



**GCSE (9–1)**

**Psychology**

**J203/02: Studies and applications in Psychology 2**

General Certificate of Secondary Education

**Mark Scheme for June 2019**

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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.

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## Annotations

Annotation	Meaning
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## Subject Specific Marking Instructions

QUESTION		ANSWER	MARKS	GUIDANCE
1	(a)	B – REM	1	
	(b)	C – sends signals	1	
	(c)	B – cerebral cortex	1	
2		<p>1 mark for demonstrating understanding of the concept of reductionism.</p> <p>1 mark for demonstrating how reductionism is a limitation in the context of the theory.</p> <p>e.g. ‘Reductionism refers to the idea that something can be explained in simpler terms (1). The theory is too reductionist as dreams are so complex that they cannot just be attributed to the electrical signals in the brain (1).’</p> <p>It reduces dreams solely down to the result of a biological function (1). However, there is evidence to suggest that dreams are not as random as mere neuronal activity in the brain, they are often related to experiences from the day (1).</p>	2	For full marks it must be clear that the criticism is related to the activation synthesis theory.
3		1 mark for each distinct function of sleep. Most likely answers will refer to healthy brain, physical repair, emotional stability, keeping us safe.	2	<p>Do not credit functions that are interchangeable e.g. ‘physical repair’ and ‘healing cells’.</p> <p>Allow examples that fall within these functions.</p>
4		1 mark for each correctly drawn line as shown below;	3	Subtract 1 mark for each additional line drawn.

		<p>The diagram shows four boxes on the left with descriptions of sleep stages, and four boxes on the right labeled Stage 1 to Stage 4. Lines connect the descriptions to the stage labels: Stage 1 is 'The stage before REM sleep when people are in a deep sleep.', Stage 2 is 'The stage of light, drowsy sleep where people can be stirred quite easily.', Stage 3 is 'The stage where people lose consciousness and brain waves begin to slow down.', and Stage 4 is empty.</p>		
5	(a)	Unstructured (interview)	1	
	(b)	'What actually happened (in dreams)'	1	
	(c)	'His anxiety about letting out a secret'	1	Do not credit (his) anxiety alone
	(d)	<p>1 mark for demonstrating an understanding how open questions are constructed (to investigate dreams), e.g.</p> <ul style="list-style-type: none"> <li>• Can you explain some of your reoccurring dreams?</li> <li>• What happened in your most recent dream?</li> <li>• What did you dream about last night?</li> </ul>	1	<p>Questions must be related to dreams or recent experiences.</p> <p>The questions can be related to the source.</p> <p>It must be a question, inviting a detailed/individual response.</p>
	(e)	<p>1 mark for a strength of using qualitative data e.g. higher (construct) validity, more detail/greater depth/richer.</p> <p>1 mark for justifying the strength in relation to the study e.g. to understand the meaning of dreams she needed to be able to go into depth, dreams are unique experiences which cannot be quantified.</p> <p>It provides rich detailed data (1). This will be useful for analysing possible links between dreams and prior experiences (1).</p>	2	
6		<p>For each criticism;</p> <p>1 mark for a brief or basic point. 2 marks for a more developed point clearly related to the</p>	4	Do not credit descriptive statements unless they are in the context of a criticism e.g. do not credit 'participants recorded dreams and fantasies in their own homes' but do credit 'participants may have been unable to

	<p>study.</p> <p><u>Examples of a 1 mark answer:</u></p> <ul style="list-style-type: none"> <li>• the sample was not representative</li> <li>• sample was biased (gender/culture)</li> <li>• It may lack construct validity</li> <li>• Lack of control over IV</li> <li>• there may have been a problem with social desirability</li> <li>• difference in scores may have been down to variabilities in reporting techniques</li> <li>• the findings lack generalisability</li> </ul> <p><u>Examples of a 2 mark answer:</u></p> <ul style="list-style-type: none"> <li>• the sample may not have been representative (1) as only 12 participants were used (1)</li> <li>• the sample was biased (1) as all participants were biopsychology students (1).</li> <li>• the sample was gender biased (1) as there were more females than males/ 10 out of the 12 participants were female (1).</li> <li>• It was culturally biased (1) participants came from (Harvard university) America/an American university (1).</li> <li>• the findings may lack construct validity (1) as dreams and fantasies are too complex to be reduced down to a rating (1)</li> <li>• it may not have always been practical for participants to record their dreams and fantasies (1) leading to inaccuracies due to things like forgetting details of both (1)</li> </ul>		<p>distinguish between REM and non-REM sleep (1) because they recorded dreams and fantasies in their own homes (1)'.</p>
7	Credit understanding and application of two or more	4	Physical environment: no computer / mobile phone use,

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		<p>ideas used to improve sleep/reduce insomnia i.e. relaxation techniques, changes to physical environment and sleep hygiene.</p> <p>1 mark for the identification of one way to improve sleep from sleep hygiene, changes to the physical environment and relaxation techniques. 1 mark for an elaborated response going beyond the mere identification of this.</p> <p>For example, Pawel could use relaxation techniques to fall asleep (1) for example deep breathing and relaxing his muscles (1). Sleep hygiene can also help him to fall asleep (1), he should avoid consuming alcohol or nicotine before sleeping (1).</p>		<p>no light, temperature.</p> <p>Sleep hygiene: alcohol, coffee, nicotine, large meals, taking naps, exercise, sufficient daylight, taking sleeping pills.</p> <p>Relaxation techniques: breathing, muscle relaxation, yoga, clearing the mind, writing down your worries.</p> <p>Context is implicit by giving the appropriate response.</p>
8	(a)	A – field	<b>1</b>	
	(b)	B – dress of the experimenter giving orders	<b>1</b>	
	(c)	B – moving to the other side of a bus stop	<b>1</b>	
9		<p>Evaluation points could include; sample / sampling bias, cultural bias, historical bias, ethical issues, issues of control, gender bias in selection of confederates, ecological validity, construct validity.</p> <p><b>Level 3 (5-6 marks):</b> There is a thorough evaluation which offers breadth and/or depth covering <b>at least two</b> different evaluation points. Points are coherent and relevant and the response is developed in order to reach a substantiated judgement in response to the question.</p> <p><b>Level 2 (3-4 marks):</b> There is a good evaluation which offers breadth and/or depth. Points may be brief but should still be relevant and used to reach a supported judgement in response to</p>	<b>6</b>	<p>For Level 3 marks it needs to be clear that it is related to Bickman's study.</p> <p>Evaluation can be both positive and negative but a balance is not required for full marks.</p> <p>Dispositional factors related to participants (low self-esteem) can be credited if related to opportunity sampling.</p>

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		<p>the question.</p> <p><b>Level 1 (1-2 marks):</b> There may be some basic attempt at evaluation but it will be weak and maybe some omissions. Judgements will be either unclear or absent.</p> <p><b>(0 marks):</b> No credit worthy response.</p>		
10	(a)	Mr Singh or (Science) teacher	<b>1</b>	
	(b)	<p>1 mark for demonstrating that authority is linked to a power/status or threat of punishment /fear of consequences.</p> <p>1 mark for applying this understanding to the source.</p> <p>e.g. 'Authority comes from a person's power to punish us (1) so in this case, Mr Singh punishes his pupils by getting cross and telling them off if they disobey. (1)'</p> <p>'Cerys' authority figure (Mr Singh) has the power to punish (1) and she recognises this and so behaves well in his lessons/always does her homework on time (1)'.</p>	<b>2</b>	<p>Either mark can be awarded without the other.</p> <p>The response must be contextualised for full marks.</p>
11		<p>1 mark for a basic understanding of deindividuation as the loss of identity.</p> <p>2 marks for a more developed and detailed understanding of deindividuation, such as circumstances under which it occurs.</p> <p>1 mark for a relevant example which illustrates deindividuation.</p> <p><u>Examples of a 1 mark answer:</u></p> <ul style="list-style-type: none"> <li>• when someone doesn't feel like an individual anymore</li> <li>• people can be deindividuated if they are wearing the</li> </ul>	<b>3</b>	Example has to explain deindividuation, it must go beyond a mere identification of this.



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		<p>same uniform as everyone else</p> <p><u>Examples of a 2 mark answer:</u></p> <ul style="list-style-type: none"> <li>• Deindividuation can happen when someone is caught up in a crowd / group (1) and then they lose their sense of identity (1).</li> <li>• If someone is part of gang attacking someone (1) they may not feel as guilty as they have come deindividuated (1).</li> </ul> <p><u>Examples of a 3 mark answer:</u></p> <ul style="list-style-type: none"> <li>• Deindividuation can result from being part of a larger group (1) where a person loses their sense of identity (1). For example, mob behaviour can result from no-one feeling personally responsible for their actions (1).</li> <li>• A study showed that people in large crowds are more likely to encourage a person to jump and commit suicide (1). This is not the sort of thing people would do alone because they are more aware of their actions (1). However, in a crowd this awareness drops which is what we mean by deindividuation (1).</li> </ul>		
12	(a)	<p>1 mark for each correctly placed term as shown in the paragraph below;</p> <p>Around <b>thirty</b> people were interviewed in Tottenham. There was an even split between people over and under <b>eighteen</b> years. People represented a range in terms of gender, <b>ethnicity</b> and work status.</p>	<b>3</b>	
	(b)	<p>For the chosen category;</p> <p>1 mark for a description of the group.</p> <p>1 mark for an elaborated response to include the</p>	<b>2</b>	Is should be clear by name or description which category is being referred to.

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		<p>identification (or by name or description) of the sub group.</p> <p>Watchers: young people who were present at the incidents and observed some of what happened but did not become involved in criminal activity (1) such as bystanders or the curious (1).</p> <p>Rioters: young people who were involved in violent disturbances and vandalism (1) such as protestors, retaliators or thrill seekers(1).</p> <p>Looters: young people involved in breaking into shops, stealing from broken-into shops or picking up stolen goods left on the street (1). Such as opportunists or sellers (1).</p>		
13		<p>1 mark for knowledge of the relationship between <b>hippocampal volume</b> and self-esteem.</p> <p>1 mark for a further detail e.g. on the role of the hippocampus or how this part of the brain is related to conformity.</p> <p>e.g. People with low amounts of grey matter in the hippocampus/reduced hippocampal volume generally have lower self-esteem (1). As a result, they are more likely to conform (1).</p>	<b>2</b>	Allow reversals, for example “people with higher hippocampal volume/grey matter have higher self-esteem (1), this makes them less likely to conform (1)”.
14		<p>1 mark for expressing the ratio as 60:15</p> <p>1 mark for reducing this to 4:1</p>	<b>2</b>	
15	(a)	A – encoding	<b>1</b>	
	(b)	B – displacement	<b>1</b>	
	(c)	A - cerebellum	<b>1</b>	

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16	(a)	Normal (distribution)	1	
	(b)	5 (faces)	1	
17	(a)	Ivan	1	
	(b)	Kane	1	
	(c)	<p>1 mark for an example of an appropriate cue in context or the source (revising/taking of exams).</p> <p>1 mark for explaining how this could help to trigger/improve his memory.</p> <p><u>Examples of a 1 mark answer:</u></p> <ul style="list-style-type: none"> <li>• Cues could be used to trigger his memory.</li> <li>• Kane could use a particular pen when revising then take it into the exam as a cue.</li> </ul> <p><u>Examples of a 2 mark answer:</u></p> <ul style="list-style-type: none"> <li>• Kane could wear a particular scent when revising so that if he wears it into the exam (1) the smell will help to trigger his memory (1).</li> <li>• Kane could try to find the time to revise in the exam hall (1) as being back in the same place for the exams will help him to retrieve what he has learned (1).</li> <li>• Kane could drink coffee whilst revising so just before the exam he could drink coffee again (1). The idea is that state-dependent cues help recall information from when revising to when sitting the exam (1).</li> </ul>	2	The suggestions must be feasible.
18		<p>1 mark for a brief or basic criticism. 2 marks for a more developed criticism.</p> <p><u>Examples of a 1 mark answer:</u></p> <ul style="list-style-type: none"> <li>• The model is too simple/ the model is reductionist</li> <li>• the model overemphasises the role of rehearsal</li> <li>• the model ignores the importance of meaning in</li> </ul>	2	Do not credit descriptive statements unless they are in the context of a criticism e.g. do not credit 'the model suggests there is one long term memory store' but do credit 'the model suggests there is one long term memory store (1) when neuropsychological evidence contradicts by showing different areas of the brain are used depending on what kind of data is being stored long term (1)'.

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	<p>memory</p> <ul style="list-style-type: none"> <li>evidence shows that there is more than one long term store</li> </ul> <p><u>Examples of a 2 mark answer:</u></p> <ul style="list-style-type: none"> <li>the model is too simple (1) Evidence shows that there are more than three memory stores (1).</li> <li>the model overemphasises the role of rehearsal (1) and ignores the importance of meaning in memory (1).</li> <li>it ignores individual differences in memory function (1) by suggesting that all human memories have the same structure (1).</li> <li>the concept of the short-term memory is too simplistic (1) as evidence shows that parallel processing of information happens in the short-term (1).</li> </ul>		
19	<p>Responses are likely to refer to Cooper and Mackey, Heaven, Dweck, Tandoc, Bickman (exp 3).</p> <p><u>AO1 marks</u></p> <p>Description of the use of questionnaires including how they are administered, types of questions and types of data generated.</p> <p><u>AO3 marks</u></p> <p>Evaluation of the use of questionnaires which can include strengths (e.g. sample size, accessing thoughts</p>	<b>13</b>	<p><b>For AO1:</b> to be placed in Level 2 or above, the response must refer to <b>both</b> the use of questionnaires in Braun et al.'s study <b>and</b> at least one other study that used questionnaires.</p>

	<p>&amp; feelings, benefits of anonymity, use of closed questions where relevant, comparability of responses) and/or weaknesses (e.g. social desirability bias, inability to clarify questions or verify responses, response bias).</p> <p><b>AO1</b></p> <p><b>Level 3: (5-6 marks):</b> There is a <b>good</b> description of the use of questionnaires. This is done with accuracy and clarity. The information presented is relevant and substantiated in a good structure.</p> <p><b>Level 2 (3-4 marks):</b> There is a <b>reasonable</b> description of the use of questionnaires. There may be some inaccuracies though most of the information presented is relevant. The response has a reasonable structure.</p> <p><b>Level 1 (1-2 marks):</b> There is a <b>basic</b> description of the use of questionnaires. This may include some inaccuracy. The information has some relevance though there will be inaccuracies. Structure will be weak/poor.</p> <p><b>(0 marks):</b> No credit worthy response.</p> <p><b>AO3</b></p> <p><b>Level 3 (6-7 marks):</b> There is a <b>thorough</b> evaluation which offers breadth and/or depth covering at least two different points. Points</p>		
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		<p>are coherent and relevant and the response is developed in order to reach a <b>substantiated</b> judgement in response to the question.</p> <p><b>Level 2 (4-5 marks):</b> There is a <b>good</b> evaluation which offers breadth and/or depth covering at least two different points. Points may be brief but should still be relevant and used to reach a <b>supported</b> judgement in response to the question.</p> <p><b>Level 1 (1-3 marks):</b> There may be some <b>basic</b> attempt at evaluation but it will be weak. Judgements will be either unclear or absent.</p> <p><b>(0 marks):</b> No credit worthy response.</p>		<p><b>For AO3:</b> to be placed in Level 2 or above, the evaluation must refer to <b>both</b> the use of questionnaires in Braun et al.'s study <b>and</b> at least one other study that used questionnaires.</p>
20		Natural observation	<b>1</b>	No marks if both boxes are ticked.
21		<p>1 mark for knowing the observation was non-participant.</p> <p>1 mark for explaining this method in the context of the study e.g. because the researchers were in a separate room/not actively participating in the lesson.</p>	<b>2</b>	<p>The explanation cannot be awarded without identifying the right type of observation.</p> <p>The focus is on the fact that the observer did not participate in the study, not the use of the camera.</p>
22	(a)	<p>1 mark for demonstrating knowledge of the method of covert observation e.g. it is undercover, participants are not aware of being observed.</p> <p>1 mark for applying this method to the study itself e.g. because <b>secret</b> cameras were used, because <b>students</b> did not know they were being watched.</p>	<b>2</b>	The focus is the study being undercover achieved through the use of a secret camera.
	(b)	<p>1 mark for identifying an appropriate strength of the method e.g. no observer effect, higher validity</p> <p>1 mark for applying this strength to the study itself e.g. students behave normally, students' concentration</p>	<b>4</b>	<p>It is possible to get credit for a strength/weakness which is relevant to the method even if it cannot be applied easily to this study.</p> <p>Also credit strengths/weaknesses which are specific to</p>

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		<p>levels would be genuine.</p> <p>1 mark for identifying an appropriate weakness of the method e.g. lack of informed consent, right to withdraw, cannot ask questions, difficulties recording information without being exposed, extraneous variables.</p> <p>1 mark for applying this weakness to the study itself e.g. students could not withdraw, students are being deceived, students did not consent.</p>		<p>the way this covert observation was set up e.g. practicalities of using a secret camera. Unethical alone is not creditworthy; only credit ethical issues which are known not to have been considered, i.e., do not credit no debrief, harm.</p> <p>It does not matter whether a weakness is given first followed by a strength.</p>
23		1 mark for an accurate definition of primary data e.g. data collected directly by the researcher/first-hand information gathered by the researcher themselves.	<b>1</b>	
24		<p>1 mark for demonstrating an understanding that there has to be an agreement/consistency between the observers to have inter-rater reliability.</p> <p>1 mark for relating this to higher validity/more objectivity/reduced observer/researcher bias/reduced subjectivity.</p> <p>1 mark for placing this in context, applying this to the (ratings of) concentration.</p>	<b>3</b>	Simply stating observers is not enough for context. 'Ratings' is given in the question, so cannot be credited alone for context.
25		<p>1 mark for knowing the data set needs to be organised in numerical order.</p> <p>1 mark for knowing it is the middle score that is selected.</p>	<b>2</b>	
26		<p>1 mark for each valid conclusion (up to 2 marks), including</p> <p>1 mark for use of data from the source to support either conclusion.</p>	<b>3</b>	

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	<p>Conclusions:</p> <p>50 minutes is the ideal lesson length for concentration.</p> <p>60 minute lessons produce the poorest concentration.</p> <p>Concentration improves with lesson length up to point but then begins to drop if the lesson becomes too long.</p> <p>If lessons that are too long or too short then concentration is low.</p> <p>40 and 55 minute lessons produce the same level of concentration on average.</p> <p>Findings:</p> <p>Optimum concentration occurs with a 50 minute lesson, median concentration was 7.5.</p> <p>40 minutes was 6, peaking at 6.5 and dropping to 5.</p> <p>As 60 minute lessons had the lowest median rating of 5 for concentration.</p>		
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