



General Certificate of Education (A-level)
June 2013

Psychology A

PSYA4

(Specification 2180)

**Unit 4: Psychopathology, Psychology in Action
and Research Methods**

Final

Mark Scheme

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Section A Psychopathology

Topic: Schizophrenia

Question 01

AO1 = 8 marks

AO1 credit is awarded for a description of biological explanations of schizophrenia. As the question refers to explanations in the plural, candidates are required to present two or more explanations.

The main biological explanations of schizophrenia are as follows:

- genetics – there is considerable evidence of a genetic predisposition to develop schizophrenia
- biochemistry – the dopamine hypothesis argues that elevated levels of dopamine are related to symptoms of schizophrenia
- neuroanatomy – differences in brain structure (including ventricle size, brain weight and symmetry) have been identified in people with schizophrenia.

Other creditworthy explanations include season of birth, viral influences, birth complications, links to substance abuse and neuropsychological models put forward by Frith and Helmsley. Examiners should read material on Frith and Helmsley carefully to ensure that emphasis is on the neurological aspects of these models before awarding credit. Evolutionary explanations can gain credit.

Given the difficulty of describing genetic explanations in detail, AO1 credit is given for straight descriptions of twin, family and adoptive studies which support the genetic explanation of schizophrenia (e.g. Kendler).

If candidates present one explanation only, this is partial performance and can receive a maximum of 6 marks only. Merely naming appropriate explanations maximum of 1 mark.

AO2/AO3 = 16 marks

AO2/AO3 credit is awarded for a discussion of biological explanations for schizophrenia. Many evaluation points are relevant to more than one explanation, so partial performance criteria are unlikely to apply.

Evaluation will depend on the explanation offered, but is likely to include supporting evidence and methodological critique of that evidence.

Methodological evaluation of research is creditworthy, provided the implications for the explanation are made explicit.

Likely material includes:

- genetics – quality of evidence, difficulties in separating environmental and genetic influences in family history and twin studies, sample sizes in twin studies, changes in diagnostic criteria for schizophrenia and zygosity
- biochemistry – difficulties in establishing cause and effect, supporting evidence from post mortem/scanning studies and animal studies, strengths and limitations of evidence

- neuroanatomy – difficulties in establishing cause and effect, supporting evidence from post mortem/scanning studies, strengths and limitations of evidence
- the diathesis stress model can be used to demonstrate the interplay of genetic and environmental factors.

Explicit comparison with other approaches/explanations can be an effective way of achieving AO2/AO3 credit. Candidates who link biological explanations such as genetic basis of schizophrenia to the dopamine system are also likely to achieve good AO2/AO3 marks.

AO1 Mark bands Knowledge and understanding

8 - 7 marks Sound

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

6 - 5 marks Reasonable

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

4 - 3 marks Basic

Knowledge and understanding are basic/relatively superficial.
A restricted range of material has been presented.
Organisation and structure of the answer are basic.
Partial performance: Knowledge and understanding of one explanation is generally accurate and reasonably detailed.

2 - 1 mark Rudimentary

Knowledge and understanding are rudimentary and may be muddled and/or inaccurate.
The material presented may be very brief or largely irrelevant.
Lacks organisation and structure.
Partial performance: Knowledge and understanding of one explanation is basic.

0 marks

No creditworthy material.

AO2/AO3 Mark bands Commentary

16 - 13 marks Effective

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

12 - 9 marks Reasonable

Commentary and/or evaluation demonstrate reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.
Partial performance demonstrates sound analysis and understanding. It is well focused and shows coherent elaboration and/or a clear line of argument. Maximum 10 marks.

8 - 5 marks Basic

Commentary and/or evaluation demonstrate basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.
Partial performance demonstrates reasonable analysis and understanding. It is generally focused and shows reasonable elaboration and/or a clear line of argument.

4 - 1 marks Rudimentary

Commentary and/or evaluation are rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.
Partial performance demonstrates basic, superficial understanding. It is sometimes focused and shows some evidence of elaboration.

0 marks

No creditworthy material is presented.

Topic: Depression

Question 02

Note that candidates can legitimately cover unipolar and/or bipolar depression for questions 02, 03 and 04.

AO1 = 4 marks

AO1 credit is awarded for an outline of the clinical characteristics of depression. It is acceptable for candidates to cover major depressive disorder or bipolar disorder.

Depression is characterised by a range of symptoms and candidates could refer to emotional, cognitive (suicidal thoughts) physical (weight loss or gain) or behavioural symptoms (decrease in sexual activity). A diagnosis of MDD can be made when five symptoms are present for at least two weeks.

To achieve top band marks at least one of two 'core' symptoms should be present:

- depressed mood for most of the day
- diminished interest or pleasure in activities.

Epidemiology i.e. prevalence, gender differences, prognosis etc., are creditworthy.

AO1 Mark bands

Knowledge and understanding

4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks No creditworthy material.

Question 03

AO1 = 4 marks

AO1 credit is awarded for an outline of one biological explanation of depression. If more than one explanation is presented, the better/best should be credited.

The main biological explanations of depression are:

- genetic – there is considerable evidence that the predisposition to develop depression is inherited
- amine hypothesis – low levels of mono amines predominantly noradrenaline and serotonin
- neuroanatomical – damage to amine pathways in post-stroke patients
- neuroendocrine (hormonal) factors – elevated cortisol levels related to stress, female hormones.

It is also acceptable to describe the evolutionary approach. Given the difficulty of describing genetic explanations in detail, AO1 credit is given for straight descriptions of twin, family and adoptive studies which support the genetic explanation.

AO1 Mark bands

Knowledge and understanding

4 marks Sound
Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable
Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic
Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary
Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks
No creditworthy material.

Question 04

AO2/AO3 = 16 marks

AO2/AO3 credit is awarded for an evaluation of one or more biological explanations for depression. Evaluation will depend on the explanation(s) offered, but is likely to include supporting evidence and methodological critique of that evidence.

Likely material includes:

- genetics – quality of evidence, difficulties in separating environmental and genetic influences in family history and twin studies, sample sizes in twin studies, changes in diagnostic criteria
- biochemistry – actions of drugs (e.g. SSRI's and MAOI's) in alleviating symptoms, difficulties in establishing cause and effect, strengths and limitations of evidence
- neuroanatomy – difficulties in establishing cause and effect
- the diathesis stress model can be used to demonstrate the interplay of genetic and environmental factors in depression
- debate about the relative importance of different causal factors
- the usefulness of a combined approach to explaining depression
- relevant debates such as nature/nurture, reductionism and determinism.

Methodological evaluation of research is creditworthy, provided the implications for the explanation are made explicit.

Explicit comparison with other approaches/explanations can be an effective way of achieving AO2/AO3 credit. Candidates who link biological explanations such as genetic basis of depression to the serotonin system are also likely to achieve good AO2/AO3 marks.

AO2/AO3 Marks bands Evaluation

<p>16 - 13 marks Effective Evaluation demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.</p>
<p>12 - 9 marks Reasonable Evaluation demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.</p>
<p>8 - 5 marks Basic Evaluation demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.</p>
<p>4 - 1 marks Rudimentary Evaluation is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.</p>
<p>0 marks No creditworthy material is presented.</p>

Topic: Phobic Disorders

Question 05

AO1 = 4 marks

For AO1 credit, candidates need to identify issues related to the classification and/or diagnosis of phobias. The specification directs them towards reliability and validity of classification and diagnosis, so these are likely to form part of the answer. Only 4 marks are available. Detailed description of issues is not expected.

Candidates who present lists of signs and symptoms of phobias or who describe classification systems are not addressing the issues surrounding diagnosis and classification.

AO2/AO3 = 8 marks

AO2/AO3 credit is awarded for a discussion of the issues identified. This is likely to focus on the importance of reliable and valid classification and diagnosis in relation to effective treatment and the consequences of unreliable diagnosis in relation to phobias. It is unlikely that Rosenhan's study can be made relevant to the topic of phobias but such material should still be read carefully.

The table shows one way in which candidates may organise material as AO1 and AO2. However, there are other ways. For example, symptom overlap could be an issue or

consequence depending on how it is presented. Examiners should read answers carefully to identify how material is presented as AO1 and AO2.

Likely issues (AO1)	Discussion (AO2)
The reliability of ICD and DSM classification systems	There is reasonably good agreement between DSM iv and ICD. However, DSM classifies agoraphobia as panic disorder when panic attacks are present. There are slight differences in the symptoms of social phobias.
Difficulty in establishing 'cut off' points between normal anxiety	There is a debate about whether or not anxiety should be medicalised and sufferers labelled.
The benefits of diagnosis in accessing support/treatment	Diagnosis can produce benefits in terms of rapid and effective treatment but can also have negative effects. Labelling may influence employment prospects and motivation.
The validity of diagnosis and the problem of co-morbidity with other disorders	Social phobias are particularly hard to diagnose: some people are extremely shy and this is hard to distinguish from a true social phobia. Phobias can co-occur (e.g. social and agoraphobia) making it difficult to identify which should be treated. This is important, as establishing the primary disorder influences the treatment offered. There is some overlap between specific phobias (e.g. knives) and OCD – these should be distinguishable by skilled clinicians.

Other relevant issues include problems associated with diagnosis, e.g. labelling, adopting a sick role, and culture and gender differences in symptom presentation.

AO1 Mark bands Knowledge and understanding

4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks No creditworthy material.

AO2/AO3 Mark bands Commentary

8 - 7 marks Effective

Commentary and/or evaluation demonstrate sound analysis, understanding and interpretation.

The answer is well focused and shows coherent elaboration and/or a clear line of argument.

Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

6 - 5 marks Reasonable

Commentary and/or evaluation demonstrate reasonable analysis and understanding.

The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.

Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

4 - 3 marks Basic

Commentary and/or evaluation demonstrate basic, superficial understanding.

The answer is sometimes focused and shows some evidence of elaboration.

Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

2 - 1 marks Rudimentary

Commentary and/or evaluation are rudimentary, demonstrating a very limited understanding.

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

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

0 marks

No creditworthy material is presented.

Question 06

AO1 = 4 marks

AO1 credit is awarded for an outline of one psychological explanation for phobias. Given the requirement for 4 marks, this should contain a reasonable level of detail. Note that candidates could present an approach (e.g. behavioural) or specific explanation (classical conditioning).

The main psychological explanations for phobias are as follows:

- behavioural explanations – based on classical and operant conditioning
- social learning theory – observation and modeling of phobias
- cognitive/cognitive behavioural explanations – errors in logic and irrational beliefs
- psychodynamic – defences against repressed impulses.

Some candidates may present learned preparedness as a psychological explanation. This is creditworthy provided the focus is on the learning elements of this approach (i.e. the conditioning experience, Ohman).

AO2/AO3 = 8 marks

AO2/AO3 credit is awarded for an evaluation of the psychological explanation of phobias presented. Evaluation will depend on the explanation offered, but is likely to include supporting evidence.

Methodological evaluation of research is creditworthy, provided the implications for the explanation are made explicit.

Effectiveness of treatments based on the approach can also be a way of gaining credit as can comparison with alternative explanations of phobias.

Likely material includes:

- behavioural explanations – supporting evidence from case studies (Watson and Rayner 1920)
- social learning theory – e.g. Mineka et al (1984) study of rhesus monkeys
- cognitive factors explanations – some studies, e.g. Tomarken 1989, support the role of cognitive notably over-estimation of danger/distorted thinking in phobias. The effectiveness of CBT offers some support for the role of cognitive factors
- psychodynamic – there are studies demonstrating the psychodynamic explanation of phobias, such as Freud's case study of Little Hans.

AO1 Mark bands

Knowledge and understanding

4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks No creditworthy material.

AO2/AO3 Mark bands Evaluation

8 - 7 marks Effective

Evaluation demonstrates sound analysis, understanding and interpretation.

The answer is well focused and shows coherent elaboration and/or a clear line of argument.

Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

6 - 5 marks Reasonable

Evaluation demonstrates reasonable analysis and understanding.

The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident.

Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.

4 - 3 marks Basic

Evaluation demonstrates basic, superficial understanding.

The answer is sometimes focused and shows some evidence of elaboration.

Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

2 - 1 marks Rudimentary

Evaluation is rudimentary, demonstrating a very limited understanding.

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

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

0 marks

No creditworthy material is presented.

Topic: Obsessive Compulsive Disorder

Question 07

AO1 = 4 marks

For AO1 credit, candidates need to identify issues related to the classification and/or diagnosis of OCD. The specification directs them towards reliability and validity of classification and diagnosis so these are likely to form part of the answer. Only 4 marks are available, so detailed description of issues is not expected.

Candidates who present lists of signs and symptoms of OCD or who describe classification systems are not addressing the issues surrounding diagnosis and classification.

AO2/AO3 = 8 marks

AO2/AO3 credit is awarded for a discussion of the issues identified. This is likely to focus on the importance of reliable and valid classification and diagnosis and the consequences of unreliable diagnosis in relation to OCD. Candidates may also present material on diagnostic agreement between clinicians (e.g. Beck). The implications for diagnosis of OCD should be made clear for reasonable marks.

It is unlikely that Rosenhan's study can be made relevant to the topic of OCD but such material should still be read carefully.

The table shows one way in which candidates may organise material as AO1 and AO2. However, there are other ways. For example, symptom overlap could be an issue or consequence depending on how it is presented. Examiners should read answers carefully to identify how material is presented as AO1 and AO2.

Likely issues (AO1)	Discussion (AO2)
The reliability of ICD and DSM classification systems	There is reasonably good agreement between DSM iv and ICD in symptomology for OCD.
Difficulty in establishing 'cut off' points between normal anxiety/checking and pathological checking	It can be difficult to distinguish a cut-off point between normal and abnormal behaviours such as checking the gas is off. There is a debate about whether or not anxiety should be medicalised and sufferers labelled.
The benefits of diagnosis in accessing support/treatment	Diagnosis can produce benefits in terms of rapid and effective treatment but can also have negative effects. Labelling may influence employment prospects and motivation.
The validity of diagnosis, e.g. the problem of co-morbidity with other disorders	OCD is difficult to distinguish from other anxiety disorders (for example, generalised anxiety and phobias) as there is considerable overlap in symptoms. There is overlap between OCD and simple phobias (obsessive thoughts about cutting may appear as a knife phobia – Rasmussen 1986) – these should be distinguishable by skilled clinicians. OCD is co-morbid with Tourettes syndrome, making it difficult to identify which should be treated. This is important, as establishing the primary disorder influences the treatment

	offered.
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AO1 Mark bands Knowledge and understanding

4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks No creditworthy material.

AO2/AO3 Mark bands Commentary

8 - 7 marks Effective Commentary and/or evaluation demonstrate sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.
6 - 5 marks Reasonable Commentary and/or evaluation demonstrate reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.
4 -3 marks Basic Commentary and/or evaluation demonstrate basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.
2 - 1 marks Rudimentary Commentary and/or evaluation are rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.
0 marks No creditworthy material is presented.

Question 08

AO1 = 4 marks

AO1 credit is awarded for an outline of one biological explanation for OCD. Given the requirement for 4 marks, this should contain a reasonable level of detail.

The main biological explanations for OCD are as follows:

- genetics – there is some evidence of a tendency to inherit OCD, with a gene (Sapap3) recently identified
- biochemistry – serotonin deficiency has been implicated
- Neuroanatomy – dysfunctions of the orbital frontal cortex (OFC) over-activity in basal ganglia and caudate-nucleus thalamus have been proposed
- Evolutionary – adaptive advantages of hoarding, grooming, etc.

Given the difficulty of describing genetic explanations in detail, AO1 credit can be awarded for straight descriptions of twin, family and adoptive studies which support the genetic explanation of OCD.

AO2/AO3 = 8 marks

AO2/AO3 credit is awarded for an evaluation of the biological explanation of OCD presented. Evaluation will depend on the explanation offered, but is likely to include supporting evidence.

Methodological evaluation of research is creditworthy provided the implications for the explanation are made explicit.

Effectiveness of treatments based on the approach can also be a way of gaining credit as can comparison with alternative explanations of OCD.

Likely material includes:

- genetics – relatives of sufferers are around 9 times more likely to be diagnosed (Arbor 2006), with a CR of between 65% and 80% MZ twins (Rasmussen 1986, Carey and Gottesman), sample sizes in twin studies, difficulty separating genetic and environmental influences
- biochemistry – SSRI's are effective for about 50% of sufferers
- neuroanatomy – some support for claims, eg Rauch et al 1994, PET scans show over activity in basal ganglia, co-morbidity with Tourette's which is also linked to basal ganglia (Rapoport 1990).

AO1 Mark bands

Knowledge and understanding

4 marks Sound

Knowledge and understanding are accurate and well detailed.
Organisation and structure of the answer are coherent.

3 marks Reasonable

Knowledge and understanding are generally accurate and reasonably detailed.
Organisation and structure of the answer are reasonably coherent.

2 marks Basic

Knowledge and understanding are basic/relatively superficial.
Organisation and structure of the answer are basic.

1 mark Rudimentary

Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate.

Lacks organisation and structure.
0 marks No creditworthy material.

AO2/AO3 Mark bands Evaluation

<p>8 - 7 marks Effective Evaluation demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.</p>
<p>6 - 5 marks Reasonable Evaluation demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration and/or a line of argument is evident. Most ideas appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling only occasionally compromise meaning.</p>
<p>4 - 3 marks Basic Evaluation demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.</p>
<p>2 - 1 marks Rudimentary Evaluation is rudimentary, demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure, often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.</p>
<p>0 marks No creditworthy material is presented.</p>

Section B Psychology in Action

Topic: Media Psychology

Question 09

There are different routes to obtaining credit here. AO1 credit can be awarded for descriptions of findings and conclusions regarding the positive effects of computers and/or video games and AO2/AO3 for evaluating these.

Alternatively, candidates could outline the positive effects of computers as AO1 and present research evidence for these effects as AO2/AO3. Examiners should read answers carefully to establish how the candidate is approaching the question.

AO1 = 4 marks

Candidates can take a broad approach and cover video games and computers in outline or focus one of these in more detail. Whichever approach is taken, the focus of description should be on findings/conclusions, given the phrasing of the question. Descriptions of procedural detail should not be awarded AO1 credit.

Some games (e.g. Tetris) have been found to improve specific cognitive skills, hand eye co-ordination and some aspects of vision (Green and Bavelier 2003).

Games with a pro-social theme can effect helping behaviour (Gentile 2009).

Active Wii fit style games may promote higher levels of physical activity in sedentary individuals (Graham et al 2011, Maddison et al., 2009).

Social networking sites can promote pro-social behaviours, political change.

AO2/AO3 = 6 marks

AO2/AO3 credit is awarded for commentary and evaluation on the positive effects of computers and video games. There are contradictory findings in this area and candidates could explore some of the reasons why studies have reached different conclusions (for example, the operationalisation of effects, length of follow-up). Candidates could choose to comment critically on the methods used in research studies covered as AO1 and/or discuss the difficulties in drawing firm conclusions from 'effects' research (for example, correlational studies, lack of causal relationships, relatively small effect sizes, need for longitudinal studies, sampling issues).

AO1 Mark bands

Knowledge and understanding

4 marks Sound	Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable	Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic	Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary	Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks	

No creditworthy material.

AO2/AO3 Mark bands

6 marks Effective

Commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument.

Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

5 - 4 marks Reasonable

Commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration. Most ideas are appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling occasionally compromise meaning.

3 - 2 marks Basic

Commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

1 mark Rudimentary

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

0 marks

No creditworthy material is presented.

Question 10

AO1 = 4 marks

AO1 credit is awarded for a description of one explanation for the persuasiveness of TV advertising.

There is a wide choice of potentially relevant material including:

- the Hovland Yale model of persuasion
- the Elaboration Likelihood model.

Other principles underlying the effectiveness of TV advertising include the use of classical conditioning (positive associations), the mere exposure effect (repetition/familiarity) and theories of media influence (including uses and gratifications theory, cultivation theory). These can gain full credit.

Examiners should be mindful that this question focuses on TV advertising. Whichever approach is taken, material should be shaped effectively for 4 marks. General descriptions (for example of the principles of classical conditioning) should not be awarded credit.

Where more than one explanation is presented, credit should be awarded to the better/best of these.

AO1 Mark bands

Knowledge and understanding

4 marks Sound
Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable
Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic
Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary
Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks
No creditworthy material.

Question 11

As part of his research into intense fandom, a psychologist examined comments posted on a fan website for a famous ‘boyband’. He found that most fans discussed concerts, favourite songs and band souvenirs. However, a small number were more intensely involved with the band. These fans spent their weekends following the band around the country when they were on tour in the hope of catching a glimpse of their favourite celebrities. They visited the fan website several times a day to discuss the latest ‘Tweets’ posted by the band members on Twitter.

AO2/AO3 = 10 marks

AO2/AO3 credit is awarded for application of knowledge about intense fandom to the scenario. The scenario identifies two levels of fandom: relatively mild engagement (discussing forthcoming events) and intense fandom (following of celebrities, attempts to see or contact). Candidates may link these to established measurements of the intensity of celebrity worship, notably Maltby’s 2001 celebrity attitude scale which differentiates three levels of celebrity worship. This material can be awarded credit, but is not essential.

Candidates are required to discuss how psychological research might explain these two kinds of fandom. They can approach this by covering theoretical explanations of intense fandom/celebrity worship or studies. Given the focus of the scenario, material on celebrity stalking is acceptable.

Likely material includes:

- The absorption addiction model (McCutcheon 2002) argues that people pursue parasocial relationships with celebrities when their own lives are deficient in some way. Those with poorer psychological adjustment, or weaker senses of identity or those who have experienced personal crises are seen as more prone to engage in intense fandom.
- Attachment theory (Keinlen 1998, McCutcheon) argues that intense parasocial relationships originate in insecure childhood attachments. These are seen as attractive, as there are few demands and little risk of rejection.
- Jenkins (1992) takes a more positive view of fandom arguing that it serves important social functions. This model can explain the mild fandom, but does not attempt to explain extreme levels of fandom identified in the scenario.

The marks awarded will depend on how effectively knowledge is applied to the scenario. Candidates who select potentially relevant material, but do not apply it to the two kinds of fandom depicted in the scenario, should be awarded a basic mark.

AO2/AO3 Mark bands Application

<p>9 - 10 marks Effective Explanation/application demonstrate sound analysis and understanding. Application of knowledge is well focused and effective. Ideas are well structured and expressed clearly and fluently.</p>
<p>6 - 8 marks Reasonable Explanation/application demonstrate reasonable analysis and understanding. Application of knowledge is generally focused. Most ideas are appropriately structured and expressed clearly.</p>
<p>3 - 5 marks Basic Explanation/application demonstrate basic analysis and superficial understanding. Application is sometimes focused. Expression of ideas lacks clarity.</p>
<p>1 - 2 marks Rudimentary Explanation/application are rudimentary demonstrating very limited understanding. The answer is weak, muddled and may be mainly largely irrelevant. Deficiency in expression of ideas results in confusion and ambiguity.</p>
<p>0 marks No creditworthy material is presented.</p>

Topic: The Psychology of Addictive Behaviour

Question 12

AO2/AO3 = 10 marks

AO2/AO3 credit is awarded for an application of knowledge of addictive behaviour to the scenario. The scenario provides a number of 'clues' as to the source of Sam's addiction. These include vulnerability factors (e.g. age personality and peer influence) and approaches (e.g. learning theories). Material from both sub-sections of the specification can gain credit. The marks awarded will depend on how effectively knowledge is applied.

- Boredom of work and excitement of the betting shop atmosphere may be linked to personality factors such as sensation seeking.
- Peer influence – is important in many addictions notably smoking (Bricker et al) and drug use. Credit if linked to gambling.
- Observational learning from peers.
- Positive reinforcement from winning money.

Candidates who select relevant explanations, but do not apply these to the scenario, should be awarded a maximum of 4 marks.

AO2/AO3 Mark bands Application

9 - 10 marks Effective Explanation/application demonstrate sound analysis and understanding. Application of knowledge is well focused and effective. Ideas are well structured and expressed clearly and fluently.
6 - 8 marks Reasonable Explanation/application demonstrate reasonable analysis and understanding. Application of knowledge is generally focused. Most ideas are appropriately structured and expressed clearly.
3 - 5 marks Basic Explanation/application demonstrate basic analysis and superficial understanding. Application is sometimes focused. Expression of ideas lacks clarity.
1 - 2 marks Rudimentary Explanation/application are rudimentary demonstrating very limited understanding. The answer is weak, muddled and may be mainly largely irrelevant. Deficiency in expression of ideas results in confusion and ambiguity.
0 marks No creditworthy material is presented.

Question 13
AO1 = 4 marks

AO1 credit is awarded for an outline of the theory of planned behaviour (Ajzen 1985) as a model for addiction prevention TPB claims that:

- behaviour is a function of three factors, personal attitudes, subjective norms (other people's views) and perceived behavioural control
- perceived behavioural control (or self-efficacy) – strength of your belief or conviction that you can carry out the behaviour
- SE reflects past experience (e.g. of trying to quit smoking) as well as obstacles
- developing behavioural control is an important aspect of preventing addiction (e.g. education programmers aimed at children).

TPB is derived from the Theory of Reasoned Action and basic credit can be awarded for reference to the link between TRA and TPB. Diagrams of TPB can also receive credit. Maximum 3 marks if material is not shaped to addiction prevention.

AO1 Mark bands Knowledge and understanding

4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks No creditworthy material.

Question 14

There are different ways of approaching this question so examiners should read answers carefully to establish what the candidate is presenting as AO1 and AO2.

AO1 = 4 marks

A likely approach is that candidates will describe one or more public health interventions aimed at reducing or preventing addiction as AO1. Public health interventions are interventions by governments and voluntary organisations designed to prevent or treat addictions. These are not targeted at individuals but at the population and include legislation (e.g. for example the workplace smoking ban/price increases) and health education (e.g. advertising, leaflets, quitline).

Alternatively, candidates may describe the effectiveness of interventions as AO1 and comment on these as AO2. This approach is creditworthy.

Psychological/biological interventions are aimed at individuals, and cannot receive AO1 credit. These include doctors' advice to individuals.

AO2/AO3 = 6 marks

AO2/AO3 credit is awarded for a discussion of the effectiveness of public health interventions. Candidates are likely to refer to research studies which have calculated effectiveness, for example, Parkes 2008. They may also discuss methodological difficulties with evidence and problems of establishing cause and effect, when a raft of public health measures come on stream at the same time. Comparison with psychological/biological interventions can receive credit.

Answers which do not refer to relevant research are unlikely to achieve a mark above basic.

AO1 Mark bands Knowledge and understanding

4 marks Sound	Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable	Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic	Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary	Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks	No creditworthy material.

AO2/AO3 Mark bands

6 marks Effective

Commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line of argument.

Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.

5 - 4 marks Reasonable

Commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration. Most ideas are appropriately structured and expressed clearly. Appropriate use of psychological terminology.

Minor errors of grammar, punctuation and spelling occasionally compromise meaning.

3 - 2 marks Basic

Commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.

1 mark Rudimentary

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

0 marks

No creditworthy material is presented.

Topic: Anomalistic Psychology

Question 15

AO1 = 4 marks

AO1 credit is awarded for an outline of methodological issues involved in the study of psychokinesis. Psychokinesis refers to the (disputed) ability to move objects by the mind. PK was initially accessed via eye only (macro PK) then by the ability to influence the fall of dice. Latterly, it has been superseded by micro PK in which technology is used. Candidates can refer to problems associated with any of these methods of studying PK.

Relevant methodological issues include:

- bias/sleight of hand in dice rolling studies
- experimenter bias in recording macro PK results
- lack of validity of micro PK studies
- problems of replication in all of the above.

Award 1 mark for identifying a methodological issue that would be relevant to PK and a further mark for explanation/ elaboration.

Example: Experimenters could be biased in recording results (1 mark) as they could overestimate the distance an object has moved (2 marks).

Question 16

Most people have several dreams each night and a small number of these dreams come true a week or so later. Former American president, Abraham Lincoln is believed to have dreamed of his assassination, two weeks before it happened. Some people interpret dreams coming true as evidence for the paranormal. However, others assume that probability or coincidence can explain this anomalous experience.

AO2/AO3 = 10 marks

For AO2/AO3 credit, candidates are required to explain why some people interpret dreams coming true as evidence for the paranormal, whereas others interpret this as a coincidence or arising from statistical probability. This requires application of knowledge about coincidence/probability to the example given in the scenario. This example used (dreams coming true) is sometimes known as pre-cognition or clairvoyance, and candidates could legitimately use these terms.

Paranormal believers, by and large, interpret events like dreams coming true as evidence for clairvoyance. They tend to see patterns between random associations, rather than using explanations based on probability or coincidence. Candidates could legitimately consider what is known about paranormal believers (i.e. why some people appear to be prone to paranormal explanations) referring to relevant personality factors such as fantasy processes, sensation seeking and extraversion.

Non-believers in the paranormal recognise that events occur coincidentally and explain them in relation to probability. A probability judgment refers to a judgment of how likely an event is to happen. As most people have several dreams each night and many of these are vague or poorly remembered, it is quite probable that some of these will relate to daily events (Wiseman 2011). Candidates could refer to relevant studies of probability mis-judgments for example, Esgate and Groome (2001) found that disasters are often reported on the news and disaster dreams are common, making the two likely to co-occur but this is not necessary. They could also use other examples to demonstrate probability and coincidence such as three lottery winners coming from the same small town. This is acceptable.

The law of truly large numbers (Diaconis and Mosteller 1989) argues that unusual events are likely to happen when there are lots of opportunities for that event (i.e. lots of dreams). Coincidence refers to the co-occurrence of two events entirely by chance, in this case the dream and the event.

The marks awarded will depend on how effectively knowledge is applied to the scenario example of dreams coming true. To access top band marks candidates must explicitly address both sides of the scenario, i.e. why people do/do not accept paranormal explanations for dreams coming true. Candidates who select potentially relevant material, but do not apply it to dreams which later come true, should be awarded up to 4 marks.

AO2/AO3 Mark bands Application

<p>9 - 10 marks Effective Explanation/application demonstrate sound analysis and understanding. Application of knowledge is well focused and effective. Ideas are well structured and expressed clearly and fluently.</p>
<p>6 - 8 marks Reasonable Explanation /application demonstrate reasonable analysis and understanding. Application of knowledge is generally focused. Most ideas are appropriately structured and expressed clearly.</p>
<p>3 - 5 marks Basic Explanation/application demonstrate basic analysis and superficial understanding. Application is sometimes focused. Expression of ideas lacks clarity.</p>
<p>1 - 2 marks Rudimentary Explanation/application are rudimentary demonstrating very limited understanding. The answer is weak, muddled and may be mainly largely irrelevant. Deficiency in expression of ideas results in confusion and ambiguity.</p>
<p>0 marks No creditworthy material is presented.</p>

Question 17

AO1 = 4 marks

AO1 credit is awarded for findings and conclusions of research into psychic healing. Candidates are likely to focus on studies which have looked for the existence of healing and/or the factors associated with belief in psychic healing.

Some studies have demonstrated significant benefits from psychic healing, whereas others have shown a lack of benefit:

- Krieger (2000) found higher haemoglobin levels in a group who had received psychic healing than a control group.
- Bener's (2000) meta-analysis identified positive effects in 197 studies of psychic healers.
- Keller et al (1986) double blind trial found significant benefits to tension headaches.

Credit can also be gained from description of possible mechanisms underlying possible effects, e.g. Tang (1998) suggests that psychic healing increases relaxation and activates self-healing.

AO2/AO3 = 6 marks

AO2/AO3 credit is awarded for commentary and evaluation on what research has shown about psychic healing.

AO2/AO3 content depends on the material presented as AO1 but likely content includes:

- contradictory findings of studies on healing
- lack of controlled, double blind trials
- use of small volunteer samples
- ethical issues (e.g. vulnerability, exploitation of those seeking healing).

AO1 Mark bands

4 marks Sound Knowledge and understanding are accurate and well detailed. Organisation and structure of the answer are coherent.
3 marks Reasonable Knowledge and understanding are generally accurate and reasonably detailed. Organisation and structure of the answer are reasonably coherent.
2 marks Basic Knowledge and understanding are basic/relatively superficial. Organisation and structure of the answer are basic.
1 mark Rudimentary Knowledge and understanding are rudimentary and may be very brief, muddled and/or inaccurate. Lacks organisation and structure.
0 marks no creditworthy material.

AO2/AO3 Mark bands

6 marks Effective Commentary demonstrates sound analysis, understanding and interpretation. The answer is well focused and shows coherent elaboration and/or a clear line or argument. Ideas are well structured and expressed clearly and fluently. Consistently effective use of psychological terminology. Appropriate use of grammar, punctuation and spelling.
5 - 4 marks Reasonable Commentary demonstrates reasonable analysis and understanding. The answer is generally focused and shows reasonable elaboration. Most ideas are appropriately structured and expressed clearly. Appropriate use of psychological terminology. Minor errors of grammar, punctuation and spelling occasionally compromise meaning.
3 - 2 marks Basic Commentary demonstrates basic, superficial understanding. The answer is sometimes focused and shows some evidence of elaboration. Expression of ideas lacks clarity. Limited use of psychological terminology. Errors of grammar, punctuation and spelling are intrusive.
1 mark Rudimentary Commentary is rudimentary demonstrating a very limited understanding. The answer is weak, muddled and incomplete. Material is not used effectively and may be mainly irrelevant. Deficiency in expression of ideas results in confusion and ambiguity. The answer lacks structure often merely a series of unconnected assertions. Errors of grammar, punctuation and spelling are frequent and intrusive.
0 marks No creditworthy material is presented.

Section C Psychological Research and Scientific Method

Question 18

AO1 = 2 marks

Content analysis is a technique for analysing qualitative data of various kinds. Data can be placed into categories and counted (quantitative) or can be analysed in themes (qualitative).

Award 1 mark for a brief statement and a further mark for elaboration.

Question 19

AO3 = 4 marks

- The psychologist could have begun by watching some of the film clips of driver behaviour.
- This would enable the psychologist to identify potential categories which emerged from the data of the different types of distractions seen in the film.
- Such categories/themes might include: passenger distractions, gadget distractions, etc.
- The psychologists would then have watched the films again and counted the number of examples which fell into each category to provide quantitative data.

Credit variations in so far as they explain the process.

Note: maximum 1 mark if no engagement with the stem.

AO3 Mark bands

4 marks Effective
Effective explanation of the processes involved in content analysis referring to some or all of the above points.
2 - 3 marks Reasonable
Reasonable accurate coverage of the processes involved.
1 mark Basic
Basic identification of the processes involved in content analysis ('watching the films and counting').
0 marks
No creditworthy material.

Question 20

AO3 = 3 marks

1 mark for identification of an appropriate way of assessing reliability in this investigation. By far the most likely answers here are inter-rater reliability or test-retest reliability.

2 marks for some explanation/elaboration: 'the two psychologists could carry out content analysis of the films separately and compare their answers' or 'they could re-code the films at a later date and compare the two sets of data'.

3 marks for an accurate and clear explanation which refers to deriving the categories and checking the data. 'The two psychologists could watch the films separately and devise a set of categories. They could compare these and use categories they both agreed on. They could carry out content analysis of the films separately and compare their answers looking for agreement'.

Question 21

AO3 = 3 marks

Candidates can cover one reason explained in detail here or several reasons in less detail.

A repeated measures design was chosen in this experiment:

- to remove the effects of individual differences in reaction times which would occur if an independent groups design was used
- to avoid the potential difficulties involved in matching participants
- to reduce the number of participants required for the experiment.

Question 22

AO3 = 3 marks

This is a repeated measures design and is counter-balanced hence points about order effects and individual differences will not gain credit.

There are a range of potential extraneous variables here including:

- the nature and content of the conversation with the psychologist on the hands-free phone
- interaction between the sex of the psychologist and sex of participant which could influence the type of conversation
- the number of hazards in the computer-based test, hence difficulty of the tests
- the presence of the hands-free headset could have produced distraction..

Award 1 mark for basic identification of a confounding variable and a further 2 marks for elaboration of how this could have affected the dependent variable.

Example: The chat with the psychologist was not controlled (1 mark) so the difficulty or number of questions could have varied (2 marks). This would influence the DV as more or less attention would be required (3 marks).

Question 23

AO3 = 3 marks

External validity refers to how far the findings of the experiment can be generalised to real-life situations. The most likely answer here is that the hazard perception test was done using a computer test which does not resemble real-life driving situations. (No noise, stress, etc.)

Award 1 mark for a brief answer (test lacks ecological validity) and 2 further marks for appropriate explanation contextualised within the scenario.

Question 24

AO3 = 4 marks

There are several potential ethical issues here. Candidates can focus on one in detail or several in less detail.

- Protection of participants from harm whilst studying the effects of a hands-free phone on driving. Two key issues here are the use of a computer-based test with no risk attached and of an experienced sample of police drivers.
- Informed consent: Participants should be given full information about the nature of both tasks before deciding whether or not to participate.
- Debriefing: A full debriefing should take place at the end of the experiment. This should provide feedback on performance and allow participants to ask questions if they wish to.
- Freedom to withdraw: Participants should be made aware of their freedom to withdraw before and during the experiment. They should be made aware of their right to withdraw their data after the experiment.
- Confidentiality: Individuals should not be identified, but should retain anonymity (use of numbers or initials instead of names).

Lists of ethical issues with no elaboration 1 mark.

AO3 Mark bands

4 marks Sound

An appropriate ethical issue is identified and explained in detail. Material is accurate – or several issues are identified and discussed accurately in less detail.

2 - 3 marks Reasonable

One or more appropriate ethical issues are identified and discussed. The answer is generally accurate.

1 mark Basic

Basic identification of an ethical issue (e.g. 'right to withdraw') or very brief answers which lack detail.

0 marks

No creditworthy material.

Question 25

AO3 = 5 marks

The standardised instructions should include the following information:

- You will take part in a simulated driving test which will last for three minutes.*
- Your task will be to identify potential hazards on the road ahead.*
- When you see a hazard, you should press the mouse button as quickly as possible.*
- Whilst you are doing the test, I will chat to you on a mobile phone and I would like you to reply using the hands-free mobile phone headset.*
- Do you have any questions?*

For full marks, the instructions should adopt an appropriate formal tone. Instructions which are not suitable to be read out should be awarded a maximum mark of 2.

AO3 Marks bands	Standardised instructions
5 marks Effective	The standardised instructions provide accurate detail of the procedure in a clear and concise form and participants' understanding is checked.
4 - 3 marks Reasonable	The standardised instructions provide sufficient detail of the procedure in a reasonably clear form.
2 marks Basic	The standardised instructions provide some details of the procedure though these may not be clear.
1 mark Rudimentary	The standardised instructions provide few details of the procedure and may be muddled and or inaccurate. Omissions in the instructions compromise the procedure.
0 marks	No creditworthy material is presented.

Question 26

AO3 = 3 marks

Students are required to identify an appropriate test and are asked to justify their choice.

Award 1 mark for identification of the Wilcoxon (signed ranks) test. Candidates could receive credit for Sign test or related t test. Note that reasons/justification must be correct for the test supplied.

If an incorrect test is identified **no marks** can be awarded.

Award 1 mark for basic statement of a reason, and a further mark for elaboration, within the context of the experiment or a further reason.

e.g. for Wilcoxon test:

- A repeated measures design was used (1 mark) as drivers take part in both the hands-free phone and non-phone (silent) conditions (1 mark).
- A repeated measures design was used (1 mark) and the data can be treated as ordinal (1 mark).

Test of difference cannot gain credit.

Question 27

AO3 = 2 marks

Students are told that the difference in reaction times was significant at the $p \leq 0.01$ level.

Award 1 mark for a basic understanding of this ('the result is highly significant') and a further mark for elaboration e.g. identifying that the probability of a Type 1 error here is less than 1/100.

Question 28

A03 = 3 marks

Replication is an important tool in the scientific method. It allows scientists to check findings and ensure that they are robust. In this study, replication is important, as the original sample is small (30 people) and specific (experienced police drivers). For this reason, replication on a larger sample will be used to check if findings apply outside this specific group.

Award 1 mark for a general answer on the importance of replication to check findings.

Assessment Objectives

Question	AO1	AO2/AO3	Total
Section A			
1	8	16	24
2	4		4
3	4		4
4		16	16
5	4	8	12
6	4	8	12
7	4	8	12
8	4	8	12
Section B			
9	4	6	10
10	4		4
11		10	10
12		10	10
13	4		4
14	4	6	10
15	4		4
16		10	10
17	4	6	10
Section C			
18	2		2
19		4	4
20		3	3
21		3	3
22		3	3
23		3	3
24		4	4
25		5	5
26		3	3
27		2	2
28		3	3

UMS conversion calculator www.aqa.org.uk/umsconversion