaborated response in context of the source. For example, 'Yasmin must repeat or rehearse [1] the information to allow it to be moved from short-term to long-term memory [1]'. Or, 'Once information is encoded into short-term memory, it goes through maintenance rehearsal so it can be transferred in to long-term memory'.	2	For context, the response must refer to features of the Multi-store Model of Model, for example by moving information from short-term to long-term memory.
3			Strengths or weaknesses can be used to evaluate the Multi-store Model of Memory.	4	For full marks, two separate evaluative points must be fully elaborated.

			1 mark for identifying a strength or weakness of the Multi-store Model of Memory. 1 further mark for an elaborated response explaining how or why this is a strength or weakness. Most likely answers will refer to the model being too simplistic or reductionist; that neuropsychology has suggested that long-term memory is made up of more than one store; that the model over-emphasises the role of rehearsal and not the meaning of information. For example, 'The multi-store model is reductionist [1], as it over simplifies the memory process [1].' Or 'The model over emphasises the role of rehearsal [1], there is lots of information in the long-term memory that has not been rehearsed but stored because it has meaning [1]'. Or, 'The multi-store model of memory is useful [1] because it showed us that short-term memory and long-term memory are separate memory stores [1]'.		Responses can refer to two weaknesses and still achieve full marks.
4			1 mark for each correctly matched type of amnesia to its definition as shown below: Anterograde amnesia - Difficulty in forming new memories. Retrograde amnesia - Difficulty in recalling memories from the past.	2	
5			1 mark for each correctly placed part of the brain: The part of the brain associated with anterograde amnesia is the **hippocampus.** This is because information from the short-term memory needs to pass through here to reach the long-term memory. Damage to the **frontal lobe** is associated with retrograde	3	

			amnesia. Procedural memories like knowing how to drive a car or play a musical instrument can be affected by damage to the *cerebellum.*		
6	**(a)**		1 mark for an appropriate way in which memories can be reconstructed (other than by shaped by experience or expectation). Most likely answer will include: Confabulation. Distortion (through the use leading questions).	1	Allow definitions or description of confabulation such as 'making things up' or distortion alone.
6	**(b)**		1 mark for recognising that the common factor is 6. 1 mark for showing accurate workings. 1 mark for the correct calculation 2/5.	3	6 is the common factor 12/6 = 2 30/6 = 5 Answer 2/5 Alternative methods of calculating the fraction should be accepted.
7			1 mark for identifying a criticism of the Theory of Reconstructive Memory. 1 mark for an elaborated response describing how or why it is a criticism of the theory. Most likely criticisms will refer to: They theory is reductionist; the theory doesn't explain how memories are processed; the concept of schemas is vague and hypothetical; problems with the evidence to support it; the reconstructive theory is very complicated. For example, 'The theory of reconstructive memory is reductionist [1] as it does not explain how memories are processed [1]'. Or, 'Schemas are very vague [1] as they can't be seen, they cannot be measured [1]'.	2	

8			1 mark for the mere identification of a way the development of neuropsychology as contributed to measuring different memory functions. 1 mark for an elaborated response which goes beyond merely identifying and which explains how it has contributed to measuring memory function. For example, 'The Wechsler memory test [1] and its contribution to understanding memory problems stemming from brain injury or dementia [1]'. Or, 'Neuropsychologists have developed tests to use with brain damaged patients [1] so they can identify memory problems / develop appropriate treatments [1]'.	2	
9	(a)		B - manifest content	1	
9	(b)		D - pushing unpleasant thought and experiences in to the unconscious	1	
9	(c)		C – it is subjective	1	
10	(a)		1 mark for identifying *'(stays awake) playing computer games'*.	1	
10	(b)		1 mark for identifying *'(shares a room with) her sister who snores'*.	1	
10	(c)		1 mark correctly identifying 'Monday' as the day in which Adeline took the longest to settle to sleep.	1	
10	(d)		1 mark for the correct percentage. 1 mark for expressing the percentage to two decimal places. 1 mark for accurate workings.	3	The percentage is calculated by dividing 96 (Sunday) over the total length of time before sleeping (456) So, 96/456 = 0.2105 0.2105 x 100 = 21.052 So the correct answer is 21.05%
10	(e)		1 mark for the identification of one function of sleep. 1 further mark for an elaborated response explaining how or why it benefits in context of the source.	2	There must be some contextualisation to the source by name or reference.

Most likely responses will refer to: sleep keeps Adeline safe; sleep is good for her healthy brain; sleep helps her to physically repair; sleep is necessary for her emotional stability.

For example, 'Sleep benefits us as it helps us to physically repair [1] so Adeline needs slow wave sleep to heal her cells or damaged tissue [1]'. Or, 'Sleep is necessary for emotional stability [1], Adeline needs sleep to keep her hormones balanced [1]'.

Question			Answer	Mark	Guidance
10	(f)		1 mark for an appropriate open question suitable for this study. 1 mark for application to the source (sleep hygiene). For example, 'How do you organise your bedroom before you go to bed to help you sleep?' Or, how do you change your diet to help you sleep?'. Or, 'How does your bedtime routine help you to sleep?'.	2	For application to the source, the (open) question must refer to sleep hygiene, for example, referring to the external enviroment or maintaining psychological health to promote sleep.
11			1 mark for recognising that melatonin is associated with sleep onset/regulates the sleep – wake cycle. 1 mark for showing an understanding that melatonin is a natural hormone produced by the pineal gland and is active at night to produce melatonin. For example, 'Melatonin is a natural hormone produced by the pineal gland [1]. It helps with the onset of sleep as part of the sleep – wake cycle [1]'. Or 'during the day time, the pineal gland is inactive but as night falls, the gland is activated to produce melatonin [1]. When melatonin levels increase, we feel drowsy and sleepy. It stays high for about 12 hours which helps to regulate our sleep-wake cycle [1]'.	2	

| 12 | | | 1 mark for demonstrating a basic understanding of the Activation Synthesis Theory of Dreaming relating to one feature of neuropsychology.
 1 mark for explaining a good understanding of activation synthesis theory with at least two features of neuropsychology.
 1 mark for an elaborated response explaining the theory in logical progression.

 For example, 'The theory is made up of two parts: activation and synthesis. Activation refers to the random firing of neurons from the brain stem [1]. The signals come from the pons [1]. Synthesis refers to the interpretation of these random signals into spontaneous thoughts by the cerebral cortex [1]'. | 3 | This question requires a focus on the role of neuropsychology in the theory, not just an outline of the theory. |
| 13 | | | Credit evaluation points that refer to the Activation Synthesis Theory of Dreaming. Points can be strengths (e.g. objectivity, reliability, supporting evidence), or weaknesses (e.g. reductionism, validity linked to dreams not making sense and/or lucid dreaming).

 Level 3 (5–6 marks): There is a thorough evaluation of two or more concepts. This should be done with accuracy and clarity. There should be evidence of coherency throughout the evaluation.

 Level 2 (3–4 marks): There is a good evaluation of one or more concepts. This should be done with some accuracy. There should be some evidence of coherency within the evaluation.

 Level 1 (1–2 marks): There is a basic reference to one or more concepts. Evaluation may be more common sense.

 0 marks: No credit worthy response. | 6 | |

			Example of Level 3 response: 'The theory is reductionist because dreams are very complex and usually have meaning to the individual. Other theories, such as Freud's are much more holistic. However, the theory is very objective and reliable as it shows the different parts of the brain involved in dreaming which can be measured'.		
14	**(a)**		D: New York	1	
14	**(b)**		A: opportunity sampling	1	
14	**(c)**		C: civilian, milkman guard	1	
15			1 mark for recognising that cultural differences occur (because of differences between individualistic and collective cultures). 1 mark for an illustrative response clearly describing a cultural difference in relation to pro-social behaviour. For example, 'If you come from a collectivist culture, you may be more likely to help [1] your parents than if you come from an individualistic culture [1]'.	2	
16	**(a)**		1 mark for identifying Oliver as showing conformity.	1	
16	**(b)**		1 mark for identifying Henry as showing obedience.	1	
17			1 mark for identifying conformity as yielding to group pressure. 1 mark for identifying crowd behaviour as a group of people who have come together for a purpose but may behave differently.	2	
18			1 mark for a suggestion as to how minority influence could help reduce mental health stigma and discrimination. 1 mark for an elaborated response showing how this could reduce mental health stigma and discrimination in context of the source. For example, They/Mohammed and Jordana could get a speaker to come in to their youth club [1] and give a	2	There should be a reference to characteristics of minority influence e.g. commitment, consistency, and persuasion.

			persuasive talk on mental health to try and reduce the stigma attached to it [1]'. Or, 'Mohammed and Jordana could be consistent [1] in arguing against mental health [1] to reduce the stigma [1]'.			
19			AO1 description marks can be awarded for knowledge and understanding of: showing knowledge of quantitative data as numerical data and qualitative data as language-based descriptions/reference to both data types in Bickman's study into the power of a uniform and at least one other study from a different area of psychology studied. **AO1** **Level 3 (5-6 marks)** The response demonstrates a **good** understanding of the both data types of data throughout to **both** Bickman's (1974) study **and** at least one other area of psychology. This is done with accuracy and clarity. The information presented is relevant and substantiated in a good structure. **Level 2 (3-4 marks)** The response demonstrates a **reasonable** understanding of both data types which has some links to **both** Bickman's (1974) study **and** one other area of psychology. There may be some inaccuracies though most of the information presented is relevant. The response has a reasonable structure. **Level 1 (1-2 marks)** The response is **basic** and shows only a vague/very weak understanding of the types of data. Links to Bickman's (1974) study and/or another area of psychology are vague/very weak. The information should have some relevance though there will be inaccuracies. Structure will be weak/poor.	13		**For AO1**: to be placed in Level 2 or above, the response must refer to **both** Bickman's (1974) study **and** at least one other area of psychology.	

			0 marks – No creditworthy response. **AO3** AO3 marks for critical evaluation points relating to the strengths and limitations in relation to Bickman's (1974) study and at least one other study using quantitative or qualitative data. **Level 3 (6-7 marks)** There is a **thorough** evaluation which offers breadth and/or depth covering **both** Bickman's (1974) study **and** at least one other area of psychology. Points are coherent and relevant and the response is developed in order to reach a substantiated judgement in response to the question. **Level 2 (4-5 marks)** There is a **good** evaluation which offers breadth and/or depth covering **both** Bickman's (1974) study **and** at least one other area of psychology. Points may be brief but should still be relevant and used to reach a supported judgement in response to the question. **Level 1 (1-3 marks)** There may be some **basic** attempt at evaluation but it will be weak. Judgements will be either unclear or absent. **0 marks –** No creditworthy response.		**For AO3:** to be placed in Level 2 or above, the evaluation must refer to **both** Bickman's (1974) study **and** at least one other area of psychology.
20			1 mark for ticking the third hypothesis as the most suitable hypothesis for this study - There will be a significant difference in the risk-taking taking behaviour of participants wearing a protective cycle helmet and those wearing a baseball cap or no headgear.	1	
21	**(a)**		1 mark for showing an understanding of self-selected sampling.	2	For full marks, the response must be context of the study in the source, e.g. 'workplace' counts as contextualisation.

			1 mark for an elaborated response showing how a self–selected sample could be achieved in the study in the source. For example, 'A self-selected sample is where the participants volunteer themselves to take part in the study [1] so the psychologist could have put a poster up in his <u>workplace</u> and advertised for participants [1]'.		
21	**(b)**		1 mark for a generic strength of self-selected sampling 1 mark for an elaborated response placing the strength in context of the study in the source. For example, 'Self-selected sampling is very quick and easy to carry out [1], the psychologist would just put up a poster in his workplace and participants would volunteer themselves [1]'. Or 'You can be sure you have consent with self-selected sampling [1] so the psychologist would know his <u>colleagues</u> have agreed to take part in his study [1]'.	2	For full marks, the response must be context of the study in the source, e.g. 'workplace/colleagues' count as contextualisation.
22			1 mark for demonstrating an understanding of the concept of validity. 1 mark for an elaborated response clearly explaining how the findings of the study in the source may lack validity. For example, 'Ecological validity means how true to life the findings are [1], in this study they used a computer game to measure risk-taking behaviour, risk taking may be different in real life situations'. [1]	2	Any type of validity (internal or external) should be credited. The nature of this question requires contextualisation to the study in the source.
23			1 mark for demonstrating an understanding of internal reliability. 1 mark for an elaborated response explaining how the psychologist could achieve internal reliability for the study in the source. For example, 'Internal reliability refers to consistency of results within the study [1] so in this study, the psychologist could have used a standardised	2	

			procedure/kept the procedure the same as each participant played the risk-taking game 10 times' [1].		
24			1 mark for identifying a strength of collecting primary data. 1 mark for an elaborated response explaining how or why this is a strength for the psychologist in this study. For example, 'One strength of collecting primary data is as the psychologist recorded the risk-taking behaviour himself [1], he can trust the data [1] and know it has not been misinterpreted by someone else.	2	For contextualisation, there should be some reference to the risk-taking computer game as the primary data being collected.
25			1 mark for a full title 1 mark for correctly labelled axis 1 mark for the accurate plotting of the data Most suitable graph type is a bar chart.	3	The graph drawn must be appropriate for the data type, for example, with categorical data.
26			1 mark for each brief conclusion that does not utilise the data in the source. (2) 1 mark for showing use of the data in the source to support each conclusion. (2) For example, 'One conclusion from the data is that wearing a protective helmet makes people take more risks [1] <u>because those participants who wore a helmet took more risks (17%) than those who wore a baseball cap (13%</u>) [1]'; and 'One conclusion from the data is that wearing a baseball cap does not increase the likelihood of taking risks [1] <u>because there was no real difference in scores between those participants wearing a baseball cap (13%) and those not wearing any head gear (12%)</u> [1]'.	4	For full marks, both conclusions *must use the results of the study* to support their conclusions – see the underlined examples in the 'Answer' column.

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