GradeMax



Mark Scheme (Results)

January 2017

Pearson Edexcel International GCE
In Psychology (WPS02)
Paper 01: Biological Psychology,
Learning Theories and Development



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General Marking Guidance

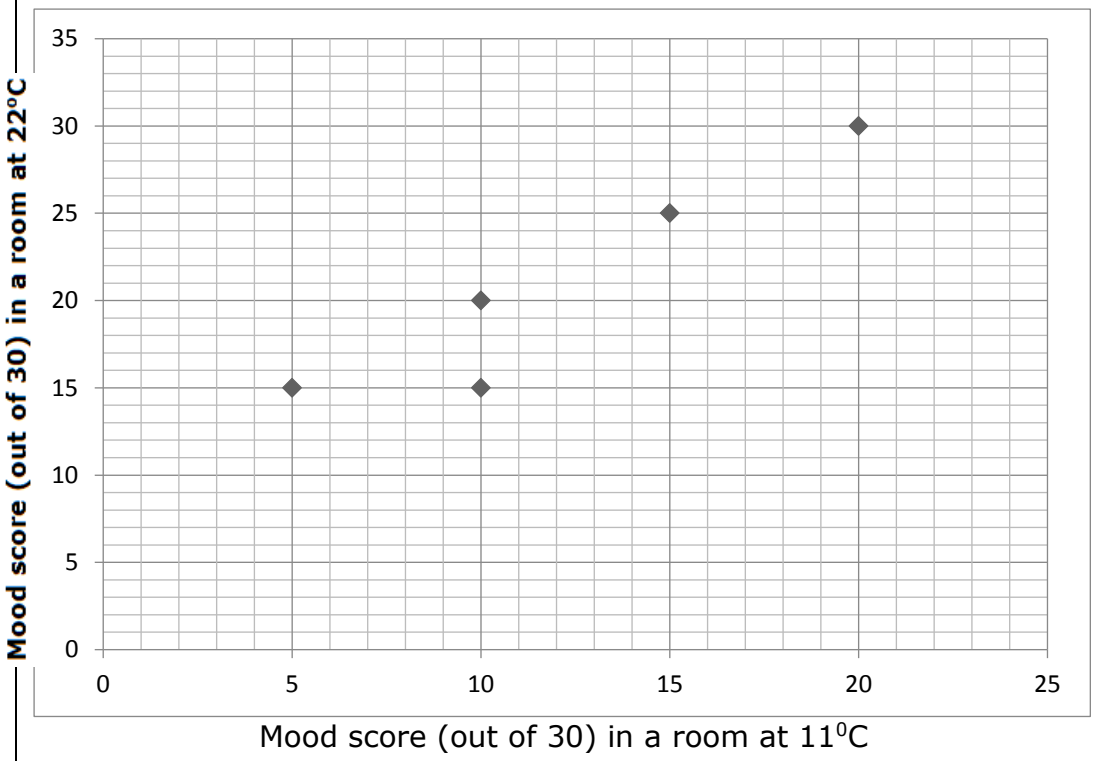
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

Section A

Question Number	Answer	Mark
1 (a)	**AO2 (1 mark), AO3 (1 mark)** Credit **one** mark for identifying of the correct correlation type (AO2) Credit **one** mark for justification of the correlation (AO3) For example: • The researchers found a negative correlation of -0.39 (1) because as the number of days absent increases the lower their examination result will be (1). **Look for other reasonable marking points** **Generic answers score 0 marks**	**(2)**
1 (b)	**AO2 (2 marks)** Credit **one** mark for each reason accurately stated. For example: • The researchers were not looking for a difference (1) • The data of the examination scores was ordinal (1) **Look for other reasonable marking points** **Generic answers score 0 marks**	**(2)**

Question Number	Answer	Mark
1 (c)	**AO2 (2 marks)** Credit up to **two** marks for correct description of significance. For example: • The correlation between absence days and examination result was significant (1) because our r result of -0.39 was greater than the critical value of 0.299 (1). **Look for other reasonable marking points**	**(2)**

Question Number	Answer	Mark
2 (a)	**AO1 (2 marks)** Credit up to **two** marks for an accurate description. For example: • Testosterone is a hormone that is linked to aggression in males (1). It is thought that testosterone exposure in the womb affects neural pathways in the brain (1). **Look for other reasonable marking points**	**(2)**
2 (b)	**AO1 (2 marks), A03 (2 marks)** **One** mark for identification of one strength and one weakness (AO1) **One** mark for justification of one strength and one weakness (AO3) For example: Strength • The influence of hormones on aggressive behaviour has supporting evidence such as Dabbs et al. (1987) (1) who found high testosterone levels in prisoners who had committed violent crime than prisoners who had committed non-violent crime giving validity to the theory (1). Weakness • Psychological research into the influence of hormones on aggression does not consider other explanations (1) social learning theory would suggest that aggression is the result of imitating aggressive role model and not a failure of hormone regulation (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
3 (a)	**AO2 (3 marks)** **One** mark for appropriate **title**. **One** mark for appropriate **labelling of axes**. **One** mark for correct **plots**. **A scatter diagram to show the relationship between mood and room temperature.**  **Look for other reasonable marking points**	**(3)**

Question Number	Answer	Mark
3 (b)	**AO3 (1 mark)** One mark for stating an accurate conclusion. For example: • Mood improves with an increase of 11^0C in room temperature (1). **Look for other reasonable marking points** **Generic answers score 0 marks.**	**(1)**
3 (c)	**AO2 (2 marks), AO3 (2 marks)** **One** mark for identification of one strength and one weakness (AO2) **One** mark for justification of one strength and one weakness (AO3) For example: Strength • Self-report questionnaires allow the participants to describe their own experiences of their moods (1) rather than researchers inferring this from observing the participants, so the data is more valid (1). Weakness • Self-report questionnaires may not be a valid measure of mood (1) as the participants may be embarrassed to put down the true answers about their mood, therefore providing unrealistic answers (1). **Look for other reasonable marking points** **Generic answers score 0 marks**	**(4)**

Question Number	Answer	Mark
4 (a)	**A02 (4 marks)** Credit up to **four** marks for reference to Maria's synchronised menstrual cycle (A02) For example: • Maria may have been influenced due to pheromones from the other female students (1). Her friends' pheromones are chemical substances which can be detected by Maria when she is close by (1). So Maria's pheromones will be detected by others and cause a reaction in their menstrual cycles (1). Maria may have a reaction with her menstrual cycle which may change her dates (1). **Look for other reasonable marking points** **Generic answers score 0 marks**	**(4)**
4(b)	**AO1 (2 marks)** **Two** marks for accurate description (AO1) For example: • During menstruation women may suffer mood disruption (1), this may include becoming angry at situations that would not normally affect them (1). **Look for other reasonable marking points**	**(2)**

Question Number	Answer	Mark
5	**AO1 (4 marks), A03 (4 marks)** **A01** • Correlations show a relationship between two variables. • A positive correlation occurs when one variable increases as another variable increases. • When there is no correlation it is expressed as zero. • Inferential statistics can be used to show a correlation coefficient ranging from +1 to -1. **A03** • In correlational research no cause and effect is inferred. • Strong significant correlations can suggest ideas for experimental studies to test in order to determine a prediction. • Correlation allows the researcher to investigate naturally occurring variables that may be unethical or impractical to test experimentally. • Extraneous variables may not be as controlled as in laboratory experiments. **Look for other reasonable marking points**	**(8)**

Level	**Mark**	**Description**
(4 AO1, 4 AO3) **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)

Section B

Question Number	Answer	Mark
6 (a)	**AO2 (4 marks)** Credit up to **four** marks for describing how a content analysis could be conducted. For example: • Researchers could select the children's television programmes (1). They could categorise the behaviours that they consider to be positive and negative (1). They could watch a programme to standardise their categories and interpretations (1). They could design a tally chart to record the data they gather from watching the programmes (1). **Look for other reasonable marking points** **Generic answers score 0 marks**	**(4)**
6 (b)	**A01 (1 mark), A03 (1 mark)** One mark for identification of a weakness (AO1) One mark for justification of the weakness (AO3) For example: • Categories used in a content analysis can be subjective (1) therefore the results could be unreliable as different people may put the same behaviour in different categories (1). **Look for other reasonable marking points**	**(2)**
6 (c)	**AO2 (1 mark)** Credit one mark for an appropriate reason for selecting the standard deviation. For example: • The standard deviation minimises the effect of extreme scores (1). **Look for other reasonable marking points**	**(1)**
6 (d)	**A02 (1 mark)** One mark for an expression of the ratio • 3:7 or 7:3 **Reject all other answers**	**(1)**

6 (e)	**AO2 (1 mark), AO3 (1 mark)** One mark for identification of a weakness in the study (AO2) One mark for justification of the weakness (AO3) For example: • The study used only five television programmes which is a small sample size (1) this would limit the generalisability of the results to all children's television programmes (1). **Look for other reasonable marking points** **Generic answers score 0 marks**	**(2)**

Question Number	Answer	Mark
7	**AO2 (4 marks)** Credit up to **four** marks for accurate description in relation to the scenario. For example: • Operant conditioning suggests that Rina can use positive reinforcement to encourage behaviour (1). When Sangita cleans her teeth, she could be given a positive consequence, such as a sticker (1). Rina could also use punishment to discourage undesirable behaviour (1). So when Sangita does not clean her teeth, she could receive a negative consequence, such as being told off (1) **Look for other reasonable marking points** **Generic answers score 0 marks**	**(4)**

Question Number	Answer	Mark
8 (a)	**A01 (2 mark)** Credit **one** mark for accurate identification of each aim. For example: • To assess the therapeutic effectiveness of systematic desensitisation (1). • To look at treatments for fear of flying as a specific phobia (1). **Look for other reasonable marking points**	**(2)**

Question Number	Answer	Mark
8 (b)	**AO1 (4 marks)** Credit up to **four** marks for accurate description. For example: • All participants were interviewed individually by the research team (1). Participants were asked to complete a fear of flying test in which they were shown a video-tape of a plane journey (1). Participants' physiological responses were recorded (1). Participants had two 1-hour sessions per week as part of a standardised individual desensitisation programme (1). **Look for other reasonable marking points**	**(4)**

Question Number	Answer	Mark
8 (c)	**A01 (2 mark), A03 (2 marks)** Credit **one** mark for identification of one strength and one weakness (AO1). Credit **one** mark for justification of one strength and one weakness (AO3). For example: Strength • Capafóns et al (1998) carefully matched the control and treatment groups (1), which eliminated participant variables and increased the validity of the results (1). Weakness • Capafóns et al (1998) used an artificial scenario of a video recording of a flight (1). This lacks ecological validity as participants are not actually experiencing flying (1). **Look for other reasonable marking points**	**(4)**

Question Number	Answer	Mark
8 (d)	**A03 (2 marks)** Credit up to **two** marks for accurate justification of improvement. For example: • Capafóns et al (1998) could have used a larger sample to increase the generalisability of their results to a larger population (1). This also would make any evaluation of the effectiveness of systematic desensitisation as a treatment for fear of flying more valid (1). **Look for other reasonable marking points**	**(2)**

Question Number	Answer	Mark
9	**AO1 (4 marks), AO3 (4 marks)** **A01** • Freud suggested that early experiences influence how we developed in later life. • Freud's oral stage is when children aged 0-1 years old are satisfied through sucking and biting. • Freud's suggested that boys aged 5 went though the Phallic stage where they have unconscious sexual feelings for their mother. • Freud's stage theory only ranges from birth to adolescence. **A03** • Supporting evidence for the Oedipus complex comes from the Little Hans case study. • This theory can be applied to society in explaining the possible long-term effects of a traumatic childhood. • Erikson suggested that development continued throughout life. • Freud's description of psychosexual stages cannot be measured using scientific methods. **Look for other reasonable marking points**	**(8)**

Level	Mark	Description
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)

Section C

Question Number	Answer	Mark
10	**AO1 (6 marks), AO3 (6 marks)** **A01** • The prefrontal cortex is involved in the regulation of emotions and a lack of regulation can lead to aggression. • It is claimed that the hypothalamus is responsible for regulating aggressive behaviour. • Low levels of the neurotransmitter serotonin have been linked to an increase in impulsive and aggressive behaviour. • The limbic system has a role in self-preservation, including aggressive situations of flight or fight. • Testosterone levels increase with the onset of puberty which corresponds to a peak in aggressive behaviour in males • Social Learning theory would suggest that we behave aggressively because we have imitated and copied the behaviour of aggressive role models. **A03** • Raine et al. (1997) found that people who had shown emotionally impulsive violence differed in their prefrontal cortex so brain function could be a complete explanation. • Herman et al. (1993) found that electrical stimulation to the hypothalamus leads to aggression so brain function could be a complete explanation. • However it may not be neurotransmitters as Dabbs et al. (1987) measured the salvia of male prisoners and found higher levels of testosterone so brain function is not a complete explanation. • Though deindividuation would suggest that we behave aggressively when we lose our identity by being part of a crowd so brain function is not a complete explanation. • An alternative explanation is Freud's psychodynamic theory suggests that aggression is the outlet for the death instinct, Thanatos so brain function is not a complete explanation. • Bandura et al. (1961) observed children aggressively hitting a bobo doll after the children had watched adults do the same so there is more to aggression than brain function. **Look for other reasonable marking points**	**(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)

Question Number	Answer	Mark
11	**AO1 (6 marks) AO2 (4 marks) A03 (6 marks)** **A01** • Seasonal Affective Disorder is a classification given to those who suffer from mood disorder that varies with the seasons. • Light therapy is a special artificial light which for mood disorders is given for a duration of 30 minutes every hour a person sleeps beyond 6 hours. • Light therapy for mood disorders should usually begin about one week before depressive symptoms. • During psychoanalysis sessions for Seasonal Affective Disorder you will discuss your early experiences with a therapist. • Psychodynamic therapy involves resolving unconscious issues that are causing Seasonal Affective Disorder. • During the sessions of psychoanalysis clients use "Free Association" to openly release their thoughts. • Light Therapy can be used alongside other treatments like antidepressants drugs for treating Seasonal Affective Disorder. **A02** • Afia has been recommended light therapy as she only suffers from mood problems at certain times of the year. • Afia could undergo light-therapy and if her symptoms decrease then she will know that it is effective. • Afia may only need treatment during the winter months instead of all year. • Afia may prefer not to take mood stabilising drug treatments. **A03** • Light therapy can have mild side effects such as insomnia which can affect patients negatively. • Light therapy cannot be used if someone has eye conditions as it could aggravate the eye condition further. • Eastman (1988) found that after 3 weeks symptoms of Seasonal Affective Disorder had decreased significantly with light therapy. • Psychotherapy has fewer physiological side effects so it may be less distressing to patients that other treatments. • Psychotherapy may take up to 6 weeks to begin to be effective. • Antidepressant selective serotonin reuptake inhibitors (SSRI's) can be used to prevent Seasonal Affective Disorder prior to onset.	**(16)**

Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.** **Application to the context is capped at maximum 4 marks.**		
	0	No rewardable material.
Level 1	1–4 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) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	5–8 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 and procedures). (AO2) 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) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) 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	13–16 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 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)

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