

GCE AS/A LEVEL

# WJEC GCE AS/A LEVEL in PSYCHOLOGY

ACCREDITED BY WELSH GOVERNMENT

## SPECIMEN ASSESSMENT MATERIALS

Teaching from 2015

This Welsh Government regulated qualification is not available to centres in England.



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**A LEVEL PSYCHOLOGY**

**UNIT 1**

**Psychology: Past to Present**

**SPECIMEN PAPER**

**1 hour 30 minutes**

### **ADDITIONAL MATERIALS**

In addition to this examination paper, you will need a 12 page answer book.

### **INSTRUCTIONS TO CANDIDATES**

Answer **all** the questions.

Use black ink or black ball-point pen.

Do not use pencil or gel pen.

Do not use correction fluid.

### **INFORMATION FOR CANDIDATES**

The number of marks is given in brackets at the end of each question.

You are reminded of the need for good English and orderly, clear presentation in your answers. Assessment will take into account the quality of written communication used in your answers.

No certificate will be awarded to a candidate detected in any unfair practice during the examination.

**Answer all the questions**

1. (a) Describe the biological assumption of 'localisation of function'. [3]  
(b) Describe the positive assumption of 'focus on the good life'. [3]
2. Using your knowledge of **two** different psychological approaches explain how a relationship is formed. [10]
3. (a) Describe the main components of a psychodynamic therapy (either dream analysis **OR** group analysis psychotherapy). [8]  
(b) Evaluate the therapy you described in 3(a). [10]
4. Describe the findings and conclusions of Loftus and Palmer's (1974) research *Reconstruction of automobile destruction: an example of the interaction between language and memory*. [10]
5. Analyse the strengths and weaknesses of the positive approach. [10]
6. A psychologist needs to explain to his client why they may be better using a therapy from a biological approach rather than a therapy from the cognitive approach. Using your knowledge of both approaches compare and contrast the cognitive and biological approaches and their therapies. [10]
7. Watson and Rayner's (1920) research *Conditioned Emotional Reaction* has many ethical issues. Discuss this statement with reference to the procedures used in this research. [16]

**End of paper**



**AS / A LEVEL PSYCHOLOGY**

**UNIT 2**

**Psychology: Using Psychological Concepts**

**SPECIMEN PAPER**

**1 hour 30 minutes**

### **ADDITIONAL MATERIALS**

In addition to this examination paper, you will need a 12 page answer book and a piece of graph paper.

### **INSTRUCTIONS TO CANDIDATES**

Answer **all** the questions.

Use black ink or black ball-point pen.

Do not use pencil or gel pen.

Do not use correction fluid.

### **INFORMATION FOR CANDIDATES**

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the need for good English and orderly, clear presentation in your answers. Assessment will take into account the quality of written communication used in your answers.

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**SECTION A – Contemporary Debate**

1. 'Neuroscience has many positive applications in contemporary society; however the ethical implications are debatable'. Discuss. [20]

**SECTION B – Principles of Research**

*Answer all questions.*

2. Explain what is meant by 'social desirability'. [2]
3. Describe the findings and conclusions of Milgram's (1963) '*Behavioral study of obedience*'. [8]
4. Identify what is being described in the two following instances:
- (a) an experimental design where the same participants are used in all conditions; [1]
- (b) a statement which predicts there will be no difference between conditions in an investigation. [1]
5. Identify **two** ways to assess validity of a measuring tool. [2]
6. A psychologist was interested in whether drinking water during the school day would have an effect on children's cognitive performance. He was given permission by the head teacher of a local high school to carry out his investigation on 100 of the 15 year olds studying Mathematics GCSE. The students were put into pairs based on their gender (one boy and one girl) and their performance on a previous maths test. One from each pair was put into condition A; Condition A were each given a litre of bottled water to drink through the school day. The other person from the matched pair was assigned to condition B; Condition B received no bottle of water. During the last lesson of the day, all of the students were given the same maths test (maximum marks of 50) to determine how much they had learnt during that day's maths lesson. The results are shown in *Table 1* below:

*Table 1: Summary table of scores in the maths test of students given water and not given water.*

Score in the maths test ( / 50)	Number of students	
	Condition A (water given)	Condition B (no water given)
0 - 10	0	2
11 - 20	6	13
21 - 30	23	15
31 - 40	14	17
41 - 50	7	3
<b>Total number</b>	<b>50</b>	<b>50</b>

- (a) Identify a confounding variable in this study. [2]
  - (b) Suggest a suitable directional hypothesis for this study. [2]
  - (c) (i) Identify the experimental design used in this study. [1]  
(ii) Explain **one** advantage of the experimental design used in this study. [3]
  - (d) Draw a graph to represent the data in the table above. [6]
  - (e) Analyse the ethical issues of this study. [8]
7. A psychologist conducted a questionnaire amongst first time mothers to investigate their experiences against their expectations. The psychologist advertised for first time mothers using posters displayed at 4 different hospitals around the UK. An extract from the advert can be seen below:

### Are you a first time mum?

Would you be willing to take part in research about the experiences and expectations of first time mothers?

The research would require you completing two questionnaires; one questionnaire when you are 6 months pregnant and another questionnaire when your baby is 6 months old.

Your results will remain confidential. If you decide to participate you can still withdraw from the research at any time.

If you would like more information or would like to take part in the research, please contact

A.Researcher@wjec.ac.uk

The psychologist used the first 10 women to respond to her advert. She emailed the first questionnaire when the women were 6 months pregnant and then emailed the second questionnaire when the babies were 6 months old.

One of the questions included in both questionnaires was 'How satisfied are you with your life at present?' The women responded to this question on the scale, as shown below and the results are given in *Table 2*.

0	1	2	3
Not satisfied	Slightly satisfied	Mostly satisfied	Completely satisfied

Table 2. Responses to “How satisfied are you with your life at present?”

Woman's ID number	Satisfaction score	
	At 6 months pregnant	When baby 6 months old
1	3	3
2	2	3
3	1	3
4	3	1
5	2	3
6	3	3
7	0	0
8	3	3
9	2	3
10	3	2

- (a) Using the data from the table above:
- (i) Identify the modal scores for both questionnaires. It should be made clear which questionnaire the score relates to. [2]
  - (ii) The standard deviation for the ‘At 6 months pregnant’ condition was 1.2; calculate the standard deviation for the ‘When baby was 6 months old’ condition. You should show your calculations in full. [5]
- (b) During a peer review, a colleague noted that there were issues with the validity of this research.
- (i) Identify **two** issues of validity that might arise in this study. [4]
  - (ii) Discuss how both these issues of validity can be improved in this study. [4]
- (c) Explain an alternative way in which the participants could have been sampled in this research. [3]
- (d) The data collected by this researcher was primary data.
- (i) Give **one** advantage of using primary data in this research. [3]
  - (ii) Give **one** disadvantage of using primary data in this research. [3]





**A LEVEL PSYCHOLOGY**

**UNIT 3**

**Psychology: Implications in the Real World**

**SPECIMEN PAPER**

**2 hours 30 minutes**

### **ADDITIONAL MATERIALS**

In addition to this examination paper, you will need a 12 page answer book.

### **INSTRUCTIONS TO CANDIDATES**

Answer **three** questions in Section A and **one** question in Section B.

Use black ink or black ball-point pen.

Do not use pencil or gel pen.

Do not use correction fluid.

### **INFORMATION FOR CANDIDATES**

The number of marks is given in brackets at the end of each question or part-question.

You are reminded that Section B of this paper is synoptic and so will test understanding of the connections between the different elements of the subject.

You are reminded of the need for good English and orderly, clear presentation in your answers. Assessment will take into account the quality of written communication used in your answers.

No certificate will be awarded to a candidate detected in any unfair practice during the examination.

**SECTION A – The study of behaviours**

Answer **three** questions in full.

**1. Addictive behaviour**

- (a) Outline **two** biological explanations for addictive behaviours. [10]
- (b) Evaluate **two** individual differences explanations of addictive behaviours. [15]

**2. Autistic spectrum behaviour**

- (a) Describe how Picture Exchange Communication System (PECS) modifies autistic spectrum behaviours. [10]
- (b) Evaluate ways of modifying autistic spectrum behaviours. [15]

**3. Bullying behaviour**

- (a) 'Every weekend there are children travelling to London to visit Kidscape, a charity that helps them to deal with bullying. Among staff at the anti-bullying charity there is concern at the rise in self-harm and eating disorders among primary school pupils. However, the charity reports that 85% of children who they have worked with say they are no longer being bullied'.  
  
Describe **one** method of modifying bullying behaviour. [10]
- (b) 'Bullies are born and not made'. Assess how far you agree with this statement. [15]

**4. Criminal behaviour**

- (a) Outline **two** social psychological explanations of criminal behaviours. [10]
- (b) Discuss the view that anger management is more effective at modifying criminal behaviours than restorative justice. [15]

**5. Schizophrenia**

- (a) Describe the characteristics of schizophrenia. [10]
- (b) Discuss the ethical and social implications of how the characteristics of schizophrenia are modified. [15]

**Questions continue over the page**

**6. Stress**

- (a) Ceri has recently changed jobs and is struggling to meet the deadlines and targets in his new managerial role. He is having problems sleeping, is overeating and his blood pressure has increased. His GP has diagnosed him with stress.

Describe how these symptoms of stress could be modified. [10]

- (b) Evaluate the strengths and weaknesses of **two** explanations of stress. [15]

**Section B – Controversies**

*Answer one of the questions.*

**Either**

7. 'For psychology to have an impact it is necessary for psychology to be a science.'  
Evaluate the validity of this statement. [25]

**Or**

8. 'In 1998, the American Psychological Association surveyed its members and found that of the top 100 psychologists of the 20<sup>th</sup> century, only 6 were women'. To what extent do you agree that women are 'invisible' in psychology? [25]





**A LEVEL PSYCHOLOGY**

**UNIT 4**

**Psychology: Applied Research Methods**

**SPECIMEN PAPER**

**1 hour 30 minutes**

### **ADDITIONAL MATERIALS**

In addition to this examination paper, you will need a 12 page answer book.

### **INSTRUCTIONS TO CANDIDATES**

Answer **all** the questions.

Use black ink or black ball-point pen.

Do not use pencil or gel pen.

Do not use correction fluid.

### **INFORMATION FOR CANDIDATES**

The number of marks is given in brackets at the end of each question.

You are reminded of the need for good English and orderly, clear presentation in your answers. Assessment will take into account the quality of written communication used in your answers.

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**SECTION A – Personal Investigations**

You should answer **all** the questions in this section with reference to the personal investigations carried out in your study of psychology.

**INVESTIGATION ONE:**

**Correlational research on the relationship between age and reaction times.**

1. (a) (i) State the alternative / experimental hypothesis for your correlational investigation. [3]
- (ii) Explain whether this alternative / experimental hypothesis was directional or non-directional. [2]
- (b) Explain how you ensured that the correlational research you carried out was ethical? [10]
- (c) Discuss how changing **one** aspect of your sample would increase the validity of this correlational research. [5]

**INVESTIGATION TWO:**

**Observation of gender differences in food choices.**

2. (a) (i) Describe the sampling method you used. [2]
- (ii) Explain why this sampling method was chosen. [3]
- (b) Suggest **two** ways your investigation could have been improved. [5]

**Section B over the page**

**SECTION B – Application of research methods to novel scenarios***Answer all questions.*

3. It has been found that pupils with low levels of self-confidence in reading do better when reading to an animal. A psychologist was asked to investigate whether using a dog in the class could increase reading accuracy thereby improving confidence in the skill. She measured the cortisol levels in the saliva of ten children after they had been reading in front of their peers and then again the following day after reading to a dog. Cortisol is released when an individual interprets a situation as being stressful. The results are shown in *Table 1* below:

*Table 1: Summary table of raw data, mean and standard deviation*

Participant (f=female, m=male)	Level of cortisol in saliva samples after reading (nmol/L)	
	Reading to peers	Reading to a dog
1f	13	20
2f	40	6
3f	12	1
4f	3	9
5f	15	0
6f	7	13
1m	22	4
2m	19	3
3m	11	2
4m	8	2

- (a) Calculate the median scores for the levels of cortisol when reading to a dog. Show your workings. [2]
- (b) A Wilcoxon matched pairs signed ranks test was used to analyse the data. Explain why this was appropriate. [3]
- (c) A psychology student at Bangor University read about this research; he was interested in how children learn to read and so decided to investigate further by making several changes to the original work. He wanted to investigate whether the reading skills of children was influenced by whether they are bilingual or not (being able to speak two languages fluently). He asked 6 children from his family (all boys aged between 4 and 13) whether they would participate in a longitudinal study to measure the development in reading over three years. He arranged that the parents of the children filled in a questionnaire on the reading skills of their children once a year. Each participant was paid £50 for their involvement.

Discuss the choices made by this student in planning his research in terms of the impact on the results gained. [10]

4. It has been suggested that petting an animal can help improve the mood and health of patients recovering in hospital. Describe how a psychologist could investigate this suggestion **using an experiment**. [15]

In your answer you should include:

- the operationalisation of both the independent variable (IV) and dependent variable (DV)
- details of the experimental design and participants used
- identification of **two** possible confounding variables and how you would deal with these.

**End of paper**



**A LEVEL PSYCHOLOGY****UNIT 1****Psychology: Past to Present****MARK SCHEME****GENERAL MARKING GUIDANCE**

- Every candidate's script must be treated in the same way throughout the whole marking session.
- The mark scheme should be applied positively. It is not required for an answer to be 'perfect' to gain full marks. Candidates should be rewarded for what they have included and not penalised for leaving things out. The process is very different to marking as a teacher (i.e. it is about rewarding rather than guiding).
- Examiners should read answers carefully and not make any presumptions. Original thoughts and unusual exemplars can be credited; however, do check for accuracy of unusual answers.
- The full range of marks should be used. If the answer shows the features of the top band with no significant issues, full marks can be given. Similarly, an answer which does not answer the question should be given zero marks.
- The subjective nature of psychology inevitably requires examiners to use their professional judgement. Care should be taken however not to decide on value of the answer due to personal opinions. If the material is used appropriately to answer the question then credit should be given in accordance with the skills demonstrated and indicated in the various bands.
- Crossed out work should be marked unless the candidate has made another attempt at answering the question.
- Any rubric errors should work to the candidates advantage i.e. mark all answers completed and credit the highest scoring valid combination.
- If at any time during the marking the examiner has a concern regarding content of an answer the Team Leader or Principal Examiner should be consulted.

**Indicative content**

It is essential to acknowledge the subjective nature of psychology and therefore there are not always specific answers that can be included in the mark scheme. The indicative content is simply advice on each specific question outlining some possibilities; it is not prescriptive or hierarchical and candidates are not expected to mention all the materials mentioned. They are also able to refer to other studies, theories, issues etc. which would be credited based on skills shown in accordance with the guidance in the grids.

**Which mark within a band?**

Having decided on the overall band that is appropriate for the response given the examiner should start with the top mark in the band. If there are aspects of the answer which may not be fully representative of the band, the mark given may be lower in the band.

**Quality of written communication**

This issue should have a bearing only if the quality of written communication is inconsistent with the descriptor for the band in which the answer falls decided on the psychological content. In this situation, examiners may decide not to award the higher mark within the band.

**Annotation to be used**

√ - correct material

√+ - correct material developed

x – incorrect material

? – unclear

EV – evaluation

GEV – generic evaluation

EX – example used is appropriate

NREL – does not answer question (i.e. not relevant)

1. (a) Describe the biological assumption of 'localisation of function'. [3]

Credit **could** be given for:

- The principle that specific functions have circumscribed locations in the brain
- Lateralisation of behaviours in the left or right hemisphere of the brain
- Examples: Visual cortex – vision; Broca's area – speaking; Motor cortex – movement
- Damage to areas of the brain result in problems with the function
- Any other appropriate description

Marks	AO1
3	<ul style="list-style-type: none"> <li>• Description is well detailed and clearly linked to biological psychology</li> <li>• Response is accurate throughout</li> <li>• Effective use of terminology</li> </ul>
2	<ul style="list-style-type: none"> <li>• Description is detailed and linked to biological psychology</li> <li>• There may be minor inaccuracies which do not distract from overall meaning</li> <li>• Good use of terminology</li> </ul>
1	<ul style="list-style-type: none"> <li>• Description is superficial or limited</li> <li>• Link to human behaviour may not be clear</li> <li>• Little use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) Describe the positive assumption of 'focus on the good life'. [3]

Credit **could** be given for:

- Ideas of well-being based on Aristotelian eudemonia
- Self-efficacy is a belief that one's ability to accomplish
- Actions lead to positive individuals and to thriving communities
- Any other appropriate description

Marks	AO1
3	<ul style="list-style-type: none"> <li>• Description is well detailed and clearly linked to positive psychology</li> <li>• Response is accurate throughout</li> <li>• Effective use of terminology</li> </ul>
2	<ul style="list-style-type: none"> <li>• Description is detailed and linked to positive psychology</li> <li>• There may be minor inaccuracies which do not distract from overall meaning</li> <li>• Good use of terminology</li> </ul>
1	<ul style="list-style-type: none"> <li>• Description is superficial or limited</li> <li>• Link to human behaviour may not be clear</li> <li>• Little use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

2. Using your knowledge of **two** different psychological approaches explain how a relationship is formed. [10]

Credit **could** be given for:

- Biological approach: Release of hormones and neurotransmitters (e.g. oxytocin); evolutionary preparedness (e.g. Buss's work)
- Psychodynamic approach: Bowlby's theory of attachment; paternal / maternal transference
- Behaviourist approach: Conditioning (classical or operant); cupboard love
- Cognitive approach: Relationship Schemas; embodied cognition and linguistic concepts (e.g. Sweet love)
- Positive approach: Connection to others due to positive emotions; subjective well-being
- Any other appropriate explanation

**NB** The two explanations must be clearly from two different approaches to allow credit.

Marks (per explanation)	AO1
5	<ul style="list-style-type: none"> <li>• Explanation is well detailed and clearly linked to forming a relationship</li> <li>• Response is accurate throughout</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• Explanation is detailed and linked to forming a relationship</li> <li>• There may be minor inaccuracies which do not distract from overall meaning</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Explanation is superficial or limited</li> <li>• Link to forming a relationship may not be clear</li> <li>• Little use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

3. (a) Describe the main components of a psychodynamic therapy (either dream analysis **OR** group analysis psychotherapy). [8]

Credit <b>could</b> be given for:	
<p>Dream Analysis</p> <ul style="list-style-type: none"> <li>• 'The royal road to the unconscious'</li> <li>• The interpretation of a client's dreams</li> <li>• Manifest and latent content</li> <li>• Freud's processes (displacement, projection, symbolization, condensation and rationalisation)</li> <li>• Any other appropriate description</li> </ul>	<p>Group analysis psychotherapy</p> <ul style="list-style-type: none"> <li>• One or more therapists treat small group of clients</li> <li>• Group process used as mechanism</li> <li>• Universality of sharing experiences</li> <li>• Work with transference of primary family experiences</li> <li>• Any other appropriate description</li> </ul>
<b>Marks</b>	<b>AO1</b>
<b>7 - 8</b>	<ul style="list-style-type: none"> <li>• Description of the main components of the therapy is well detailed</li> <li>• Depth and range to material included</li> <li>• Details are accurate throughout</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical throughout</li> </ul>
<b>5 - 6</b>	<ul style="list-style-type: none"> <li>• Description of the main components of the therapy is detailed</li> <li>• Depth and range of material used, but not in equal measure</li> <li>• There may be minor inaccuracies</li> <li>• Good use of terminology</li> <li>• The structure is mostly logical</li> </ul>
<b>3 - 4</b>	<ul style="list-style-type: none"> <li>• Description of the main components of the therapy is limited</li> <li>• Depth or range only in material used</li> <li>• There may be major inaccuracies</li> <li>• Some use of appropriate terminology</li> <li>• The structure is reasonable</li> </ul>
<b>1 - 2</b>	<ul style="list-style-type: none"> <li>• Description of the main components of the therapy is superficial</li> <li>• Very little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(b) Evaluate the therapy you described in 3(a).

[10]

Credit **could** be given for:

- Usefulness and application (with reference to identifiable examples and / or research)
- Success rates in treating various conditions (e.g. appropriateness for all mental health)
- Comparability to other therapies (another psychodynamic therapy or from another approach)
- Ethics of the process (e.g. the relationship between client and therapist)
- Validity of the assumption on which therapy is based
- Evolution of psychology and the changes in cultural context
- Any other appropriate evaluation

Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• A sophisticated and articulate evaluation of the therapy from 3(a)</li> <li>• Well-developed and balanced arguments</li> <li>• Evaluative comments are evidently relevant to the context</li> <li>• Excellent structure</li> <li>• An appropriate conclusion is reached based on the evidence presented</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good evaluation of the therapy from 3(a)</li> <li>• Arguments made are well-established and balanced</li> <li>• The evaluative comments are clearly relevant to the context</li> <li>• Logical structure</li> <li>• Clear conclusion based on evidence presented</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• A reasonable evaluation of the therapy from 3(a)</li> <li>• Arguments are reasonable but may be one-sided</li> <li>• The evaluative comments made tend to be generic and not appropriately contextualised</li> <li>• There is a reasonable structure</li> <li>• May not be a conclusion or a generic statement</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Answer does not move beyond statement(s)</li> <li>• There is very little use of appropriate terminology</li> <li>• Answer lacks clarity</li> <li>• No conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

4. Describe the findings and conclusions of Loftus and Palmer's (1974) research *Reconstruction of automobile destruction: an example of the interaction between language and memory*. [10]

Credit **could** be given for:

Findings

- Estimated speeds with the five levels of the independent variable

Verb	mph
Smashed	40.8
Collided	39.3
Bumped	38.1
Hit	34.0
Contacted	31.8

- Number of students responding to the 'did you see the broken glass?' question

	Yes	No
Hit	7	43
Smashed	16	34
No question / control	6	44

[Major inaccuracies – omissions, wrong integer number

Minor inaccuracies – wrong / missing decimal point]

Conclusions

- The form of a question can markedly and systematically affect a witness's answer
- Leading questions can distort a witness's memory for an event
- People's accuracy for reporting details of a complex event is potentially distorted through use of leading questions
- Any other appropriate conclusion

Marks	AO1
9 - 10	<ul style="list-style-type: none"> <li>Findings from both experiments are described</li> <li>Findings are clearly related to the critical questions</li> <li>There are no major inaccuracies</li> <li>There may be up to two minor inaccuracies</li> <li>The conclusions are thoroughly explained</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>Findings from both experiments are described</li> <li>Findings are clearly related to the critical questions</li> <li>There is one major inaccuracy</li> <li>There may be up to two minor inaccuracies</li> <li>The conclusion may be from one experiment only OR conclusion is generic in nature</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>Findings are related to the critical questions</li> <li>Accurate findings from one of the experiments are described OR findings from both experiments are described but there are two major inaccuracies and up to two minor inaccuracies</li> <li>There may not be a conclusion OR there are no findings but the conclusions are thoroughly explained</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>Findings from only one experiment are described</li> <li>Findings are not clearly related to the critical question</li> <li>There are major inaccuracies throughout</li> <li>There may not be a conclusion OR there are no findings but the conclusion is generic</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given</li> <li>No response attempted</li> </ul>

5. Analyse the strengths and weaknesses of the positive approach.

[10]

Credit **could** be given for:

- Changing the focus from pathology and negative experiences to a more holistic sense of being
- Focus on the individual as well as the cultural group
- Evidence for basic assumptions and consequently the ethical grounding of the approach if there are issues with the reliability and validity of the assumptions
- Methodologies used (e.g. reliance on self-reports)
- Scientific or unfocused
- Usefulness (e.g. success of therapeutic applications)
- Specific comparison with the other approaches
  
- Any other appropriate analysis

**NB** There is no definitive list of strengths and / or weaknesses as it is subjective and one issue can be presented as being both.

Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• A thorough analysis made of both the strengths and weaknesses</li> <li>• Clearly linked to the positive approach</li> <li>• Examples are well chosen to support the point made</li> <li>• Arguments are developed throughout</li> <li>• Well-structured and reaches appropriate conclusions based on evidence presented</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good analysis made of both strengths and weaknesses</li> <li>• Clearly linked to the positive approach</li> <li>• Examples are appropriate</li> <li>• Arguments are occasionally developed</li> <li>• Clearly structured with logical conclusions</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Basic analysis is made of both strengths and weaknesses</li> <li>• Comments may be generic with no link to positive psychology through use of examples</li> <li>• May be one-sided (e.g. only evaluating strengths)</li> <li>• Arguments are not developed</li> <li>• There may not be a conclusion OR a generic statement</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Strengths and /or weaknesses are identified only</li> <li>• There are no examples to support</li> <li>• No conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



6. A psychologist needs to explain to his client why they may be better using a therapy from a biological approach rather than a therapy from the cognitive approach. Using your knowledge of both approaches compare and contrast the cognitive and biological approaches and their therapies. [10]

Credit **could** be given for:

- The assumptions - the influence of internal / external factors (e.g. to work alongside client's beliefs in reason for behaviour)
- Effectiveness of therapeutic techniques (use of identifiable research findings to support)
- Objective / scientific nature of the approaches
- Choice of investigative methods used to study behaviour
- Use of human and non-human animals (therefore ability to generalise findings)
- Determinism vs free will (availability of choice for the individual)
- Any other relevant material

Marks	AO2
9 - 10	<ul style="list-style-type: none"> <li>• A thorough analysis is made of the similarities and differences of the approaches in the context of choosing a therapy</li> <li>• Examples to support the points made are well chosen</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good analysis is made of the similarities and differences of the approaches in the context of choosing a therapy</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on the evidence presented</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Basic analysis is made of the similarities and differences of the approaches in the context of choosing a therapy OR a good analysis is made of the similarities and differences with no reference to choosing a therapy</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• A superficial analysis is made of the similarities and differences of the approaches with no reference to choosing a therapy</li> <li>• Answer lacks structure</li> <li>• No conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

7. 'Watson and Rayner's (1920) research *Conditioned Emotional Reaction* has many ethical issues'. Discuss this statement with reference to the procedures used in this research. [16]

Credit **could** be given for:

- Procedures suggested for purpose of removing conditioned responses (e.g. stimulating erogenous zones)
- Use of a child in psychological research – lack of informed consent
- Exposing subject to knowingly frightening situations – the expectation that fear would be induced (could suggest that same principles could be observed with a more positive emotion)
- Potential long term developmental effects on Albert
- Information from the researchers: '*Albert was one of the best developed youngsters ever brought to the hospital ...stolid and unemotional. His stability was one of the principal reasons for using him as a subject in this test. It was felt that little harm would be done to him*'.
- Release of pictures following the research allowing identification of the individual thereby not ensuring confidentiality (see below)
- Any other relevant ethical issue

**NB** Due to the date of this research specific codes and guidelines for carrying out psychological research had not yet been published. Care should therefore be taken when crediting reference to these.

**NB** The evidence must be relevant to the original article.

Marks (per explanation)	AO1
5 - 6	<ul style="list-style-type: none"> <li>• The evidence used is detailed and accurate</li> <li>• Exemplars used are well-chosen to support the points made</li> <li>• There is depth and range of material</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• The evidence used is basic but accurate</li> <li>• Appropriate exemplars are used to support the points made</li> <li>• There is depth or range of material</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• The evidence used is superficial</li> <li>• The evidence includes many inaccuracies</li> <li>• Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**Criteria for AO3 content of this question is on the next page**

Credit **could** be given for:

- Lack of ethical codes and guidance at this time (is that a good enough reason not to be careful)
- Inducing a negative emotion (fear) in an individual (compared with proving the same theory but with a pleasant emotions e.g. happiness)
- Long term modification of personality
- Lack of removal of conditioned emotional responses
- Justification of gaining further insight into human development (i.e. individual suffering compared with gains for society)
- Any other appropriate discussion on ethical issues

<b>Marks</b>	<b>AO3</b>
<b>9 - 10</b>	<ul style="list-style-type: none"> <li>• A thorough evaluation of the research in relation to the ethical issues of the procedures</li> <li>• Developed and balanced arguments made</li> <li>• The evaluative comments are clearly relevant to the context</li> <li>• Excellent structure</li> <li>• An appropriate conclusion is reached</li> </ul>
<b>6 - 8</b>	<ul style="list-style-type: none"> <li>• A reasonable evaluation of the research in relation to ethical issues of the procedures</li> <li>• Arguments are reasonable but may be one-sided</li> <li>• The evaluative comments are clearly relevant to the context</li> <li>• The structure is coherent</li> <li>• A basic conclusion is made</li> </ul>
<b>3 - 5</b>	<ul style="list-style-type: none"> <li>• Basic evaluation of the research in relation to ethical issues of the procedures.</li> <li>• The evaluative comments made tend to be generic and not contextualised</li> <li>• Any conclusion may be contradictory with flow of the answer</li> <li>• Structure is clear</li> <li>• Answer does not move beyond assertions</li> </ul>
<b>1 - 2</b>	<ul style="list-style-type: none"> <li>• Identification of ethical issues in the procedures</li> <li>• There is no conclusion</li> <li>• Answer does not move beyond assertions</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



**A LEVEL PSYCHOLOGY****UNIT 2****Psychology: Using Psychological Concepts****MARK SCHEME****GENERAL MARKING GUIDANCE**

- Every candidate's script must be treated in the same way throughout the whole marking session.
- The mark scheme should be applied positively. It is not required for an answer to be 'perfect' to gain full marks. Candidates should be rewarded for what they have included and not penalised for leaving things out. The process is very different to marking as a teacher (i.e. it is about rewarding rather than guiding).
- Examiners should read answers carefully and not make any presumptions. Original thoughts and unusual exemplars can be credited; however, do check for accuracy of unusual answers.
- The full range of marks should be used. If the answer shows the features of the top band with no significant issues, full marks can be given. Similarly, an answer which does not answer the question should be given zero marks.
- The subjective nature of psychology inevitably requires examiners to use their professional judgement. Care should be taken however not to decide on value of the answer due to personal opinions. If the material is used appropriately to answer the question then credit should be given in accordance with the skills demonstrated and indicated in the various bands.
- Crossed out work should be marked unless the candidate has made another attempt at answering the question.
- Any rubric errors should work to the candidates advantage i.e. mark all answers completed and credit the highest scoring valid combination.
- If at any time during the marking the examiner has a concern regarding content of an answer the Team Leader or Principal Examiner should be consulted.

**Indicative content**

It is essential to acknowledge the subjective nature of psychology and therefore there are not always specific answers that can be included in the mark scheme. The indicative content is simply advice on each specific question outlining some possibilities; it is not prescriptive or hierarchical and candidates are not expected to mention all the materials mentioned. They are also able to refer to other studies, theories, issues etc. which would be credited based on skills shown in accordance with the guidance in the grids.

**Which mark within a band?**

Having decided on the overall band that is appropriate for the response given the examiner should start with the top mark in the band. If there are aspects of the answer which may not be fully representative of the band, the mark given may be lower in the band.

**Quality of written communication**

This issue should have a bearing only if the quality of written communication is inconsistent with the descriptor for the band in which the answer falls decided on the psychological content. In this situation, examiners may decide not to award the higher mark within the band.

**Annotation to be used**

√ - correct material

√+ - correct material developed

x – incorrect material

? – unclear

EV – evaluation

GEV – generic evaluation

EX – example used is appropriate

NREL – does not answer question (i.e. not relevant)

**SECTION A – Contemporary Debate**

1. 'Neuroscience has many positive applications in contemporary society; however the ethical implications are debatable'. Discuss. [20]

This debate is linked to the biological approach. However, the materials used in the responses may be taken from any approach and perspective within psychology. Some reference could also be made to economic, social and political evidence (as long as it is explicitly linked to the psychological issue).

Credit **could** be given for:

- Named research into e.g. emotion, attention, cognition, learning and / or memory
- Study normal behaviours in animals and humans as well as pathological cause of disorders (e.g. dementia, schizophrenia)
- Use of functional and structural neuroimaging (e.g. fMRI, PET)
- Application e.g. explaining shell shock from First World War
- Work of Adrian Raine in identifying differences in brains of murderers
- Any other appropriate material

Marks	AO1
10	<ul style="list-style-type: none"> <li>• Exemplars used are well chosen to support the points made</li> <li>• Details are accurate throughout</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology throughout</li> </ul>
7 - 9	<ul style="list-style-type: none"> <li>• Exemplars used are appropriate</li> <li>• There may be minor inaccuracies which do not distract from overall meaning</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> </ul>
4 - 6	<ul style="list-style-type: none"> <li>• Exemplars may not always be appropriate</li> <li>• There are inaccuracies throughout</li> <li>• There is depth or range only in material used</li> <li>• There is some use of appropriate terminology</li> </ul>
1 - 3	<ul style="list-style-type: none"> <li>• Exemplars are limited and not always made relevant</li> <li>• There are inaccuracies throughout</li> <li>• Little use of appropriate terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**Criteria for AO3 content of this question is on the next page**

1. continued

Credit <b>could</b> be given for:	
<ul style="list-style-type: none"> <li>• Appropriateness of the historical evidence applied to modern society due to changes in technological advances</li> <li>• Ethical implications of not using the information appropriately</li> <li>• Ethical implications of using the information inappropriately (e.g. screening for potential criminals)</li> <li>• Influence of the evidence on political decisions (e.g. treatment of neurological disorders)</li> <li>• Evaluation of the research (must be contextualised)</li> <li>• Any other appropriate analysis</li> </ul>	
Marks	AO3
10	<ul style="list-style-type: none"> <li>• A thorough discussion is made of both sides of the debate</li> <li>• Evaluative comments are evidently relevant to the context</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> </ul>
7 - 9	<ul style="list-style-type: none"> <li>• A good discussion is made of both sides of the debate</li> <li>• Evaluative comments show some relevance to the context</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> </ul>
4 - 6	<ul style="list-style-type: none"> <li>• A reasonable discussion of both sides of the debate OR a good discussion of only one side of the debate</li> <li>• Evaluative comments are generic and not appropriately contextualised</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> </ul>
1 - 3	<ul style="list-style-type: none"> <li>• A superficial discussion is made of the debate</li> <li>• Evaluative comments are superficial</li> <li>• Answer lacks structure</li> <li>• No conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



**SECTION B – Principles of research**

2. Explain what is meant by 'social desirability'. [2]

Exemplar definition:

Social desirability is a term that describes the tendency of participants to respond in a manner that will be viewed favourably by others. It can take the form of exaggerating "good behaviour" or minimising undesirable behaviour.

- Any other appropriate definition

Marks	AO1
2	<ul style="list-style-type: none"> <li>• Complete definition given in the context of research in experimental psychology</li> </ul>
1	<ul style="list-style-type: none"> <li>• Undeveloped / Crude definition given which may lack link to psychology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

3. Describe the findings and conclusions of Milgram's (1963) '*Behavioral study of obedience*'. [8]

Credit **could** be given for:

- Milgram's survey of Psychology Majors showed estimates of between 0% and 3% of participants would administer 450 volts

- 

Voltage level	Number obeying
Up to 300	40
315	35
330	31
345	29
360	28
375	27
390-450	26

- Remarks and behaviour indicated the participants were behaving against their own values, e.g. 14 of the 40 showed nervous laughter and smiling; sweating, stuttering, biting lips and digging fingernails into flesh
- Milgram concluded that '*the phenomenon of obedience must rest on the analysis of the particular conditions in which it occurs*'.
- Milgram concluded that there were 13 elements of the situation that contributed to these levels of obedience e.g. payment, location of Yale University with its '*unimpeachable reputation*'.
- Any other appropriate finding and / or conclusion

**NB** Credit can only be given to details from the original article.

Marks	AO1
7 - 8	<ul style="list-style-type: none"> <li>• Description of the findings and conclusions are accurate and well detailed</li> <li>• There is depth and range material used</li> <li>• There is excellent use of terminology</li> </ul>
4 - 6	<ul style="list-style-type: none"> <li>• Description of the findings and conclusions are mostly accurate and detailed</li> <li>• There is depth and range material used</li> <li>• There is good use of terminology</li> </ul>
1 - 3	<ul style="list-style-type: none"> <li>• Description of the findings or conclusions are mostly accurate and detailed OR</li> <li>• Basic description of the findings and conclusions with many inaccuracies</li> <li>• Limited use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

4. Identify what is being described in the two following instances:

- (a) an experimental design where the same participants are used in all conditions.

[1]

Marks	AO1
1	<ul style="list-style-type: none"> <li>Repeated measures (design)</li> <li>Related measures</li> <li>Related samples</li> <li>Within groups design</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given</li> <li>No response attempted</li> </ul>

- (b) a statement which predicts there will be no difference between conditions in an investigation.

[1]

Marks	AO1
1	<ul style="list-style-type: none"> <li>Null hypothesis OR</li> <li><math>H_0</math></li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given</li> <li>No response attempted</li> </ul>

5. Identify **two** ways to assess the validity of a measuring tool.

[2]

Marks (per way)	AO1
1	<ul style="list-style-type: none"> <li>Concurrent validity</li> <li>Predictive validity</li> <li>Face validity</li> <li>Content validity</li> <li>Construct validity</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given</li> <li>No response attempted</li> </ul>

6. A psychologist was interested in whether drinking water during the school day would have an effect on children's cognitive performance. He was given permission by the head teacher of a local high school to carry out his investigation on 100 of the 15 year olds studying Mathematics GCSE. The students were put into pairs based on their gender and their performance on a previous maths test. One from each pair was put into condition A; Condition A was each given a litre of bottled water to drink through the school day. The other person from the matched pair was assigned to condition B; Condition B received no bottle of water. During the last lesson of the day, all of the students were given the same maths test (maximum marks of 50) to determine how much they had learnt during that day's maths lesson. The results are shown in *Table 1* below.

*Table 1: Summary table of scores in the maths test of students given water and not given water.*

Score in the maths test ( / 50)	Number of students	
	Condition A (water given)	Condition B (no water given)
0 - 10	0	2
11 - 20	6	13
21 - 30	23	15
31 - 40	14	17
41 - 50	7	3
<b>Total number</b>	<b>50</b>	<b>50</b>

- (a) Identify a confounding variable in this study.

[2]

Credit **could** be given for:

- Amount of sleep the student had the night before
- Who they are sitting with during the lessons
- Menstruation for the girls
- Any other appropriate confounding variable

Marks	AO2
2	<ul style="list-style-type: none"> <li>• The confounding variable is clearly identifiable</li> <li>• There is a logical link made to the context of the study</li> </ul>
1	<ul style="list-style-type: none"> <li>• The confounding variable to identified</li> <li>• There is no link made to the context of the study</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) Suggest a suitable directional hypothesis for this study. [2]

Credit **could** be given for:

Students who drink water through the school day will score higher on a maths test than students who do not drink water throughout the school day. (2 marks)

‘Condition A will do better on the maths test than condition B’. (1 mark)

- Any other appropriate directional hypothesis linked to this research

Marks	AO2
2	<ul style="list-style-type: none"> <li>Appropriate directional hypothesis is suggested, with good use of appropriate psychological terminology</li> </ul>
1	<ul style="list-style-type: none"> <li>Basic directional hypothesis is suggested which uses some appropriate psychological terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given (e.g. a non-directional hypothesis)</li> <li>No response attempted</li> </ul>

- (c) (i) Identify the experimental design used in this study. [1]

Marks	AO2
1	<ul style="list-style-type: none"> <li>Matched pairs (design)</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given</li> <li>No response attempted</li> </ul>

- (ii) Explain **one** advantage of the experimental design used in this study. [3]

Credit **could** be given for:

- The differences between the two groups are minimised through the matching process, so there are fewer participant (confounding) variables
- There are no order effects as you may get with repeated measures since there are different people in both groups
- Any other appropriate advantage linked to this study

Marks	AO2
3	<ul style="list-style-type: none"> <li>Appropriate advantage explained</li> <li>Applied well to the study</li> </ul>
2	<ul style="list-style-type: none"> <li>Appropriate advantage explained</li> <li>Some link with this study</li> </ul>
1	<ul style="list-style-type: none"> <li>Appropriate advantage identified only</li> <li>No link with the study</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given (e.g. quick)</li> <li>No response attempted</li> </ul>

- (d) Draw a graph to represent the data in the table above. [6]

Marks	AO2
1 mark given for each of the following aspects:	
<ul style="list-style-type: none"> <li>Title for graph</li> <li>Correctly labelled X axis</li> <li>Correctly labelled Y axis</li> <li>Suitable scale</li> <li>Accurate plotting of data (2 marks)</li> <li>Mostly accurate plotting of data (1 mark)</li> </ul>	
0	<ul style="list-style-type: none"> <li>Inappropriate graph used</li> <li>No graph attempted</li> </ul>

- (e) Analyse the ethical issues of this study. [8]

Credit <b>could</b> be given for:	
<ul style="list-style-type: none"> <li>Consent gained by head teacher but should it come directly from the students or their parents?</li> <li>Familiar environment thereby reducing stress to participants</li> <li>Physical risk of dehydration for those not drinking water</li> <li>Need to ensure test results kept confidential to minimise embarrassment of a poor performance</li> <li>Any other relevant ethical issue</li> </ul>	
Marks	AO3
6 - 8	<ul style="list-style-type: none"> <li>A good analysis is made of the ethical issues in this study</li> <li>The arguments are balanced</li> <li>Structure is logical</li> <li>A reasonable conclusion is reached based on evidence presented</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>Basic analysis is made of the ethical issues in this study</li> <li>The argument may be one sided</li> <li>Structure is reasonable</li> <li>A basic conclusion is reached</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>A superficial analysis is made of the ethical issues in this study</li> <li>The issues are not always made relevant to this study</li> <li>Answer lacks structure</li> <li>No conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>Inappropriate answer given</li> <li>No response attempted</li> </ul>

7. A psychologist conducted a questionnaire amongst first time mothers to investigate their experiences against their expectations. The psychologist advertised for first time mothers using posters displayed at 4 different hospitals around the UK. An extract from the advert can be seen below:

### Are you a first time mum?

Would you be willing to take part in research about the experiences and expectations of first time mothers?

The research would require you completing two questionnaires; one questionnaire when you are 6 months pregnant and another questionnaire when your baby is 6 months old.

Your results will remain confidential. If you decide to participate you can still withdraw from the research at any time.

If you would like more information or would like to take part in the research, please contact

A.Researcher@wjec.ac.uk

The psychologist used the first 10 women to respond to her advert. She emailed the first questionnaire when the women were 6 months pregnant and then emailed the second questionnaire when the babies were 6 months old.

One of the questions included in both questionnaires was 'How satisfied are you with your life at present?' The women responded to this question on the scale shown below and the results are given in *Table 2*.

0	1	2	3
Not satisfied	Slightly satisfied	Mostly satisfied	Completely satisfied

*Table 2: Responses to "How satisfied are you with your life at present?"*

Woman's ID number	Satisfaction score	
	At 6 months pregnant	When baby 6 months old
1	3	3
2	2	3
3	1	3
4	3	1
5	2	3
6	3	3
7	0	0
8	3	3
9	2	3
10	3	2

(a) Using the data from *Table 2* above:

- (i) Identify the modal scores for both questionnaires. It should be made clear which questionnaire the score relates to. [2]

Credit given for:  At 6 months pregnant: 3 When baby 6 months old: 3	
<b>Marks</b> (per score)	<b>AO2</b>
<b>1</b>	<ul style="list-style-type: none"> <li>• 3</li> <li>• three</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



- (ii) The standard deviation for the 'At 6 months pregnant' condition was 1.2; calculate the standard deviation for the 'When baby was 6 months old' condition. You should show your calculations in full. [5]

Credit given for:

$$\bar{x} = \frac{3 + 3 + 3 + 1 + 3 + 3 + 0 + 3 + 3 + 2}{10} = \frac{24}{10} = 2.4$$

$x$	$\bar{x}$	$x - \bar{x}$	$(x - \bar{x})^2$
3	2.4	0.6	0.36
3	2.4	0.6	0.36
3	2.4	0.6	0.36
1	2.4	-1.4	1.96
3	2.4	0.6	0.36
3	2.4	0.6	0.36
0	2.4	-2.4	5.76
3	2.4	0.6	0.36
3	2.4	0.6	0.36
2	2.4	-0.4	0.16
			Total: 10.4

$$s = \sqrt{\frac{\Sigma(x - \bar{x})^2}{n - 1}}$$

$$SD = \frac{10.4}{9} = 1.15$$

**NB** as this is the SD of a population it must be  $n - 1$  (i.e. 9)

Marks	AO2
1 mark for each of the following (max 5 marks)	<ul style="list-style-type: none"> <li>• Accurate calculation of <math>\bar{x}</math></li> <li>• Accurate inclusion of data in column <math>x - \bar{x}</math></li> <li>• Accurate inclusion of data in column <math>(x - \bar{x})^2</math></li> <li>• Correct total</li> <li>• Correct denominator</li> <li>• SD of 1.15</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) During peer review, a colleague noted that there were issues with the validity of this research.

- (i) Identify **two** issues of validity that might arise in this study. [4]

Credit **could** be given for:

- Use of scaling in the questionnaire – definition of ‘satisfied’
- Social desirability of questionnaires – first time mother’s concerns about being judged
- Self-selecting sample – invitation to participate may not be considered by all members of the community (e.g. linguistic understanding)
- Any other appropriate issue of validity

Marks	A02
3 - 4	<ul style="list-style-type: none"> <li>• Two issues of validity are identified</li> <li>• There is a clear description of how both issues of validity are relevant to this study</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• There may be only one issue of validity identified with a clear link to this study</li> <li>• There is a generic description of two issues of validity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (ii) Discuss how both these issues of validity can be improved in this study. [4]

Credit **could** be given for:

- Use of unstructured interviews allowing opportunities to clarify meaning of words
- Question others (e.g. partners, midwives) as well to validate responses given
- Choose a stratified sample from a local hospital to ensure representation from different social groups
- Any other appropriate way of improving the validity

Marks	A02
3 - 4	<ul style="list-style-type: none"> <li>• Improvement of both issues of validity are clearly and fully discussed</li> <li>• There is clear reference to the study</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Improvement of only one issue of validity is clearly and fully discussed with clear reference to the study OR</li> <li>• Improvements to both issues of validity are identified only with no link to the study</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (c) Explain an alternative way in which the participants could have been sampled in this research. [3]

Exemplar answer:

Due to the specific population from which the sample could be obtained there is a clear need to target the sampling within particular contexts. Doctor's surgeries, hospital waiting rooms would be suitable whereas nursery schools may not be as those there are already parents. To ensure a representation from all social groups a stratified sampling method could be adopted; surgeries and/or hospitals in different areas could be targeted with equal amounts of women accepted from each.

Credit **could** be given for:

- Snowball sampling: where each participant brings another pregnant woman with her to the research
- Opportunistic: approaching those women attending pre-natal classes and using those happy to participate
- Any other appropriate sampling method

Marks	AO2
3	<ul style="list-style-type: none"> <li>• Full explanation given in relation to an alternative sampling method</li> <li>• There is a logical application of the sampling method used for the purpose of this research</li> </ul>
2	<ul style="list-style-type: none"> <li>• Good explanation given in relation to an alternative sampling method</li> <li>• Lacks some application of the sampling method used for the purpose of this research</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic explanation given in relation to an alternative sampling method</li> <li>• No application to the purpose of their investigation (i.e. a generic explanation)</li> </ul>
0	<ul style="list-style-type: none"> <li>• Identification only of a sampling method</li> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(d) The data collected by this researcher was primary data.

(i) Give **one** advantage of using primary data in this research. [3]

Credit **could** be given for:

- Greater control by the experimenter of gaining necessary information
- Addresses specific research issues rather than depending on similar issues raised previously
- Up to date information and therefore more valid in terms of application of findings
- Any other relevant advantage

**NB** An issue considered as a disadvantage can be credited here if description is clearly an advantage.

Marks	AO2
3	<ul style="list-style-type: none"> <li>• Full explanation of an advantage of primary data</li> <li>• There is a logical application to this research</li> </ul>
2	<ul style="list-style-type: none"> <li>• Good explanation of an advantage of primary data</li> <li>• Lacks some application to this research</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic response of an advantage of primary data</li> <li>• No application to the purpose of their investigation (i.e. a generic reason)</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(ii) Give **one** disadvantage of using primary data in this research. [3]

Credit **could** be given for:

- Time consuming – sampling method
- Takes time to gather data which makes it expensive
- Inaccurate feedback – social desirability may result in unreliable information as dealing with a sensitive matter such as feelings about being a parent
- Any other appropriate disadvantage

**NB** An issue considered as an advantage can be credited here if description is clearly a disadvantage.

Marks	AO2
3	<ul style="list-style-type: none"> <li>• Full explanation of a disadvantage of primary data</li> <li>• There is a logical application to this research</li> </ul>
2	<ul style="list-style-type: none"> <li>• Good explanation of an advantage of primary data</li> <li>• Lacks some application to this research</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic response of a disadvantage of primary data</li> <li>• No application to the purpose of their investigation (i.e. a generic reason)</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**A LEVEL PSYCHOLOGY****UNIT 3****Psychology: Implications in the Real World****MARK SCHEME****GENERAL MARKING GUIDANCE**

- Every candidate's script must be treated in the same way throughout the whole marking session.
- The mark scheme should be applied positively. It is not required for an answer to be 'perfect' to gain full marks. Candidates should be rewarded for what they have included and not penalised for leaving things out. The process is very different to marking as a teacher (i.e. it is about rewarding rather than guiding).
- Examiners should read answers carefully and not make any presumptions. Original thoughts and unusual exemplars can be credited; however, do check for accuracy of unusual answers.
- The full range of marks should be used. If the answer shows the features of the top band with no significant issues, full marks can be given. Similarly, an answer which does not answer the question should be given zero marks.
- The subjective nature of psychology inevitably requires examiners to use their professional judgement. Care should be taken however not to decide on value of the answer due to personal opinions. If the material is used appropriately to answer the question then credit should be given in accordance with the skills demonstrated and indicated in the various bands.
- Crossed out work should be marked unless the candidate has made another attempt at answering the question.
- Any rubric errors should work to the candidates advantage i.e. mark all answers completed and credit the highest scoring valid combination.
- If at any time during the marking the examiner has a concern regarding content of an answer the Team Leader or Principal Examiner should be consulted.

**Indicative content**

It is essential to acknowledge the subjective nature of psychology and therefore there are not always specific answers that can be included in the mark scheme. The indicative content is simply advice on each specific question outlining some possibilities; it is not prescriptive or hierarchical and candidates are not expected to mention all the materials mentioned. They are also able to refer to other studies, theories, issues etc. which would be credited based on skills shown in accordance with the guidance in the grids.

**Which mark within a band?**

Having decided on the overall band that is appropriate for the response given the examiner should start with the top mark in the band. If there are aspects of the answer which may not be fully representative of the band, the mark given may be lower in the band.

**Quality of written communication**

This issue should have a bearing only if the quality of written communication is inconsistent with the descriptor for the band in which the answer falls decided on the psychological content. In this situation, examiners may decide not to award the higher mark within the band.

**Annotation to be used**

√ - correct material

√+ - correct material developed

x – incorrect material

? – unclear

EV – evaluation

GEV – generic evaluation

EX – example used is appropriate

NREL – does not answer question (i.e. not relevant)

**SECTION A – The study of behaviours***Answer three questions in full***1. Addictive behaviour**(a) Outline **two** biological explanations for addictive behaviours. [10]Credit **could** be given for:

- Brain structure: e.g. abnormalities in fronto-striatal brain systems implicated in self-control
- Neurotransmitters: e.g. dopamine, serotonin, noradrenaline
- Genetic predisposition: A1 allele of the dopamine receptor gene DRD2
- By-product of brain evolution
- Epigenetics: Kipper and Whitney (The Addiction Solution, 2011)
- Any other relevant biological explanation

**NB** Both explanations need to be clearly distinct to allow credit for both.

Marks	AO1
<b>9 - 10</b>	<ul style="list-style-type: none"> <li>• Outline of the biological explanations of addictive behaviours is thorough and accurate</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical and coherent</li> </ul>
<b>6 - 8</b>	<ul style="list-style-type: none"> <li>• Outline of the biological explanations of addictive behaviours is reasonably detailed and accurate</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> <li>• The structure is logical and coherent</li> </ul>
<b>3 - 5</b>	<ul style="list-style-type: none"> <li>• Outline of the biological explanations of addictive behaviours is basic in detail, there may be some inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• Some use of appropriate terminology</li> <li>• There is a reasonable structure</li> <li>• Description of one biological explanation of addictive behaviours is thorough and accurate</li> </ul>
<b>1 - 2</b>	<ul style="list-style-type: none"> <li>• Outline of the explanation(s) of addictive behaviours is superficial</li> <li>• Little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(b) Evaluate **two** individual differences explanations of addictive behaviours. [15]

Credit <b>could</b> be given for:	
<ul style="list-style-type: none"> <li>Addictive personality: description of the behaviours</li> <li>Gender differences: research identifying male-female differences in specified addiction</li> <li>Cultural context; e.g. religious significance of cannabis by Rastafarian</li> <li>Use of therapies to modify the behaviour</li> <li>Research on a specific individual difference to explain addiction</li> <li>Any other appropriate description of an individual differences explanation</li> </ul>	
Marks	AO2
5	<ul style="list-style-type: none"> <li>The evidence used is well-chosen and applied effectively to develop the argument</li> <li>Two distinct explanations are evident</li> <li>There is depth and range to the evidence used</li> <li>The details are accurate</li> <li>Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>Appropriate evidence used and applied to the argument</li> <li>Two distinct explanations are evident</li> <li>There is depth or range to the evidence used</li> <li>The details are mostly accurate</li> <li>Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>Evidence used is accurately described but not applied appropriately OR link to the argument is weak</li> <li>There are many inaccuracies throughout</li> <li>Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>No attempt at application</li> <li>No evidence included</li> </ul>

**Criteria for AO3 content of this question is on the next page**



## 1. (b) continued

Credit **could** be given for:

- Validity of the explanations
- Comparison of the two explanations in terms of similarities and differences
- Comparison with other explanations (e.g. biological)
- Ethical implications of the explanation – possible consequences of being an inappropriate explanation
- Sampling issues of the research – those receiving help are more likely to be involved in research and therefore not representative
- Any other appropriate discussion

Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• A thorough evaluation made of the individual differences explanations for addictive behaviours</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> <li>• Effective use of terminology is used throughout</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good evaluation is made of the individual differences explanations for addictive behaviours</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> <li>• Appropriate terminology is used throughout</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Basic evaluation is made of the individual differences explanations for addictive behaviours</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> <li>• Little use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Superficial evaluation is made of the individual differences explanations for addictive behaviours</li> <li>• Answer lacks structure</li> <li>• There is no conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

2. **Autistic spectrum behaviour**

- (a) Describe how Picture Exchange Communication System (PECS) modifies autistic spectrum behaviours. [10]

Credit **could** be given for:

- Teaching the child to spontaneously request an object or activity
- Generalize this skill to other objects and activities, and with other people involved
- Teach the child to discriminate (e.g. 'what would you like to do?')
- Extension of sentence with adjectives (e.g. "I want blue doll")
- Encourage the child to comment about things (e.g. using symbols to say "I can smell dinner cooking")
- Starts with a basic request and eventually forms the basis for conversation, which provides an ideal foundation for verbal skills at a later point
- Any other relevant description

Marks	AO1
9 - 10	<ul style="list-style-type: none"> <li>• Description of the PECS to modify autistic spectrum behaviours is thorough and accurate</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical and coherent</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Description of the PECS to modify autistic spectrum behaviours is reasonably detailed and accurate</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> <li>• The structure is logical and coherent</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Description of the PECS to modify autistic spectrum behaviours is basic in detail, there may be some inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• Some use of appropriate terminology</li> <li>• There is a reasonable structure</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Description of the PECS to modify autistic spectrum behaviours is superficial</li> <li>• Little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(b) Evaluate ways of modifying Autistic spectrum behaviours.

[15]

Credit **could** be given for:

- Holistic ways of dealing with autism
  - Pivotal response treatment: the therapist targets “pivotal” areas of a child's development including motivation, response to multiple cues, self-management and the initiation of social interactions
  - Whole family work: “Floor play” which may improve social and emotion-regulation skills, involves intensive parent-child play
- Exact ways of dealing with autism
  - Applied Behaviour Analysis: focuses on the principles of when learning takes place (e.g. positive reinforcement)
  - Dietary intervention: gluten-free and/or casein-free can improve core and peripheral symptoms and improve developmental outcome
- Any other appropriate description of therapy or research

Marks	AO2
5	<ul style="list-style-type: none"> <li>• The evidence used is well-chosen and applied effectively to develop the argument</li> <li>• There is depth and range to the evidence used</li> <li>• The details are accurate</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• Appropriate evidence used and applied to the argument</li> <li>• There is depth or range to the evidence used</li> <li>• The details are mostly accurate</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Evidence used is accurately described but not applied to the treatment of autistic spectrum</li> <li>• There may be inaccuracies throughout</li> <li>• Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• No evidence included</li> <li>• No attempt at application</li> </ul>

Criteria for AO3 content of this question is on the next page

## 2. (b) continued

Credit **could** be given for:

- Effectiveness of the treatments – success rates in reducing symptoms
- Ethics of choosing an appropriate treatment if the cause of autism is unclear
- Different needs of children and adults
- Attention to individual differences and particular needs
- Treatment of the core symptoms as well as associated medical conditions
- Appropriate balance of the treatment
- Is there a need for treatment anyway? – appropriateness of autism as a pathology
- Any other appropriate discussion

<b>Marks</b>	<b>AO3</b>
<b>9 - 10</b>	<ul style="list-style-type: none"> <li>• A thorough evaluation made of the modifications for autistic spectrum behaviours</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> <li>• Effective use of terminology is used throughout</li> </ul>
<b>6 - 8</b>	<ul style="list-style-type: none"> <li>• A good evaluation is made of the modifications for autistic spectrum behaviours</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> <li>• Appropriate terminology is used throughout</li> </ul>
<b>3 - 5</b>	<ul style="list-style-type: none"> <li>• Basic evaluation is made of the modifications for autistic spectrum behaviours</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> <li>• Little use of appropriate terminology</li> </ul>
<b>1 - 2</b>	<ul style="list-style-type: none"> <li>• Superficial evaluation is made of the modifications for autistic spectrum behaviours</li> <li>• Answer lacks structure</li> <li>• There is no conclusion</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

### 3. Bullying behaviour

- (a) 'Every weekend there are children travelling to London to visit Kidscape, a charity that helps them to deal with bullying. Among staff at the anti-bullying charity there is concern at the rise in self-harm and eating disorders among primary school pupils. However, the charity reports that 85% of children who they have worked with say they are no longer being bullied'.

Describe **one** method of modifying bullying behaviour.

[10]

Credit **could** be given for:

- CAPSLE: addresses relationship between bully, victim and bystander; all members of the school play a role; five strategies to improve mentalisation
- Olweus bullying prevention programme: all students and staff take part; individual intervention for possible victims and those bullying others
- Social Skills Training: emphasising cognitive aspects of relations and emotions; teaching pro-social skills as well as how to identify negative perceptions and behaviours
- Any other relevant method of reducing bullying behaviour

Marks	AO1
9 - 10	<ul style="list-style-type: none"> <li>• Description of the method of modifying bullying behaviours is thorough and accurate</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical and coherent</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Description of the method of modifying bullying behaviours is reasonably detailed and accurate</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> <li>• The structure is logical and coherent</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Description of the method of modifying bullying behaviours is basic in detail, there may be some inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• Some use of appropriate terminology</li> <li>• There is a reasonable structure</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Description of the method of modifying bullying behaviours is superficial</li> <li>• Little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(b) 'Bullies are born not made'. Assess how far you agree with this statement.

[15]

Credit **could** be given for:

- Evidence that bullies are born that way
  - Genetic predisposition (e.g. absence of the MAOA gene; findings from twin studies)
  - Exposure to stress hormones in the womb
- Evidence that bullies are not born that way
  - Low self-esteem (e.g. due to being themselves the victim of a bully)
  - Active-authoritarian personality (e.g. Fromm, sadistic control of others)
  - Inappropriate socialisation during childhood (e.g. inconsistent discipline)
- Any other appropriate evidence

Marks	AO2
5	<ul style="list-style-type: none"> <li>• Explanation is detailed and accurate</li> <li>• Evidence is well chosen and effectively support and develop arguments made</li> <li>• Application of the material is very well judged</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• Explanation is detailed with minor inaccuracies</li> <li>• Evidence is well chosen to support the argument but may not always develop the arguments made</li> <li>• Application of the material is appropriate</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Explanation is brief and / or muddled</li> <li>• Evidence used is described but not applied to the treatment of stress</li> <li>• Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• No evidence included</li> <li>• No application attempted</li> </ul>

**Criteria for AO3 content of this question is on the next page**

## 3. (b) continued

Credit **could** be given for:

- Difficulties with separating the influences of nature and those of nurture
- Epigenetics
- Ethical implications of knowing the reason why a person shows bullying behaviours
- The importance of knowing why a person develops bullying behaviour
- Reliability of the definition of 'bullying' (e.g. aggression or assertion)
- Historical evolution of the critical issue
- Gender differences
- Evidence from studying animals
- Any other appropriate analysis of the issue

<b>Marks</b>	<b>AO3</b>
<b>9 - 10</b>	<ul style="list-style-type: none"> <li>• A thorough assessment is made of the explanations for bullying behaviours</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> <li>• Effective use of terminology is used throughout</li> </ul>
<b>6 - 8</b>	<ul style="list-style-type: none"> <li>• A good assessment is made of the explanations for bullying behaviours</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> <li>• Appropriate terminology is used throughout</li> </ul>
<b>3 - 5</b>	<ul style="list-style-type: none"> <li>• Basic assessment is made of the explanations for bullying behaviours</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> <li>• Little use of appropriate terminology</li> </ul>
<b>1 - 2</b>	<ul style="list-style-type: none"> <li>• Superficial assessment of the explanations for bullying behaviours</li> <li>• Answer lacks structure</li> <li>• There is no conclusion</li> </ul>
<b>0</b>	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

4. **Criminal behaviour**

- (a) Outline **two** social psychological explanations of criminal behaviours. [10]

Credit **could** be given for:

- Differential association theory (Sutherland): criminal behaviour is learnt through association with criminals and becomes internalised
- Gender socialisation: boys encouraged to demonstrate physical strength (e.g. fighting 'boys will be boys'); girls challenging the nurturing roles expected by society
- Social-cognition (e.g. hate crimes)
- Social learning theory: Bandura
- Any other appropriate explanation

**NB** Both explanations need to be clearly distinct to allow credit for both.

Marks	AO1
9 - 10	<ul style="list-style-type: none"> <li>• Outline of both explanations of criminal behaviours is thorough and accurate</li> <li>• There is depth to both biological and social psychological explanations of criminal behaviour</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical and coherent</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Outline of both explanations of criminal behaviours is reasonably detailed and accurate</li> <li>• There is reasonable depth to both biological and social psychological explanations of criminal behaviour</li> <li>• Good use of terminology</li> <li>• The structure is logical and coherent</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Outline of the explanation(s) of criminal behaviours is basic in detail, there may be some inaccuracies</li> <li>• There is some depth to both explanations OR outline of one explanation is thorough and accurate</li> <li>• Some use of appropriate terminology</li> <li>• There is a reasonable structure</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Outline of the explanation(s) of criminal behaviours is superficial</li> <li>• Little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



- (b) Discuss the view that anger management is more effective at modifying criminal behaviours than restorative justice. [15]

Credit **could** be given for:

- Examples of restorative justice: victim-offender mediation; family group conferencing; restorative conferencing
- Examples of anger management applied to modifying criminal behaviour: cognitive preparation, skills acquisition (e.g. relaxation, social skills such as assertiveness and conflict resolution which could include role-playing angry situations with other offenders)
- Any other appropriate evidence

Marks	AO2
5	<ul style="list-style-type: none"> <li>• Evidence is detailed and accurate</li> <li>• Evidence is well chosen and effectively supports and develops arguments made</li> <li>• Application of the material is very well judged</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• Evidence is detailed with minor inaccuracies</li> <li>• Evidence is well chosen to support the argument but may not always develop the arguments made</li> <li>• Application of the material is appropriate</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Evidence is brief and / or muddled</li> <li>• Evidence is not applied to the treatment of modifying criminal behaviours</li> <li>• Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• No application attempted</li> <li>• No evidence included</li> </ul>

**Criteria for AO3 content of this question is on the next page**

## 4. (b) continued

Credit <b>could</b> be given for:	
<ul style="list-style-type: none"> <li>• Discussion regarding the purpose of restorative justice – criminals taking responsibility for their actions</li> <li>• Discussion of the assumptions behind using anger management to deal with criminal behaviour (e.g. cognitive triad dealing with the reasons for their anti-social actions)</li> <li>• Choice of modifying method is dependent on the validity of the explanation for criminal behaviour – linked to the approach but clearly contextualised</li> <li>• Reliability of explanations (e.g. generalisability of the sample used in the research)</li> <li>• Cultural and historical context (e.g. how crimes change and some behaviour decriminalised)</li> <li>• The implications (socially and/or ethically) of using a less effective method</li> <li>• Any other relevant discussion</li> </ul>	
Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• A thorough discussion is given on modifying criminal behaviours</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> <li>• Effective use of terminology is used throughout</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good discussion is given on modifying criminal behaviours</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> <li>• Appropriate terminology is used throughout</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Basic discussion is given on modifying criminal behaviours</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> <li>• Little use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Superficial discussion is given on modifying criminal behaviours</li> <li>• Answer lacks structure</li> <li>• There is no conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

5. **Schizophrenia**

(a) Describe the characteristics of schizophrenia.

[10]

Credit **could** be given for:

- Delusions: of persecution, of grandeur, of reference, of control
- Hallucinations: e.g. auditory (hearing voices), visual (seeing objects and / or persons)
- Disorganized speech: e.g. word salad
- Disorganized behaviour; lack of inhibition, bizarre and unpredictable
- “Negative” symptoms: social withdrawal, deterioration of personal hygiene, inability to cry or express joy, unable to concentrate
- Any other relevant characteristic (as indicated by DSM V)

Marks	A01
9 - 10	<ul style="list-style-type: none"> <li>• Description of the characteristics of schizophrenia is thorough and accurate</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical and coherent</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Description of the characteristics of schizophrenia is reasonably detailed and accurate</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> <li>• The structure is logical and coherent</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Description of the characteristics of schizophrenia is basic in detail, there may be some inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• Some use of appropriate terminology</li> <li>• There is a reasonable structure</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Description of the characteristics of schizophrenia is superficial</li> <li>• Little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) Discuss the ethical and social implications of how the characteristics of schizophrenia are modified.

[15]

Credit <b>could</b> be given for:	
<ul style="list-style-type: none"> <li>• 'Care in the Community' (could refer to case studies e.g. Sirhowy Hotel Murder)</li> <li>• Medication. Antipsychotic drugs may help relieve symptoms such as delusions, hallucinations and thinking problems</li> <li>• Psychological treatment. Psychological treatments include cognitive behavioural therapy (CBT), family therapy and arts therapy</li> <li>• Voluntary and / or compulsory detention: Serious schizophrenic episodes may require admission to a hospital or clinic's psychiatric</li> <li>• Any other appropriate evidence</li> </ul>	
Marks	AO2
5	<ul style="list-style-type: none"> <li>• Evidence is detailed and accurate</li> <li>• Evidence is well chosen and effectively supports and develops arguments made</li> <li>• Application of the material is very well judged</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• Evidence is detailed with minor inaccuracies</li> <li>• Evidence is well chosen to support the argument but may not always develop the arguments made</li> <li>• Application of the material is appropriate</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Evidence is brief and / or muddled</li> <li>• Evidence is not applied to the modification of schizophrenia</li> <li>• Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**Criteria for AO3 content of this question is on the next page**

## 5. (b) continued

Credit **could** be given for:

- The medicalization of what is considered appropriate behaviour in different cultures (e.g. hallucinations are not necessarily seen as a sign of mental illness in some African countries and therefore would not require 'treatment')
- Discussion regarding the purpose of modifying behaviour – control of the individual or to protect society
- Choice of modifying method is dependent on the validity of the explanation for the cause of schizophrenia – linked to the approach but clearly contextualised
- Reliability of explanations (e.g. generalisability of the sample used in the research)
- Cultural and historical context (e.g. how treatments have been improved with new knowledge)
- The stigmatisation of labelling an individual once diagnosed
- Any other relevant discussion

Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• A thorough discussion is given on modifying schizophrenia</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> <li>• Effective use of terminology is used throughout</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good discussion is given on modifying schizophrenia</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> <li>• Appropriate terminology is used throughout</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Basic discussion is given on modifying schizophrenia</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> <li>• Little use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Superficial discussion is given on modifying schizophrenia</li> <li>• Answer lacks structure</li> <li>• There is no conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

6. **Stress**

- (a) 'Ceri has recently changed jobs and is struggling to meet the deadlines and targets in his new managerial role. He is having problems sleeping, is over-eating and his blood pressure has increased. His GP has diagnosed him with stress'.

Describe how these symptoms of stress could be modified.

[10]

Credit **could** be given for:

- Therapeutic intervention
  - Drug therapy – to deal with associated symptoms (e.g. beta blockers to alleviate anxious feelings)
  - Stress inoculation training – increase resistance to stressors
- Reclassification of stress as a clinical condition to comply with social norms of behaving (e.g. by reviewing the Diagnostic and Statistical Manual)
- Any other relevant description of a method of modifying the symptoms of stress

Marks	A01
9 - 10	<ul style="list-style-type: none"> <li>• Description of the method(s) of modifying the symptoms of stress is thorough and accurate</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology throughout</li> <li>• The structure is logical and coherent</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Description of the method(s) of modifying the symptoms of stress is reasonably detailed and accurate</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> <li>• The structure is logical and coherent</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Description of the method(s) of modifying the symptoms of stress is basic in detail, there may be some inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• Some use of appropriate terminology</li> <li>• There is a reasonable structure</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Description of the method(s) of modifying the symptoms of stress is superficial</li> <li>• Little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) Evaluate the strengths and weaknesses of **two** explanations of stress. [15]

Credit **could** be given for:

- Biological explanation: evolutionary adaptation to ensure avoidance of stressors; predisposed due to stress gene (named gene - 5HTR2C)
- Individual difference: type A, B, C personality (e.g. Friedman and Rosenman); impact of self-efficacy levels on perceived control of a situation
- Social explanation: number of life events experienced in recent times (named life events e.g. divorce, holiday, and financial changes); daily hassles versus uplifts theory
- Any other appropriate psychological explanation

**NB** Both explanations should be clearly distinct to allow crediting both.

Marks	AO2
5	<ul style="list-style-type: none"> <li>• Evidence is detailed and accurate</li> <li>• Evidence is well chosen and effectively supports and develops arguments made</li> <li>• Application of the material is very well judged</li> <li>• Effective use of terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• Evidence is detailed with minor inaccuracies</li> <li>• Evidence is well chosen to support the argument but may not always develop the arguments made</li> <li>• Application of the material is appropriate</li> <li>• Good use of terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Evidence is brief and/or muddled</li> <li>• Evidence is not applied to modifying stress behaviours</li> <li>• Basic use of terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**Criteria for AO3 content of this question is on the next page**

6. (b) continued

Credit <b>could</b> be given for:	
<ul style="list-style-type: none"> <li>• Comparison of the two explanations in terms of validity, reliability, scientific, application etc.</li> <li>• A contextualised evaluation of the approach from which the explanation for stress derives</li> <li>• Social implications of the explanation (e.g. increase in diagnosis)</li> <li>• Ethical implications of the explanation (e.g. mis-diagnosis)</li> <li>• Any other relevant evaluation</li> </ul>	
Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• A thorough evaluation is made of the explanations for stress</li> <li>• Structure is logical throughout</li> <li>• An appropriate conclusion is reached based on evidence presented</li> <li>• Effective use of terminology is used throughout</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• A good evaluation is made of the explanations for stress</li> <li>• Structure is mostly logical</li> <li>• A reasonable conclusion is reached based on evidence presented</li> <li>• Appropriate terminology is used throughout</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Basic evaluation is made of the explanations for stress</li> <li>• Structure is reasonable</li> <li>• A basic conclusion is reached</li> <li>• Little use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Superficial evaluation of the explanations for stress</li> <li>• Answer lacks structure</li> <li>• There is no conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



**Section B – Controversies***Answer one of the questions*

7. 'For psychology to have an impact it is necessary for psychology to be a science.'  
Evaluate the validity of this statement. [25]

The important factor here is that the evidence used is appropriate and linked to the comment made. This is a question which is synoptic in its nature and therefore the material used to support the debate can be drawn from any area of psychology. Credit **could** therefore be given for any accurate psychological concept, evidence, research, study or theory from any approach or perspective.

Exemplar content:

- Characteristics of science (e.g. empirical research, replicability)
- William Wundt's work (Leipzig laboratory 1890s)
- Thomas Khun's ideas on the need for clear paradigms
- Karl Popper's ideas on the need for science to develop testable theories
- Examples of scientific work in psychology (e.g. brain scanning)
- The biological approach: testable assumptions (e.g. genetics)
- The cognitive approach: relationship with the cognitive sciences
- Importance of less scientific work in psychology (e.g. Freudian case studies)

Marks	AO2
9 - 10	<ul style="list-style-type: none"> <li>• Evidence used is well-chosen and effective in support and developing comments made</li> <li>• Details are accurate throughout</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Evidence used is appropriate to support the comments made</li> <li>• Details may have some minor inaccuracies</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Evidence not always made relevant to comment</li> <li>• There may be significant inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• There is some use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Little credit-worthy evidence given</li> <li>• Application of the evidence to the comment is inappropriate</li> <li>• There is very little use of appropriate terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**Criteria for AO3 content of this question is on the next page**

7. continued

The core of the issue is the implications of whether psychology is considered a science or not. Whilst considering which aspects of psychology can be considered scientific it is also necessary to make a judgment on the need for this status or not.

Credit **could** be given for:

- Support for the statement:
  - reputation of the discipline
  - applications and usefulness in assisting real people (e.g. treating mental disorders, motivating optimum performance)
  - regular use of the scientific method in psychological investigations
- Support against the statement:
  - impact of the less scientific approaches (e.g. the popularity of early psychodynamic theories and use of the terminology in everyday language)
  - lack of a single paradigm
  - negative effects of gaining the status (e.g. intelligence testing)
  - characteristics of science (e.g. replicability, empirical research, paradigm) and examples of these in identifiable psychological research
- Any other appropriate discussion

Marks	AO3
13 - 15	<ul style="list-style-type: none"> <li>• A sophisticated and articulate interpretation of the issue</li> <li>• Thoroughly well-developed and balanced arguments</li> <li>• Evaluative comments are evidently relevant to the context</li> <li>• Excellent structure</li> <li>• An appropriate conclusion is reached based on the evidence presented</li> </ul>
10 - 12	<ul style="list-style-type: none"> <li>• A good interpretation of the key issue</li> <li>• Arguments made are thorough and balanced</li> <li>• The evaluative comments are clearly relevant to the context</li> <li>• Excellent structure</li> <li>• An appropriate conclusion is reached</li> </ul>
7 - 9	<ul style="list-style-type: none"> <li>• A reasonable interpretation of the key issue</li> <li>• Arguments are reasonable but may be one-sided</li> <li>• The evaluative comments made tend to be generic and not contextualised</li> <li>• The structure is coherent</li> <li>• A basic conclusion is made</li> </ul>
4 - 6	<ul style="list-style-type: none"> <li>• May be some misinterpretation regarding the key issue</li> <li>• Arguments made are basic but creditworthy</li> <li>• Answer does not move beyond assertions</li> <li>• Basic structure</li> <li>• Any conclusion may be contradictory with flow of the answer</li> </ul>
1 - 3	<ul style="list-style-type: none"> <li>• There is no engagement with the issue beyond simple rewording</li> <li>• Answer does not move beyond assertions</li> <li>• Answer lacks clarity</li> <li>• There is no conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

8. 'In 1998 the American Psychological Association surveyed its members and found that of the top 100 psychologists of the 20<sup>th</sup> century, only 6 were women'. To what extent do you agree that women are 'invisible' in psychology? [25]

The important factor here is that the evidence used is appropriate and linked to the comments made. This is a question which is synoptic in its nature and therefore the material used to support the debate can be drawn from any area of psychology. Credit **could** therefore be given for any accurate psychological concept, evidence, research, study or theory from any approach or perspective.

Exemplar content:

- Work of named female psychologists: e.g. Calkins, Bern, Anna Freud, Horney, Klein, Ainsworth
- Feminist Psychology: clash with evolutionary psychology
- Research using women as samples
- Sex roles
- Use of women for 'softer' research (e.g. childcare)

Marks	AO2
9 - 10	<ul style="list-style-type: none"> <li>• Evidence used is well-chosen and effective in support and developing comments made</li> <li>• Details are accurate throughout</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Evidence used is appropriate to support the comments made</li> <li>• Details may have some minor inaccuracies</li> <li>• There is depth and range to material used, but not in equal measure</li> <li>• Good use of terminology</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Evidence not always made relevant to comment</li> <li>• There may be significant inaccuracies</li> <li>• There is depth or range only in material used</li> <li>• There is some use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Little credit-worthy evidence given</li> <li>• Application of the evidence to the comment is inappropriate</li> <li>• There is very little use of appropriate terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

8. continued

The core of the controversy in this question is whether the apparent 'invisibility' of women in psychology is a truth or a result of misogynistic practices amongst the status quo.

Credit **could** be given for:

- Justification due to the historical and cultural context of the research (e.g. changing roles of women in society)
- Does it matter anyway? Is there more value to research if knowing sex/gender of researcher?
- Do men and women have different agendas in psychological research
- Any other appropriate evaluation

Marks	AO3
13 - 15	<ul style="list-style-type: none"> <li>• A sophisticated and articulate interpretation of the issue</li> <li>• Thoroughly well-developed and balanced arguments</li> <li>• Evaluative comments are evidently relevant to the context</li> <li>• Excellent structure</li> <li>• An appropriate conclusion is reached based on the evidence presented</li> </ul>
10 - 12	<ul style="list-style-type: none"> <li>• A good interpretation of the key issue</li> <li>• Arguments made are thorough and balanced</li> <li>• The evaluative comments are clearly relevant to the context</li> <li>• Excellent structure</li> <li>• An appropriate conclusion is reached</li> </ul>
7 - 9	<ul style="list-style-type: none"> <li>• A reasonable interpretation of the key issue</li> <li>• Arguments are reasonable but may be one-sided</li> <li>• The evaluative comments made tend to be generic and not contextualised</li> <li>• The structure is coherent</li> <li>• A basic conclusion is made</li> </ul>
4 - 6	<ul style="list-style-type: none"> <li>• May be some misinterpretation regarding the key issue</li> <li>• Arguments made are basic but creditworthy</li> <li>• Answer does not move beyond assertions</li> <li>• Structure is clear</li> <li>• Any conclusion may be contradictory with flow of the answer</li> </ul>
1 - 3	<ul style="list-style-type: none"> <li>• There is no engagement with the issue beyond simple rewording</li> <li>• Answer lacks clarity</li> <li>• Answer does not move beyond assertions</li> <li>• There is no conclusion</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**A LEVEL PSYCHOLOGY****UNIT 4****Psychology: Applied Research Method****MARK SCHEME****GENERAL MARKING GUIDANCE**

- Every candidate's script must be treated in the same way throughout the whole marking session.
- The mark scheme should be applied positively. It is not required for an answer to be 'perfect' to gain full marks. Candidates should be rewarded for what they have included and not penalised for leaving things out. The process is very different to marking as a teacher (i.e. it is about rewarding rather than guiding).
- Examiners should read answers carefully and not make any presumptions. Original thoughts and unusual exemplars can be credited; however, do check for accuracy of unusual answers.
- The full range of marks should be used. If the answer shows the features of the top band with no significant issues, full marks can be given. Similarly, an answer which does not answer the question should be given zero marks.
- The subjective nature of psychology inevitably requires examiners to use their professional judgement. Care should be taken however not to decide on value of the answer due to personal opinions. If the material is used appropriately to answer the question then credit should be given in accordance with the skills demonstrated and indicated in the various bands.
- Crossed out work should be marked unless the candidate has made another attempt at answering the question.
- Any rubric errors should work to the candidates advantage i.e. mark all answers completed and credit the highest scoring valid combination.
- If at any time during the marking the examiner has a concern regarding content of an answer the Team Leader or Principal Examiner should be consulted.

**Indicative content**

It is essential to acknowledge the subjective nature of psychology and therefore there are not always specific answers that can be included in the mark scheme. The indicative content is simply advice on each specific question outlining some possibilities; it is not prescriptive or hierarchical and candidates are not expected to mention all the materials mentioned. They are also able to refer to other studies, theories, issues etc. which would be credited based on skills shown in accordance with the guidance in the grids.

**Which mark within a band?**

Having decided on the overall band that is appropriate for the response given the examiner should start with the top mark in the band. If there are aspects of the answer which may not be fully representative of the band, the mark given may be lower in the band.

**Quality of written communication**

This issue should have a bearing only if the quality of written communication is inconsistent with the descriptor for the band in which the answer falls decided on the psychological content. In this situation, examiners may decide not to award the higher mark within the band.

**Annotation to be used**

√ - correct material

√+ - correct material developed

x – incorrect material

? – unclear

EV – evaluation

GEV – generic evaluation

EX – example used is appropriate

NREL – does not answer question (i.e. not relevant)

**SECTION A – Personal Investigations**

You should answer **all** the questions in this section with reference to the investigations carried out in your study of psychology.

**INVESTIGATION ONE:**

Correlational research on the relationship between age and reaction times

1. (a) (i) State the alternative / experimental hypothesis for your correlational investigation. [3]

Exemplar hypothesis:

- As age increases in the participant, there will be a reduction in their response times in a recognition task
- There will be a relationship between age and reaction times
- Any appropriate hypothesis

Marks	AO1
3	<ul style="list-style-type: none"> <li>• Full alternative hypothesis stated with both variables clearly operationalised</li> </ul>
2	<ul style="list-style-type: none"> <li>• Full alternative hypothesis stated with only one variable clearly operationalised</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic alternative stated but neither variables is clearly operationalised</li> </ul>
0	<ul style="list-style-type: none"> <li>• Experimental or null hypothesis</li> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (ii) Explain whether this alternative / experimental hypothesis was directional or non-directional. [2]

Marks	AO1
2	<ul style="list-style-type: none"> <li>• Full explanation given which is appropriate in relation to the alternative hypothesis given in part a) (i)</li> </ul>
1	<ul style="list-style-type: none"> <li>• Identification of direction is appropriate in relation to the hypothesis given in part a) (i)</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) Explain how you ensured that the correlational research you carried out was ethical? [10]

Credit **could** be given for:

- Choice of participants – avoiding vulnerable individuals
- Consent – ensure fully informed consent given as far as possible (or description why not gained)
- Debrief – any post-research information or intervention
- Reference to BPS guidelines
- Any other appropriate explanation of an ethical issue

**NB** We cannot know if candidates have carried out the investigation – the marks given must be based on the responses to the questions only and allocated in accordance with the criteria indicated in the marking bands below.

Marks	AO2
9 - 10	<ul style="list-style-type: none"> <li>• Explanation includes several issues and each is clearly detailed</li> <li>• Application of the material used is well-judged</li> <li>• There is depth and range to material included</li> <li>• Effective use of terminology</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Explanation includes few issues and each is detailed</li> <li>• Application of the material used is appropriate</li> <li>• There is depth and / or range to material used</li> <li>• Good use of terminology</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• Explanation includes at least two issues</li> <li>• Application of the material used may be inappropriate or incorrect in places</li> <li>• There is depth or range only in material used</li> <li>• There is some use of appropriate terminology</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Basic explanation</li> <li>• There may only be one issue explained briefly</li> <li>• Application of the material is superficial</li> <li>• Answer does not move beyond description of ethics</li> <li>• There is little use of appropriate terminology</li> <li>• Answer lacks clarity</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>



- (c) Discuss how changing **one** aspect of your sample would increase the validity of this correlational research. [5]

Credit **could** be given for:

- Changing the sample: more representative (e.g. wider age range, different sampling technique)
- Changing the method of measuring reaction time: i.e. use a more scientific tool
- Changing the location of the research: impact on ecological validity
- Improving the ethics e.g. ensuring full informed consent gained by all, confidentiality of the results
- Any other appropriate discussion

Marks	AO3
5	<ul style="list-style-type: none"> <li>• The change is clearly and fully described</li> <li>• Excellent discussion</li> <li>• Balanced argument</li> <li>• Focus on impact on validity</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• The change is clearly described</li> <li>• Good discussion</li> <li>• There is an attempt at giving both sides of the argument although not necessarily balanced</li> <li>• Focus on impact on validity</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• The change might not be clear and / or vague (e.g. increase number of participants with no further detail)</li> <li>• Discussion is superficial and / or muddled</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**INVESTIGATION TWO:**

Observation of gender differences in food choices.

- 2 (a) (i) Describe the sampling method you used. [2]

Credit **could** be given for:

- Opportunity sampling – using those available in a named location
- Random sampling – placing the names of all those able to participate in a randomiser computer programme to generate the required number
- Stratified sampling – ensuring that there is a representation of all characteristics in proportion to percentages in the population
- Any other appropriate sampling method

Marks	AO1
2	<ul style="list-style-type: none"> <li>• Full description of sampling method which is contextualised to specific investigation</li> </ul>
1	<ul style="list-style-type: none"> <li>• Sampling method described generically</li> <li>• Description may be muddled</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (ii) Explain why this sampling method was chosen. [3]

This response needs to identify strengths of their sampling method and / or the weakness of other sampling methods to explain why their choice was most appropriate for their personal investigation.

Exemplar answer:

Due to the investigation considering gender differences I needed equal numbers of male and female participants. Due to people's food choices being influenced by food allergies, cultural influences etc. I also decided to use a cross-cultural and representation of every age group from the population. I considered using self-selecting sampling by placing adverts in different locations (e.g. schools, old people's homes, temples, cafes) but I could not be sure to receive an equal response from each. I decided it was necessary to use a stratified sampling method and although this was time consuming it ensured that the results I achieved were valid in the context of my hypothesis.

Marks	AO2
3	<ul style="list-style-type: none"> <li>• Full explanation given in relation to a strength of method used and / or weakness of other methods</li> <li>• There is a logical application of the sampling method used for the purpose of their investigation</li> </ul>
2	<ul style="list-style-type: none"> <li>• Good explanation given in relation to the strength of method used and / or weakness of other methods</li> <li>• Lacks some application of the sampling method used for the purpose of their investigation</li> </ul>
1	<ul style="list-style-type: none"> <li>• Basic explanation given in relation to a strength of method used or a weakness of other methods only</li> <li>• No application to the purpose of their investigation (i.e. generic reason)</li> </ul>
0	<ul style="list-style-type: none"> <li>• 'Quick and easy' (needs comparison to be creditworthy)</li> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

(b) Suggest **two** ways your investigation could have been improved. [5]

Credit **could** be given for:

- Changes to sampling method (e.g. to use a quicker and less complicated method)
- Improving the ethical aspects (e.g. ensuring ethical guidelines were more strictly adhered to)
- Changing the methodology for gathering the data to another with greater validity
- Rewording the instructions given to participants to reduce demand characteristics and improve reliability
- Collect different types of data (e.g. quantitative rather than qualitative)
- Carry out at a different location / time
- Any other appropriate suggestion

**NB** The two ways can be similar in nature as long as there is a distinct analysis of the effect of the change.

Marks	AO3
5	<ul style="list-style-type: none"> <li>• Two ways of improving the investigation are suggested</li> <li>• Thorough analysis of why these suggestions would improve the investigation</li> <li>• The answer is logical</li> <li>• Good use of appropriate terminology</li> </ul>
3 - 4	<ul style="list-style-type: none"> <li>• There may be only one way of improving the investigation suggested (if only one given the analysis should be thorough and detailed)</li> <li>• Good analysis of why the suggestion(s) would improve the investigation</li> <li>• Some appropriate terminology is used</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Only one way of improving the investigation is suggested</li> <li>• Analysis is basic</li> <li>• General statement of how the suggestion would improve the investigation (e.g. make it more valid)</li> <li>• Little use of appropriate terminology</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

**SECTION B – Application of research methods to novel scenarios***Answer all questions.*

3. It has been found that pupils with low levels of self-confidence in reading do better when reading to an animal. A psychologist was asked to investigate whether using a dog in the class could increase reading accuracy thereby improving confidence in the skill. She measured the cortisol levels in the saliva of ten children after they had been reading in front of their peers and then again the following day after reading to a dog. Cortisol is released when an individual interprets a situation as being stressful. The results are shown in *Table 1* below:

*Table 1 – Summary table of raw data, mean and standard deviation*

Participant (f = female, m = male)	Level of cortisol in saliva samples after reading (nmol/L)	
	Reading to peers	Reading to a dog
1f	13	20
2f	40	6
3f	12	1
4f	3	9
5f	15	0
6f	7	13
1m	22	4
2m	19	3
3m	11	2
4m	8	2

- (a) Calculate the median scores for the levels of cortisol when reading to a dog. Show your workings. [2]

Credit given for:

- Reading to a dog: (0 1 2 2 3 4 6 9 13 20,  $3+4/2 =$  ) 3.5

Marks	A02
2	<ul style="list-style-type: none"> <li>• Correct answer identified</li> <li>• Calculations shown</li> </ul>
1	<ul style="list-style-type: none"> <li>• Correct answer identified only</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

- (b) A Wilcoxon matched pairs signed ranks test was used to analyse the data.  
Explain why this was appropriate. [3]

Marks	A01
<p>Credit given for:</p> <p>1 mark for each (max. 3 marks)</p> <ul style="list-style-type: none"><li>• Data at ordinal level</li><li>• Testing for a difference</li><li>• Scores obtained from the same participants (in repeated measures of matched pairs)</li></ul>	

- (c) A psychology student at Bangor University read about this research; he was interested in how children learn to read and so decided to investigate further by making several changes to the original work. He wanted to investigate whether the reading skills of children was influenced by whether they are bilingual or not (being able to speak two languages fluently). He asked 6 children from his family (all boys aged between 4 and 13) whether they would participate in a longitudinal study to measure the development in reading over three years. He arranged that the parents of the children filled in a questionnaire on the reading skills of their children once a year. Each participant was paid £50 for their involvement.

Discuss the choices made by this student in planning his research in terms of the impact on the results. [10]

Credit **could** be given for:

- Sample chosen:
  - all boys introduces gender bias as girls are believed to have different attitudes - to reading
  - all boys eliminates issue of individual differences thereby increasing population validity
  - all from same family reduces applicability of data
- Gathering of data:
  - second hand data from parents
  - social desirability effect reducing the validity and reliability
- Length of study: issues with longitudinal study (e.g. attrition)
- Ethical consideration: use of young children in research
- Any other appropriate discussion

Marks	AO3
9 - 10	<ul style="list-style-type: none"> <li>• Thorough discussion dealing with several aspects of research design</li> <li>• There is a balanced argument presenting both sides</li> <li>• Focus is on the impact on the results</li> </ul>
6 - 8	<ul style="list-style-type: none"> <li>• Good discussion dealing with several aspects of research design</li> <li>• There is an argument presenting both sides but not necessarily balanced</li> <li>• Focus is on the impact on the results</li> </ul>
3 - 5	<ul style="list-style-type: none"> <li>• There is a basic discussion</li> <li>• Argument is one-sided</li> <li>• Focus not always on how results are impacted</li> </ul>
1 - 2	<ul style="list-style-type: none"> <li>• Discussion is brief and identifies issues only</li> <li>• Aspects of research design are identified</li> <li>• Not focused on how results are impacted</li> </ul>
0	<ul style="list-style-type: none"> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>

4. It has been suggested that petting an animal can help improve the mood and health of patients recovering in hospital. Describe how a psychologist could investigate this suggestion **using an experiment**. [15]

In your answer you should include:

- the operationalisation of the independent variable (IV) and dependent variable (DV)
- details of the experimental design and participants used
- identification of **two** possible confounding variables and how you would deal with these.

Credit **could** be given for:

- Key elements: operationalised IV and DV, appropriate confounding variables (two) and how these are dealt with, sampling, experimental design
- Location
- Any instructions given
- Type of data collected
- Any other appropriate material

Marks	AO2
13 - 15	<ul style="list-style-type: none"> <li>• Description includes the key elements and is clearly detailed</li> <li>• Application of the material used is well-judged</li> <li>• Effective use of terminology</li> <li>• The structure is logical and coherent allowing replication</li> <li>• It would be easy to carry out the investigation</li> </ul>
9 - 12	<ul style="list-style-type: none"> <li>• Description includes the key elements and is detailed</li> <li>• Application of the material used is appropriate</li> <li>• Good use of terminology</li> <li>• The structure is logical allowing replication</li> <li>• It would be easy to carry out the investigation</li> </ul>
5 - 8	<ul style="list-style-type: none"> <li>• Description may be lacking a key element</li> <li>• Application of the material used may be inappropriate or incorrect in places</li> <li>• There is some use of appropriate terminology</li> <li>• There is a reasonable structure but replication may not be possible</li> <li>• Not always clear how to carry out the investigation</li> </ul>
1 - 4	<ul style="list-style-type: none"> <li>• Basic description which lacks key elements</li> <li>• Application of the material is superficial</li> <li>• There is very little use of appropriate terminology</li> <li>• Answer lacks clarity and replication would be difficult</li> </ul>
0	<ul style="list-style-type: none"> <li>• Non-experimental method used (take care that questionnaires and observations can be used within an experiment and therefore creditable)</li> <li>• Inappropriate answer given</li> <li>• No response attempted</li> </ul>