



General Certificate of Education

Psychology 2181

Specification A

Unit 3 (PSYA3) Topics in Psychology

Mark Scheme

2011 series - June examination

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PSYA3: Topics in Psychology

Topic: Biological Rhythms and Sleep

Question 01

AO1 = 9 marks Outline of the nature of sleep

The nature of sleep conventionally refers to the basic characteristics of sleep. These include its circadian periodicity, the different phases and stages of sleep (REM and NREM, or REM and SWS), the association between REM sleep and dreaming etc. Different sleep patterns across the lifespan or across the animal kingdom would also be relevant. Given the problem of defining the 'nature' of sleep, a wide range of material could be relevant. These include the functions of sleep, sleep disorders, brain mechanisms of sleep and sleep as a biological rhythm.

AO1 mark bands

9 - 8 marks **Sound**

Knowledge and understanding are accurate and well detailed.
A good range of relevant material has been selected. There is substantial evidence of breadth and depth. Organisation and structure of the answer are coherent.

7 - 5 marks **Reasonable**

Knowledge and understanding are generally accurate and reasonably detailed.
A range of relevant material has been selected. There is evidence of breadth and/or depth.
Organisation and structure of the answer are reasonably coherent.

4 - 3 marks **Basic**

Knowledge and understanding are basic/relatively superficial.
A restricted range of material has been presented.
Organisation and structure of the answer are basic.

2 - 1 marks **Rudimentary**

Knowledge and understanding are rudimentary and may be muddled and/or inaccurate.
The material presented may be very brief or largely irrelevant.
Lacks organisation and structure.

0 marks

No creditworthy material.

Question 02

AO2/AO3 = 16 marks
rhythms

Consideration of the consequences of disrupting biological

Candidates could consider a range of different consequences, such as the effects of shift work and jet lag, and, although unlikely, reference to circadian sleep disorders. An effective route to AO2/AO3 marks would be methodological evaluation of research and field studies. A second route would be commentary on the implications of findings e.g. what modifications to shift work have been shown to alleviate its effects? Does our knowledge of the mechanisms behind jet lag suggest possible ways of minimising its effects? Accurate explanations of why disrupting biological rhythms has such effects ie the roles of endogenous pacemakers and exogenous zeitgebers, would qualify as extended commentary and would be eligible for AO2/3 marks. Examiners should be sensitive to depth/breadth trade-offs in answers that cover several consequences or examples of disruption.

Material eg non-human animal studies, sleep deprivation, would not move beyond rudimentary unless explicitly linked to the consequences of disrupting biological rhythms.

Indicative issues/debates/approaches in the context of the consequences of disrupting biological rhythms: biological/physiological approach; field studies; reductionism; ethical issues; applications of psychological research e.g. to the alteration of shift work patterns. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark Bands – Best Fit

16 - 13 marks Effective

Commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Issues/debates/approaches are used effectively. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

12 - 9 marks Reasonable

Commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Issues/debates/approaches are used in a reasonably effective manner. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

8 - 5 marks Basic

Commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Superficial reference may be made to issues/debates/approaches. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

4 - 1 marks Rudimentary

Commentary is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. If reference is made to issues/debates/approaches, it is muddled and inaccurate. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Perception**Question 03****AO1 = 9 marks Outline of Bruce and Young's theory of face recognition**

Bruce and Young's model consists of several subcomponents or processes. These include structural encoding, expression analysis, facial speech analysis, face recognition units, person identity nodes and name generation. At least three of these should be included for answers in the top bands, and description should be accurate and at least reasonably detailed. Diagrams would be an effective way of presenting the model, but there must be some detail of the functions of individual components. If diagrams are presented without detail they may earn a maximum of 4 marks.

AO1 mark bands

9 - 8 marks Sound
Knowledge and understanding are accurate and well detailed. A good range of relevant material has been selected. There is substantial evidence of breadth and depth. Organisation and structure of the answer are coherent.
7 - 5 marks Reasonable
Knowledge and understanding are generally accurate and reasonably detailed. A range of relevant material has been selected. There is evidence of breadth and/or depth. Organisation and structure of the answer are reasonably coherent.
4 - 3 marks Basic
Knowledge and understanding are basic/relatively superficial. A restricted range of material has been presented. Organisation and structure of the answer are basic.
2 - 1 marks Rudimentary
Knowledge and understanding are rudimentary and may be muddled and/or inaccurate. The material presented may be very brief or largely irrelevant. Lacks organisation and structure.
0 marks
No creditworthy material.

AO2/AO3 = 16 marks Evaluation of Bruce and Young's theory of face recognition

The main route to AO2/AO3 credit is likely to be research evidence. There have been many studies investigating this model, from diary studies and laboratory experiments to case studies on brain damaged patients. Implications of findings for the model must be clear for marks in the top bands. Methodological evaluation of studies can earn AO2/AO3 marks but cannot move out of 'rudimentary' unless the implications for the model are clear.

It would also be relevant to consider the considerable influence this model has had on the psychology of face processing; this might involve the debate of whether face processing is analytic or holistic, or the ability of the model to account for such a wide range of research evidence.

Indicative issues/debates/approaches in the context of evaluating Bruce and Young's theory of face recognition: cognitive approach; reductionism; case studies; ethical issues. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

16 - 13 marks Effective

Evaluation demonstrates sound analysis, understanding and interpretation.
The answer is well focused and shows coherent elaboration and/or a clear line of argument.
Issues/debates/approaches are used effectively.
Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

12 - 9 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding.
The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.
Issues/debates/approaches are used in a reasonably effective manner.
Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

8 - 5 marks Basic

Evaluation demonstrates basic, superficial understanding.
The answer is sometimes focused and shows some evidence of elaboration.
Superficial reference may be made to issues/debates/approaches
Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

4 - 1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding.
The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant.
If reference is made to issues/debates/approaches, it is muddled and inaccurate.
Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Relationships

Question 04

AO1 = 9 marks **Outline of the influence of childhood and/or adolescent experiences on later adult relationships**

Candidates are likely to focus on early attachment experiences and their effects on adult relationships, as this body of work is most accessible. Building on Bowlby's research into infant-caregiver relationships, ideas such as the 'internal working model' would be very relevant; note that for AO1 marks there need be no reference to research studies, but the candidate may choose to focus on more theoretical approaches. Accurate descriptions of the early development of relationship schemata would be creditable, as would the extensive work of Hazan and Shaver and others using Ainsworth's infant attachment styles and relating them to later adult attachment styles. More general approaches such as social learning theory could be made fully relevant, but must be explicitly linked to relationships. Similarly, Freud's psychodynamic approach could be made directly relevant to this question, while Erikson's work on psychosocial development could also be effective.

There is also a less well known body of research on the significance of adolescent experiences for adult relationships e.g. the work of Dunphy, Bee, Kirchler, Blos and others on the role of the peer group in managing the transition to full adult relationships. It is important that any unfamiliar material is carefully checked for relevance and accuracy.

There is no requirement for candidates to consider both childhood and adolescent experiences, but examiners should be sensitive to depth/breadth trade-offs for those who do choose to cover both. Answers should also be *psychologically informed* to earn marks.

AO1 mark bands

<p>9 - 8 marks Sound</p> <p>Knowledge and understanding are accurate and well detailed. A good range of relevant material has been selected. There is substantial evidence of breadth and depth. Organisation and structure of the answer are coherent.</p>
<p>7 - 5 marks Reasonable</p> <p>Knowledge and understanding are generally accurate and reasonably detailed. A range of relevant material has been selected. There is evidence of breadth and/or depth. Organisation and structure of the answer are reasonably coherent.</p>
<p>4 - 3 marks Basic</p> <p>Knowledge and understanding are basic/relatively superficial. A restricted range of material has been presented. Organisation and structure of the answer are basic.</p>
<p>2 - 1 marks Rudimentary</p> <p>Knowledge and understanding are rudimentary and may be muddled and/or inaccurate. The material presented may be very brief or largely irrelevant. Lacks organisation and structure.</p>
<p>0 marks</p> <p>No creditworthy material.</p>

AO2/3 = 16 marks Evaluation of the influence of childhood and/or adolescent experiences on later adult relationships

There are a variety of routes to AO2/AO3 credit. Findings from cross-sectional and longitudinal studies of early attachment and later relationships would provide excellent evaluative material. Methodological evaluation of such studies eg focusing on the problems of using questionnaires (demand characteristics, self-presentation etc), identifying cause and effect, inconsistent findings etc would be another rich source of AO2/AO3 marks, although the *implications* of such evaluation for the influence of childhood and/or adolescent experiences must be explicit. Alternative explanations and interpretations may be introduced, but may only earn AO2/AO3 marks if used as part of sustained and effective evaluation.

Commentary may also include the complex nature and the range of relationships that adults may have, and gender and cultural aspects of research in this area. Explanations for consistency in attachment styles, eg temperament, may also earn credit as AO2/AO3 commentary/understanding.

Indicative issues/debates/approaches in the context of the influence of childhood and/or adolescent experiences on later adult relationships: cognitive, developmental, psychodynamic approaches; social learning; gender and cultural issues; reductionism; free will/determinism; nature-nurture. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

16 - 13 marks Effective

Evaluation/commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Issues/debates/approaches are used effectively. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

12 - 9 marks Reasonable

Evaluation/commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Issues/debates/approaches are used in a reasonably effective manner. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

8 - 5 marks Basic

Evaluation/commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Superficial reference may be made to issues/debates/approaches. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

4 - 1 marks Rudimentary

Evaluation/commentary is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. If reference is made to issues/debates/approaches, it is muddled and inaccurate. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Aggression

Question 05

AO1 = 9 marks **Outline of the role of neural and/or hormonal mechanisms in aggression**

There is a long tradition of research into the neural (brain) and hormonal mechanisms underlying aggressive behaviour. Much of the early work was carried out on non-human animals, but over the last twenty years new technologies have allowed this to be extended into work with humans. Either approach is acceptable. Classic models such as the Papez-Maclean limbic theory involving structures such as the amygdala, septum, and hippocampus have been extended in order to account for conditions such as psychopathy and reactive aggression in humans; areas such as the amygdala, cingulate and prefrontal cortex have been implicated.

On the hormonal side most research has focused on the role of testosterone in human and animal aggression. Examiners should be sensitive to depth/breadth trade-offs in answers covering both neural and hormonal mechanisms.

Candidates may introduce material on genetic factors in aggression. Such material cannot earn marks *unless* the implications for neural/hormonal mechanisms are explicit e.g. the association between genetic factors and levels of neurotransmitters such as serotonin and noradrenaline.

AO1 mark bands

<p>9 - 8 marks Sound</p> <p>Knowledge and understanding are accurate and well detailed. A good range of relevant material has been selected. There is substantial evidence of breadth and depth. Organisation and structure of the answer are coherent.</p>
<p>7 - 5 marks Reasonable</p> <p>Knowledge and understanding are generally accurate and reasonably detailed. A range of relevant material has been selected. There is evidence of breadth and/or depth. Organisation and structure of the answer are reasonably coherent.</p>
<p>4 - 3 marks Basic</p> <p>Knowledge and understanding are basic/relatively superficial. A restricted range of material has been presented. Organisation and structure of the answer are basic.</p>
<p>2 - 1 marks Rudimentary</p> <p>Knowledge and understanding are rudimentary and may be muddled and/or inaccurate. The material presented may be very brief or largely irrelevant. Lacks organisation and structure.</p>
<p>0 marks</p> <p>No creditworthy material.</p>

AO2/AO3 = 16 marks

Commentary on the role of neural and/or hormonal mechanisms in aggression

The key area for AO2/AO3 marks should be research evidence from studies with humans and non-human animals, and the implications of findings. Methodological evaluation of studies may only earn marks beyond rudimentary if the implications for the role of neural and/or hormonal mechanisms are explicit.

Relevant commentary could include the problems of defining aggression, the range of aggressive behaviours, and problems of extrapolating from animals to humans. Gender and cultural issues could also be made relevant to this question.

Alternative approaches that focus on the role of aggression such as psychological, social, and cultural aspects, may earn AO2/AO3 marks if used as part of sustained and effective commentary on the role of neural and/or hormonal mechanisms.

Indicative issues/debates/approaches in the context of neural and/or hormonal mechanisms in aggression: biological approach; reductionism; free will/determinism; gender and cultural issues; use of non-human animals in research; ethical issues; nature/nurture. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

16 - 13 marks Effective

Commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Issues/debates/approaches are used effectively. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

12 - 9 marks Reasonable

Commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Issues/debates/approaches are used in a reasonably effective manner. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

8 - 5 marks Basic

Commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Superficial reference may be made to issues/debates/approaches. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

4 - 1 marks Rudimentary

Commentary is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. If reference is made to issues/debates/approaches, it is muddled and inaccurate. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Eating Behaviour**Question 06****AO1 = 5 marks Outline of one psychological explanation of one eating disorder**

Examples of eating disorders given in the Specification are anorexia nervosa, bulimia nervosa and obesity. Each of these has a range of psychological explanations, such as social/cultural influences (eg social learning theory and other conditioning explanations) and psychodynamic approaches (eg Bruch, Minuchin).

Explanations of obesity are likely to focus on a range of cultural and environmental factors. These should be considered as one psychological explanation.

Answers should be assessed on their accuracy and coherence, and focus on a *single* disorder. Where a single disorder cannot be identified, such generic answers eg on the role of social learning on eating disorders in general, can earn a maximum of 3 marks. Studies can be credited to the extent to which they illustrate the explanation.

AO1 Mark Bands

5 - 4 marks Outline is reasonably thorough, accurate and coherent
3 - 2 marks Outline is limited, generally accurate and reasonably coherent
1 mark Outline is weak and muddled, or very limited
0 marks No creditworthy material

Question 07**AO1 = 4 marks Outline of evolutionary explanations of food preference**

There is a range of material available in this area. Candidates are likely to focus on taste preferences (preferences for sweet, salty and umami, avoidance of sour and bitter) and their adaptive significance. Other approaches might include the value of moving to an omnivorous diet and the significance of meat eating for the development for brain size and intelligence. Examiners must be alert to unfamiliar material that is in fact relevant to the question and creditable.

AO1 mark bands

4 marks Outline is reasonably thorough, accurate and coherent
3 - 2 marks Outline is limited, generally accurate and reasonably coherent
1 mark Outline is weak and muddled, or very limited
0 marks No creditworthy material

AO2/AO3 = 16 marks Evaluation of evolutionary explanations of food preference

Research studies on food preferences in babies, children and non-human animals would be a key source of AO2/AO3 credit. Methodological evaluation of studies may also be creditworthy, but may only earn marks beyond rudimentary if the implications for explanations are clear. Areas such as taste aversion learning and changes in food preference associated with e.g. pregnancy may be popular, but again can only earn credit if discussed in the context of evolutionary explanations of food preference.

More general commentary may include changes in food preference with age and experience, and the possible role of associative learning, modelling and social/cultural factors. These must be discussed in the context of evolutionary explanations to earn AO2/AO3 marks.

Generic evaluation of evolutionary explanations would also be relevant and creditable, while evolutionary explanations of eating disorders can earn marks if explicitly shaped towards the issue of food preference.

Indicative issues/debates/approaches in the context of evolutionary explanations of food preference: evolutionary/biological approaches; behavioural approach (associative learning); social/cultural aspects; use of non-human animals in research; reductionism; free will/determinism. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit**16 - 13 marks Effective**

Evaluation demonstrates sound analysis, understanding and interpretation.
The answer is well focused and shows coherent elaboration and/or a clear line of argument.
Issues/debates/approaches are used effectively.
Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

12 - 9 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding.
The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.
Issues/debates/approaches are used in a reasonably effective manner.
Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

8 - 5 marks Basic

Evaluation demonstrates basic, superficial understanding.
The answer is sometimes focused and shows some evidence of elaboration.
Superficial reference may be made to issues/debates/approaches
Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

4-1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding.

The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant.

If reference is made to issues/debates/approaches, it is muddled and inaccurate.

Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Gender**Question 08****AO1 = 5 marks Outline of one or more explanations for psychological androgyny**

Explanations for androgyny focus on gender schema theory and how these develop between childhood and adolescence. Androgynous schema develop in a social and family setting that is rewarding for this mix of female and male characteristics, and research (eg Martin & Halverson, 1981) suggests that the influence of parents and peers is likely to be critical. Alternative views see androgyny developing as an individual's gender schema move beyond gender stereotypes (Bem, 1975), and becomes part of a lifestyle choice (Orlofsky, 1977). The association between androgyny and psychological health is also an explanation for the development and maintenance of androgyny; such material can be presented in a form that could earn either AO1 or AO2/AO3 marks.

As a new area on the Specification material unfamiliar may be presented eg on possible biological factors in the development of psychological androgyny. Examiners should be alert to the possible relevance of such material. However *descriptions* of androgyny and how it is measured are (eg Bem's BSRI scale) not explanations and cannot earn AO1 marks.

To earn AO1 marks answers must focus on explanations for the development and/or maintenance of psychological androgyny. Examiners should be sensitive to depth/breadth trade-offs in answers that cover more than one explanation.

AO1 Mark Bands**5 - 4 marks**

Outline is reasonably thorough, accurate and coherent

3 - 2 marks

Outline is limited, generally accurate and reasonably coherent

1 mark

Outline is weak and muddled, or very limited

0 marks

No creditworthy material

AO2/AO3 = 8 marks Evaluation of one or more explanations of psychological androgyny.

Research studies would provide effective evaluative material in this question. The association between psychological health and androgyny is by now well established, while other studies have

investigated the relationships between parental and peer characteristics and the development of psychological androgyny. Methodological evaluation of studies would also qualify for AO2/AO3 marks, particularly if the implications for explanations are clear. Bem's original work in establishing androgyny as a gender category can earn a maximum of 2 marks *unless* explicitly shaped to the issue of explanations.

Alternative explanations eg biological/genetic, may be introduced as part of evaluation, but can only earn AO2/AO3 marks if used as part of sustained and effective commentary.

Indicative issues/debates/approaches in the context of one explanation of psychological androgyny: developmental and cognitive-developmental approaches; biological approach; gender differences and gender bias; free will/determinism. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

8 - 7 marks Effective

Evaluation demonstrates sound analysis, understanding and interpretation.
The answer is well focused and shows coherent elaboration and/or a clear line of argument.
Issues/debates/approaches are used effectively.
Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

6 - 5 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding.
The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.
Issues/debates/approaches are used in a reasonably effective manner.
Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

4 - 3 marks Basic

Evaluation demonstrates basic, superficial understanding.
The answer is sometimes focused and shows some evidence of elaboration.
Superficial reference may be made to issues/debates/approaches
Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

2 - 1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding.
The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant.
If reference is made to issues/debates/approaches, it is muddled and inaccurate.
Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Question 09**AO1 = 4 marks Outline of cross-cultural studies into gender role**

Beginning perhaps with the work of Margaret Mead in the 1930s there is by now a wide range of cross-cultural studies into gender roles in different cultures. Some of these are observational while some make use of Bem's sex role inventory. Cultures investigated include traditional forest living tribes as well as modern societies across the globe. Significant differences in perceptions of gender role have been found between e.g. the USA, China, and Japan.

AO1 Mark Bands

4 marks
Outline is reasonably thorough, accurate and coherent
3 - 2 marks
Outline is limited, generally accurate and reasonably coherent
1 mark
Outline is weak and muddled, or very limited
0 marks
No creditworthy material

AO2/AO3 = 8 marks Evaluation of cross-cultural studies of gender role

Implications of research findings would be a key source of AO2/AO3 marks for this question. In addition, the methodological problems of doing such cross-cultural work are highly significant; Margaret Mead's studies are an excellent example of such problems, but even modern research has issues of testing and interpretation.

More general commentary could include explanations for the existence of cross-cultural differences in gender stereotypes. These might include social and cultural differences, especially between individualistic and collectivist societies. Another relevant aspect would be changes in gender roles over time in different societies.

Candidates may introduce alternative approaches, such as the role of biological factors in gender role development, but these can only earn marks if part of sustained and effective commentary on cross-cultural studies into gender role.

Indicative issues/debates/approaches in the context of cross-cultural studies into gender role: issues in cross-cultural research, including cultural bias and cultural differences; gender bias and gender differences; free will/determinism; nature/nurture; ethical issues in research. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

8 - 7 marks Effective

Evaluation demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Issues/debates/approaches are used effectively. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

6 - 5 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Issues/debates/approaches are used in a reasonably effective manner. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

4 - 3 marks Basic

Evaluation demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Superficial reference may be made to issues/debates/approaches. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

2 - 1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. If reference is made to issues/debates/approaches, it is muddled and inaccurate. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Intelligence and Learning

Question 10

AO1 = 9 marks **Outline of evolutionary factors involved in the development of human intelligence**

Factors involved in the evolution of human intelligence include ecological (eg bipedalism, foraging, hunting), social (group size, social complexity) and brain size. The question is on the development of intelligence, so material on, for instance, the role of diet in increasing brain size must be linked into the development of intelligence to earn marks beyond Basic. Similarly, comparative studies of brain size and the encephalisation quotient need to be presented in the context of the increase in human intelligence to earn marks beyond Basic.

AO1 mark bands

<p>9 - 8 marks Sound</p> <p>Knowledge and understanding are accurate and well detailed. A good range of relevant material has been selected. There is substantial evidence of breadth and depth. Organisation and structure of the answer are coherent.</p>
<p>7 - 5 marks Reasonable</p> <p>Knowledge and understanding are generally accurate and reasonably detailed. A range of relevant material has been selected. There is evidence of breadth and/or depth. Organisation and structure of the answer are reasonably coherent.</p>
<p>4 - 3 marks Basic</p> <p>Knowledge and understanding are basic/relatively superficial. A restricted range of material has been presented. Organisation and structure of the answer are basic.</p>
<p>2 - 1 marks Rudimentary</p> <p>Knowledge and understanding are rudimentary and may be muddled and/or inaccurate. The material presented may be very brief or largely irrelevant. Lacks organisation and structure.</p>
<p>0 marks</p> <p>No creditworthy material.</p>

AO2/AO3 = 16 marks **Commentary on the evolution of human intelligence**

Research findings on the evolution of human intelligence are necessarily indirect. However the research eg of Dunbar on group size, brain size, and social intelligence in human and non-human primate societies, would be an excellent source of AO2/AO3 marks. Research into gender differences in types of intelligence and cognitive skills have also been discussed in an evolutionary context and would be creditworthy in this question. Comparative studies of animal intelligence in relation to, for instance, brain size, may also be made relevant. Again, however, the focus of the question is on the development of intelligence, not brain size, and implications for the question must be clear for marks to be awarded. Although unlikely, candidates may introduce research into the genetic basis of IQ. This could in theory be made relevant to the question, but this must be explicit for marks to be awarded.

General commentary could include the adaptive advantage of intelligence (eg in the development of cognitive skills involved in tool use, hunting, foraging and group living). Additional issues

include the problems of conducting research in this area, the speculative and retrospective nature of many hypotheses, and problems of defining intelligence.

Indicative issues/debates/approaches in the context of the evolution of human intelligence: evolutionary/biological approach; use of non-human animals in research; reductionism; free will/determinism; nature/nurture; cross-cultural research; social/cultural factors; gender differences. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

16 - 13 marks Effective

Commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Issues/debates/approaches are used effectively. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

12 - 9 marks Reasonable

Commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Issues/debates/approaches are used in a reasonably effective manner. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

8 - 5 marks Basic

Commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Superficial reference may be made to issues/debates/approaches. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

4 - 1 marks Rudimentary

Commentary is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. If reference is made to issues/debates/approaches, it is muddled and inaccurate. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Topic: Cognition and Development

Question 11

AO1 = 5 marks Outline of the role of the mirror neuron system in social cognition

The mirror neuron system was identified in monkeys in the 1990s. These neurons fire when an animal makes a meaningful movement and also when it observes another animal making the same movement. Humans are also assumed to have a mirror neuron system, so that neurons involved in, for instance, producing facial expressions, fire when facial expressions are observed in others. This firing is thought to activate the appropriate feelings associated with that facial expression, allowing us to experience the same feelings we identify in others. It is assumed that this could be the foundation of our abilities to understand and empathise with others ie the mirror neuron system is basic to social cognition.

Research studies may earn AO1 marks if used to outline the role of the mirror neuron system and not explicitly as research support.

Examiners should note that human research into mirror neurons often uses 'MU suppression' in the EEG as a measure of mirror neuron activity. Candidates are likely to refer to this.

AO1 Mark Bands

5 - 4 marks
Outline is reasonably thorough, accurate and coherent
3 - 2 marks
Outline is limited, generally accurate and reasonably coherent
1 mark
Outline is weak and muddled, or very limited
0 marks
No creditworthy material

AO2/AO3 = 8 marks Evaluation of the role of mirror neurons in social cognition

It is likely that the fundamental research studies of De Pellegrino, Rizzolatti and others will form the main source of AO2/AO3 marks. These studies were single cell recordings carried out on monkeys, and established the existence of mirror neurons. There have been many similar studies since. Methodological evaluation of research studies would also be a source of AO2/AO3 credit, including ethical issues in animal research.

Research studies on human participants have in general used indirect techniques, such as EEG recordings ('mu desynchronisation'), and this is an important evaluative point. Further commentary on the role of mirror neurons might include the problems in defining 'social cognition', problems in extrapolating from animals to humans, and the more complex nature of human social behaviour.

Indicative issues/debates/approaches in the context of the role of mirror neurons in social cognition: biological approach; reductionism; use of non-human animals in research; free will/determinism; nature/nurture. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

8 - 7 marks Effective

Evaluation demonstrates sound analysis, understanding and interpretation.
The answer is well focused and shows coherent elaboration and/or a clear line of argument.
Issues/debates/approaches are used effectively.
Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

6 - 5 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding.
The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.
Issues/debates/approaches are used in a reasonably effective manner.
Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

4 - 3 marks Basic

Evaluation demonstrates basic, superficial understanding.
The answer is sometimes focused and shows some evidence of elaboration.
Superficial reference may be made to issues/debates/approaches
Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

2 - 1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding.
The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant.
If reference is made to issues/debates/approaches, it is muddled and inaccurate.
Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

Question 12**AO1 = 4 marks Outline of one theory of moral understanding**

Candidates are likely to outline Kohlberg's theory of moral understanding, although the question makes clear that Eisenberg's theory of pro-social reasoning is equally acceptable. It is also possible that alternative approaches, such as Piaget's heteronomous and autonomous moralities, might be outlined, and these may be creditable if focused on moral understanding.

Given the marks available, detailed descriptions are not required for marks across the scale. However the *major* stages of any theory outlined must be accurately outlined and sequenced; these would include Kohlberg's pre-conventional, conventional and post-conventional stages, and Eisenberg's hedonistic, needs oriented and internalised stages of pro-social reasoning.

AO1 Mark Bands

4 marks Outline is reasonably thorough, accurate and coherent
3 - 2 marks Outline is limited, generally accurate and reasonably coherent
1 mark Outline is weak and muddled, or very limited
0 marks No creditworthy material

AO2/AO3 = 8 marks Evaluation of one theory of moral understanding

The main source for AO2/AO3 marks should be the many research studies on the development of moral understanding and pro-social reasoning in children. There are findings in support of Kohlberg and/or Eisenberg and findings that contradict their theories. Gender differences are a key issue in the development of moral understanding and Gilligan's work on the different types of morality in girls and boys is likely to be popular. It must be explicitly used as evaluation/commentary to earn marks. Alternative theories, such as Piaget or Freud, may be introduced as AO2/AO3 material but may only earn marks if used as sustained and effective commentary on the target theory.

General commentary may include the issue of gender and cultural bias, methodological problems of working with young children (eg the different types of moral dilemmas used by different theorists; cross-sectional versus longitudinal studies) and the complex multidimensional nature of moral understanding.

Indicative issues/debates/approaches in the context of one theory of moral understanding: cognitive-developmental approach; stage theories; social/cultural issues; gender bias and gender differences; cultural bias and cultural differences; ethical issues in the use of young children as participants. Such material must be used effectively to earn AO2/AO3 credit.

AO2/AO3 material should first be placed in the appropriate band according to the descriptors. However, not all the criteria need be satisfied for an answer to be placed in a particular band. Weak performance in one area may be compensated for by strong performance in others. In order to access the top band, issues, debates and/or approaches need to be addressed effectively.

AO2/AO3 Mark bands – Best Fit

8 - 7 marks Effective

Evaluation demonstrates sound analysis, understanding and interpretation.
The answer is well focused and shows coherent elaboration and/or a clear line of argument.
Issues/debates/approaches are used effectively.
Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

6 - 5 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding.
The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.
Issues/debates/approaches are used in a reasonably effective manner.
Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

4 - 3 marks Basic

Evaluation demonstrates basic, superficial understanding.
The answer is sometimes focused and shows some evidence of elaboration.
Superficial reference may be made to issues/debates/approaches
Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

2 - 1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding.
The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant.
If reference is made to issues/debates/approaches, it is muddled and inaccurate.
Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.

0 marks

No creditworthy material is presented.

ASSESSMENT OBJECTIVES

Question Number	AO1	AO2/AO3	Total
01	9		9
02		16	16
03	9	16	25
04	9	16	25
05	9	16	25
06	5		5
07	4	16	20
08	5	8	13
09	4	8	12
10	9	16	25
11	5	8	13
12	4	8	12

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