

ASSESSMENT and QUALIFICATIONS ALLIANCE

# Mark scheme June 2003

# GCE

# Psychology A

Unit PYA4

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## UNIT 4

## MARK ALLOCATIONS FOR ASSESSMENT OBJECTIVE ONE

Band	Marking Criteria	Marks					
3	At the top of the band psychological content is ACCURATE and WELL-	12 - 9					
	DETAILED at the level of knowledge, description and understanding. The						
	organisation and structure are PRESENTED COHERENTLY. There is						
	SUBSTANTIAL EVIDENCE OF BREADTH AND DEPTH and a						
	BALANCE between them has been ACHIEVED.						
	At the bottom of the band SLIGHTLY LIMITED psychological content is						
	cited, which is ACCURATE and WELL-DETAILED at the level of						
	knowledge, description and understanding. The organisation and structure are						
	PRESENTED COHERENTLY. There is EVIDENCE OF BREADTH						
	AND DEPTH although a BALANCE between these is NOT ALWAYS						
	ACHIEVED.						
2	At the top of the band LIMITED psychological content is cited, which is	8 - 5					
	ACCURATE and REASONABLY DETAILED at the level of knowledge,						
	description and understanding. The answer is <b>REASONABLY</b>						
	<b>CONSTRUCTED</b> in its attempt to answer the question. There is SOME <b>EVIDENCE OF BREADTH AND/OR DEPTH</b> .						
	At the bottom of the band <b>BASIC</b> psychological content is cited which is						
	<b>GENERALLY ACCURATE</b> at the level of knowledge, description and understanding but LACKS DETAIL. The answer is <b>REASONABLY</b>						
	<b>CONSTRUCTED</b> in its attempt to answer the question. There is <b>SOME</b>						
	EVIDENCE OF BREADTH AND/OR DEPTH.						
1	At the top of the band Psychological content is, <b>RUDIMENTARY</b> and	4 - 0					
1	SOMETIMES FLAWED. The answer is SOMETIMES FOCUSED on the	<b>H</b> = <b>U</b>					
	question. The organisation and structure of the answers is <b>REASONABLE</b> .						
	At the bottom of the band the psychological content is <b>JUST DISCERNIBLE</b>						
	and the views expressed may be largely 'anecdotal psychology', and/or the						
	candidate makes <b>INACCURATE</b> assertions about the subject of the question.						
	Description is <b>WEAK</b> and understanding is <b>MUDDLED</b> and						
	<b>INCOMPLETE</b> . The answer may be wholly or mainly <b>IRRELEVANT</b> to						
	the problem it addresses.						

## MARK ALLOCATIONS FOR ASSESSMENT OBJECTIVE TWO

Band	Marking Criteria	Marks					
3	At the top of this band commentary is <b>THOROUGH</b> in terms of analysis,						
	evaluation and interpretation of relevant psychological theories, concepts,						
	evidence or applications. Material has been used in a HIGHLY						
	EFFECTIVE manner and shows evidence of APPROPRIATE						
	SELECTION and COHERENT ELABORATION.						
	At the bottom of this band commentary is SLIGHTLY LIMITED in terms						
	of analysis, evaluation and interpretation of relevant psychological theories,						
	concepts, evidence or applications. Material has been used in an						
	EFFECTIVE manner and shows evidence of APPROPRIATE						
	SELECTION and COHERENT ELABORATION.						
2	At the top of this band commentary is <b>REASONABLE</b> but <b>LIMITED</b> in	8 - 5					
	terms of analysis, evaluation and interpretation of relevant psychological						
	theories, concepts, evidence or applications. Material has been used in an						
	<b>EFFECTIVE</b> manner and shows evidence of <b>COHERENT</b>						
	ELABORATION.						
	At the bottom of this band commentary is <b>BASIC</b> in terms of analysis,						
	evaluation and interpretation of relevant psychological theories, concepts,						
	evidence or applications. Material has been used in a <b>RESTRICTED</b>						
	manner, and shows <b>SOME</b> evidence of <b>ELABORATION</b> .						
1	At the top of this band commentary is SUPERFICIAL and	4 - 0					
	<b>RUDIMENTARY</b> in terms of analysis, evaluation of psychological theories,						
	concepts, evidence or applications. Material is not used EFFECTIVELY						
	and shows NO EVIDENCE OF ELABORATION.						
	At the bottom of this band the psychological content is <b>MUDDLED</b> and						
	<b>INCOMPLETE</b> . The answer may be wholly or mainly <b>IRRELEVANT</b> to						
	the problem it addresses.						

## **QUALITY OF WRITTEN COMMUNICATION**

Band 3	The work is characterised by a CLEAR expression of	4-3 marks
	ideas, the use of a GOOD range of specialist terms, and	
	<b>FEW</b> errors of grammar, punctuation and spelling.	
Band 2	The work is characterised by a <b>REASONABLE</b>	2-1 marks
	expression of ideas, the use of SOME specialist terms,	
	and <b>REASONABLE</b> grammar, punctuation and spelling.	
Band 1	The work is characterised by a POOR expression of	0 marks
	ideas, the use of a LIMITED range of specialist terms,	
	and <b>POOR</b> grammar, punctuation and spelling.	

#### SECTION A – SOCIAL PSYCHOLOGY

#### 1

#### Total for this question: 24 marks

Outline	and	evaluate	two	explanations	relating	to	the	reduction	of	prejudice	and/or
discrimin	natior	ı.								(24	4 marks)

*Outline* is an AO1 term, which requires the candidate to give evidence of AO1 with relation to two explanations relating to the reduction of prejudice and/or discrimination. *Evaluate* is an AO2 term which requires the candidate to give evidence of AO2 with relation to these explanations.

It is possible that some candidates may present explanations of the *origins* of prejudice in response to this question. Such answers should be credited for any insights made explicit by the candidate concerning the *reduction* of prejudice.

#### AO1

For the purposes of this question, the term 'explanation' can be interpreted as an explanation of prejudice reduction (e.g. SIT) or an explanation of **how** prejudice might be reduced (e.g. a strategy such as increased contact).

There are a number of ways in which prejudice/discrimination might be reduced. These include educational strategies (e.g. the jigsaw method), consciousness raising, increased contact, as well as strategies derived from social identity theory. It is most likely that candidates would choose an explanation based on 'increased contact', as this is the strategy that is given most attention in the texts. It is acceptable for candidates to choose two 'explanations' that are derived from the same perspective. For example, some candidates may present two explanations derived from social identity theory – for example explanations based on the notion of 'de-categorisation' and 're-categorisation'. This is perfectly acceptable. Alternatively, candidates may select a specific study of prejudice (e.g. Sherif and Sherif, 1966) and explain how the researchers overcame the prejudicial behaviour of their participants.

#### AO2

Evaluation of these explanations may be achieved through a critical examination of the amount of research support for each explanation, or perhaps through a comparison of the weaknesses of one explanation contrasted with the strengths of another. (Note that to satisfy the plurality requirement of this question, however, there should be evidence of *description* and *evaluation* of two explanations relating to the reduction of prejudice and/or discrimination). The 'value' of a particular explanation can also be judged by the degree of success that accompanies its use in the real world. Therefore candidates who draw on real-life evaluation of methods derived from these explanations should receive due credit (e.g. the limited success of some integration programmes in the US).

Candidates should evaluate only the two explanations that they outlined earlier. Candidates who simply *describe* alternative explanations or research studies without using this material as part of a sustained critical commentary will receive a maximum of 4 marks (top of Band 1) for the **AO2** component. Better answers will *evaluate* their explanations using the same material. They would receive more marks because the material is being used more *effectively*.

There is a partial performance penalty for this question. Candidates who present only one explanation relating to the reduction of prejudice and/or discrimination will be restricted to a maximum mark in Band 2 (top) for each assessment objective. Candidates who present *more than two* explanations of prejudice and/or discrimination reduction should be marked for the best two *unless* different methods can be subsumed within a super-ordinate perspective (such as social identity theory or increased contact). Some candidates may interpret this question as indicating a requirement for **two** explanations of prejudice reduction **and** two explanations of discrimination reduction. This is a legitimate interpretation. It is possible, given the wording of the question, that candidates may include techniques that *might* reduce prejudice, even if, in some cases, there is little evidence that they do. In such cases it is up to the candidate to make a convincing case for a particular strategy, and the success, or otherwise, of that argument will determine the number of marks awarded.

## **QUESTION 1 AO1**

Outline of two explanations relating to the reduction of prejudice and/or discrimination

Outline	of two explanations relating to the reduction of prejudice and/or discrimination	
Band	Mark allocation	Marks
	Outline of two explanations relating to the reduction of prejudice and/or discrimination is	
Band 3	substantial. It is accurate and well-detailed. The organisation and structure of the answer is	12 - 11
top	coherent.	
	Outline of two explanations relating to the reduction of prejudice and/or discrimination is	
Band 3	slightly limited. It is accurate and reasonably detailed. The organisation and structure of the	10 - 9
bottom	answer is <b>coherent</b> .	
	Outline of two explanations relating to the reduction of prejudice and/or discrimination is	
Band 2	limited. It is generally accurate and reasonably detailed. The organisation and structure of	8 - 7
top	the answer is reasonably constructed.	
	Partial performance is substantial, accurate and well-detailed (top of the band) or slightly	
	limited, accurate and reasonably detailed (bottom of band).	
	Outline of two explanations relating to the reduction of prejudice and/or discrimination is <b>basic</b> .	
Band 2	It is generally accurate but lacks detail. The organisation and structure of the answer is	6 - 5
bottom	reasonable.	
	Partial performance is limited, generally accurate and reasonably detailed.	
	Outline of two explanations relating to the reduction of prejudice and/or discrimination is	
Band 1	rudimentary and sometimes flawed. There is some focus on the question. The organisation	4 - 3
top	and structure of the question is <b>reasonable</b> .	
-	Partial performance is basic, generally accurate and lacking detail.	
	Outline of two explanations relating to the reduction of prejudice and/or discrimination is just	
Band 1	discernible. It is weak and shows muddled understanding. The answer may be wholly or	2 - 0
bottom	mainly irrelevant to the question's requirement.	
	Partial performance is rudimentary and sometimes flawed, with little focus on the question.	

## **QUESTION 1 AO2**

Evaluation of two explanations relating to the reduction of prejudice and/or discrimination

Band	Mark allocation	Marks	
	Evaluation of two explanations relating to the reduction of prejudice and/or discrimination is		
Band 3	thorough and there is evidence of appropriate selection and coherent elaboration.	12 - 11	
top	The material is used in a highly effective manner		
	Evaluation of two explanations relating to the reduction of prejudice and/or discrimination is		
Band 3	slightly limited and there is evidence of appropriate selection and coherent elaboration.	10 - 9	
bottom	The material is used in an effective manner.		
	Evaluation of two explanations relating to the reduction of prejudice and/or discrimination is		
Band 2	limited and there is reasonable elaboration. The material is used in reasonably effective	8 - 7	
top	manner.		
	Partial performance is thorough, coherent and highly effective use of material (top of band) or		
	slightly limited and effective use of material (bottom of band).		
	Evaluation of two explanations relating to the reduction of prejudice and/or discrimination is		
Band 2	basic and there is some evidence of elaboration. The material is used in a restricted manner.	6 - 5	
bottom	Partial performance is limited with reasonable elaboration, and reasonably effective use of		
	material.		
	Evaluation of two explanations relating to the reduction of prejudice and/or discrimination is		
Band 1	superficial and rudimentary, and there is no evidence of elaboration. The material is not	4 - 3	
top	used effectively.		
	Partial performance is basic with some evidence of elaboration, and restricted use of material.		
	Evaluation of two explanations relating to the reduction of prejudice and/or discrimination is		
Band 1	muddled and incomplete. The material may be wholly or mainly irrelevant.	2 - 0	
bottom	Partial performance is superficial with no evidence of elaboration, and not used effectively.		

#### 2

## Total for this question: 24 marks

#### Discuss research (theories *and/or* studies) relating to the dissolution of relationships. (24 marks)

*Discuss* is an **AO1** and **AO2** term which requires the candidate to both describe and evaluate research (theories and/or studies) relating to the dissolution of relationships. In the Terms Used in Examination Questions document, the term 'research' is defined as 'the process of gaining knowledge and understanding via either theory construction, examination, or empirical data collection'.

## AO1

Some candidates may present theoretical accounts (e.g. equity theory, balance theory or Fulmlee's 'fatal attraction model') or views on the stages of relationship breakdown (e.g. the work of Duck), rather than research studies per se. Alternatively, candidates may choose to write about research into the effects of relationship breakdown (e.g. on physical or mental health). All of these approaches are acceptable, as is the work on the statistics of relationship breakdown. What is important, however, is that any research presented is psychological in nature. Anecdotal accounts or personal opinions would earn few, if any marks.

Note that the question clearly specifies which aspect of relationships is required (i.e. their dissolution). It is likely that some candidates may take the 'In order to understand the dissolution of relationships, we must first study the factors involved in their formation' line when answering this question. This is appropriate up to a point, but any such inclusions should be used explicitly to answer the question rather than introducing a totally different question to the one set. The same is true for research that explains cultural variations in relationships, i.e. this is not appropriate unless dealing explicitly with cultural differences in the dissolution of relationships. Answers that only focus on the formation of relationships, or on cultural differences in relationships, without any reference to dissolution will receive no credit. Theories and research studies relating to the maintenance of relationships are more difficult to exclude when marking as they may relate to dissolution (equity theory is a case in point), but it is up to the candidate to justify their inclusion. We should not assume that all answers will dwell on the dissolution of romantic relationships. Candidates may well write about the dissolution of other types of relationships as a response to this question provided they are addressing dissolution issues rather than a general essay on the type of relationship in question.

## AO2

For the AO2 component of this question, it is acceptable for candidates to evaluate in terms of the evidence for or against their chosen theories/research studies, the cultural or gender biases inherent in certain theories or in terms of alternative explanations and perspectives.

Candidates who fail to embed their answer within recognisable psychology may well find it difficult to offer critical evaluation (AO2) of the assertions they have made. This is not always the case, however, and some candidates offer quite intelligent critiques of 'commonsensical' views of the dissolution of relationships, and should therefore receive marks. The type of evaluation obviously depends on the particular interpretation of the term 'research' that is taken by the candidate. If candidates attempt a post-modern critique of this topic area, their evaluation should be explicitly relevant to relationship dissolution, rather than an unfocused account of the nature of relationships.

Note that the question does not carry a plurality requirement, the critical word being research rather than research studies.

## **QUESTION 2 AO1**

Description of research relating to the dissolution of relationships
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Band	Mark allocation	Marks					
Danu	Description of research relating to the dissolution of relationships is substantial.	1 <b>1111 N</b> 5					
Dand 2							
Band 3	It is accurate and well-detailed. The organisation and structure of the answer is						
top	coherent. There is substantial evidence of breadth and depth, and an						
	appropriate balance between them is achieved.						
	Description of research relating to the dissolution of relationships is slightly						
Band 3	limited. It is accurate and reasonably detailed. The organisation and structure	10 - 9					
bottom	of the answer is coherent. There is evidence of breadth and depth, although a						
	balance between them is not always achieved.						
	Description of research relating to the dissolution of relationships is limited. It is						
Band 2	2 generally accurate and reasonably detailed. The organisation and structure of						
top	the answer is reasonably constructed. There is increasing evidence of breadth						
-	and/or depth.						
	Description of research relating to the dissolution of relationships is basic. It is						
Band 2	generally accurate but lacks detail. The organisation and structure of the	6 - 5					
bottom	answer is <b>reasonable</b> . There is <b>some evidence</b> of depth and/or breadth.						
	Description of research relating to the dissolution of relationships is <b>rudimentary</b>						
Band 1	and sometimes flawed. There is some focus on the question. The organisation	4 - 3					
top	and structure of the question is reasonable.						
-	Description of research relating to the dissolution of relationships is just						
Band 1	discernible. It is weak and shows muddled understanding. The answer may	2 - 0					
bottom	be wholly or mainly irrelevant to the question's requirement.						

## **QUESTION 2 AO2**

Evaluation of research relating to the dissolution of relationships

Band	Mark allocation	Marks
	Evaluation of research relating to the dissolution of relationships is thorough and	
Band 3	there is evidence of appropriate selection and coherent elaboration. The	12 - 11
top	material is used in a highly effective manner	
	Evaluation of research relating to the dissolution of relationships is slightly	
Band 3	limited and there is evidence of appropriate selection and coherent	10 - 9
bottom	elaboration. The material is used in an effective manner.	
	Evaluation of research relating to the dissolution of relationships is limited and	
Band 2	there is reasonable elaboration. The material is used in reasonably effective	8 - 7
top	manner.	
	Evaluation of research relating to the dissolution of relationships is <b>basic</b> and there	
Band 2	is some evidence of elaboration. The material is used in a restricted manner.	6 - 5
bottom		
	Evaluation of research relating to the dissolution of relationships is superficial,	
Band 1	and rudimentary, and there is no evidence of elaboration. The material is not	4 - 3
top	used effectively.	
Band 1	Evaluation of research relating to the dissolution of relationships is muddled and	
bottom	incomplete. The material may be wholly or mainly irrelevant.	

## Total for this question: 24 marks

## (a) Outline two or more explanations of media influences on anti-social behaviour. (12 marks)

## (b) To what extent do research studies support the view that the media are responsible for antisocial behaviour? (12 marks)

*Outline* is an **AO1** injunction, which requires candidates to provide a summary description of explanations of media influences on anti-social behaviour [part (a) of the question].

The **AO2** injunction is *To what extent*, which requires the candidate to present consider the extent to which research studies support the view that the media is responsible for anti-social behaviour [part (b) of the question].

## (a) AO1

This question is a departure from the more usual question in this topic area in that it asks for explanations of media influences on anti-social behaviour. This is faithful to the wording of the specification, and requires more than just a documenting of research that has (or has not) demonstrated this influence. Some candidates may take the view that there is a simple correlational relationship between exposure to violent media and the emergence of violent behaviour. Others may draw more on experimental research which suggests that violent media has a causal influence on violent behaviour. Whilst such responses are relevant and would receive credit, better candidates should be able to explain this relationship in terms of underlying psychological mechanisms and processes. For example, work by Brown and Pennell (1998) suggests that television and video violence has a mediating influence rather than being the sole causal factor in violent behaviour. Bandura (1983) suggests that television may exert its influence through socialising influences such as the learning of novel behaviours, the vicarious legitimisation of aggressive behaviours and the desensitisation of the viewer towards violence.

#### (b) AO2

Although there are studies that do purport to show media effects on anti-social behaviour, the methodological limitations of these studies might detract from our ability to make sweeping generalisations based on their findings. Likewise, many studies have failed to find evidence of a consistent relationship between media violence and anti-social behaviour, therefore such studies can be used as a critical counterpoint to the media effects perspective. Candidates who do no more than describe appropriate research studies without using this material as part of a sustained critical commentary on the media effects model will receive a maximum of 4 marks (top of Band 1) for the AO2 component of this question. Candidates may also offer a more general evaluation of the media effects model as an explanation of violent behaviour in children (e.g. the criticisms of this model offered by Gauntlett, (1998), Cumberbatch (2001) and Livingstone, (2001). According to Cumberbatch, for example, although there have been many anecdotal claims that people do imitate violent programmes, in real life there is little evidence for this. Livingstone suggests that the challenge within media effects research is not to try to answer simple questions with simple answers, but to construct a more complex picture, based on the differences, contradictions and parallels among diverse studies.

Note that partial performance penalties apply in both parts of this question (see AO1 and AO2 mark allocations). If a candidate includes material that is clearly relevant and would earn marks in one part of a question, it should remain (when determining marks) regardless of whether it might earn more marks elsewhere. If the material is only peripherally relevant or irrelevant to one part of the question and would earn marks in the other part, then it should be 'exported' (when determining marks) to that part.



## **QUESTION 3 AO1**

Outline of two or more explanations of media influences on anti-social behaviour

BandMark allocationOutline of two or more explanations of media influences on anti-social behaviour isBand 3substantial. It is accurate and well-detailed. The organisation and structure of the answer is coherent.	
Band 3 topsubstantial. It is accurate and well-detailed. The organisation and structure of the answer is coherent.	
top answer is coherent.	
Outline of two or more explanations of media influences on anti-social behaviour is	
Band 3 slightly limited. It is accurate and reasonably detailed. The organisation and	10 - 9
<b>bottom</b> structure of the answer is <b>coherent</b> .	
Outline of two or more explanations of media influences on anti-social behaviour is	
Band 2 limited. It is generally accurate and reasonably detailed. The organisation and	8 - 7
top structure of the answer is reasonably constructed.	
Partial performance is substantial, accurate and well-detailed (top of the band) or	
slightly limited, accurate and reasonably detailed (bottom of band).	
Outline of two or more explanations of media influences on anti-social behaviour is	
Band 2 basic. It is generally accurate but lacks detail. The organisation and structure of the	6 - 5
bottom answer is reasonable.	
Partial performance is limited, generally accurate and reasonably detailed.	
Outline of two or more explanations of media influences on anti-social behaviour is	
Band 1 rudimentary and sometimes flawed. There is some focus on the question.	4 - 3
top The organisation and structure of the question is <b>reasonable</b> .	
Partial performance is basic, generally accurate and lacking detail.	
Outline of two or more explanations of media influences on anti-social behaviour is	
Band 1 just discernible. It is weak and shows muddled understanding. The answer may be	2 - 0
<b>bottom</b> wholly or mainly irrelevant to the question's requirement.	
Partial performance is rudimentary and sometimes flawed, with little focus on the	
question.	

## **QUESTION 3 AO2**

*Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour* 

Band	Mark allocation	Marks
Band 3 top	Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour is <b>thorough</b> and there is evidence of <b>appropriate selection and coherent elaboration</b> . The material is used in a <b>highly effective</b> manner	12 - 11
Band 3 bottom	Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour is <b>slightly limited</b> and there is evidence of <b>appropriate selection and coherent elaboration</b> . The material is used in an <b>effective</b> manner.	10 - 9
Band 2 top	Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour is <b>limited</b> and there is <b>reasonable elaboration</b> . The material is used in <b>reasonably effective</b> manner. <i>Partial performance is thorough, coherent and highly effective use of material (top of band) or slightly limited and effective use of material (bottom of band).</i>	8 - 7
Band 2 bottom	Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour is <b>basic</b> and there is <b>some evidence of elaboration</b> . The material is used in a <b>restricted</b> manner. <i>Partial performance is limited with reasonable elaboration, and reasonably effective use of material.</i>	6 - 5
Band 1 top	Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour is <b>superficial</b> , and <b>rudimentary</b> , and there is no <b>evidence of elaboration</b> . The material is <b>not used effectively</b> . <i>Partial performance is basic with some evidence of elaboration, and restricted use of material</i> .	4 - 3
Band 1 bottom	Consideration of the extent to which research studies support the view that the media is responsible for anti-social behaviour is <b>muddled and incomplete</b> . The material may be <b>wholly or mainly irrelevant</b> . <i>Partial performance is superficial with no evidence of elaboration, and not used effectively.</i>	2 - 0

## SECTION B - PHYSIOLOGICAL PSYCHOLOGY

#### 4

#### Total for this question: 24 marks

Discuss the functional organisation of the cerebral cortex.	(24 marks)
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*Discuss* is an AO1 and AO2 term which requires the candidate to both describe and evaluate the functional organisation of the cerebral cortex.

## AO1

This question does not specify 'theories' or 'research', therefore candidates are free to simply describe the functional organisation of the cortex as their AO1 content. The question does, however, specify the 'cerebral cortex', therefore material relating to the organisation of other brain areas is not relevant should not receive marks unless this material is explicitly linked to cortical organisation. One way of dividing the cerebral cortex according to its different functions is into sensory, motor and association areas. For example, visual information is relayed via the thalamus to the primary visual cortex. The primary auditory cortex and the primary somatosensory cortex have analogous roles in hearing and skin senses. Likewise, there are several motor areas in the cortex, damage to which impairs movement in some way. The role of the association areas, once believed to link different sensory areas together, is less clear cut.

Alternatively, the cerebral cortex may be divided into different lobes, each associated with a different aspect of behaviour or experience. The occipital lobe is primarily responsible for vision, the temporal lobe for hearing (as well as some complex aspects of vision) and emotion and motivation, and the parietal lobe for bodily sensations. The frontal lobe, comprised of the motor cortex and the prefrontal cortex, deals with the control of fine movements (motor cortex) and the prefrontal cortex with (among other functions) memory, attention and the planning of movements.

#### AO2

Evaluation of this material may be achieved in a number of ways. Candidates may, for example, consider the consequences of damage to any of the areas they have described in the cerebral cortex. Damage to the primary visual cortex leads to blindness and damage to the primary auditory cortex leads to deafness. Damage to motor areas leads to paralysis of whatever part of the body controlled by that particular area. Damage to an association area, on the other hand, neither leads to complete impairment of a particular sense, nor to complete paralysis.

In the same way, candidates might consider the consequences of damage to a particular lobe of the cerebral cortex (e.g. damage to the temporal lobe may lead to the Klüver-Bucy syndrome) as support for the assumptions concerning functional organisation. Alternatively, candidates may offer research evidence to support the functional differentiation of the cortex, consider methodological difficulties in investigating this functional organisation, or assess the evolutionary significance of brain development that has led to this functional differentiation.

Some candidates may approach this question exclusively in terms of organisation of language (or some other faculty) in the cortex. This is a legitimate approach and one which has the potential for the full range of marks.

## **QUESTION 4 A01**

Description of the functional organisation of the cerebral cortex

Band	Mark allocation	
	Description of the functional organisation of the cerebral cortex is substantial.	
Band 3	It is accurate and well-detailed. The organisation and structure of the answer is	12 - 11
top	coherent. There is substantial evidence of breadth and depth, and an appropriate	
	balance between them is achieved.	
	Description of the functional organisation of the cerebral cortex is slightly	
Band 3	limited. It is accurate and reasonably detailed. The organisation and structure	10 - 9
bottom	of the answer is coherent. There is evidence of breadth and depth, although a	
	balance between them is not always achieved.	
	Description of the functional organisation of the cerebral cortex is limited.	
Band 2	It is generally accurate and reasonably detailed. The organisation and structure	8 - 7
top	of the answer is reasonably constructed. There is increasing evidence of	
	breadth and/or depth.	
	Description of the functional organisation of the cerebral cortex is basic. It is	
Band 2	generally accurate but lacks detail. The organisation and structure of the	6 - 5
bottom	answer is reasonable. There is some evidence of depth and/or breadth.	
	Description of the functional organisation of the cerebral cortex is rudimentary	
Band 1	and sometimes flawed. There is some focus on the question. The organisation	4 - 3
top	and structure of the question is reasonable.	
	Description of the functional organisation of the cerebral cortex is just	
Band 1	discernible. It is weak and shows muddled understanding. The answer may be	2 - 0
bottom	wholly or mainly irrelevant to the question's requirement.	

## **QUESTION 4 AO2**

Evaluation of the functional organisation of the cerebral cortex

Band	Mark allocation	Marks
	Evaluation of the functional organisation of the cerebral cortex is thorough and	
Band 3	there is evidence of appropriate selection and coherent elaboration.	12 - 11
Тор	The material is used in a highly effective manner	
	Evaluation of the functional organisation of the cerebral cortex is slightly limited	
Band 3	and there is evidence of appropriate selection and coherent elaboration.	10 - 9
bottom	The material is used in an effective manner.	
	Evaluation of the functional organisation of the cerebral cortex is limited and	
Band 2	there is reasonable elaboration. The material is used in reasonably effective	8 - 7
top	manner.	
	Evaluation of the functional organisation of the cerebral cortex is <b>basic</b> and there	
Band 2	is some evidence of elaboration. The material is used in a restricted manner.	6 - 5
Bottom		
	Evaluation of the functional organisation of the cerebral cortex is superficial, and	
Band 1	rudimentary, and there is no evidence of elaboration. The material is not used	4 - 3
top	effectively.	
Band 1	Evaluation of the functional organisation of the cerebral cortex is muddled and	2 - 0
bottom	incomplete. The material may be wholly or mainly irrelevant.	

#### Total for this question: 24 marks

## (a) Outline and evaluate *one* neurobiological theory of dreaming (e.g. Hobson and McCarley, Crick and Mitchison). (12 marks)

## (b) Outline and evaluate *one* psychological theory of dreaming (e.g. Freud, Webb, Cartwright). (12 marks)

(a) *Outline* is an **AO1** injunction, which requires candidates to provide a summary description of one neurobiological theory of dreaming. The **AO2** injunction is *Evaluate*, which requires the candidate to present evidence of **AO2** in relation to that neurobiological theory.

(b) *Outline* is an **AO1** injunction, which requires candidates to provide a summary description of one psychological theory of dreaming. The **AO2** injunction is *Evaluate*, which requires the candidate to present evidence of **AO2** in relation to that psychological theory.

## (a) AO1 + AO2

The question suggests the neurobiological theories of Hobson and McCarley, and Crick and Mitchison as suitable content, but any theory that explains dreaming in terms of the brain's activity during REM would be acceptable provided this is an explanation of dreaming rather than simply an explanation of REM sleep. Hobson and McCarley's 'activation-synthesis' hypothesis (Hobson and McCarley, 1977) states that dreaming may have no significance beyond the brain's attempt to impose some sort of coherence on what are essentially random firings of neurons during REM sleep. Crick and Mitchison's 'reverse learning' theory proposes that during sleep, when the brain is 'off-line', it sifts through information acquired during the course of the previous day and 'throws out' anything that is not needed. In this theory, dreaming is a way for forgetting by 'reverse-learning'. Appropriate AO2 material depends on the theory being discussed, but each of these theories can be criticised in terms of unexplained facts (e.g. the 'fact' that dreams do appear to be organised into clear narratives poses a problem for Crick and Mitchison's theory). On the other hand, a strength of Hobson and McCarley's theory is the wealth of supporting evidence. Answers that emphasise sleep should not receive credit unless making explicit reference to dreaming.

Candidates who present a theory in the wrong context (e.g. putting Freud in part (a) and/or Hobson and McCarley in part (b)) may have it exported **only** if, in the examiner's judgement, this is an innocent error of labelling. If, however, the candidate represents the theory inappropriately (e.g. "One neurobiological theory is Freud....") the material should not be moved and will not, therefore, receive credit.

#### (b) AO1 + AO2

There is probably more choice for candidates searching for a suitable psychological theory of dreaming. These would include Winson's model of dreaming as an important correlate of survival, Cartwright's problem solving function for dreaming, and of course the more extensive theories of Freud and Jung, where dreams are given a great deal more significance. To Freud, dreams were the disguised fulfilment of a repressed desire, whereas to Jung dreams reflected more the mind's current state and preoccupations.

Evaluation of the chosen theory may focus on empirical research evidence (e.g. the recent suggestion that there is a dissociation in the brain between REM and dream states), or on aspects of a theory that do not sit comfortably with the facts. Alternatively, candidates may take a more general critical stance, and offer an evaluation based more on the methodological problems with trying to explore dreams in a laboratory setting versus the problems of relying on anecdotal accounts of dreams in less controlled settings.

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It is possible that candidates will draw on alternative explanations of dreaming as a way of evaluating their chosen theories. Candidates who simply describe alternative theories without using this material as part of a sustained critical commentary will receive a maximum of 2 marks (top of Band 1) for the AO2 component. Better answers should evaluate their chosen theory by, for example, demonstrating how the weaknesses of one theory (or even its strengths) are overcome in the alternative theories chosen. Such candidates would receive more marks because the material is being used more effectively. If the same theory is presented in parts (a) and (b), it can only count in one (this should be the part where it would gain most marks). Candidates who outline and evaluate more than one theory in either part should have both marked and the one that would earn most marks (if appropriate to that part of the question) credited.

## QUESTION 5 AO1 (Use for both parts of the question)

Outline of one neurobiological/psychological theory of dreaming

Band	Mark allocation	
	Outline of one neurobiological/psychological theory of dreaming is substantial.	
Band 3	It is accurate and well-detailed. The organisation and structure of the answer is	6
top	coherent.	
	Outline of one neurobiological/psychological theory of dreaming is slightly	
Band 3	limited. It is accurate and reasonably detailed. The organisation and structure	5
bottom	of the answer is <b>coherent</b> .	
	Outline of one neurobiological/psychological theory of dreaming is limited. It is	
Band 2	generally accurate and reasonably detailed. The organisation and structure of	4
top	the answer is reasonably constructed.	
	Outline of one neurobiological/psychological theory of dreaming is basic. It is	
Band 2	generally accurate but lacks detail. The organisation and structure of the	3
bottom	answer is reasonable.	
	Outline of one neurobiological/psychological theory of dreaming is rudimentary	
Band 1	and sometimes flawed. There is some focus on the question. The organisation	2
top	and structure of the question is reasonable.	
	Outline of one neurobiological/psychological theory of dreaming is just	
Band 1	discernible. It is weak and shows muddled understanding. The answer may	1 - 0
bottom	be wholly or mainly irrelevant to the question's requirement.	

## **QUESTION 5 AO2**

Evaluation of one neurobiological/psychological theory of dreaming

Band	Mark allocation		
	Evaluation of one neurobiological/psychological theory of dreaming is <b>thorough</b>		
Band 3	and there is evidence of appropriate selection and coherent elaboration.	6	
top	The material is used in a highly effective manner		
	Evaluation of one neurobiological/psychological theory of dreaming is slightly		
Band 3	limited and there is evidence of appropriate selection and coherent	5	
bottom	elaboration. The material is used in an effective manner.		
	Evaluation of one neurobiological/psychological theory of dreaming is limited		
Band 2	and there is reasonable elaboration. The material is used in reasonably	4	
top	effective manner.		
	Evaluation of one neurobiological/psychological theory of dreaming is basic and		
Band 2	there is some evidence of elaboration. The material is used in a restricted	3	
bottom	manner.		
	Evaluation of one neurobiological/psychological theory of dreaming is		
Band 1	superficial, and rudimentary, and there is no evidence of elaboration.	2	
top	The material is <b>not used effectively</b> .		
Band 1	Evaluation of one neurobiological/psychological theory of dreaming is muddled		
bottom	and incomplete. The material may be wholly or mainly irrelevant.		

## Total for this question: 24 marks

## 6

## Critically consider the role of brain structures in emotion.

(24 marks)

*Critically consider* is an AO1 and AO2 term, which requires the candidate to both describe and evaluate the role of brain structures in emotion.

## AO1

The key brain structures associated with emotion are located in the limbic system. These include the hypothalamus, hippocampus and amygdala. Stimulation of the hypothalamus in animal subjects generally results in rage and its destruction to a decrease in emotional behaviour. Likewise, electrical and chemical stimulation of the hippocampus brings about emotional responses and autonomic reactions similar to those found during normal emotion. However, the full range of emotional experiences involves much more of the brain. There is evidence, for example, that the right hemisphere of the cerebral cortex may be more important than the left in certain types of emotional behaviour. The frontal lobes, although primarily neocortex, are also implicated in emotion. Early animal studies that involved frontal lobe ablations (a precursor to the frontal lobotomy) produced a decrease in emotional responsiveness. The exact role of the frontal lobes in emotion is, however, as yet unknown.

Although not strictly a structure, the autonomic nervous system plays an important role in emotional arousal. Candidates may, therefore, make reference to the James-Lange and Cannon-Bard theories of emotion to illustrate the role of autonomic nervous system arousal in emotional experience. The Cannon-Bard theory could be made relevant but only as a way of illustrating the role of brain structures. It is harder to see how a candidate might make the James-Lange theory relevant in this respect.

## AO2

Evaluation of this area may touch on the relative uncertainty that taints much of our understanding of the role of different brain structures in emotion, or the mechanisms by which they act. Research in this area is widely accessible, and better-informed candidates should be able to support their assertions about the role of different brain structures through reference to empirical studies in that area. It is also appropriate for candidates to consider the consequences of damage to a particular area. For example, temporal lobe damage can lead to the Klüver-Bucy syndrome (a condition where subjects fail to display normal fears and anxieties).

Understanding the physiology of emotion is fraught with difficulties. Some of these are methodological - for example the technical difficulties of determining the precise location and extent of a particular lesion or how to confine the effect of stimulation or a lesion to a given area of interest. A related problem is the whole idea of localisation of function. In attempting to define a specific area of brain as 'involved' with emotional behaviour and experience, there is the implication that this area of the brain is responsible for that behaviour or experience. However, this is rarely the case. Rather it is more accurate to say that the action of a particular area of the brain is necessary for the occurrence of a particular emotional behaviour, but it may not be a sufficient condition for that behaviour to take place. Candidates may, therefore, as part of their AO2 content, point out the role of non-neurological factors in emotional behaviour and experience.

Despite the use of the term 'brain structures' in the question, this does not imply a partial performance penalty should a candidate only discuss the role of one brain structure. Instead it acknowledges that emotional behaviour and experience may be spread across many different areas of the brain rather than being located in just one central area.

## **QUESTION 6 A01**

Description of the role of brain structures in emotion

Band	Mark allocation	Marks		
Dallu		IVIAI KS		
	Description of the role of brain structures in emotion is substantial. It is			
Band 3	accurate and well-detailed. The organisation and structure of the answer is	12 - 11		
top	coherent. There is substantial evidence of breadth and depth, and an			
	appropriate balance between them is achieved.			
	Description of the role of brain structures in emotion is slightly limited. It is			
Band 3	accurate and reasonably detailed. The organisation and structure of the answer	10 - 9		
bottom	is coherent. There is evidence of breadth and depth, although a balance between			
	them is not always achieved.			
	Description of the role of brain structures in emotion is <b>limited</b> . It is generally			
Band 2	accurate and reasonably detailed. The organisation and structure of the answer	8 - 7		
top	is reasonably constructed. There is increasing evidence of breadth and/or	0 /		
top	depth.			
D 14	Description of the role of brain structures in emotion is <b>basic</b> . It is generally			
Band 2	accurate but lacks detail. The organisation and structure of the answer is	6 - 5		
bottom	reasonable. There is some evidence of depth and/or breadth.			
	Description of the role of brain structures in emotion is rudimentary and			
Band 1	sometimes flawed. There is some focus on the question. The organisation and	4 - 3		
top	structure of the question is <b>reasonable</b> .			
-	Description of the role of brain structures in emotion is just discernible. It is			
Band 1	weak and shows muddled understanding. The answer may be wholly or	2 - 0		
bottom	mainly irrelevant to the question's requirement.			

## **QUESTION 6 AO2**

Evaluation of the role of brain structures in emotion

Band	Mark allocation	Marks
	Evaluation of the role of brain structures in emotion is thorough and there is	
Band 3	evidence of appropriate selection and coherent elaboration. The material is	12 - 11
top	used in a highly effective manner	
	Evaluation of the role of brain structures in emotion is slightly limited and there is	
Band 3	evidence of appropriate selection and coherent elaboration. The material is	10 - 9
bottom	used in an effective manner.	
	Evaluation of the role of brain structures in emotion is limited and there is	
Band 2	reasonable elaboration. The material is used in reasonably effective manner.	8 - 7
top		
	Evaluation of the role of brain structures in emotion is basic and there is some	
Band 2	evidence of elaboration. The material is used in a restricted manner.	6 - 5
bottom		
	Evaluation of the role of brain structures in emotion is superficial, and	
Band 1	rudimentary, and there is no evidence of elaboration. The material is not used	4 - 3
top	effectively.	
	Evaluation of the role of brain structures in emotion is <b>muddled and incomplete</b> .	
Band 1	The material may be wholly or mainly irrelevant.	2 - 0
bottom		

## SECTION C - COGNITIVE PSYCHOLOGY

#### Total for this question: 24 marks

Ι	iscuss research	(theories <i>and/or</i> studies	) into automatic	processing.	(24 marks)
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*Discuss* is an **AO1** and **AO2** term which requires the candidate to both describe and evaluate research (theories and/or studies) relating to automatic processing. In the Terms Used in Examination Questions document, the term 'research' is defined as 'the process of gaining knowledge and understanding via either theory construction, examination, or empirical data collection'.

#### A01

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Posner and Snyder (1975) suggest that performance on a task is automatic if it occurs without the intention or the awareness of the person performing the task, and does not interfere with other mental activities. As this question asks for 'research' into automatic processing, candidates may draw on both theoretical accounts of automatic processing (such as the Stroop Effect) or research studies of this phenomenon. They may also discuss research associated with action slips, in that these too are a consequence of the automatic processing of habitual tasks.

Shiffrin and Schneider (1977) have distinguished between attentional processing, and automatic processing. The former is serial in nature and is usually consciously directed towards a task. The latter, automatic processing, operates in parallel and usually at a subconscious level. These differences, and the other differences between the two types of processing proposed by Shiffrin and Schneider may be used as part of the AO1 descriptive content or, if used as part of a sustained critical commentary may count towards the AO2 component of the answer. Candidates who include material relating to attentional processing (e.g. focused and divided attention) should not receive credit unless it is being used as an explicit contrast to automatic processing (as detailed above).

#### AO2

It is possible that candidates may draw on alternative research studies and/or explanations of information processing as a way of evaluating research into automatic processing. Candidates who simply describe such alternative perspectives without using this material as part of a sustained critical commentary should receive a maximum of 4 marks (Band 1 top) for the AO2 component. Better answers might evaluate alternative perspectives by, for example, demonstrating how the weaknesses of one position are overcome in the alternative perspective chosen (see Norman and Shallice model below). Such candidates would receive more marks because the material is being used more effectively.

Despite the apparently clear distinction between attentional and automatic processing, it is not clear how the switch from one to the other is achieved. The distinction between the two forms of processing may not be as clear as Shiffrin and Schneider suggest. Some aspects of a task may require attentional (i.e. controlled) processing, whereas others involve mostly automatic processing. Candidates may use alternative models such as Norman and Shallice's idea of the 'supervisory attentional system' (Norman and Shallice, 1986) to reconcile this fact.

## **QUESTION 7 A01**

Description of research into automatic processing

Band	Mark allocation	Marks
Dunu	Description of research into automatic processing is <b>substantial</b> . It is <b>accurate</b>	1/10/165
Band 3	and well-detailed. The organisation and structure of the answer is coherent.	12 - 11
top	There is <b>substantial evidence</b> of breadth and depth, and an <b>appropriate balance</b>	12 11
чор	between them is achieved.	
Band 3 bottom	Description of research into automatic processing is <b>slightly limited</b> . It is <b>accurate and reasonably detailed</b> . The organisation and structure of the answer is <b>coherent</b> . There is <b>evidence</b> of breadth and depth, although a <b>balance</b> <b>between them is not always achieved</b> .	10 - 9
Band 2 top	Description of research into automatic processing is <b>limited</b> . It is <b>generally accurate and reasonably detailed</b> . The organisation and structure of the answer is <b>reasonably constructed</b> . There is <b>increasing evidence</b> of breadth and/or depth.	8 - 7
Band 2 bottom	Description of research into automatic processing is <b>basic</b> . It is <b>generally accurate but lacks detail</b> . The organisation and structure of the answer is <b>reasonable</b> . There is <b>some evidence</b> of depth and/or breadth.	6 - 5
Band 1 top	Description of research into automatic processing is <b>rudimentary and sometimes</b> <b>flawed</b> . There is <b>some focus on the question</b> . The organisation and structure of the question is <b>reasonable</b> .	4 - 3
Band 1 bottom	Description of research into automatic processing is <b>just discernible</b> . It is <b>weak</b> <b>and shows muddled understanding</b> . The answer may be <b>wholly or mainly</b> <b>irrelevant</b> to the question's requirement.	2 - 0

## **QUESTION 7 AO2**

Evaluation of research into automatic processing

Band	Mark allocation	Marks
Band 3 top	Evaluation of research into automatic processing is <b>thorough</b> and there is evidence of <b>appropriate selection and coherent elaboration</b> . The material is used in a <b>highly effective</b> manner	12 - 11
Band 3 bottom	Evaluation of research into automatic processing is <b>slightly limited</b> and there is evidence of <b>appropriate selection and coherent elaboration</b> . The material is used in an <b>effective</b> manner.	10 - 9
Band 2 top	Evaluation of research into automatic processing is <b>limited</b> and there is <b>reasonable elaboration</b> . The material is used in <b>reasonably effective</b> manner.	8 - 7
Band 2 bottom	Evaluation of research into automatic processing is <b>basic</b> and there is <b>some</b> evidence of elaboration. The material is used in a restricted manner.	6 - 5
Band 1 top	Evaluation of research into automatic processing is <b>superficial</b> , and <b>rudimentary</b> , and there is <b>no evidence of elaboration</b> . The material is <b>not used effectively</b> .	4 - 3
Band 1 bottom	Evaluation of research into automatic processing is <b>muddled and incomplete</b> . The material may be <b>wholly or mainly irrelevant</b> .	2 - 0

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## Total for this question: 24 marks

## (a) Outline *two or more* studies into the development of perceptual abilities. (12 marks) (b) To what extent do such studies contribute to the nature-nurture debate in perception?

(12 marks)

Part (a): *Outline* is an **AO1** term, which requires the candidate to give evidence of **AO1** with relation to two or more studies into the development of perceptual abilities.

Part (b): *Evaluate* is an **AO2** term, which requires the candidate to consider the extent to which such studies contribute to the nature-nurture debate in perception.

## (a) AO1

The specification mentions infant and cross-cultural studies, so these are the types of study most likely to be found in response to the first part of this question.

Infant studies of the development of perceptual abilities include the following:

- Depth/distance perception (e.g. Gibson and Walk, 1960; Yonas et al., 2001)
- Visual constancies (e.g. Bower, 1966; Slater et al., 1990)
- Face recognition (e.g. Fantz, 1961)
- Spatial perception (e.g. Johnson et al., 2001)

- Depth/distance perception (e.g. Hudson et al., 1960)
- Visual illusions (e.g. Segal et al., 1966)
- Shape constancy (e.g. Deregowski, 1976)
- Pictorial perception (e.g. Deregowski, 1990)
- Turnbull's experiences with African pygmies (Turnbull, 1965) may be included as an example of a cross-cultural study of perceptual development. Whilst not strictly a psychological study, it did give some insights appropriate to this area, and so would receive some credit.

## (b) AO2

For the second part of this question, candidates are required to consider whether 'such' studies (they do not have to explicitly address the same studies as in part [a]) contribute to the nature-nurture debate in perception. There are a number of ways that candidates might address this. They could, for example, address the *consequences* or *implications* of a particular study, or the *inferences* that might be drawn from it. Alternatively, they may take a critical perspective towards a particular study (e.g. the limitations of the Gibson and Walk methodology), or to a particular *type* of study (such as the difficulties of carrying out infant studies, or the validity of conclusions drawn from cross-cultural studies). It is also possible that some candidates might demonstrate how particular studies have led to the development of an explanation of perceptual development that in turn contributes to the nature-nurture debate. What is important, however, is that whichever route candidates take in this second part of the question, they are linking studies of the development of perceptual abilities to our understanding of, or the development of, the nature-nurture debate. It is also possible that some candidates itself, rather than focusing specifically on the contribution of perceptual studies to this debate. Examiners should be wary of such an approach, and



only credit material that links perceptual development and nature-nurture, or that draws general conclusions *using* this material.

Note that animal studies (e.g. Held and Hein, Blakemore and Cooper) are not excluded from this question and so may receive credit.

Note that partial performance penalties apply in both parts of this question (see AO1 and AO2 mark allocations). If a candidate includes material that is *clearly relevant* and would earn marks in one part of a question, it should remain (when determining marks) *regardless* of whether it might earn more marks elsewhere. If the material is only *peripherally relevant* or *irrelevant* to one part of the question and would earn marks in the other part, then it should be '*exported*' (when determining marks) to that part.

## **QUESTION 8 A01**

Outline of two or more studies into the development of perceptual abilities

Band	Mark allocation	Marks		
	Outline of two or more studies into the development of perceptual abilities is			
Band 3	substantial. It is accurate and well-detailed. The organisation and structure of			
top	the answer is <b>coherent</b> .			
	Outline of two or more studies into the development of perceptual abilities is			
Band 3	slightly limited. It is accurate and reasonably detailed. The organisation and	10 - 9		
bottom	structure of the answer is <b>coherent</b> .			
	Outline of two or more studies into the development of perceptual abilities is			
Band 2	limited. It is generally accurate and reasonably detailed. The organisation and	8 - 7		
top	structure of the answer is reasonably constructed.			
	Partial performance is substantial, accurate and well-detailed (top of the band)			
	or slightly limited, accurate and reasonably detailed (bottom of band).			
	Outline of two or more studies into the development of perceptual abilities is			
Band 2	basic. It is generally accurate but lacks detail. The organisation and structure	6 - 5		
bottom	of the answer is <b>reasonable</b> .			
	Partial performance is limited with reasonable elaboration, and reasonably			
	effective use of material.			
	Outline of two or more studies into the development of perceptual abilities is			
Band 1	rudimentary and sometimes flawed. There is some focus on the question.	4 - 3		
top	The organisation and structure of the question is <b>reasonable</b> .			
	Partial performance is basic, generally accurate and lacking detail.			
	Outline of two or more studies into the development of perceptual abilities is just			
Band 1				
bottom	be wholly or mainly irrelevant to the question's requirement.			
	Partial performance is rudimentary and sometimes flawed, with little focus on the			
	question.			

## **QUESTION 8 AO2**

*Consideration of the extent to which such studies contribute to the nature-nurture debate in perception* 

Band	Mark allocation	
	Consideration of the extent to which such studies contribute to the nature-nurture	
Band 3	debate in perception is thorough and there is evidence of appropriate selection	12 - 11
top	and coherent elaboration. The material is used in a highly effective manner	
	Consideration of the extent to which such studies contribute to the nature-nurture	
Band 3	debate in perception is slightly limited and there is evidence of appropriate	10 - 9
bottom	selection and coherent elaboration. The material is used in an effective manner.	
	Consideration of the extent to which such studies contribute to the nature-nurture	
Band 2	debate in perception is limited and there is reasonable elaboration. The material	8 - 7
top	is used in reasonably effective manner.	
	Partial performance is thorough, coherent and highly effective use of material	
	(top of band) or slightly limited and effective use of material (bottom of band).	
	Consideration of the extent to which such studies contribute to the nature-nurture	
Band 2	debate in perception is basic and there is some evidence of elaboration.	6 - 5
bottom	The material is used in a <b>restricted</b> manner.	
	Partial performance is limited with reasonable elaboration, and reasonably	
	effective use of material.	
	Consideration of the extent to which such studies contribute to the nature-nurture	
Band 1	debate in perception is superficial, and rudimentary, and there is no evidence of	4 - 3
top	elaboration. The material is not used effectively.	
	Partial performance is basic with some evidence of elaboration, and restricted use	
	of material.	
	Consideration of the extent to which such studies contribute to the nature-nurture	
Band 1	debate in perception is muddled and incomplete. The material may be wholly or	2 - 0
bottom	mainly irrelevant.	
	Partial performance is superficial with no evidence of elaboration, and not used	
	effectively.	

#### 9

## Total for this question: 24 marks

#### Describe and evaluate research (theories *and/or* studies) into problem solving. (24 marks)

*Describe* is an **AO1** term which requires the candidate to give evidence of **AO1** in relation to research into problem solving. *Evaluate* is an **AO2** term which requires the candidate to give evidence of **AO2** in relation to this research. In the Terms Used in Examination Questions document, the term 'research' is defined as 'the process of gaining knowledge and understanding via either theory construction, examination, or empirical data collection'.

## AO1

The specification entry for this area includes 'problem solving strategies' and 'means of representation' as indicative of research into problem solving. Although it is most likely that candidates choose these examples, other types of problem solving are also appropriate in this context. For example, candidates might write about research into decision-making, creativity or even aspects of social cognition, provided they are emphasising the problem solving aspects of these behaviours. As the term 'research' is used in this question, it is appropriate for candidates to discuss both theoretical perspectives on problem solving (e.g. the Gestalt approach) as well as research studies (e.g. Greeno, 1974).

Although there is a wealth of research relevant to this question for candidates to draw on, it is likely that some candidates may spend an inappropriate amount of time describing practical examples of problem solving scenarios and their solutions (e.g. the Luchins' Water Jar problem or the Hobbits and Orcs problem). Although such material serves an important illustrative purpose, excessive use may detract from the question's primary aim – to elicit discussion of research into problem solving. Answers that dwell too long on such practical demonstrations might be seen as less well constructed as a response to the question set.

## AO2

Evaluation of this research might include the degree to which research in this area is supported (or challenged) by relevant research studies. Candidates who simply describe such studies without using such material as part of a sustained critical commentary on problem solving should receive a maximum of 4 marks (Band 1 top) for the AO2 component of this question. Alternatively, candidates may address theoretical perspectives on problem solving in terms of the ability to explain problem solving in real life. For example, Willson (2000) argues that although means-ends analysis is a useful problem-solving strategy, in real life factors such as knowledge and experience affect the way that we represent problems and how we solve them.

**Note:** The wording of this question does not exclude animal problems solving, therefore studies that show problem solving in non-humans (e.g. theory of mind, machiavellian intelligence) can also receive credit.

## **QUESTION 9 A01**

Description of research into problem solving

Band	Mark allocation	Marks	
	Description of research into problem solving is substantial. It is accurate and		
Band 3	well-detailed. The organisation and structure of the answer is coherent. There is	12 - 11	
top	substantial evidence of breadth and depth, and an appropriate balance between		
	them is achieved.		
	Description of research into problem solving is slightly limited. It is accurate		
Band 3	and reasonably detailed. The organisation and structure of the answer is	10 - 9	
bottom	coherent. There is evidence of breadth and depth, although a balance between		
	them is not always achieved.		
	Description of research into problem solving is limited. It is generally accurate		
Band 2	and reasonably detailed. The organisation and structure of the answer is	8 - 7	
top	reasonably constructed. There is increasing evidence of breadth and/or depth.		
	Description of research into problem solving is basic. It is generally accurate		
Band 2	but lacks detail. The organisation and structure of the answer is reasonable.	6 - 5	
bottom	There is <b>some evidence</b> of depth and/or breadth.		
	Description of research into problem solving is rudimentary and sometimes		
Band 1	flawed. There is some focus on the question. The organisation and structure of	4 - 3	
top	the question is <b>reasonable</b> .		
	Description of research into problem solving is just discernible. It is weak and		
Band 1	shows muddled understanding. The answer may be wholly or mainly		
bottom	irrelevant to the question's requirement.		

## **QUESTION 9 AO2**

Evaluation of research into problem solving

Band	Mark allocation	Marks
	Evaluation of research into problem solving is thorough and there is evidence of	
Band 3	appropriate selection and coherent elaboration. The material is used in a	12 - 11
top	highly effective manner	
	Evaluation of research into problem solving is slightly limited and there is	
Band 3	evidence of appropriate selection and coherent elaboration. The material is	10 - 9
bottom	used in an effective manner.	
	Evaluation of research into problem solving is limited and there is reasonable	
Band 2	elaboration. The material is used in reasonably effective manner.	8 - 7
top		
	Evaluation of research into problem solving is basic and there is some evidence	
Band 2	of elaboration. The material is used in a restricted manner.	6 - 5
bottom		
	Evaluation of research into problem solving is superficial, and rudimentary, and	
Band 1	there is no evidence of elaboration. The material is not used effectively.	4 - 3
top		
	Evaluation of research into problem solving is muddled and incomplete.	
Band 1	The material may be <b>wholly or mainly irrelevant</b> .	2 - 0
bottom		

## SECTION D - DEVELOPMENTAL PSYCHOLOGY

#### 10

#### Total for this question: 24 marks

Describe and evaluate Piaget's theory of cognitive development.	(24 marks)
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*Describe* is an **AO1** term which requires the candidate to give evidence of *AO1* with relation Piaget's theory of cognitive development. *Evaluate* is an **AO2** term which requires the candidate to give evidence of AO2 with relation to this theory.

## AO1

This question, which specifies the cognitive developmental theory of Piaget should trigger most candidates into releasing a deluge of Piagetian concepts, claims and counter claims. Although the aspect of cognitive development chosen is most likely to be 'intellectual' development, his theory of moral development is also appropriate in this context, either as an elaboration of his ideas on cognitive development or as a theory in its own right. For the AO1 content, candidates are able to draw upon concepts such as assimilation, accommodation and equilibriation, as well as the notion of schemas, and stages in development. A key criterion in the assessment of the AO1 content may well be the degree of breadth and depth in the answer. It is likely that many candidates may spend too long describing the four main stages of cognitive development and therefore lose the opportunity to discuss the mechanisms of development on which these are based.

The use of examples, (e.g. of the 'three mountains' test to illustrate egocentricity, or various conservation tasks) are relevant in that they illustrate a concept or qualitative differences between children of different ages. However, they should not take the place of written descriptions of these phenomena, and so examiners should look for evidence that candidates understand a particular concept or problem rather than simply being able to represent it pictorially.

## AO2

Evaluation may well take the form of evidence that either supports (or more usually challenges) Piagetian assumptions about cognitive development. For example Piaget's claims about object permanence have been challenged by the work of Bower and Wishart (1972) and Bower (1977). Likewise Donaldson has argued that the 'standard version of the task unwittingly forces children to produce the wrong answer against their better judgement' (Donaldson, 1978, cited in McIlveen and Gross, 1997).

It is possible, given that candidates answering this question will also have studied the theories of Vygotsky and the Information Processing approach, that these are used by way of a critical evaluation of Piaget's theory. Candidates who simply describe appropriate research studies or alternative perspectives without using this material as part of a sustained critical commentary will receive a maximum of 4 marks (top of Band 1) for the AO2 component. Better answers might evaluate Piaget's theory using the same research evidence or by demonstrating how the weaknesses of Piaget's theory (or even its strengths) are overcome in the alternative theories chosen. Such candidates would receive more marks because the material is being used more effectively.

## **QUESTION 10 A01**

Description of Piaget's theory of cognitive development

Band	Mark allocation	Marks
Dallu		
	Description of Piaget's theory of cognitive development is substantial. It is	
Band 3	accurate and well-detailed. The organisation and structure of the answer is	12 - 11
top	coherent. There is substantial evidence of breadth and depth, and an	
	appropriate balance between them is achieved.	
	Description of Piaget's theory of cognitive development is slightly limited. It is	
Band 3	accurate and reasonably detailed. The organisation and structure of the answer	10 - 9
bottom	is coherent. There is evidence of breadth and depth, although a balance between	
	them is not always achieved.	
	Description of Piaget's theory of cognitive development is limited. It is	
Band 2	generally accurate and reasonably detailed. The organisation and structure of	8 - 7
top	the answer is reasonably constructed. There is increasing evidence of breadth	
•	and/or depth.	
	Description of Piaget's theory of cognitive development is <b>basic</b> . It is generally	
Band 2	accurate but lacks detail. The organisation and structure of the answer is	6 - 5
bottom	reasonable. There is some evidence of depth and/or breadth.	
	Description of Piaget's theory of cognitive development is rudimentary and	
Band 1	sometimes flawed. There is some focus on the question. The organisation and	4 - 3
top	structure of the question is <b>reasonable</b> .	
	Description of Piaget's theory of cognitive development is just discernible. It is	
Band 1	weak and shows muddled understanding. The answer may be wholly or	2 - 0
bottom	mainly irrelevant to the question's requirement.	

## **QUESTION 10 AO2**

Evaluation of Piaget's theory of cognitive development

Band	Mark allocation	Marks
	Evaluation of Piaget's theory of cognitive development is thorough and there is	
Band 3	evidence of appropriate selection and coherent elaboration. The material is	12 - 11
top	used in a highly effective manner	
	Evaluation of Piaget's theory of cognitive development is slightly limited and	
Band 3	there is evidence of appropriate selection and coherent elaboration. The	10 - 9
bottom	material is used in an effective manner.	
	Evaluation of Piaget's theory of cognitive development is limited and there is	
Band 2	reasonable elaboration. The material is used in reasonably effective manner.	8 - 7
top		
	Evaluation of Piaget's theory of cognitive development is <b>basic</b> and there is <b>some</b>	
Band 2	evidence of elaboration. The material is used in a restricted manner.	6 - 5
bottom		
	Evaluation of Piaget's theory of cognitive development is superficial, and	
Band 1	rudimentary, and there is no evidence of elaboration. The material is not used	4 - 3
top	effectively.	
Band 1	Evaluation of research into problem solving is muddled and incomplete.	2 - 0
bottom	The material may be wholly or mainly irrelevant.	

#### 11

## Total for this question: 24 marks

## Discuss research (theories *and/or* studies) into relationships with parents *and/or* peers during adolescence. (24 marks)

*Discuss* is an **AO1** and **AO2** term which requires the candidate to both describe and evaluate research into relationships with parents and/or peers during adolescence. In the Terms Used in Examination Questions document, the term 'research' is defined as 'the process of gaining knowledge and understanding via either theory construction, examination, or empirical data collection'.

## AO1

Textbooks that deal with the issues of adolescent-parental relationships tend to take rather an eclectic approach to the issues involved. Thus, for example, we are likely to find material relating to communication patterns between adolescents and their parents (e.g. the relationship between effective communication and healthy family functioning), the so-called generation gap (including the contrast between parental and adolescent values) and issues of parental control.

Likewise, candidates who opt to include a description of adolescent relationships with peers may also adopt an eclectic approach in their response to this question. They may, for example, write about peer group influences on the developing adolescent (such as patterns of peer group interaction and gender differences in adolescent friendships) or perhaps define 'relationships' in terms of adolescent sexual behaviour.

The question specifies research but qualifies this to include both theories and studies. Thus it is acceptable for candidates to provide theoretical insights into adolescent relationships, e.g. Blos' reindividuation theory (Blos, 1967), as well as empirical studies that have explicitly addressed this question. Note that candidates who choose to write about both relationships with parents and relationships with peers cannot be expected to write in as much depth as if they had chosen just one of these. Therefore, in such cases, the issue of breadth versus depth is not as important as it might be if the answer was focused on just one of these two types of relationships.

## AO2

Evaluation might include discussion of the implications of a particular point of view (e.g. the risks of adolescent pregnancy and the spread of sexually transmitted diseases), or the degree to which certain assumptions about adolescent relationships (e.g. the clash of values presupposed in the generation gap) are supported by research studies. Candidates may also address the consequences of any insights from related research, for example the view that individuals who do not develop satisfactory peer relationships during adolescence (staying close to their families instead) experience problems developing autonomy and engaging in adult relationships.

## **QUESTION 11 A01**

Discussio	n of research this relationships with parents and/or peers during adolescence	
Band	Mark allocation	Marks
Band 3 top	Description of research into relationships with parents and/or peers during adolescence is <b>substantial</b> . It is <b>accurate and well-detailed</b> . The organisation and structure of the answer is <b>coherent</b> . There is <b>substantial evidence of breadth and depth</b> , and an appropriate balance between them is achieved.	12 - 11
Band 3 bottom	Description of research into relationships with parents and/or peers during adolescence is <b>slightly limited</b> . It is <b>accurate</b> and <b>reasonably detailed</b> . The organisation and structure of the answer is <b>coherent</b> . There is <b>evidence of breadth and depth</b> , although a balance between them is not always achieved.	10 - 9
Band 2 top	Description of research into relationships with parents and/or peers during adolescence is <b>limited</b> . It is generally <b>accurate</b> and <b>reasonably detailed</b> . The organisation and structure of the answer is <b>reasonably constructed</b> . There is <b>increasing evidence of breadth and/or depth</b> .	8 - 7
Band 2 bottom	Description of research into relationships with parents and/or peers during adolescence is <b>basic</b> . It is <b>generally accurate</b> but <b>lacks detail</b> . The organisation and structure of the answer is <b>reasonable</b> . There is <b>some evidence of depth and/or breadth</b> .	6 - 5
Band 1 top	Description of research into relationships with parents and/or peers during adolescence is <b>rudimentary</b> and <b>sometimes flawed</b> . There is some focus on the question. The organisation and structure of the question is <b>reasonable</b> .	4 - 3
Band 1 bottom	Description of research into relationships with parents and/or peers during adolescence is <b>just discernible.</b> It is <b>weak</b> and shows <b>muddled understanding</b> . The answer may be wholly or mainly <b>irrelevant</b> to the question's requirement.	2 - 0

## **QUESTION 11 AO2**

Evaluation of research into relationships with parents and/or peers during adolescence

Band	Mark allocation	Marks
	Evaluation of research into relationships with parents and/or peers during	
Band 3	adolescence is thorough and there is evidence of appropriate selection and	12 - 11
top	coherent elaboration. The material is used in a highly effective manner	
	Evaluation of research into relationships with parents and/or peers during	
Band 3	adolescence is slightly limited and there is evidence of appropriate selection	10 - 9
bottom	and coherent elaboration. The material is used in an effective manner.	
	Evaluation of research into relationships with parents and/or peers during	
Band 2	adolescence is limited and there is reasonable elaboration. The material is used	8 - 7
top	in reasonably effective manner.	
	Evaluation of research into relationships with parents and/or peers during	
Band 2	adolescence is basic and there is some evidence of elaboration. The material is	6 - 5
bottom	used in a <b>restricted</b> manner.	
	Evaluation of research into relationships with parents and/or peers during	
Band 1	adolescence is superficial, and rudimentary, and there is no evidence of	4 - 3
top	elaboration. The material is not used effectively.	
	Evaluation of research into relationships with parents and/or peers during	
Band 1	adolescence is muddled and incomplete. The material may be wholly or mainly	2 - 0
bottom	irrelevant.	

## Total for this question: 24 marks

## Discuss psychological insights into how people cope with bereavement. (24 marks)

*Discuss* is an AO1 and AO2 term which requires the candidate to both describe and evaluate psychological insights into how people cope with bereavement.

## AO1

12

The term 'psychological insights' is intended to cover all aspects of commentary on this topic. This might include theoretical insights (e.g. Kübler-Ross, 1969 and Murray-Parkes, 1972), research studies (e.g. Silverman's work on the chronology of grief - Silverman, 1986) or insights that are more concerned with the importance of social support for the bereaved person (e.g. Kahn and Antonucci's concept of the support 'convoy'). The main requirement is that such insights are psychological in nature, although insights derived from closely associated disciplines (e.g. gerontology, sociology etc.) are also acceptable in this context.

Coping with bereavement is not the sole province of adults, yet it has been perceived wisdom that the processes are very different in children and adults. Freud believed that young children lack the capacity to mourn, the psychological tasks involved in resolving grief being too difficult for children to negotiate. Only in adolescence, he claimed, does true grieving become possible. More recent studies, on the other hand, suggest that losing a parent is not a single event with predictable consequences for the child. Rather, the way a child copes with their loss is the result of a complex interweaving of circumstances, including the emotional responses and parenting abilities of the surviving parent and the presence or absence of other stressors in the child's life.

#### **AO2**

It is difficult to predict how candidates might choose to evaluate these psychological 'insights'. Some candidates might offer an evaluation of particular coping strategies, or consider the degree of research support for the psychological insights they have previously described. Alternatively, candidates might assess the degree to which there are cultural differences in how people cope with bereavement. Some candidates may simply describe cultural differences in coping behaviour rather than using these explicitly as an assessment of the degree to which they represent a difference in the ways different cultures perceive and therefore deal with bereavement. Better answers will engage with these differences in a more explicit way, perhaps by considering the underlying cultural beliefs that give rise to these differences, the implications of any differences, or considering whether the claim for cultural differences in coping with bereavement is supported by research evidence. They would thus receive more marks because their evaluative material is being used more effectively.

It is likely that the 'commentary' offered in the AO2 may be extremely diverse, therefore examiners should be alert to the many different aspects of individual answers that might fulfil this role. These include the consequences of a particular coping strategy, its implications for recovery, individual differences in coping (such as gender differences) and possible applications (such as the development of bereavement counselling). Such material should be part of a sustained critical commentary to open up the full range of marks for AO2, otherwise straightforward description will be limited to a maximum mark in Band 1 (top) for this component.

## **QUESTION 12 AO1**

Description of psychological insights into how people cope with bereavement

Band	Mark allocation	Marks
	Description of psychological insights into how people cope with bereavement is	
Band 3	substantial. It is accurate and well-detailed. The organisation and structure of	12 - 11
top	the answer is coherent. There is substantial evidence of breadth and depth, and	
-	an appropriate balance between them is achieved.	
	Description of psychological insights into how people cope with bereavement is	
Band 3	slightly limited. It is accurate and reasonably detailed. The organisation and	10 - 9
bottom	structure of the answer is coherent. There is evidence of breadth and depth,	
	although a balance between them is not always achieved.	
	Description of psychological insights into how people cope with bereavement is	
Band 2	limited. It is generally accurate and reasonably detailed. The organisation and	8 - 7
top	structure of the answer is reasonably constructed. There is increasing evidence	
	of breadth and/or depth.	
	Description of psychological insights into how people cope with bereavement is	
Band 2	basic. It is generally accurate but lacks detail. The organisation and structure	6 - 5
bottom	of the answer is <b>reasonable</b> . There is <b>some evidence</b> of depth and/or breadth.	
	Description of psychological insights into how people cope with bereavement is	
Band 1	rudimentary and sometimes flawed. There is some focus on the question.	4 - 3
top	The organisation and structure of the question is <b>reasonable</b> .	
	Description of psychological insights into how people cope with bereavement is	
Band 1	just discernible. It is weak and shows muddled understanding. The answer	2 - 0
bottom	may be wholly or mainly irrelevant to the question's requirement.	

## **QUESTION 12 AO2**

Evaluation of psychological insights into how people cope with bereavement

Band	Mark allocation	Marks
	Evaluation of psychological insights into how people cope with bereavement is	
Band 3	thorough and there is evidence of appropriate selection and coherent	12 - 11
top	elaboration. The material is used in a highly effective manner	
	Evaluation of psychological insights into how people cope with bereavement is	
Band 3	slightly limited and there is evidence of appropriate selection and coherent	10 - 9
bottom	elaboration. The material is used in an effective manner.	
	Evaluation of psychological insights into how people cope with bereavement is	
Band 2	limited and there is reasonable elaboration. The material is used in reasonably	8 - 7
top	effective manner.	
	Evaluation of psychological insights into how people cope with bereavement is	
Band 2	basic and there is some evidence of elaboration. The material is used in a	6 - 5
bottom	restricted manner.	
	Evaluation of psychological insights into how people cope with bereavement is	
Band 1	superficial, and rudimentary, and there is no evidence of elaboration.	4 - 3
top	The material is <b>not used effectively</b> .	
Band 1	Evaluation of psychological insights into how people cope with bereavement is	2 - 0
bottom	muddled and incomplete. The material may be wholly or mainly irrelevant.	

## SECTION E - COMPARATIVE PSYCHOLOGY

#### 13

#### Total for this question: 24 marks

Discuss evidence for intelligence in non-human animals.	(24 marks)
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*Discuss* is an **AO1** and **AO2** term which requires the candidate to both describe and evaluate evidence for intelligence in non-human animals.

## AO1

'Intelligence' in non-human animals does not have one universally accepted definition. Animal intelligence may be 'measured' within a hierarchy of learning processes ranging from simple learning (such as habituation and associative learning) through to more complex learning (such as the development of learning sets). Under this view of intelligence, some species are clearly more 'intelligent' than others. Alternatively, intelligence may be seen as the solution of problems that have some ecological relevance in the environment in which the species evolved. Under this definition, all species are equally intelligent in their own ways, and the question becomes an examination of what different species' intelligence consists of (Shettleworth, 1998). Indeed, all evidence of cognition and learning may be taken as evidence for 'intelligence'.

An alternative approach to this question might be to examine the 'social' theory of intelligence, i.e. the view that physical intelligence simply reflects mechanisms that have evolved to deal with social problems. Research with many social species, e.g. Vervet monkeys, has presented evidence for well-developed skills of social cognition within large and relatively stable social groups. Species that have highly developed 'social intelligence' may show clear foraging and other behavioural advantages over species that do not.

## AO2

The AO2 content is most likely to be interwoven throughout the essay, as many of the qualifications for animal intelligence are somewhat controversial, and subject to evidence and counter evidence. For example, given the inclusion of the terms 'self-recognition' and 'theory of mind' in the specification, it is likely that many candidates might concentrate on these as evidence for animal intelligence. This should give rise to interesting critical discussion, as claims for both of these faculties in non-human animals are hotly contested. Some candidates may choose to examine evidence for intelligence in cetaceans. Critical commentary may include physical evidence (brain size and quality) and behavioural evidence (such as evidence for the learning of complex behaviours or the use of 'language'). It is also possible that some candidates might use the story of 'Clever Hans', to highlight the methodological problems of measuring cognitive skills in non-human animals.

As the question specifies 'non-human animals', material relating to intelligence in human beings should not receive credit unless it is being used as part of a critical comparative argument, in which case it may earn marks under AO2.

## **QUESTION 13 A01**

Description of evidence for intelligence in non-human a	animals

Band	Mark allocation	Marks
Dallu		Marks
	Description of evidence for intelligence in non-human animals is substantial.	
Band 3	It is accurate and well-detailed. The organisation and structure of the answer is	12 - 11
top	coherent. There is substantial evidence of breadth and depth, and an	
•	appropriate balance between them is achieved.	
	Description of evidence for intelligence in non-human animals is slightly limited.	
Band 3	It is accurate and reasonably detailed. The organisation and structure of the	10 - 9
bottom	answer is <b>coherent</b> . There is <b>evidence</b> of breadth and depth, although a <b>balance</b>	
20000111	between them is not always achieved.	
	Description of evidence for intelligence in non-human animals is limited. It is	
Band 2	generally accurate and reasonably detailed. The organisation and structure of	8 - 7
top	the answer is <b>reasonably constructed</b> . There is <b>increasing evidence</b> of breadth	0 /
top	and/or depth.	
	4	
	Description of evidence for intelligence in non-human animals is basic. It is	
Band 2	generally accurate but lacks detail. The organisation and structure of the	6 - 5
bottom	answer is <b>reasonable</b> . There is <b>some evidence</b> of depth and/or breadth.	
	Description of evidence for intelligence in non-human animals is rudimentary	
Band 1	and sometimes flawed. There is some focus on the question. The organisation	4 - 3
top	and structure of the question is reasonable.	
	Description of evidence for intelligence in non-human animals is just discernible.	
Band 1	It is weak and shows muddled understanding. The answer may be wholly or	2 - 0
bottom	mainly irrelevant to the question's requirement.	

## **QUESTION 13 AO2**

Evaluation of evidence for intelligence in non-human animals

Band	Mark allocation	Marks
	Evaluation of evidence for intelligence in non-human animals is thorough and	
Band 3	there is evidence of appropriate selection and coherent elaboration.	12 - 11
Тор	The material is used in a highly effective manner.	
	Evaluation of evidence for intelligence in non-human animals is slightly limited	
Band 3	and there is evidence of appropriate selection and coherent elaboration.	10 - 9
bottom	The material is used in an effective manner.	
Band 2	Evaluation of evidence for intelligence in non-human animals is limited and there	
top	is reasonable elaboration. The material is used in reasonably effective manner.	8 - 7
	Evaluation of evidence for intelligence in non-human animals is <b>basic</b> and there is	
Band 2	some evidence of elaboration. The material is used in a restricted manner.	6 - 5
Bottom		
	Evaluation of evidence for intelligence in non-human animals is superficial, and	
Band 1	rudimentary, and there is no evidence of elaboration. The material is not used	4 - 3
top	effectively.	
Band 1	Evaluation of evidence for intelligence in non-human animals is muddled and	
bottom	incomplete. The material may be wholly or mainly irrelevant.	2 - 0

#### 14

## Total for this question: 24 marks

## Outline and evaluate two different signalling systems used by non-human animals. (24 marks)

*Outline* is an **AO1** term, which requires the candidates to provide a summary description of the use of two different signalling systems in non-human animals. *Evaluate* is an **AO2** term which requires the candidate to give evidence of **AO2** with relation to these two different signalling systems.

## AO1

Candidates are required to choose two signalling systems. The most obvious are the visual, auditory and olfactory systems, but there are others (touch, electric field) that would also satisfy the definition of a 'signalling system'. Visual signals are particularly important during courtship and for many species have been fine-tuned by the process of sexual selection into their present ritualised form. Visual signals are also important in parent-offspring communication, as in the case of the herring gull, where an orange spot on the parent bird's mandible serves as a target for the young chick to peck, which in turn causes the parent to regurgitate food.

Acoustic signals are evident in the alarm calls of many species, or as invitations to mate. Singing in birds may serve two quite distinct functions - defending a territory and attracting females to mate. The exact function of the songs of humpback whales is less clear, although it is generally accepted that it serves little greater purpose than the mate attracting calls of male songbirds, or the group spacing calls of howler monkeys. Chemical signals (pheromones) are found extensively in both insects and mammals, and are frequently used to mark territories, where they inform others that a particularly territory is already occupied.

## AO2

Evaluation is most likely to take the form of examining the advantages and/or disadvantages of the signalling systems being discussed. For example, visual signals can be transmitted instantaneously, but are no use in conditions of restricted visibility. Likewise, auditory signals allow for longer and more complex messages but fade rapidly. Chemical signals are stable and relatively long-lasting, but have the disadvantage of being slow to transmit.

Evaluation may also take the form of considering the underlying evolutionary significance of a particular signal or the degree to which particular signals may be used 'dishonestly' as a way of manipulating the behaviour of the receiver to the advantage of the signalling animal.

There is a partial performance penalty for this question. Candidates who present only one signalling system will be restricted to a maximum mark in Band 2 (top) for each assessment objective. Candidates who present more than two signalling systems should be marked for the best two unless different methods can be subsumed within a super-ordinate perspective (e.g. a variety of systems used by two different species). The question does specify 'non-human' animals, therefore material on signalling in humans would not receive credit.

For the purpose of this question, signalling can be defined as an 'intentional behaviour of one animal that is received by another animal whose behaviour is changed as a result of that signal'. This excludes, therefore, 'signals' that may be given out by atmospheric and environmental conditions.

## **QUESTION 14 A01**

Outline of two signalling systems used by non-human animals

Outline of two signating systems used by non-numan animals				
Band	Mark allocation	Marks		
Band 3	Outline of two signalling systems in non-human animals is <b>substantial</b> . It is <b>accurate</b>			
top	and well-detailed. The organisation and structure of the answer is coherent.			
	Outline of two signalling systems in non-human animals is slightly limited.			
Band 3	It is accurate and reasonably detailed. The organisation and structure of the answer	10 - 9		
bottom	is coherent.			
	Outline of two signalling systems in non-human animals is <b>limited</b> . It is generally			
Band 2	accurate and reasonably detailed. The organisation and structure of the answer is	8 - 7		
top	reasonably constructed.			
	Partial performance is substantial, accurate and well-detailed (top of the band) or			
	slightly limited, accurate and reasonably detailed (bottom of band).			
	Outline of two signalling systems in non-human animals is basic. It is generally			
Band 2	accurate but lacks detail. The organisation and structure of the answer is	6 - 5		
bottom	reasonable.			
	Partial performance is limited, generally accurate and reasonably detailed.			
	Outline of two signalling systems in non-human animals is rudimentary and			
Band 1	sometimes flawed. There is some focus on the question. The organisation and	4 - 3		
top	structure of the question is <b>reasonable</b> .			
	Partial performance is basic, generally accurate and lacking detail.			
	Outline of two signalling systems in non-human animals is just discernible. It is			
Band 1	weak and shows muddled understanding. The answer may be wholly or mainly	2 - 0		
bottom	irrelevant to the question's requirement.			
	Partial performance is rudimentary and sometimes flawed, with little focus on the			
	question.			

## **QUESTION 14 AO2**

Evaluation of two signalling systems used by non-human animals

Band	Mark allocation			
	Evaluation of two signalling systems in non-human animals is <b>thorough</b> and there is			
Band 3	evidence of appropriate selection and coherent elaboration. The material is used			
top	in a highly effective manner			
	Evaluation of two signalling systems in non-human animals is slightly limited and			
Band 3	there is evidence of <b>appropriate selection and coherent elaboration</b> . The material			
bottom	is used in an effective manner.			
	Evaluation of two signalling systems in non-human animals is limited and there is			
Band 2	reasonable elaboration. The material is used in reasonably effective manner.	8 - 7		
top	Partial performance is thorough, coherent and highly effective use of material (top of			
	band) or slightly limited and effective use of material (bottom of band).			
	Evaluation of two signalling systems in non-human animals is <b>basic</b> and there is			
Band 2	some evidence of elaboration. The material is used in a restricted manner.	6 - 5		
bottom	Partial performance is limited with reasonable elaboration, and reasonably effective			
	use of material.			
	Evaluation of two signalling systems in non-human animals is superficial, and			
Band 1	rudimentary, and there is no evidence of elaboration. The material is not used	4 - 3		
top	effectively.			
	Partial performance is basic with some evidence of elaboration, and restricted use of			
	material.			
	Evaluation of two signalling systems in non-human animals is muddled and			
Band 1	incomplete. The material may be wholly or mainly irrelevant.	2 - 0		
bottom	Partial performance is superficial with no evidence of elaboration, and not used			
	effectively.			

## Total for this question: 24 marks

## (a) Outline and evaluate *one* explanation of depression from an evolutionary perspective. (12 marks)

## (b) Outline and evaluate *one* explanation of anxiety disorders from an evolutionary perspective. (12 marks)

(a) *Outline* is an **AO1** injunction, which requires candidates to provide a summary description of one explanation of depression from an evolutionary perspective. The **AO2** injunction is *Evaluate*, which requires the candidate to present evidence of AO2 in relation to that explanation.

(b) *Outline* is an **AO1** injunction, which requires candidates to provide a summary description of one explanation of anxiety disorders from an evolutionary perspective. The **AO2** injunction is *Evaluate*, which requires the candidate to present evidence of **AO2** in relation to that explanation.

## AO1

As the first part of this question does not specify which type of depression the candidate must explain, it is possible that some candidates might write about either or both of unipolar or bipolar depression, or even just depression in general. Any of these approaches is acceptable, as evolutionary explanations of these disorders do not tend to make the same distinction between these disorders as do modern classificatory systems. The same rule applies to the explanation of anxiety disorders in part (b) of the question. It is most likely that candidates restrict their answer to just one type of anxiety disorder (phobias) but it is equally acceptable for them to treat 'anxiety disorders' as a more generic term and offer an evolutionary explanation to a variety of different disorders under this general category.

Likewise, it is permissible for candidates to interpret the requirement for an 'evolutionary explanation' either in terms of evolution generally (e.g. a Darwinian perspective), or to choose one specific evolutionary explanation that might illuminate the mental disorder in question. An example of the latter would be the rank theory of depression, which sees depression as an adaptive response to losing rank and the conception of oneself as a loser. Under this theory, the depressive state evolved to "promote the acceptance of the subordinate role and the loss of resources which can only be obtained by holding higher rank in the dominance hierarchy" (Stevens and Price, 1996). Note that it is also permissible for candidates to offer an explanation of their chosen mental disorder that relates to 'cultural' rather than 'biological' evolution.

#### AO2

Evaluation might also include an examination of research support (e.g. the work of David Buss) for evolutionary explanations of these mental disorders, or an analysis of the claims made by evolutionary psychologists. It is a fundamental claim of evolutionary psychologists, for example, that the underlying mechanisms for these disorders would have evolved in response to adaptive problems of the EEA. Note that evaluation should address the value of these evolutionary explanations, therefore the description of alternative explanations (e.g. biochemical imbalances or learned helplessness) that are not explicitly directed to an evaluation of these explanations would not be considered 'effective' evaluation, and should be marked accordingly.

15

## QUESTION 15 AO1 (Use for both parts of the question)

Outline of one explanation of depression/anxiety disorders from an evolutionary perspective

Band	Mark allocation		
	Outline of one explanation of depression/anxiety disorders from an evolutionary		
Band 3	perspective is substantial. It is accurate and well-detailed. The organisation	6	
top	and structure of the answer is <b>coherent</b> .		
	Outline of one explanation of depression/anxiety disorders from an evolutionary		
Band 3	perspective is slightly limited. It is accurate and reasonably detailed.	5	
bottom	The organisation and structure of the answer is <b>coherent</b> .		
	Outline of one explanation of depression/anxiety disorders from an evolutionary		
Band 2	perspective is limited. It is generally accurate and reasonably detailed.	4	
top	The organisation and structure of the answer is reasonably constructed.		
	Outline of one explanation of depression/anxiety disorders from an evolutionary		
Band 2	perspective is basic. It is generally accurate but lacks detail. The organisation	3	
bottom	and structure of the answer is <b>reasonable</b> .		
	Outline of one explanation of depression/anxiety disorders from an evolutionary		
Band 1	perspective is rudimentary and sometimes flawed. There is some focus on the		
top	question. The organisation and structure of the question is reasonable.		
	Outline of one explanation of depression/anxiety disorders from an evolutionary		
Band 1	perspective is just discernible. It is weak and shows muddled understanding.	1 - 0	
bottom	The answer may be wholly or mainly irrelevant to the question's requirement.		

## **QUESTION 15 AO2**

Evaluation of one explanation of depression/anxiety disorders from an evolutionary perspective

Band	Mark allocation	Marks
Band 3 top	Evaluation of one explanation of depression/anxiety disorders from an evolutionary perspective is <b>thorough</b> and there is evidence of <b>appropriate selection and coherent elaboration</b> . The material is used in a <b>highly effective</b> manner	6
Band 3 bottom	Evaluation of one explanation of depression/anxiety disorders from an evolutionary perspective is <b>slightly limited</b> and there is evidence of <b>appropriate selection and coherent elaboration</b> . The material is used in an <b>effective</b> manner.	5
Band 2 top	Evaluation of one explanation of depression/anxiety disorders from an evolutionary perspective is <b>limited</b> and there is <b>reasonable elaboration</b> . The material is used in <b>reasonably effective</b> manner.	4
Band 2 bottom	Evaluation of one explanation of depression/anxiety disorders from an evolutionary perspective is <b>basic</b> and there is <b>some evidence of elaboration</b> . The material is used in a <b>restricted</b> manner.	3
Band 1 top	Evaluation of one explanation of depression/anxiety disorders from an evolutionary perspective is <b>superficial</b> , and rudimentary, and there is no evidence of elaboration. The material is not used effectively.	
Band 1 bottom	Evaluation of one neurobiological/psychological theory of dreaming is muddled and incomplete. The material may be wholly or mainly irrelevant.	1 - 0

Question number	AO1	AO2
1	12	12
2	12	12
3(a)	12	
(b)		12
4	12	12
5(a)	6	6
(b)	6	6
6	12	12
7	12	12
8(a)	12	
(b)		12
9	12	12
10	12	12
11	12	12
12	12	12
13	12	12
14	12	12
15(a)	6	6
(b)	6	6

## A LEVEL/A2 UNIT 4: ASSESSMENT GRID

Marks	AO1	AO2	QoWC
Total marks for 3	36	36	4
questions			
A-level total weighting	7.8%	7.2%	
(15%)			