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A Level Psychology

Sample Assessment Materials

Pearson Edexcel Level 3 Advanced GCE in Psychology (9PS0)

First teaching from September 2015

First certification from 2017

Issue 2

Pearson

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Sample Assessment Materials

First certification 2017

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Edexcel, BTEC and LCCI qualifications

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Summary of Pearson Edexcel Level 3 Advanced GCE in Psychology SAMs Issue 2 changes

Summary of changes made between previous issue and this current issue	Page number
9PS0/01 Paper 1, 9PS0/02 Paper 2 and 9PS0/03 Paper 3 common	
Spearman's rank critical values have been updated.	6, 60, 136
Chi-squared distribution formula – statement at the bottom changed to 'The calculated value must be equal to or exceed the critical value in this table for significance to be shown.'	7, 61, 137
Critical values for the Mann-Whitney U test have been updated.	8–9, 62–63, 138–139
9PS0/02 Paper 2 specific	
Question 1(b) indicative content has been updated.	90
9PS0/03 Paper 3 specific	
Question 2c 'giving one similarity and one difference' has been removed from the question.	146

If you need further information on these changes or what they mean, contact us via our website at: qualifications.pearson.com/en/support/contact-us.html.

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All information in this document is correct at the time of publication.

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Contents

Introduction

The Pearson Edexcel Level 3 Advanced GCE in Psychology is designed for use in schools and colleges. It is part of a suite of GCE qualifications offered by Pearson.

These sample assessment materials have been developed to support this qualification and will be used as the benchmark to develop the assessment students will take.

General marking guidance

- All candidates must receive the same treatment. Examiners must mark the last candidate in exactly the same way as they mark the first.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than be penalised for omissions.
- Examiners should mark according to the mark scheme – not according to their perception of where the grade boundaries may lie.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification/indicative content will not be exhaustive.
- In a levels-based mark scheme there are two distinct parts – the indicative content and the levels descriptors:
    - Indicative content is exactly that – they are factual points that candidates are likely to use to construct their answer. It is possible for an answer to be constructed without mentioning some or all of these points, as long as they provide alternative responses to the indicative content that fulfils the requirements of the question. It is the examiner's responsibility to apply their professional judgement to the candidate's response in determining if the answer fulfils the requirements of the question.
    - The mark grid identifies which assessment objective is being targeted by each bullet point within the level descriptors, and describes the ways in which they will be evidenced across the ability range.
- When deciding how to reward an answer using a levels based mark scheme, a 'best fit' approach should be used:
    - Examiners should first decide which descriptor most closely matches the candidate answer and place it in that band.
    - The mark awarded within the band according to each of the assessment objectives will be decided according to how securely all bullet points are displayed at that level.
    - In cases of uneven performance, this will still apply. Candidates will be placed in the band that best describes their answer, and they will be awarded marks towards the top or bottom of that band depending how securely they have evidenced bullet points in that, or other descriptors.
- Detailed guidance how to apply all mark schemes, with exemplars for this unit, will be given at standardisation.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, a team leader must be consulted before a mark is given.
- Crossed-out work should be marked **unless** the candidate has replaced it with an alternative response.

Write your name here

Surname	Other names

Pearson Edexcel
Level 3 GCE

Centre Number	Candidate Number

Psychology

Advanced
Paper 1: Foundations in psychology

Sample assessment materials for first teaching
September 2015
Time: 2 hours

Paper Reference
9PS0/01

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The list of formulae and critical value tables are printed at the start of this paper.
- Candidates may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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S 4 7 5 3 7 A 0 1 2 1

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FORMULAE AND CRITICAL VALUE TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\sum(x-\bar{x})^2}{n-1}\right)}$$

Spearman's rank correlation coefficient

$$1-\frac{6\sum d^2}{n(n^2-1)}$$

Critical values for Spearman's rank

	Level of significance for a one-tailed test				
	0.05	**0.025**	**0.01**	**0.005**	**0.0025**
	Level of significance for a two-tailed test				
N	**0.10**	**0.05**	**0.025**	**0.01**	**0.005**
5	0.900	1.000	1.000	1.000	1.000
6	0.829	0.886	0.943	1.000	1.000
7	0.714	0.786	0.893	0.929	0.964
8	0.643	0.738	0.833	0.881	0.905
9	0.600	0.700	0.783	0.833	0.867
10	0.564	0.648	0.745	0.794	0.830
11	0.536	0.618	0.709	0.755	0.800
12	0.503	0.587	0.678	0.727	0.769
13	0.484	0.560	0.648	0.703	0.747
14	0.464	0.538	0.626	0.679	0.723
15	0.446	0.521	0.604	0.654	0.700
16	0.429	0.503	0.582	0.635	0.679
17	0.414	0.485	0.566	0.615	0.662
18	0.401	0.472	0.550	0.600	0.643
19	0.391	0.460	0.535	0.584	0.628
20	0.380	0.447	0.520	0.570	0.612
21	0.370	0.435	0.508	0.556	0.599
22	0.361	0.425	0.496	0.544	0.586
23	0.353	0.415	0.486	0.532	0.573
24	0.344	0.406	0.476	0.521	0.562
25	0.337	0.398	0.466	0.511	0.551
26	0.331	0.390	0.457	0.501	0.541
27	0.324	0.382	0.448	0.491	0.531
28	0.317	0.375	0.440	0.483	0.522
29	0.312	0.368	0.433	0.475	0.513
30	0.306	0.362	0.425	0.467	0.504

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Chi squared distribution formula

$$X^2 = \sum \frac{(O-E)^2}{E} \qquad df = (r-1)(c-1)$$

Critical values for chi-squared distribution

	Level of significance for a one-tailed test					
	0.10	**0.05**	**0.025**	**0.01**	**0.005**	**0.0005**
	Level of significance for a two-tailed test					
df	**0.20**	**0.10**	**0.05**	**0.025**	**0.01**	**0.001**
1	1.64	2.71	3.84	5.02	6.64	10.83
2	3.22	4.61	5.99	7.38	9.21	13.82
3	4.64	6.25	7.82	9.35	11.35	16.27
4	5.99	7.78	9.49	11.14	13.28	18.47
5	7.29	9.24	11.07	12.83	15.09	20.52
6	8.56	10.65	12.59	14.45	16.81	22.46
7	9.80	12.02	14.07	16.01	18.48	24.32
8	11.03	13.36	15.51	17.54	20.09	26.12
9	12.24	14.68	16.92	19.02	21.67	27.88
10	13.44	15.99	18.31	20.48	23.21	29.59
11	14.63	17.28	19.68	21.92	24.73	31.26
12	15.81	18.55	21.03	23.34	26.22	32.91
13	16.99	19.81	22.36	24.74	27.69	34.53
14	18.15	21.06	23.69	26.12	29.14	36.12
15	19.31	22.31	25.00	27.49	30.58	37.70
16	20.47	23.54	26.30	28.85	32.00	39.25
17	21.62	24.77	27.59	30.19	33.41	40.79
18	22.76	25.99	28.87	31.53	34.81	42.31
19	23.90	27.20	30.14	32.85	36.19	43.82
20	25.04	28.41	31.41	34.17	37.57	45.32
21	26.17	29.62	32.67	35.48	38.93	46.80
22	27.30	30.81	33.92	36.78	40.29	48.27
23	28.43	32.01	35.17	38.08	41.64	49.73
24	29.55	33.20	36.42	39.36	42.98	51.18
25	30.68	34.38	37.65	40.65	44.31	52.62
26	31.80	35.56	38.89	41.92	45.64	54.05
27	32.91	36.74	40.11	43.20	46.96	55.48
28	34.03	37.92	41.34	44.46	48.28	56.89
29	35.14	39.09	42.56	45.72	49.59	58.30
30	36.25	40.26	43.77	46.98	50.89	59.70
40	47.27	51.81	55.76	59.34	63.69	73.40
50	58.16	63.17	67.51	71.42	76.15	86.66
60	68.97	74.40	79.08	83.30	88.38	99.61
70	79.72	85.53	90.53	95.02	100.43	112.32

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Mann-Whitney U test formulae

$$U_a = n_a n_b + \frac{n_a(n_a+1)}{2} - \sum R_a$$

$$U_b = n_a n_b + \frac{n_b(n_b+1)}{2} - \sum R_b$$

(U is the smaller of U_a and U_b)

Critical values for the Mann-Whitney U test

N_a \ N_b	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.05 (one-tailed), *p* ≤ 0.10 (two-tailed)**																
5	4	5	6	8	9	11	12	13	15	16	18	19	20	22	23	25
6	5	7	8	10	12	14	16	17	19	21	23	25	26	28	30	32
7	6	8	11	13	15	17	19	21	24	26	28	30	33	35	37	39
8	8	10	13	15	18	20	23	26	28	31	33	36	39	41	44	47
9	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
10	11	14	17	20	24	27	31	34	37	41	44	48	51	55	58	62
11	12	16	19	23	27	31	34	38	42	46	50	54	57	61	65	69
12	13	17	21	26	30	34	38	42	47	51	55	60	64	68	72	77
13	15	19	24	28	33	37	42	47	51	56	61	65	70	75	80	84
14	16	21	26	31	36	41	46	51	56	61	66	71	77	82	87	92
15	18	23	28	33	39	44	50	55	61	66	72	77	83	88	94	100
16	19	25	30	36	42	48	54	60	65	71	77	83	89	95	101	107
17	20	26	33	39	45	51	57	64	70	77	83	89	96	102	109	115
18	22	28	35	41	48	55	61	68	75	82	88	95	102	109	116	123
19	23	30	37	44	51	58	65	72	80	87	94	101	109	116	123	130
20	25	32	39	47	54	62	69	77	84	92	100	107	115	123	130	138

N_a \ N_b	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.01 (one-tailed), *p* ≤ 0.02 (two-tailed)**																
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6	2	3	4	6	7	8	9	11	12	13	15	16	18	19	20	22
7	3	4	6	7	9	11	12	14	16	17	19	21	23	24	26	28
8	4	6	7	9	11	13	15	17	20	22	24	26	28	30	32	34
9	5	7	9	11	14	16	18	21	23	26	28	31	33	36	38	40
10	6	8	11	13	16	19	22	24	27	30	33	36	38	41	44	47
11	7	9	12	15	18	22	25	28	31	34	37	41	44	47	50	53
12	8	11	14	17	21	24	28	31	35	38	42	46	49	53	56	60
13	9	12	16	20	23	27	31	35	39	43	47	51	55	59	63	67
14	10	13	17	22	26	30	34	38	43	47	51	56	60	65	69	73
15	11	15	19	24	28	33	37	42	47	51	56	61	66	70	75	80
16	12	16	21	26	31	36	41	46	51	56	61	66	71	76	82	87
17	13	18	23	28	33	38	44	49	55	60	66	71	77	82	88	93
18	14	19	24	30	36	41	47	53	59	65	70	76	82	88	94	100
19	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101	107
20	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.025$ (one-tailed), $p \leq 0.05$ (two-tailed)																
5	2	3	5	6	7	8	9	11	12	13	14	15	17	18	19	20
6	3	5	6	8	10	11	13	14	16	17	19	21	22	24	25	27
7	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
8	6	8	10	13	15	17	19	22	24	26	29	31	34	36	38	41
9	7	10	12	15	17	20	23	26	28	31	34	37	39	42	45	48
10	8	11	14	17	20	23	26	29	33	36	39	42	45	48	52	55
11	9	13	16	19	23	26	30	33	37	40	44	47	51	55	58	62
12	11	14	18	22	26	29	33	37	41	45	49	53	57	61	65	69
13	12	16	20	24	28	33	37	41	45	50	54	59	63	67	72	76
14	13	17	22	26	31	36	40	45	50	55	59	64	67	74	78	83
15	14	19	24	29	34	39	44	49	54	59	64	70	75	80	85	90
16	15	21	26	31	37	42	47	53	59	64	70	75	81	86	92	98
17	17	22	28	34	39	45	51	57	63	67	75	81	87	93	99	105
18	18	24	30	36	42	48	55	61	67	74	80	86	93	99	106	112
19	19	25	32	38	45	52	58	65	72	78	85	92	99	106	113	119
20	20	27	34	41	48	55	62	69	76	83	90	98	105	112	119	127

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.005$ (one-tailed), $p \leq 0.01$ (two-tailed)																
5	0	1	1	2	3	4	5	6	7	7	8	9	10	11	12	13
6	1	2	3	4	5	6	7	9	10	11	12	13	15	16	17	18
7	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24
8	2	4	6	7	9	11	13	15	17	18	20	22	24	26	28	30
9	3	5	7	9	11	13	16	18	20	22	24	27	29	31	33	36
10	4	6	9	11	13	16	18	21	24	26	29	31	34	37	39	42
11	5	7	10	13	16	18	21	24	27	30	33	36	39	42	45	48
12	6	9	12	15	18	21	24	27	31	34	37	41	44	47	51	54
13	7	10	13	17	20	24	27	31	34	38	42	45	49	53	56	60
14	7	11	15	18	22	26	30	34	38	42	46	50	54	58	63	67
15	8	12	16	20	24	29	33	37	42	46	51	55	60	64	69	73
16	9	13	18	22	27	31	36	41	45	50	55	60	65	70	74	79
17	10	15	19	24	29	34	39	44	49	54	60	65	70	75	81	86
18	11	16	21	26	31	37	42	47	53	58	64	70	75	81	87	92
19	12	17	22	28	33	39	45	51	56	63	69	74	81	87	93	99
20	13	18	24	30	36	42	48	54	60	67	73	79	86	92	99	105

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

Wilcoxon Signed Ranks test process

- Calculate the difference between two scores by taking one from the other
- Rank the differences giving the smallest difference Rank 1

  Note: do not rank any differences of 0 and when adding the number of scores, do not count those with a difference of 0, and ignore the signs when calculating the difference
- Add up the ranks for positive differences
- Add up the ranks for negative differences
- T is the figure that is the smallest when the ranks are totalled (may be positive or negative)
- N is the number of scores left, ignore those with 0 difference

Critical values for the Wilcoxon Signed Ranks test

	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
n	0.1	0.05	0.02
N=5	0	-	-
6	2	0	-
7	3	2	0
8	5	3	1
9	8	5	3
10	11	8	5
11	13	10	7
12	17	13	9

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

Answer ALL questions.

SECTION A: SOCIAL PSYCHOLOGY

1 Annabel carried out research to investigate prejudice. She gave 20 students two reports of a person who had dropped their bag and needed help. One report described the person wearing a hooded top and the other report described the person wearing a suit. The students had to decide if they would help the person in the report or not.

Table 1 shows the total number of students who said they would help or not help a person wearing a hooded top or a person wearing a suit.

	Person wearing a hoodie	**Person wearing a suit**
Total number of students who would help	5	15
Total number of students who would not help	15	5

Table 1

Annabel concluded that people were more prejudiced against people wearing hooded tops.

(a) Identify the level of measurement used in Annabel's study.

(1)

.....

.....

(b) Identify the experimental design Annabel used.

(1)

.....

.....

(c) Explain **one** improvement that could be made to the experimental design used in Annabel's research.

(2)

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.....

(Total for Question 1 = 4 marks)

2 Tom is busy with his schoolwork and revision. He is told by his teacher, Mrs Smith, to make sure he turns up to lessons early so that he can run errands for her. Mrs Smith orders Tom to do her photocopying and help prepare the classroom for her lessons.

Using agency theory, explain why Tom might have obeyed Mrs Smith's orders even though he was busy.

(Total for Question 2 = 4 marks)

3 Evaluate whether research into obedience can be conducted without violating ethical guidelines.

(Total for Question 3 = 8 marks)

TOTAL FOR SECTION A = 16 MARKS

SECTION B: COGNITIVE PSYCHOLOGY

4 Describe the theory of reconstructive memory.

(Total for Question 4 = 4 marks)

5 A recent research project into brain damage has shown that people tend to retain their episodic memory in remembering their previous personal history. For instance, they could recall the names of their children, what type of food they preferred and their favourite colour. However, they had problems in updating their episodic memory and creating new semantic memories.

Describe how this information could be used to provide appropriate care for brain damaged patients in a hospital situation.

(Total for Question 5 = 3 marks)

6 A group of researchers is testing whether the number of words that can be recalled from a list is affected by age.

One group of participants is under 30 years old, and the other group of participants is over 50 years old.

Participants have to learn and recall words from a list of 100.

Each participant is given a recall score out of 100.

(a) State why an 'independent groups' design is suitable for this investigation.

(1)

.....

.....

Table 2 shows the data from the investigation.

	Under 30 years old	**Over 50 years old**
Mean score out of 100	22	39

Table 2

(b) Explain which statistical test the researchers could have used to analyse the data.

(2)

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.....

(Total for Question 6 = 3 marks)

7 Two possible methods of learning a language are either learning in a formal classroom setting where the language is taught, or acquiring the language by living in the relevant country.

Discuss how the multi-store model of memory explains how language is learnt in a formal classroom setting. You must make reference to the context in your answer.

(Total for Question 7 = 8 marks)

TOTAL FOR SECTION B = 18 MARKS

SECTION C: BIOLOGICAL PSYCHOLOGY

8 Mrs Khan is a recently widowed woman suffering from bouts of intense anger, which is having serious consequences in terms of her health. She has visited a counsellor who believes that her problems might be caused by the events that have happened to her in the last year.

The counsellor carries out an assessment using a well-known scale that gives an arbitrary score for every time a particular event happens. These scores are added up to give an overall score. The size of this score gives an indication of a person's level of stress, which could be the cause of Mrs Khan's recent increase in aggressive behaviour.

Table 3 shows a portion of the scale showing the events that have happened and how Mrs Khan scored on it.

Event	Arbitrary score	Times occurred in the year	Total for each type of event
Death of a spouse	100	1	100
Personal injury	53	4	212
Change in financial status	38	1	38
Son or daughter leaving home	29	2	58
Minor violations of the law	11	2	22
		Total	430

Table 3

(a) State **one** aspect of Mrs Khan's situation that could be described as nature and **one** aspect that could be described as nurture.

(2)

(b) Describe how the counsellor could use this data to advise his client to reduce her aggression.

(4)

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(Total for Question 8 = 6 marks)

9 Val was conducting research into aggression. She asked seven participants to rate their own aggression on a scale of 1–9 and then asked the best friend of each participant to give a peer rating of their friend's aggression level using the same scale.

Table 4 shows the data from the investigation.

Complete the table and calculate Spearman's rank correlation coefficient between self-rated aggression and peer-rated aggression.

Self-rated aggression	Rank 1	Peer-rated aggression	Rank 2	d	d^2
2	6.5	3	6		
2	6.5	6	4		
4	5	2	7		
5	4	5	5		
8	3	7	3		
9	1.5	8	2		
9	1.5	9	1		
				Total:	

Table 4

Spearman's rank correlation coefficient .....

(Total for Question 9 = 4 marks)

10 Assess how both biological and psychodynamic theories have been used to explain aggression.

(Total for Question 10 = 8 marks)

TOTAL FOR SECTION C = 18 MARKS

SECTION D: LEARNING THEORIES

11 Two psychology students are arguing as to whether males or females would be more likely to stop and help a woman with a baby in a pushchair up the stairs at a busy train station.

They decide to settle the argument by carrying out a structured observation.

(a) State an operationalised directional hypothesis for this study.

(2)

.....

.....

.....

.....

(b) State **two** reasons why chi-squared might be an appropriate statistical test for this study.

(2)

1 .....

.....

2 .....

.....

(c) Explain how the students could make their observation as reliable as possible.

(3)

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(Total for Question 11 = 7 marks)

12 Suraj has severe ornithophobia (fear of birds).

Describe how **one** therapy based on classical conditioning could be carried out to help Suraj overcome his phobia.

(Total for Question 12 = 3 marks)

13 The media is said to have an ever growing impact on our lives, including the behaviours we show and how we view ourselves and others. For example, the media can be said to affect the style of clothes that young people choose to wear.

Claims have been made that the media is responsible for the increasing number of young people with eating disorders, both male and female.

Discuss the key issue for society of the effect of the media on young people, using concepts, theories and/or research from learning theories. You must make reference to the context in your answer.

(Total for Question 13 = 8 marks)

TOTAL FOR SECTION D = 18 MARKS

SECTION E: ISSUES AND DEBATES

14 Assess the scientific status of the classic studies of Sherif et al. (1954, 1961) and Baddeley (1966b).

(Total for Question 14 = 8 marks)

15 Evaluate the issue of reductionism in relation to the use of biological and learning theories in explaining human behaviour.

(Total for Question 15 = 12 marks)

TOTAL FOR SECTION E = 20 MARKS
TOTAL FOR PAPER = 90 MARKS

GCE Advanced-Level Psychology Paper 1 Mark Scheme

Question Number	Answer	Mark
1(a)	**AO2 (1 mark)** One mark for identifying the level of measurement used. Nominal/nominal data.	**(1)**

Question Number	Answer	Mark
1(b)	**AO2 (1 mark)** One mark for identifying the experimental design used. Repeated measures design/repeated measures/related/related design/within group design.	**(1)**

Question Number	Answer	Mark
1(c)	**AO2 (1 mark), AO3 (1 mark)** One mark for identifying an improvement and one mark for justifying that improvement **in the context** of Annabel's research. For example: **Repeated measures design problem** Engage two groups of students, each seeing only one report (1), because this removes order effects (so they are not influenced about one report by seeing the other reports) (1). OR **Small sample size** The sample size needs to be larger (1) to allow Annabel to generalise to the target population (1). OR **Biased sample** The sample needs to target a wider range of people (not only students) (1) to allow Annabel to generalise to the target population (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
2	**AO2 (4 marks)** One mark for each point related to agency theory which in combination provides a logical explanation up to a maximum of four marks. The answer must be contextualised with the scenario of Tom/Mrs Smith/preparing her lessons. For example: Agency theory would explain that Mrs Smith is an authority figure who has given Tom, a subordinate, an order (1) so Tom would have chosen not to run errands if in an autonomous state, but will experience moral strain if he refuses to obey (1). Therefore moral strain will cause an agentic shift and Tom will become an agent for Mrs Smith (1). Any negative aspects associated with his obedience, such as not doing his homework, will be displaced on to Mrs Smith/he will lay the responsibility for consequences of his obedience such as not doing his homework, on Mrs Smith (1). Generic description of obedience theory/research gains no marks. **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(4)**

Question Number	Indicative content	Mark
3	**AO1 (4 marks), AO3 (4 marks)** **AO1** • Ethical guidelines include the right to withdraw, which means someone can leave a study at any time. • Ethics mean obtaining informed consent so everything about the study must be explained to the participants beforehand. • Ethical guidelines include keeping participants from harm/ensuring they leave the study as they arrived. Society as a whole needs to be considered in terms of future use of the research outcomes. • Research into obedience includes Milgram's (1963) study that showed that 65% of participants obeyed and gave what they thought were electric shocks to someone they thought was a fellow participant. • Milgram gained consent but deceived the participants as to the nature of the study. • Milgram de-briefed the participants after the study. • Milgram's work was considered very unethical as he did not give the right to withdraw properly; he used verbal prods when they wanted to leave, even when showing signs of distress. **AO3** Concluding points to suggest that research into obedience **can or cannot** be conducted without violating ethical guidelines, linked from applied knowledge, for example: • Burger (2009) replicated Milgram's work but did so just up to 150 volts, which he felt was ethical. • Less distressing research **has** been conducted into obedience such as Milgram et al. (1986) who used 'queue jumpers' to see if people would push them out of the queue and only about 10% did that – this has contributed to our understanding of obedience without using stressful situations, and this explains mundane obedience. • Obedience research is likely to use deception to avoid demand characteristics, which would violate the ethical guidelines.	**(8)**

Question Number	Indicative content	Mark
3 cont.	• Without deception, no meaningful conclusions can be conducted from Milgram's obedience research. • Reasonable assumptions can be made regarding continued obedience based on ethically sound research, eg. Burger (2009) found that obedience research cannot stretch human behaviour beyond what is ethically acceptable in terms of distress. • A right to withdraw is often violated in obedience research, without which obedience cannot be produced readily. • Certain types of social research (obedience, conformity) are expensive/extensive to run and may require funding/support from notable interested parties (military, government), so the intentions and outcomes of such research may be aligned with certain organisational expectations. The outcomes therefore could be used against certain groups of people **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.**		
Level 0	0	No rewardable material.
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Question Number	Answer	Mark
4	**AO1 (4 marks)** One mark for each point related to reconstructive memory which in combination provides a logical description up to a maximum of four marks. Memories are reconstructed each time they are recalled (1). The schema we possess alters the content of our memories which we recall to be consistent with our belief/previous experiences (1). Our existing schema affects our memory in line with our beliefs or previous experience (1). We use our schemas to fill in the gaps (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
5	**AO2 (3 marks)** One mark for each point, which in combination provides a logical description up to a maximum of three marks. Three marks to be drawn from the following ideas: Patients should be asked about their personal preferences such as with reference to their diet (1). A history of the patient should be documented in terms of their family relations (1). Patients should be provided with care that reflects this information, e.g. photos of their family in their room and their preferred foods should be provided (1). Any new information that the patients need to know should be written down and not left to just telling the patient (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(3)**

Question Number	Answer	Mark
6(a)	**AO2 (1 mark)** One mark for identifying why independent groups design **in this investigation** is suitable. For example: Researchers are unlikely to wait the 20 years to retest the same participants at age 30 and then age 50. OR The study needs people in two different age groups, so that would require different people if the study is cross-sectional/done at one moment in time. **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(1)**

Question Number	Answer	Mark
6(b)	**AO2 (2 marks)** One mark for identifying which statistical test, **related to the data**, should have been used, and one mark for saying that this data is ordinal/interval data and/or a test of difference is being carried out and/or that the study uses an independent groups design/focuses on two ages. For example: Mann Whitney/Mann Whitney U test can be used (1) because the data is ordinal/interval data, and it is testing the difference in scores between under 30yrs olds compared to over 50 year olds (1). So it satisfies the conditions. **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(2)**

Question Number	Indicative content	Mark
7	**AO1 (4 marks), AO2 (4 marks)** **AO1** • The multi-store model of memory (Atkinson and Shiffrin, 1968) divided memory into sensory store/sensory register, short-term memory and long-term memory. • Attention to information in the sensory store means it goes into short-term memory, or else it is lost. • Short-term memory has a capacity of 5 to 9 items (e.g. Miller, 1956) and duration of up to 30 seconds (probably shorter) (e.g. Posner, 1966), and it is thought to be acoustic in processing. • Memories in short-term memory can go into long-term memory if they are rehearsed, but if they are not rehearsed, they are lost (e.g. Hebb, 1961). • Interference tasks, such as that done by Peterson and Peterson (1959), show that one memory can prevent another memory being formed. **AO2** • Rehearsal is often used in a formal teaching setting to learn. • Revising the rehearsal of information in the classroom to ensure long-term memory retention. • Application of interference theory, e.g. learning one list of words after having learned another list to explain why learning vocabulary is so difficult. • The distinction between short-term memory and long-term memory is useful in understanding how learning a language by rote learning can move information into long-term memory. The model has a vast amount of experimental research to support it as a useful memory model that holds reliability (e.g. Milner, 1966, using case studies of brain damaged patients to show evidence for the two separate stores). **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
Level 0	0	No rewardable material
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Question Number	Answer	Marks
8(a)	**AO2 (2 marks)** One mark for an answer relating to nature. One mark for an answer relating to nurture. **Nature** • Level of hormones (testosterone). • Gender. • She may have brain dysfunction. **Nurture** • Death of a spouse. • Personal injury. • Change in financial status. • Son or daughter leaving home. • Minor violations of the law. **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Marks
8(b)	**AO2 (4 marks)** One mark for each point that in combination provides a logical description up to a maximum of four marks. The counsellor will explain to Mrs Khan that: • She has suffered some serious events that have affected her aggression, e.g. death of her spouse (1). • There are some events she can do something about (e.g. taking a holiday) and some she cannot (e.g. children leaving home) (1). • Looking at the figures will get her to rationalise her situation (1). • Devising a strategy (e.g. to increase her circle of friends and take a holiday) will reduce the environmental causes of her aggression and help her to control her anger (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
9	**AO2 (4 marks)** | **Self-rated aggression**	**Rank 1**	**Peer-rated aggression**	**Rank 2**	**D**	**d^2** | |---|---|---|---|---|---| | 2 | 6.5 | 3 | 6 | 0.5 | 0.25 | | 2 | 6.5 | 6 | 4 | 2.5 | 6.25 | | 4 | 5 | 2 | 7 | -2 | 4 | | 5 | 4 | 5 | 5 | -1 | 1 | | 8 | 3 | 7 | 3 | 0 | 0 | | 9 | 1.5 | 8 | 2 | -0.5 | 0.25 | | 9 | 1.5 | 9 | 1 | 0.5 | 0.25 | | | | | | Total: | 12 | One mark for accurate completion of column d (minus signs can be present or not for the mark). One mark for accurate completion of d^2. One mark for substituting into equation $1 - \frac{6 \times 12}{7(49-1)}$ One mark for 0.786/0.79.	**(4)**

Question Number	Indicative content	Marks
10	**AO1 (4 marks), AO3 (4 marks)** **AO1** • The biological explanation sees human behaviour being primarily determined by innate factors such as our genesand hormones. • The biological explanation argues that things such as our genes, hormones, brain structure, neurochemicals (e.g. low levels of serotonin are linked to aggression) etc. influence our behaviour, e.g. aggression can be caused by an increased level of testosterone. • The biological explanation includes survival of the fittest and evolution, and aggression may have been a survival trait in humans. • The biological explanation features parts of the brain related to aggression such as pre-frontal lobes and the amygdala. • The psychodynamic explanation sees our experiences and environment as being important in determining our behaviour, such as the superego coming from our interactions with others, and catharsis being a method of releasing aggression. • The psychodynamic approach has innate features such as the focus on drives, for example aggression as being innate. The death instinct is in everyone and 'comes out' as aggression. • The psychodynamic theory considers that aggression comes from anger, which comes from frustration such as the id's desires being blocked. • Use of catharsis to explain how tension within the family, unconscious wishes and desires, can be released through aggression. **AO3** • The role of testostrone may explain why the male is most often the aggressor in the family. However, evidence suggests that testosterone does not lead to aggression (see below).	**(8)**

Question Number	Indicative content	Marks
10 cont.	• The psychodynamic explanation lies more clearly within the nurture side of the argument because there is such a strong emphasis on environment, such as in the development of the superego. The superego comes from others and is the conscience and ideal self, so this shows the emphasis on nurture, and the biological explanation is about nature. However, the psychodynamic explanation is about drives and the death instinct, which is nature. • The psychodynamic approach holds that the three parts of the personality: id, ego, and superego, are innate, so there is a nature side there too. • The biological approach does take into account environmental influences such as taking recreational drugs and alchohol (which can also affect serotonin levels, and low serotonin levels link with aggression), taking medication, the influence of accidents, or surgery. So even with the biological approach, it is not the case that all behaviour is determined by innate factors. • There is evidence for the biological explanation such as low levels of serotonin being indicated by low levels of metabolites, and people who engage in aggressive behaviour and have poor levels of control have been found to have low levels of metabolites. • Mann et al. (1990) found that people given a drug that lowers levels of serotonin were found to be more aggressive (measured by questionnaire). • Measuring testosterone and aggression by looking for a correlation in fact does not show a link between the two (e.g. Archer et al., 1991 and Brook et al., 2001), so this is evidence against the hormone link to aggression. • Narabyashi et al. (1972) found that 43 out of 51 patients who had had their amygdala removed showed reduced aggression, which is evidence that the amygdala relates to aggression. • Bushman (2002) carried out a study to see if hitting a punch bag and thinking about the person who had made someone angry in fact led to more aggression not less aggression, which suggests the catharsis idea is not true, which goes against the psychodynamic explanation. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.**		
Level 0	0	No rewardable material.
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Question Number	Answer	Marks
11(a)	**AO2 (2 marks)** One mark for a partially correct operationalised directional hypothesis and two marks for a fully correct operationalised directional hypothesis. For example: 'Females will stop more times than males to help a woman carry her baby's pushchair up the stairs' (2). For example: 'Females will stop more times than males to help' (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Marks
11(b)	**AO2 (2 marks)** Two marks for any two of the following points about the study details justifying chi-squared: • Male versus female helping behaviour is being compared for any significant difference, therefore it needs a test of difference/association (between groups) (1). • The data gathered is nominal (males or females, help or not). Each person can only belong to one category (1). • The independent variable is gender (males and females), so the research design is 'independent measures/independent groups'/ 'between subjects design' (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Marks
11(c)	**AO2 (1 mark), AO3 (2 marks)** One mark for identification of an improvement (1 AO3), one mark for how this would be carried out (1 AO2) and one mark for how it would improve reliability (1 AO3). For example: • The students could use inter-rater reliability, which would involve them using more than one observer to rate the behaviour (1). The scores from the raters could be compared to see if they showed a positive correlation/matched (1). This would ensure that the tallying of helpful behaviour was accurate/objective and consistent/reliable (1). OR • The students could ensure reliability through retest, which would mean that they carried out the same observation again at different times/stations (1). Then the results from the two observations could be compared to see if they matched/correlated (1). This would ensure the finding was not a one-off and would allow for a measure of consistency(1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Marks
12	**AO1 (1 mark), AO2 (2 marks)** One mark for naming an appropriate therapy (AO1). Two marks for stating how this therapy would be carried out to treat Suraj's phobia (2 AO2). For example: Systematic desensitisation (accept 'gradual exposure') is the process of gradual exposure to the phobic stimulus while relaxation is practised (1). Suraj, with the therapist, would create a list of fearful situations involving birds and Suraj would also learn relaxation techniques to deal with increasingly fearful situations (1). Suraj would replace the fear response with the relaxed response when he encounters birds, so that would remove the phobia (1). **Accept alternative appropriate therapies.**	**(3)**

Question Number	Indicative content	Marks
13	**AO1 (4 marks), AO2 (4 marks),** **AO1** • Operant conditioning shows that when rewarded, behaviour is repeated and when punished/ignored, it stops, as Skinner (e.g. Schacter et al., 2011) showed. • Classical conditioning shows that an unconditioned stimulus leads to an unconditioned response, which is reflex behaviour. • Even when conditioned responses are extinguished and the association between the unconditioned stimulus and neutral stimulus is no longer present, there can be spontaneous recovery, as Pavlov (1929) showed. • When a stimulus is presented alongside the unconditioned stimulus, that stimulus can lead to the same response but is now a conditioned response. And the original/unconditioned stimulus is no longer needed. • Social learning theory holds that people learn through observation. There is imitation of role models (e.g. Bandura et al., 1961 and 1963). • There are stages of observational learning, including there being motivation to learn and attention to the behaviour that will be copied. • Vicarious reinforcement occurs when role models are seen to be gaining the reward desired by the young person. • Role models will be people like them in some way, people they admire and look up to, or of the same gender. **AO2** • Advertisers use classical conditioning to associate products with pleasurable feelings, e.g. thinness/fashion with fame and popularity, and operant conditioning may also have an effect as there are rewards in terms of peer approval for following fashion. Young people can be affected by such associations, as can other people. • Companies use operant conditioning to increase magazine sales by special offers, e.g. free lipstick (positive reinforcement). Young people are affected by what they see as a reward; it has to appeal to them.	**(8)**

Question Number	Indicative content	Marks
13 cont.	• Celebrities are used to advertise products such as fashionable clothing. Social learning theory suggests that consumers will imitate these role models. Young people will imitate those they see as role models/someone like them/someone they want to be like. • If the models in the media are seen to be rewarded, the consumer will be vicariously reinforced to buy the product. This will apply to young people, such as when they see someone they see as like them or someone they want to be like. • Bandura (1963, 1965) provides strong evidence for the imitation of role models and for the effect of vicarious reinforcement. • Media programmes can present role models that young people might imitate, such as the X Factor showing 'ordinary' people getting rewards from being in the limelight. • Anderson and Dill (2000) show how boys are affected by video game playing and become aggressive towards others if playing violent games. • Becker et al. (2002) carried out a study in Fiji, looking at before and after TV to see if levels of anorexia grew, and they found a link between the introduction of TV and girls focusing more on diet. • Bastian et al. (2011) found that playing violent video games made people show less humanity. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
Level 0	0	No rewardable material
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Question Number	Indicative content	Mark
14	**AO1 (4 marks), AO3 (4 marks)** **AO1** • Scientific method is where there is a theory, a hypothesis is generated, the statement is tested empirically, and then the theory amended or accepted – and then tested again perhaps in a different way to build a body of knowledge. • Sherif et al. (1954/1961) studied prejudice and both the acquisition of prejudice and the reduction of prejudice, using a field experiment. • Two groups of boys in a summer camp were kept separate, then put together with competitive tasks to undertake in their two groups. • Then they had to cooperate to succeed in the tasks that both groups needed to achieve (superordinate goals). • The researchers found that the boys were hostile even when they had not met. • They were prejudiced when in competition. • However, they worked together when faced with superordinate goals and prejudice was reduced. • Baddeley (1966b) carried out a laboratory experiment to look at long-term memory and whether it was affected by acoustic or semantic similarity. • Baddeley in previous studies, and considering previous studies of others, had found that short-term memory was acoustic, and he wondered (1966b) whether long-term memory was the same. • He had a control list as well as an 'acoustic' list and a 'semantic' list, so there were controls in his experiment, as well as standardised instructions. • He did three experiments within his 1966b study and found similar results, showing that there was semantic memory in long-term memory and that short-term memory and long-term memory did not share the same processing.	**(8)**

Question Number	Indicative content	Mark
14 cont.	**AO3** • Sherif et al. used a field experiment with careful controls up to a point but using the natural environment, so less controlled as the setting was natural. This means the experimental aspect of the study is scientific but the natural situation (uncontrolled) is not so scientific. There are elements of science in the study. • Ecological validity: the Sherif et al. study utilises a real life summer camp so has high ecological validity. By adding ecological validity, Sherif et al.'s study moves away from science as it moves away from controls to an extent. • Mundane validity: Sherif et al.'s study used everyday activities, such as competitions and cooperative tasks, that we would undertake in an everyday situation. • Sherif et al.'s study by moving into everyday tasks moves away from scientific study. • Controls: Sherif et al.'s research was carried out at a number of summer camps, which were uncontrolled situations, so showed an element of lack of science. • Replication: Sherif et al.'s studies were replicated. So reliability could be demonstrated, and reliability is a scientific requirement. • Reductionism: Sherif et al. reduced prejudice to a) separating groups, b) setting groups up to compete, c) putting groups back together to work on a superordinate goal, which shows a scientific element to their work. • Sherif et al. did aim to study the boys' whole behaviour in the situations they set up, so it is a field experiment. This makes it less scientific and holism is valued more. • Baddeley (1966b) uses more controls than Sherif et al because he uses a lab set up, and the setting of the study is controlled as well as other features. Science requires studies to be carried out in a controlled environment because cause and effect conclusions are then more readily drawn.	

Question Number	Indicative content	Mark
14 cont.	• Baddeley (1966b) reduces memory to short-term and long-term memory and reduces acoustic and semantic memory to lists of words. By using a reductionist approach he can draw cause and effect conclusions, which is scientific. • However, memory is more than recall of lists of words and a holistic approach to studying memory might be less scientific but more valid. **Look for other reasonable answers.** **Scientific status refers to concepts such as replicability, reliability, validity, reductionism, falsification, empiricism, hypothesis testing and use of controls.**	

Level	Mark	Descriptor
AO1 (4 marks) AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.**		
Level 0	0	No rewardable material.
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Question Number	Indicative content	Mark
15	**AO1 (6 marks), AO3 (6 marks)** **AO1** • Reductionism refers to studying something by looking at parts rather than the whole. • Social learning theory studies parts of learning by looking at motivation, attention, and reproduction and so on. • Learning theories include classical and operant conditioning and social learning theory. • A scientific study of biological psychology is to take one element, such as how the brain works chemically (neurotransmitters) and to study it in detail. • Biological psychology covers brain functioning and structure, genes, hormones and issues like evolution. • Biological psychology links very closely to biology, chemistry and science and, like them, involves studying aspects of a person not the whole. • Reductionism applies when studying learning because of the scientific way it is studied, using experiments and controls. To do this, parts must be focused on. • Reductionism applies to biological psychology when neurotransmitter functioning is studied because the brain is a lot more complex than that, so this is about looking at one specific part of the working of the brain. • Reductionism also applies to learning theories because they look only at behaviour and not the 'black box' in between, which is where information processing takes place. • Reductionism applies to biological theories in that they study aspects such as biochemistry, genetics and neuro-anatomy. Reductionism also applies to learning theories in that they take aspects of behaviour and study them separately, such as in classical conditioning where just stimulus and response (including reflexes) are studied.	**(12)**

Question Number	Indicative content	Mark
15 cont.	**AO3** **Learning** • Bandura (e.g. 1961, 1963, 1965) showed how aggression can be modelled through observation and used experimental method, so this is evidence that learning theories are reductionist in how they study behaviour. • This ignores the complexity of human behaviour acquisition, such as the role of emotions and thinking. • Behaviourism ignores the role of cognition in human behaviour acquisition, which means that what makes up a whole person is not touched by reducing learning to parts. • However, if it is learning that is studied, that is in itself just part of human behaviour, and so it might be acceptable to use a reductionist approach. Separating material for study, as learning theories do, is in itself reductionist. • Becker et al. (2002) in Fiji used questionnaires and self-report data before and after TV was introduced, then drew conclusions about the girls' focus on weight issues and dieting. This is reductionist as other factors might also be there as it was years between their two sets of data and there would be changes other than the introduction of TV in that time. Reductionism can give useful data by isolating areas for study but can miss a wider view of human behaviour. **Biological** • The biological explanation is reductionist in the sense that all human behaviour is fragmented and explained in the simplest sense by our biology. The biological approach, for example, sees behaviour as arising from neurological/neuroanatomical factors. As this is about science, then it is not surprising that a scientific approach to study is used. Also, as humans are complex, perhaps studying in a reductionist way is a strength as it enables the study of aspects of humans that would otherwise not be reachable. The study of how lower serotonin levels, which is linked to greater aggression is carried out using animals and human studies. These studies support each other.	

Question Number	Indicative content	Mark
15 cont.	• For example, behaviour such as depression is a result of a lack of the neurotransmitter serotonin. This helps society and so it is perhaps not 'wrong' to be reductionist, although the word does imply bias. • Pharmacological drug effectiveness offers some support for the biological explanations of mental health issues. However, it cannot be the whole explanation as many patients are drug resistant. This shows that a reductionist approach can miss out valuable issues. **Other arguments** • Reductionist explanations can be useful as they isolate variables to investigate, and causal relationships can be assumed. • Holists would argue that reductionist views ignore the complexity of human behaviour and the understanding of the whole individual. • Humanists argue that reductionist approaches dehumanise us and result in ignoring the 'self' as the most important factor in psychology. Reductionism ultimately ignores the unique qualities of humanness that collectively contribute to human behaviour and mind. • However, reductionist approaches are consistent with the prevailing scientific ideology – the hypothesis testing method and the emphasis on isolation of variables. In fact, it would be very difficult to investigate human behaviour without first isolating variables and establishing control over 'other factors'. **Look for other reasonable answers.**	

Level	Mark	Descriptor
AO1 (6 marks), AO3 (6 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer.**		
Level 1	0	No rewardable material.
Level 1	1–3 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4–6 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7–9 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	10–12 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Write your name here

Surname	Other names

Pearson Edexcel
Level 3 GCE

Centre Number	Candidate Number

Psychology

Advanced
Paper 2: Applications of psychology

Sample assessment materials for first teaching September 2015
Time: 2 hours

Paper Reference
9PS0/02

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer ALL questions in Section **A**. Answer ALL questions from **one** of the three options in Section **B**.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 90.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The list of formulae and critical value tables are printed at the start of this paper.
- Candidates may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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S 4 7 5 3 8 A 0 1 3 0

PEARSON

FORMULAE AND CRITICAL VALUE TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\sum(x-\bar{x})^2}{n-1}\right)}$$

Spearman's rank correlation coefficient

$$1-\frac{6\sum d^2}{n(n^2-1)}$$

Critical values for Spearman's rank

	Level of significance for a one-tailed test				
	0.05	**0.025**	**0.01**	**0.005**	**0.0025**
	Level of significance for a two-tailed test				
N	**0.10**	**0.05**	**0.025**	**0.01**	**0.005**
5	0.900	1.000	1.000	1.000	1.000
6	0.829	0.886	0.943	1.000	1.000
7	0.714	0.786	0.893	0.929	0.964
8	0.643	0.738	0.833	0.881	0.905
9	0.600	0.700	0.783	0.833	0.867
10	0.564	0.648	0.745	0.794	0.830
11	0.536	0.618	0.709	0.755	0.800
12	0.503	0.587	0.678	0.727	0.769
13	0.484	0.560	0.648	0.703	0.747
14	0.464	0.538	0.626	0.679	0.723
15	0.446	0.521	0.604	0.654	0.700
16	0.429	0.503	0.582	0.635	0.679
17	0.414	0.485	0.566	0.615	0.662
18	0.401	0.472	0.550	0.600	0.643
19	0.391	0.460	0.535	0.584	0.628
20	0.380	0.447	0.520	0.570	0.612
21	0.370	0.435	0.508	0.556	0.599
22	0.361	0.425	0.496	0.544	0.586
23	0.353	0.415	0.486	0.532	0.573
24	0.344	0.406	0.476	0.521	0.562
25	0.337	0.398	0.466	0.511	0.551
26	0.331	0.390	0.457	0.501	0.541
27	0.324	0.382	0.448	0.491	0.531
28	0.317	0.375	0.440	0.483	0.522
29	0.312	0.368	0.433	0.475	0.513
30	0.306	0.362	0.425	0.467	0.504

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Chi squared distribution formula

$$X^2 = \sum \frac{(O-E)^2}{E} \qquad df = (r-1)(c-1)$$

Critical values for chi-squared distribution

	Level of significance for a one-tailed test					
	0.10	**0.05**	**0.025**	**0.01**	**0.005**	**0.0005**
	Level of significance for a two-tailed test					
df	**0.20**	**0.10**	**0.05**	**0.025**	**0.01**	**0.001**
1	1.64	2.71	3.84	5.02	6.64	10.83
2	3.22	4.61	5.99	7.38	9.21	13.82
3	4.64	6.25	7.82	9.35	11.35	16.27
4	5.99	7.78	9.49	11.14	13.28	18.47
5	7.29	9.24	11.07	12.83	15.09	20.52
6	8.56	10.65	12.59	14.45	16.81	22.46
7	9.80	12.02	14.07	16.01	18.48	24.32
8	11.03	13.36	15.51	17.54	20.09	26.12
9	12.24	14.68	16.92	19.02	21.67	27.88
10	13.44	15.99	18.31	20.48	23.21	29.59
11	14.63	17.28	19.68	21.92	24.73	31.26
12	15.81	18.55	21.03	23.34	26.22	32.91
13	16.99	19.81	22.36	24.74	27.69	34.53
14	18.15	21.06	23.69	26.12	29.14	36.12
15	19.31	22.31	25.00	27.49	30.58	37.70
16	20.47	23.54	26.30	28.85	32.00	39.25
17	21.62	24.77	27.59	30.19	33.41	40.79
18	22.76	25.99	28.87	31.53	34.81	42.31
19	23.90	27.20	30.14	32.85	36.19	43.82
20	25.04	28.41	31.41	34.17	37.57	45.32
21	26.17	29.62	32.67	35.48	38.93	46.80
22	27.30	30.81	33.92	36.78	40.29	48.27
23	28.43	32.01	35.17	38.08	41.64	49.73
24	29.55	33.20	36.42	39.36	42.98	51.18
25	30.68	34.38	37.65	40.65	44.31	52.62
26	31.80	35.56	38.89	41.92	45.64	54.05
27	32.91	36.74	40.11	43.20	46.96	55.48
28	34.03	37.92	41.34	44.46	48.28	56.89
29	35.14	39.09	42.56	45.72	49.59	58.30
30	36.25	40.26	43.77	46.98	50.89	59.70
40	47.27	51.81	55.76	59.34	63.69	73.40
50	58.16	63.17	67.51	71.42	76.15	86.66
60	68.97	74.40	79.08	83.30	88.38	99.61
70	79.72	85.53	90.53	95.02	100.43	112.32

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Mann-Whitney U test formulae

$$U_a = n_a n_b + \frac{n_a(n_a+1)}{2} - \sum R_a$$

$$U_b = n_a n_b + \frac{n_b(n_b+1)}{2} - \sum R_b$$

(U is the smaller of U_a and U_b)

Critical values for the Mann-Whitney U test

N_a \ N_b	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.05 (one-tailed), *p* ≤ 0.10 (two-tailed)**																
5	4	5	6	8	9	11	12	13	15	16	18	19	20	22	23	25
6	5	7	8	10	12	14	16	17	19	21	23	25	26	28	30	32
7	6	8	11	13	15	17	19	21	24	26	28	30	33	35	37	39
8	8	10	13	15	18	20	23	26	28	31	33	36	39	41	44	47
9	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
10	11	14	17	20	24	27	31	34	37	41	44	48	51	55	58	62
11	12	16	19	23	27	31	34	38	42	46	50	54	57	61	65	69
12	13	17	21	26	30	34	38	42	47	51	55	60	64	68	72	77
13	15	19	24	28	33	37	42	47	51	56	61	65	70	75	80	84
14	16	21	26	31	36	41	46	51	56	61	66	71	77	82	87	92
15	18	23	28	33	39	44	50	55	61	66	72	77	83	88	94	100
16	19	25	30	36	42	48	54	60	65	71	77	83	89	95	101	107
17	20	26	33	39	45	51	57	64	70	77	83	89	96	102	109	115
18	22	28	35	41	48	55	61	68	75	82	88	95	102	109	116	123
19	23	30	37	44	51	58	65	72	80	87	94	101	109	116	123	130
20	25	32	39	47	54	62	69	77	84	92	100	107	115	123	130	138

N_a \ N_b	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.01 (one-tailed), *p* ≤ 0.02 (two-tailed)**																
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6	2	3	4	6	7	8	9	11	12	13	15	16	18	19	20	22
7	3	4	6	7	9	11	12	14	16	17	19	21	23	24	26	28
8	4	6	7	9	11	13	15	17	20	22	24	26	28	30	32	34
9	5	7	9	11	14	16	18	21	23	26	28	31	33	36	38	40
10	6	8	11	13	16	19	22	24	27	30	33	36	38	41	44	47
11	7	9	12	15	18	22	25	28	31	34	37	41	44	47	50	53
12	8	11	14	17	21	24	28	31	35	38	42	46	49	53	56	60
13	9	12	16	20	23	27	31	35	39	43	47	51	55	59	63	67
14	10	13	17	22	26	30	34	38	43	47	51	56	60	65	69	73
15	11	15	19	24	28	33	37	42	47	51	56	61	66	70	75	80
16	12	16	21	26	31	36	41	46	51	56	61	66	71	76	82	87
17	13	18	23	28	33	38	44	49	55	60	66	71	77	82	88	93
18	14	19	24	30	36	41	47	53	59	65	70	76	82	88	94	100
19	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101	107
20	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.025$ (one-tailed), $p \leq 0.05$ (two-tailed)																
5	2	3	5	6	7	8	9	11	12	13	14	15	17	18	19	20
6	3	5	6	8	10	11	13	14	16	17	19	21	22	24	25	27
7	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
8	6	8	10	13	15	17	19	22	24	26	29	31	34	36	38	41
9	7	10	12	15	17	20	23	26	28	31	34	37	39	42	45	48
10	8	11	14	17	20	23	26	29	33	36	39	42	45	48	52	55
11	9	13	16	19	23	26	30	33	37	40	44	47	51	55	58	62
12	11	14	18	22	26	29	33	37	41	45	49	53	57	61	65	69
13	12	16	20	24	28	33	37	41	45	50	54	59	63	67	72	76
14	13	17	22	26	31	36	40	45	50	55	59	64	67	74	78	83
15	14	19	24	29	34	39	44	49	54	59	64	70	75	80	85	90
16	15	21	26	31	37	42	47	53	59	64	70	75	81	86	92	98
17	17	22	28	34	39	45	51	57	63	67	75	81	87	93	99	105
18	18	24	30	36	42	48	55	61	67	74	80	86	93	99	106	112
19	19	25	32	38	45	52	58	65	72	78	85	92	99	106	113	119
20	20	27	34	41	48	55	62	69	76	83	90	98	105	112	119	127

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.005$ (one-tailed), $p \leq 0.01$ (two-tailed)																
5	0	1	1	2	3	4	5	6	7	7	8	9	10	11	12	13
6	1	2	3	4	5	6	7	9	10	11	12	13	15	16	17	18
7	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24
8	2	4	6	7	9	11	13	15	17	18	20	22	24	26	28	30
9	3	5	7	9	11	13	16	18	20	22	24	27	29	31	33	36
10	4	6	9	11	13	16	18	21	24	26	29	31	34	37	39	42
11	5	7	10	13	16	18	21	24	27	30	33	36	39	42	45	48
12	6	9	12	15	18	21	24	27	31	34	37	41	44	47	51	54
13	7	10	13	17	20	24	27	31	34	38	42	45	49	53	56	60
14	7	11	15	18	22	26	30	34	38	42	46	50	54	58	63	67
15	8	12	16	20	24	29	33	37	42	46	51	55	60	64	69	73
16	9	13	18	22	27	31	36	41	45	50	55	60	65	70	74	79
17	10	15	19	24	29	34	39	44	49	54	60	65	70	75	81	86
18	11	16	21	26	31	37	42	47	53	58	64	70	75	81	87	92
19	12	17	22	28	33	39	45	51	56	63	69	74	81	87	93	99
20	13	18	24	30	36	42	48	54	60	67	73	79	86	92	99	105

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

Wilcoxon Signed Ranks test process

- Calculate the difference between two scores by taking one from the other
- Rank the differences giving the smallest difference Rank 1

  Note: do not rank any differences of 0 and when adding the number of scores, do not count those with a difference of 0, and ignore the signs when calculating the difference
- Add up the ranks for positive differences
- Add up the ranks for negative differences
- T is the figure that is the smallest when the ranks are totalled (may be positive or negative)
- N is the number of scores left, ignore those with 0 difference

Critical values for the Wilcoxon Signed Ranks test

	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
n	0.1	0.05	0.02
N=5	0	-	-
6	2	0	-
7	3	2	0
8	5	3	1
9	8	5	3
10	11	8	5
11	13	10	7
12	17	13	9

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

SECTION A: CLINICAL PSYCHOLOGY

Answer ALL questions.

1 (a) Describe **one** symptom of schizophrenia.

(2)

(b) Describe an issue associated with making a valid diagnosis of schizophrenia.

(3)

(Total for Question 1 = 5 marks)

2 Alex has been asked to take part in a longitudinal study of the relationship between mothers with a social phobia and elements of social phobia in their children.

(a) Describe a suitable longitudinal procedure for this study.

(2)

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(b) Describe an appropriate sampling technique for this longitudinal study looking at the relationship between mothers and their children in relation tosocial phobias.

(3)

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(Total for Question 2 = 5 marks)

3 A group of researchers is conducting research into anxiety among adults. The researchers believe that negative life events may be a cause of anxiety. They have asked people with anxiety to record the number of positive and negative life events they have experienced over the last 12 months.

Examples of events participants were asked to consider included marriage/divorce, promotion/losing a job, moving home/losing a house, bereavement and births.

The participants provided a total score for both positive and negative life events. The results are presented in **Table 1**.

	Positive life events	**Negative life events**
Participant A	3	6
Participant B	1	5
Participant C	2	1
Participant D	0	9
Participant E	1	8
Participant F	2	6
Participant G	4	6
Participant H	3	11
Participant I	4	9
Participant J	2	12
Mean	2.2	7.3

Table 1

(a) (i) Calculate the standard deviation for negative life events. Show your working and give your answer to two significant figures.

(4)

(ii) State how the standard deviation for positive life events would differ from the negative life events you have calculated.

(1)

(b) When using a Wilcoxon Test to compare the positive and negative life events, the calculated value (T) was 1 (T=1).

The critical value table can be found in the formulae and statistics table at the front of the paper.

Explain whether these results were significant at $p<0.05$ and if the research hypothesis can be accepted.

(3)

(Total for Question 3 = 8 marks)

4 If a person visited two different psychiatrists, they might receive two different diagnoses of their medical condition.

Assess the reliability of mental disorder diagnosis using research evidence.

(Total for Question 4 = 8 marks)

5 A news article has criticised the effectiveness of psychological treatment. The headline was 'Psychological treatments for mental disorders do not work as these disorders are not psychological in origin'.

For a mental disorder other than schizophrenia, use your knowledge of the possible explanations of its causes to assess how effective a psychological treatment would be compared to a biological treatment.

(Total for Question 5 = 8 marks)

6 Evaluate the view that schizophrenia has a stronger biological basis than other mental disorders.

Refer to **one** other mental disorder in your response.

(20)

(Total for Question 6 = 20 marks)

TOTAL FOR SECTION A = 54 MARKS

SECTION B

Answer questions from ONE option in this section.

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

Answer ALL questions.

7 The concept of weapon focus is often relevant during eyewitness testimony.

(a) Explain how weapon focus affects eyewitness testimony.

(3)

(b) Apart from weapon focus, explain how **one** other factor affects eyewitness testimony.

(3)

(Total for Question 7 = 6 marks)

8 A group of students have been having difficulties in managing their anger and were advised to attend an anger-management programme. They completed an anger assessment before and after attending the anger-management programme. Researchers wanted to see if there were gender differences in the effectiveness of the programme. The anger assessment results for males and females are presented in **Table 2**.

	Before treatment	**After treatment**
Males	42	10
Females	35	12

Table 2

(a) Calculate chi-squared for this data by completing **Table 3**.

(4)

		Observed	**Expected**	**O-E**	**$(O-E)^2$**	**$(O-E)^2/E$**
Males	**Before**	42	40.4			
	After	10	11.6			
Females	**Before**	35	36.6			
	After	12	10.4			
					chi-squared =	

Table 3

(b) Analyse the results of the chi-squared test to show whether there were gender differences in how well the treatment worked.

(2)

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(Total for Question 8 = 6 marks)

9 Pete is 24 years old and has a long criminal history, including burglary, theft and drug-related offences.

Pete has spent most of his life living alone with his mother. His father is currently in prison for committing a burglary. At age 15 Pete dropped out of school, preferring to socialise with friends and play truant.

Discuss Pete's behaviour using explanations from social psychology. You must make reference to the context in your answer.

(Total for Question 9 = 8 marks)

10 Juries are used in criminal trials to determine an individual's guilt or innocence. Juries can be influenced by factors other than the evidence presented.

On 2nd September 2014 at a Crown Court in England two trials were proceeding.

The first was of a 24-year-old female fashion model.

The other was of a 64-year-old businessman.

They have both been accused of assaulting their respective partners.

Assess how characteristics of these defendants may affect the judgements of the juries during these two criminal trials. You must make reference to the context in your answer.

(16)

(Total for Question 10 = 16 marks)

TOTAL FOR SECTION B: OPTION 1 = 36 MARKS

OPTION 2: CHILD PSYCHOLOGY

Answer ALL questions.

11 The study by van IJzendoorn and Kroonenberg (1988) used a meta-analysis to look at cross-cultural differences in attachment types amongst children.

Explain **one** advantage of using a meta-analysis instead of a single study.

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(Total for Question 11 = 2 marks)

12 Sumita gathered quantitative data by tallying how often a boy and a girl chose to play inside or outside in a nursery setting. Sumita decided to observe the first boy and the first girl that she saw go outside. There were 20 children in total in the nursery. Sumita observed the boy and girl over a 60-minute period. The children were both four years old.

Sumita made a tally mark every five minutes for each child to show whether the child was playing outside or inside. The data is displayed in **Table 4**.

	Playing outside	**Playing inside**	**Totals**
Boy	9	3	12
Girl	6	6	12

Table 4

(a) Calculate chi-squared for this data by completing **Table 5**.

(4)

		Observed	**Expected**	**O–E**	**$(O–E)^2$**	**$(O–E)^2/e$**
Boy	**IN**	**9**	**7.5**			
	OUT	**3**	**4.5**			
Girl	**IN**	**6**	**7.5**			
	OUT	**6**	**4.5**			
					chi-squared =	

Table 5

(b) Analyse the results of the chi-squared test to explain what they show about whether boys or girls preferred to play inside or outside.

(2)

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(Total for Question 12 = 6 marks)

13 Ainsworth used the 'strange situation' procedure to develop ideas about attachment types between infants and their caregivers.

(a) (i) Describe the behaviour of the Type A/anxious-avoidant type as defined by Ainsworth.

(2)

(ii) Describe the behaviour of the Type B/secure attachment type as defined by Ainsworth.

(2)

(b) Anika is two and a half years old and has emigrated to the UK from Germany with her parents. Hideki is also two and a half and has emigrated from Japan with his mother who is a single parent.

Discuss the usefulness of the 'strange situation' procedure to investigate the attachment types of these two children. You must make reference to the context in your answer.

(8)

(Total for Question 13 = 12 marks)

14 A recent television news broadcast reported that 'autism begins long before birth'. The broadcast covered the story of non-identical twins Thomas and Jessica.

They were born slightly prematurely with Jessica's birth being normal but Thomas's being complicated. When the twins were due to begin primary school, Jessica started to show signs of autism and was diagnosed as such but Thomas was not.

To what extent do you agree with the broadcast about Thomas and Jessica that autism is determined before a child is born? You must make reference to the context in your answer.

(16)

(Total for Question 14 = 16 marks)

TOTAL FOR SECTION B: OPTION 2 = 36 MARKS

OPTION 3: HEALTH PSYCHOLOGY

Answer ALL questions.

15 Temi works at a research laboratory. She is testing a new drug to see how effective it is in reducing withdrawal symptoms for nicotine addicts. Temi's research is in the first stages of development, so she has to use rats at this stage.

Temi used 10 nicotine-addicted rats. Five were given the new drug and five were in the control group. Temi has suggested that the rats given the new drug will show fewer withdrawal symptoms than the control group.

Temi decided to perform a Mann Whitney U test to find out whether the drug had a significant effect on withdrawal symptoms. **Table 6** shows the ranked results.

(a) Complete **Table 6** and calculate Mann Whitney U for the data in **Table 6**.

(4)

Control Group		**Experimental Group**	
Number of symptoms after the drug	**Rank**	**Number of symptoms after the drug**	**Rank**
8	10.0	4	3.5
6	6.5	7	8.5
4	3.5	2	2.0
7	8.5	5	5.0
6	6.5	1	1.0
Total		**Total**	

Table 6

U_a = ...

U_b = ...

U = ...

(b) Using the critical values for Mann Whitney U, explain how effective the drug is in reducing withdrawal symptoms.

(2)

(c) Describe the ethics that need to be considered when carrying out experiments on animals.

(2)

(Total for Question 15 = 8 marks)

16 Describe aversion therapy as a treatment for alcohol misuse.

(Total for Question 16 = 4 marks)

17 Sarah is addicted to nicotine and has decided that she wants to stop smoking. She is considering aversion therapy but other treatments exist.

Discuss the use of other treatments for Sarah for her nicotine addiction. You must make reference to the context in your answer.

(Total for Question 17 = 8 marks)

18 Drug misuse is considered by some psychologists to have a biological basis. However, other psychologists also argue that the environment in which the person lives provides an explanation for drug misuse.

Evaluate the nature and nurture explanations of drug misuse with reference to the two types of belief above. You must make reference to the context in your answer.

(16)

(Total for Question 18 = 16 marks)

TOTAL FOR SECTION B: OPTION 3 = 36 MARKS
TOTAL FOR PAPER = 90 MARKS

GCE Advanced-Level Psychology Paper 2 Mark Scheme

Question Number	Answer	Mark
1(a)	**AO1 (2 marks)** One mark for each point related to a symptom of schizophrenia, which in combination provides a logical description up to two marks. Responses likely to focus on: • Delusions of grandeur/grandiose delusions whereby the person believes themselves to be someone famous, wealthy and/or powerful. The delusions tend to have a religious/supernatural/science fiction theme. • Hallucinations/auditory where the person hears voices talking to them. The hallucinations are powerful and the person sees them as separate to themselves/there is wakefulness unlike being in a dream state. • Hallucinations/visual where the person experiences events that are not actually happening. Like auditory hallucinations they are vivid/very real/separate from the individual. • Poverty of speech/alogia which is when responses use as few words as possible. There is not the usual response given in speech/additional content in speech is not prompted by someone who is not present. • Social withdrawal involves withdrawing from family and friends and refusing company. The individual may lose interest in life and stay at home/they may not start conversations with people. • Flattening effect which means showing a lack of expression in face and voice. There is a limited range of emotions shown, even in situations where you would expect someone to show sadness/happiness. For example: Many people experiencing schizophrenia have delusions/grandiose delusions about who they are (1) often believing they are famous, wealthy or powerful (1). Features such as frequency or type of schizophrenia do not gain credit. **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(b)	**AO1 (3 marks)** One mark for each point related to a diagnosis of schizophrenia in terms of validity, which in combination provides a logical description, up to 3 marks. • A valid diagnosis is one where the symptoms match the label so if someone suffering from hallucinations and thought insertion are diagnosed as schizophrenia then this is valid (1). However, it is difficult for clinicians to accurately determine if an individual is experiencing hallucinations (1). Symptoms of schizophrenia such as social withdrawal may also be associated with other disorders such as depression so may prevent a valid diagnosis (1). **Answers must relate to schizophrenia** **Generic answers score 0 marks.** **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
2(a)	**AO2 (2 marks)** One mark for each point related to a suitable longitudinal procedure with reference to this study, i.e. mothers and their children's social interactions, which, in combination, provides a logical description, up to 2 marks. For example: • The mother and child/children could keep a diary of their social interactions over a set period (1) of around six months, making diary entries once a week (1). OR • The mothers could be asked to complete a questionnaire every so often over a reasonable period of time (1), giving information about their own social interactions and also those of their child/children (1). OR • The mothers and child/children could be interviewed (separately) using a [semi-structured/unstructured] interview every so often over a set period (1) of reasonable length to focus on their social phobia or lack of social phobia and chart their development (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(2)**

Question Number	Answer	Mark
2(b)	**AO2 (3 marks)** One mark for each point related to an appropriate sampling technique suitable for this study, i.e. to obtain mothers, which, in combination, provides a logical description, up to 3 marks. For example: Volunteer sampling (1) advertising for volunteers if there is a group supporting those with social phobias nearby/in a local newspaper with a contact number that is confidential/in a clinic at a local hospital focusing on phobias (1) allows for the researcher to target mothers with a known social phobia/will ensure that those participating in the study meet the required criteria (1). **Look for other reasonable marking points.** **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(3)**

Question Number	Answer	Mark
3(a)(i)	**AO2 (4 marks)** One mark for squaring the values of negative life events minus the mean for each score (1), $(x-\bar{x})^2$ $-1.3^2,-2.3^2,-6.3^2,1.7^2,0.7^2,1.3^2,1.3^2,3.7^2,1.7^2, 4.7^2$ One mark for calculating the sum of these values = 92.1 One mark for dividing this by 9 (n-1) = 10.23333 One mark for calculating the square root = 3.1989581 / 3.20 to two sig figures.	**(4)**

Question Number	Answer	Mark
3(a)(ii)	**AO2 (1 mark)** One mark for stating that the standard deviation for positive life events will be smaller than the standard deviation for negative life events (1). OR The spread of data would be smaller for positive life events than for negative life events (1). **Answers must relate to the scenario.** **Generic answers score 0 marks.**	**(1)**

Question Number	Answer	Mark
3(b)	**AO2 (1 mark) AO3 (2 marks)** One mark for identifying the correct critical value of 10 (when n=10) (1 AO2). One mark for identifying that the critical value is more than the calculated (T) value (which is 1) (1 AO3) so is significant, and one mark for relating it to the hypothesis (those with anxiety had significantly more negative than positive life events) (1 AO3). For example: The critical value (which is 10) is more than the calculated value (which is 1) (1), which means that the results are significant (1). This supports the hypothesis that anxiety is characterised by more negative than positive life events (1). **Look for other reasonable marking points**	**(3)**

Question Number	Indicative content	Mark
4	**AO1 (4 marks), AO3 (4 marks)** **AO1** • Reliability refers to consistency. • If something is done more than once, one would expect the same results. • If the same results are found, then they are reliable. • This applies to the diagnosis of mental health issues, as if one person goes to two different clinicians and gets a different diagnosis, then there is no reliability. • Also, if a clinician gives one diagnosis for one person presenting with a set of symptoms and features, and then another person with the same presenting issues with the same clinician gets a different diagnosis, this shows unreliability and lack of validity in the diagnosis too. • The subjective nature of diagnosis could lead to different diagnoses. **AO3** **Unreliable** • There are two diagnostic systems used worldwide: ICD and DSM. There are distinct differences in these as the diagnosis depends on which system is used, therefore reducing the reliability of diagnosis. • There has been found to be only a 68% agreement (Andrews et al, 1999) between the ICD and DSM. • Rosenhan (1973) provided evidence that diagnoses were flawed, as staff were unable to tell mentally disordered patients apart from those who were mentally healthy. • Spitzer and Fleiss (1974) claimed that reliability was not high for any mental disorder and that reliability for psychosis and schizophrenia was just 'fair' rather than 'good'.	**(8)**

Question Number	Indicative content	Mark
4 cont.	**Reliable** • Reliability of diagnosis varies for different disorders: good for depression, worse for post-traumatic stress. So there is some reliability. • The use of diagnostic manuals, names/nomenclature and systems means more communication between clinicians, which is likely to increase reliability (Spitzer and Fleiss, 1974). • The DSM and ICD undergo continuous review. Updates ensure that it is possible to make more accurate diagnoses based on up-to-date evidence. Though DSM V has not been well received. • Wilson (1993) suggests that DSM III was developed precisely to tackle the unreliability of the previous manuals. • Many structured interviews have been developed which also increases reliability as clinicians use the same interviews/questions (e.g. Sheehan et al., 1998). • The reliability of diagnosis can be significantly improved when clinicians liaise with other clinicians when making diagnosis, as this increases inter-rater reliability. **Look for other reasonable responses.**	

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.**		
Level 0	0	No rewardable material.
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Question Number	Indicative content	Mark
5	**AO1 (4 marks), AO3 (4 marks),** **AO1** **Psychological treatments** For depression/OCD/anorexia nervosa could include: • Humanistic therapies such as person-centred counselling, which look at how the core of the person (their organismic self) can be at odds with the self-concept given by conditions of worth from others. • Cognitive therapies, which focus on maladaptive thinking and how these can be readjusted through counselling. • Cognitive behavioural therapies, which involve focusing on thinking, feeling and behaviour and the consequences of this to see if there can be intervention in one of these areas (e.g. tools such as the downward arrow technique are used to uncover core beliefs). • Deconditioning therapies can be used with OCD. **Biological treatments** For depression/OCD/anorexia nervosa could include: • Drug therapy such as antidepressants, which alter neurotransmitter functioning, can be used for OCD as well as for depression. Also relevant for anorexia nervosa (depression and anxiety often go with anorexia nervosa so medication can be prescribed). Tricyclic antidepressants can be used for moderate or severe depression, but drugs might not be used for mild depression. • Anorexia nervosa could include controlling diet. • Exercise is sometimes offered as a treatment for depression. • ECT is used for some conditions, in particular depression. **AO3** **Biological treatments** • If the cause of the mental disorder is a biochemical imbalance, then the use of drugs to address this should be effective. Many drug treatments, e.g. use of antidepressants, exist that are effective and this is evidence in support.	**(8)**

Question Number	Indicative content	Mark
5 cont.	• The fact that these drugs are in use shows that they have passed clinical trials and must have been shown to be effective. • Medication is considered widely effective for certain conditions (such as moderate to severe depression, OCD where SSRIs can work and anorexia nervosa if either depression or OCD are features of that person's presenting issues (which they can be)). • However, medication has unpleasant side effects, which can mean the patient does not continue with the medication and, therefore, it is not effective even though the belief is that the drugs would treat the biochemical imbalance. • The Department of Health and Human Services (1991) found that for depression 50% of people improved on medication and 30% improved with a placebo (so there is more at work here, as thinking they were taking medication helped them to improve or they improved to an extent over time anyway). It might be that there is another factor, or it might be that there is still a change in biochemical balance, but this is brought about by psychological effects rather than biological ones. **Psychological treatments** • The effective use of cognitive therapy in conditions such as depression supports psychologists' beliefs that behaviours are affected by psychological factors, e.g. early childhood experiences. Anorexia nervosa can be treated by cognitive analytic therapy (CAT), which is about reformulation of view of the past, for example. There have also been studies showing effectiveness of CBT. • Freud argues that early childhood experiences can cause adult mental health disorders such as in depression where sufferers spend their energy on repressing anger at a loved one who died, resulting in a lack of energy. Accepting that the loved one has died, through psychological treatment (such as CBT), reduces the symptoms of depression in many cases, which supports Freud's ideas.	

Question Number	Indicative content	Mark
5 cont.	• Freud also argued that anorexia nervosa can have a psychological element such as being about a wish not to get pregnant, and focusing on that can improve the outcome for clients, again supporting Freud's ideas. • However talking through the reasons for anxiety does not always have a positive impact on mood. Some people have therapy for many years and never see an improvement in their levels of anxiety, suggesting that psychological factors are not the cause. • The use of deconditioning to treat OCD shows that it might have been caused by conditioning events in the past. **Combined treatments** • For anorexia nervosa drug treatment is not considered successful unless treating depression or OCD as well – if drugs are offered, they tend to be SSRIs. • Drug therapy is considered effective for moderate to severe depression; milder depression might be more effectively treated by self-help, exercise or counselling, according to the NHS website. This supports the idea that both biological and psychological factors might be involved in causing mental disorders. **Issues with the evidence exist, such as:** • Clinical trials tend to randomly allocate people to either the treatment condition or a waiting condition (where the people will get the treatment just later) to look for the effectiveness of treatment, so there are good controls and evidence is considered scientific if it shows effectiveness. • However, individual differences can affect the effectiveness of treatment and such randomised control trials might not highlight individual differences, so general effectiveness might mask individual lack of effectiveness. • Meta-analysis can be useful as it looks at results from a lot of studies about the effectiveness of a particular treatment, and if findings match (such that the studies find the treatment to be effective – CBT is evidenced based in this way), then there is reliability in the findings. **Look for other appropriate marking points, related to chosen disorder.**	

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer.**		
Level 0	0	No rewardable material.
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Question Number	Indicative content	Mark
6	**AO1 (8 marks), AO3 (12 marks)** **AO1** • Neurotransmitter functioning is seen as a cause of schizophrenia, such as the dopamine hypothesis and the idea that serotonin is also involved - possibly an imbalance between the two. • Genes are also discussed as a cause of schizophrenia, which can run in families, as shown by twin studies. • Another cause of schizophrenia is a social one: pressures of living can cause symptoms, and a stressful life event and emotional reaction can cause a psychotic episode. • The bio psychosocial model is an idea that combines biological, social and psychological factors as causes of schizophrenia. • Schizophrenia might be caused by some difference in the brain (such as in the ventricles), which is also a biological cause, although not all of those with schizophrenia have the same damage. This is just one of the ideas about causes. • Drug misuse seems to relate to the onset of schizophrenia, but that might not be a cause as such so much as a trigger for one of the other (or more than one, it might be a combination) causes. • Depression/OCD/anorexia nervosa have biological causes such as genetic causes or neurotransmitters. • They also have psychological elements such as the effect of lack of social support on depression/media on anorexia nervosa. • Mental health disorders can be said to have biological, psychological and social causes. This is the bio psychosocial model. • Biological explanations for depression/OCD/anorexia nervosa include the monoamine hypothesis for depression, which is about deficiency in neurotransmitters/circuit that relays information from the orbitofrontal cortex to the thalamus, or issues related to serotonin in OCD/and for anorexia nervosa perhaps hormonal factors or factors around malnutrition.	**(20)**

Question Number	Indicative content	Mark
6 cont.	• Psychological explanations for depression/OCD/anorexia nervosa are, for depression, issues around social factors such as work issues or social support. For OCD, issues exist around stress and life events /and issues such as a tendency towards depression or OCD, or to perfectionism for anorexia nervosa. **Depression** • Although there is a well-established biochemical theory of brain chemical imbalance for depression, cognitive explanations are also strongly favoured. **OCD** • There is a strong theory of conditioning being involved in OCD. **Anorexia nervosa** • SLT is strongly involved in the development of eating disorders, as are cognitive causes, but there is also a suggestion of a genetic element. **AO3** **Biological evidence in favour of biological causes of schizophrenia, for example dopamine.** • Paranoia in drug users where dopamine levels are kept too high supports the role of dopamine. • Also, effectiveness of drugs that reduce the availability of dopamine supports its role as implicated in the disorder. • The positive correlation between schizophrenia and dopamine is consistent and, according to Seeman (2006), without exception. **Evaluation of biological evidence** • Excess dopamine can be measured only after onset, which means that the high levels of dopamine may be an effect rather than a cause. • Although antipsychotic drugs reduce dopamine availability in a very short time, the effect on symptoms takes several weeks to appear, suggesting other factors are involved.	

Question Number	Indicative content	Mark
6 cont.	**Evidence of non-biological causes of schizophrenia, for example social causation.** • Research by for example, Dohrenwend et al (1992), showed the incidence of schizophrenia in low-income groups is significantly greater than in higher-income groups. • One possibility is that low-income families are exposed to more risk factors such as infection levels and stress. • Evidence of the level of schizophrenia in immigrant groups provides evidence as they are often in a low-income situation in the host country, compared to the same groups in their home countries where schizophrenia is lower. **Evaluation of non-biological evidence** • Since Dohrenwend et al.'s research, subsequent studies have questioned a causal link, despite the correlation between income and incidence of schizophrenia. • However, there is still uncertainty whether such features are diagnostic, as individuals who do not have schizophrenia are not screened. **Other disorders** • Compare the evidence for or against a biological explanation of these other disorders compared to that of schizophrenia. • OCD is treated effectively by psychological therapies such as CBT. • Anorexia shows that family therapy is effective also cognitive therapies. • Depression treatment uses several effective drugs, but cognitive therapy also has an effective track history. • Conclusions can be that in the other mental disorders it can be argued that there is more evidence for causes other than biological ones than for schizophrenia, though the opposite conclusion can be drawn if evidence is used to support it. **Look for other reasonable marking points, including alternative appropriate psychological evidence.**	

Level	Mark	Descriptor
AO1 (8 marks), AO3 (12 marks) **Candidates must demonstrate a greater emphasis on evaluation/conclusion vs knowledge and understanding in their answer. Knowledge & understanding is capped at maximum 8 marks.**		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)
Level 5	17–20 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to an effective nuanced and balanced conclusion. (AO3)

Question Number	Answer	Mark
7(a)	**AO1 (3 marks)** One mark for identifying what weapon focus is, and two marks for justifying how eye-witness testimony is affected. • Witnesses experience greater stress when exposed to a weapon/witnesses tend to focus on a weapon (1). • This distracts them from encoding other information that may be relevant to their testimony (1). • Therefore, they remember less about the event because they were distracted by the weapon. (This makes their testimony unreliable) (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
7(b)	**AO1 (3 marks)** One mark for identifying a factor, and two marks for justifying the potential effect of that factor on eyewitness testimony. Candidates likely to focus on: **Leading questions** • A leading question may create a different situation/response to that remembered (1), and as a result the witness may then become confused and/or use the question when accessing their memory (1), which may lead to them providing a false recall (1). **Schemas/reconstructive memory** • Past knowledge can interfere with the recall of memories as recall is reconstructed (1). Therefore the witness may provide information based on a previous memory and schemas arising from that (1) rather than the crime they have seen, particularly if the memory is similar to the situation (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
8(a)	**AO2 (4 marks)** One mark for accurate completion of O-E column. One mark for accurate completion of $(O-E)^2$ column. One mark for accurate completion of $(O-E)^2/E$ column (allow more decimal places if offered 0.0634, 0.2207, 0.699, 0.2451). One mark for correct answer 0.60 (0.6/0.60/0.600/0.6001).	**(4)**

	Observed	**Expected**	**O-E**	**$(O-E)^2$**	**$(O-E)^2/E$**
Boys	42	40.4	1.6	2.56	0.06
	10	11.6	1.6	2.56	0.22
Girls	35	36.6	1.6	2.56	0.07
	12	10.4	1.6	2.56	0.25
					0.60

Question Number	Answer	Mark
8(b)	**AO2 (1 mark), AO3 (1 mark)** One mark for identifying the relationship between the results (1 AO2). One mark for justifying that the effects of the treatment are not significantly different between the genders (1 AO3). X^2= 0.6 and the critical value is 3.84 (p≤.05, df1, two-tailed)and as 0.6 is less than 3.84 (1), there is no significance between the male students and female students in terms of change in their anger management from before and then after treatment (1). **Look for other reasonable marking points, including appropriate alternative explanations.**	**(2)**

Question Number	Indicative content	Mark
9	**AO1 (4 marks), AO2 (4 marks),** Responses can relate to social learning/observation, labelling explanations or self-fulfilling prophecy. **AO1** • Social explanations for criminal behaviour include social learning theory that says learning is observational. • There are elements of observational learning including being motivated to copy behaviour and attending to the behaviour in the first place. • Vicarious learning can take place, which is repeating behaviour after having seen someone being rewarded for it. • Those who are copied are role models, who are significant people for the one observing. • The self-fulfilling prophecy (sfp) can be at work, which suggests that if a label is attached to someone, they are likely to fulfil it because of the way they are treated. They live up to the label. **AO2** • Pete may have witnessed people in his social circle and his father, who he may look up to, engaging in offending behaviour and imitate/copy them. • Copying offending role models will cause him to increase his delinquent behaviour • Bandura and others (1961, 1963, 1965) showed that children imitated aggression when they watched it, including on television, and it is thought adults model on others in the same way. • Truanting from school may have given him more opportunity to engage in drug taking with gang members. • Taking drugs can have a positive effect on how Pete feels and can satisfy his need to conform to his peers. This may make Pete want to take them more often in order to have the same positive feeling each time and to help him to socialise with his peers. • He may have found that his peers treat him better after committing one offence. The feedback he gets from peers and maybe his father when he commits offences will have encouraged him to continue to commit other offences. He may see his peers as his in group and adopt their behaviour to be part of that group.	**(8)**

Question Number	Indicative content	Mark
9 cont.	• He might have been labelled as a criminal because of his father's behaviour and then lived up to that label according to the SFP. The SFP suggests that someone is expected by others to behave in a certain way and they do then do that, fulfilling the expectation. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
Level 0	0	No rewardable material
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Question Number	Indicative content	Mark
10	**AO1 (6 marks), AO2 (4 marks), AO3 (6 marks)** **AO1** • Characteristics of the defendant can include accent, and juries can make judgements based on someone's accent. • Likewise their clothing and the way they present themselves/are presented. • Their profession/apparent profession. • Gender, age and race are characteristics of a defendant that might affect jury decision-making. • Schemas are used when perceiving or remembering, and people have schemas about 'a defendant in a trial' or about 'being a juror'. This can lead them to make judgements according to certain defendant characteristics. • Jurors might have empathy with a defendant whom they see as similar to themselves. **AO2** • Use of the characteristics of the two defendants, which can be used in the judgement of whether they will receive different judgements from the jury. • The woman might have an advantage if she is attractive. Their ethnicity is not known, and it might be an important factor in the jury's opinion of their criminal nature. • Also, we do not know jury ethnicity, so we don't know if this matches that of the defendants or not. • Similarly, we don't know if the jurors have any experience of physical assault that might influence their judgements of these two defendants. • Both defendants are on trial for a physical crime, and so the jurors' opinions of them will be similar. • The female defendant, as a model, is assumed to be more attractive than the male defendant. **Credit any other reasonable characteristic used that might be a factor in the jurors' bias towards the defendants.**	**(16)**

Question Number	Indicative content	Mark
10 cont.	**AO3** **For the accuracy of juries** • Abwender & Hough (2001) found there is no consistent effect of defendant gender, attractiveness or ethnicity on jury decisions. • Research has suggested that individual jurors may be influenced by the attractiveness of defendants, but this same effect is not shown when researching full juries. In reality, individual jurors do not make the decision, so this effect is reduced. • Abwender & Hough (2001) showed there was no ethnicity- based leniency among white jurors, showing jurors of a different ethnicity to the defendant results in a bias. • Dixon, Mahoney and Cocks (2002) found that a Birmingham accent meant juries tended to see the defendant as more guilty. • Mossiere and Dalby (2008) found that male defendants were found guilty more than female defendants but only slightly more. This can be seen as 'for' jury accuracy or 'against'. **Against the accuracy of juries** • Attractive men are considered less likely to have committed crime than unattractive men (Sigall & Ostrove (1975). • Pfeifer & Ogloff (1991) found that white jury members are more likely to rule a black defendant as guilty than a white defendant. • The jury may have personal experiences of the offence on trial, resulting in a bias towards the offence, rather than the defendant. • Patry (2008) found that jurors who discussed the case were more likely to find an attractive defendant guilty, but those who discussed less were more likely to find a plain defendant guilty. • Guy and Edens (2006) found that male defendants called 'psychopaths' were more likely to be found guilty than female defendants similarly labelled.	

Question Number	Indicative content	Mark
10 cont.	**Other points** • Many studies into the accuracy of jury influence have used mock trials rather than real trials. This has the effect of removing the seriousness of the situation for the jury, which may also influence their accuracy. • Charismatic leaders on the jury can encourage other jurors to agree with their decisions on guilt. • There might be a connection between the characteristics of the defendant and the characteristics of the jurors, rather than characteristics of the defendant being separate. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs assessment/conclusion in their answer. Application to the context is capped at maximum 4 marks.**		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning. Leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this may be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates an awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

Question Number	Answer	Mark
11	**AO1 (2 marks)** One mark for identifying an advantage and one mark for justification of that advantage. For example: • Single studies give incomplete information as they focus on one setting/culture whereas meta-analysis gives a wider view (1). For example, van iJzendoorn and Kroonenberg used studies from (eight) different countries in their meta-analysis, which means the conclusions drawn are generalisable to more than individuals in one culture (1). • Single studies use one method and analyse one set of results whereas meta-analyses offer more than one set of results (1). Having many sets of results means data can be tested for reliability, as it is as if doing a test/re-test (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
12(a)	**AO2 (4 marks)** **Observed** / **Expected** / **O-E** / **$(O-E)^2$** / **$(O-E)^2/E$** **Boy** **IN**: 9 / 7.5 / 1.5 / 2.25 / 0.3 **Boy** **OUT**: 3 / 4.5 / 1.5 / 2.25 / 0.5 **Girl** **IN**: 6 / 7.5 / 1.5 / 2.25 / 0.3 **Girl** **OUT**: 6 / 4.5 / 1.5 / 2.25 / 0.5 **1.6** One mark for accurate completion of O-E column. One mark for accurate completion of $(O-E)^2$ column. One mark for accurate completion of $(O-E)^2/E$ column. One mark for correct answer 1.6.	**(4)**

Question Number	Answer	Mark
12(b)	**AO2 (1 mark), AO3 (1 mark)** One mark for identifying the relationship between the results (1 AO2). One mark for justifying why it is not significant (1 AO3). X^2= 1.6 and the critical value is 3.84 (df = 1, $p \leq 0.01$, two-tailed), so as 1.6 is less than 3.84 (1), there is no significance between boys and girls as to whether they play inside or outside (1).	**(2)**

Question Number	Answer	Mark
13(a)(i)	**AO1 (2 marks)** One mark for each point related to Type A behaviour, which in combination provides a logical description up to 2 marks. Any two of the following points: • Child shows little emotion whether the attachment figure is there or not (1). • Child will not explore much/does not seek reassurance (1). • Child shows no sign of distress in the strange situation when the attachment figure leaves (1). • Child plays normally with the stranger (1). • The attachment figure and the stranger can comfort the child equally well (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
13(a)(ii)	**AO1 (2 marks)** One mark for each point related to Type B behaviour, which in combination provides a logical description up to 2 marks. Any two of the following points: • Child will explore much/seek reassurance when attachment figure is present (1). • Child shows signs of distress in the strange situation when the attachment figure is not present (1). • Child plays normally with the stranger when attachment figure is present (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Indicative content	Mark
13(b)	**AO1 (4 marks), AO2 (4 marks),** **AO1** • The strange situation is a procedure to test attachment types. • There are various comings and goings between the caregiver, a stranger and a child. For example, the caregiver goes in and out of the room, sometimes leaving the child alone with the stranger. • There are two reunions when the caregiver is reunited with the child, and those are the main focus for the data. • What is important is how the child reacts at those reunions. • The strange situation procedure is well controlled and well documented and has been used in other cultures to look at attachment types. **AO2** • The two children differ in their nationalities and in their family situations. • The strange situation is likely to show cultural differences (rather than universality). • Caregiving style and meeting strangers are part of the strange situation procedure and are likely to have cultural elements. • van iJzendoorn and Kroonenberg (1988) found differences in Type A and Type C between the cultures, which they put down to parenting styles. • Anika is from Europe, and European culture is typical of the culture that the strange situation was devised to investigate. • Hideki is of Asian origin and from studies using the strange situation, it is more likely that he will demonstrate insecure attachment.	**(8)**

Question Number	Indicative content	Mark
13(b) cont.	• Anika has the benefit of more care givers and may not show equal attachment to all family members. • The adult in the strange situation may not be the primary attachment figure. • Hideki has only his mother as caregiver and so may be more strongly attached to her than Anika might be to her mother. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
Level 0	0	No rewardable material
Level 1	1-2 Marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3-4 Marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5-6 Marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 4	7-8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Question Number	Indicative content	Mark
14	**AO1 (6 marks), AO2 (4 marks), AO3 (6 marks)** **AO1** • Autism is a developmental disorder that is characterised by a child having difficulties in forming and maintaining relationships. • There are other characteristics too, such as fixed behaviour and repetitive behaviour. • Some people with autism have difficulties with reading, although some can read, but possibly without intonation. • Autism affects males more than females but not just males. • There is a spectrum for autism, going from mild to more severe autism, and individuals with autism vary in their behaviour and characteristics. • Some people with autism have outstanding abilities in areas such as drawing, mathematics and music. **AO2** Credited for explicit reference to the situation of Thomas and Jessica, as follows in the argument that autism begins before birth. • Both Thomas and Jessica shared the same prenatal environment. • Jessica's birth was uncomplicated unlike Thomas's who is not diagnosed with autism. • Also the same family environment. • But there will be differences in experience in the first four years of life that might explain the difference between the twins. • Thomas is male and the evidence is that males are more likely to suffer from autism, but here it is Jessica. • Thomas and Jessica are non-identical twins so will not have the same genotype. • The diagnosis of Jessica does not happen until school age.	**(16)**

Question Number	Indicative content	Mark
14 cont.	**AO3** **For** • Twin studies and family studies suggest genetic links in the characteristics of autism. • There might be a vulnerability to autism (genetically) that the environment then triggers, hence why symptoms are not always experienced until the child is approximately four years old. • Brain development is considered to be an influencing factor for autism. Brain development starts within the womb and therefore the development, including development issues related to autism, will be well progressed at birth. • It is thought that there is not one single gene for autism but either a variety for different traits in autism or a combination that causes autism. • There appear to be different genes (biological explanation) associated with different traits related to autism and different biological mechanisms. However, genetic causes all relate to neurotransmitter functioning and to receptor functioning, which relates to the synthesis of new proteins at the synapse (Gertner 2011). **Against** • There are many other suggestions as to what causes autism. It is not possible to be conclusive as to whether autism develops in the womb as there is supporting evidence for the many other causes of autism. • If a child is born with autism, it would not fully explain why there is often no display of clear autistic behaviours until a few years after birth, rather than from the time of birth. • Psychoanalytic explanations suggest that object relations problems and problems in ego development are responsible for the social interaction issues that characterise autism (for example Volkmar 2000). These occur in early years. • Happé et al. (2006) suggest that there is not one explanation of autism but both cognitive and biological aspects are implicated. They found that in a large twin study the three areas that characterise autism are not related, so it seems that there might be different causes for all three. Thus looking for one explanation is not perhaps a suitable approach. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs judgement/conclusion in their answer. Application to the scenario is capped at maximum 4 marks.**		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2) A judgement/decision may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning. Leading to a judgement/decision being presented. Candidates will demonstrate a grasp of competing arguments but response may be imbalanced. (AO3)
Level 3	9–12 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced and well-supported judgement/decision. (AO3)

Level	Mark	Descriptor
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates throughout the skills of integrating and synthesising relevant knowledge with consistent linkages to psychological concepts and/or ideas. (AO2) Displays a well-developed and logical argument, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments and presents a balanced response, leading to an effective nuanced and balanced judgement/decision. (AO3)

Question Number	Answer	Mark
15(a)	**AO2 (4 marks)** One mark for correct totals (both the control and the experimental groups must be correct for mark). **Control Group** / **Experimental Group** **Number of symptoms** | **Rank** | **Number of symptoms** | **Rank** Total | 35.0 | Total | 20.0 $U_a = 5\times5 + \frac{5\times6}{2}\ 35 = 5$ (U_a and U_b can be the other way around and mark still given). $U_b = 5\times5 + \frac{5\times6}{2} - 20 = 20$ One mark for $5\times5 + \frac{5\times6}{2}$ One mark for correct figure for U_a (i.e. minus the total of the ranks). One mark for correct figure for U_b . (i. e. minus the total of the ranks). Note: U = the smaller value i.e. = 5. No marks for this but if given and no other working then, full marks credited.	**(4)**

Question Number	Answer	Mark
15(b)	**AO2 (1 mark) AO3 (1 mark)** One mark for identifying that the calculated value of U is greater than the critical value on the table (whatever the level of significance chosen) (1 AO2). One mark for saying that this means the results are not significant and therefore suggests that the treatment was not effective (1 AO3). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
15(c)	**AO1 (2 marks)** One mark for each point, which in combination provides a logical description up to 2 marks. • Obtain the correct licensing and permissions for handling and testing animals (1). • Ensuring that the experiment only uses the number of animals required (1). • Ensuring that the animals are well cared for during the experimental period (1). • Once the experiment was over, he would have to ensure that the animals were well cared for/humanely euthanised (1). **Look for other reasonable marking points**	**(2)**

Question Number	Answer	Mark
16	**AO1 (4 marks)** One mark for each point, which in combination provides a logical description up to 4 marks. • Any four of the following points: Aversion therapy works on the principles of classical conditioning and associates an undesirable behaviour with an undesirable response (1). • Alcoholics are given an emetic drug at the same time as being given an alcoholic drink (1). • The emetic drug stops the oxidisation of the alcohol, so the toxins build up in the body (1). • This then leads to the alcoholic feeling sick as they drink the alcohol (1). • As they will associate drinking alcohol with feeling sick, they will avoid drinking alcohol (1). • At the same time, the patients must be given non-alcoholic drinks at times they do not feel sick so that the response is not generalised to all drinks (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Indicative content	
17	**AO1 (4 marks), AO2 (4 marks),** **AO1** **Example – e-cigarettes** • E-cigarettes/patches help people to stop smoking by giving them nicotine to avoid the withdrawal but without the other toxins in cigarettes. • The amount of nicotine can be controlled and reduced gradually to achieve zero eventually. **Example – CBT** • Therapy can help with stopping smoking, including using cognitive behavioural therapy. • CBT works by looking at behaviour and seeing what the thoughts and feelings are related to that behaviour. • Then either the behaviour, the thought or the feelings can be considered and changed, to change the consequences (in this case smoking). • People use techniques to uncover their core beliefs and how such beliefs link to behaviour that might be unwanted but is sustaining a cycle. **AO2** Before treatment begins, an assessment of the reason why Sarah started smoking in the first place will need be carried out, since even if she addresses the addiction, there remains the possibility that she will restart smoking if the original reason has not been addressed. **Example – e-cigarettes /patches** • E-cigarettes /patches will allow Sarah to reduce her nicotine input in a controlled fashion, avoiding withdrawal symptoms and removing the negative side effects of smoking traditional cigarettes. • Sarah can be reassured that there is at least some evidence that e-cigarettes work and that evidence is building. For example Brown et al. (2014) found that e-cigarettes were effective, and smokers who wanted to stop and were given e-cigarettes had the best outcomes (compared with those not given them). 19.9% stopped compared with 15.1% with no aid. • She might not have a successful outcome if she had started smoking because she had observed her peers smoking. This may be a reason for her to carry on.	**(8)**

Question Number	Indicative content	Mark
17 cont.	**Example – CBT** • In using CBT Sarah will be asked to do homework, and she will receive encouragement from the counsellor to motivate her to make changes, as it is down to her. • To help Sarah to achieve success in CBT, other therapies tend to be involved in counselling, such as using the core conditions of the person-centred approach and using genuineness, empathy and unconditional positive regard to form a therapeutic relationship with the client. • Sarah can be provided with the evidence that CBT is effective, and that it is the therapy of choice in the NHS. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application in their answer.**		
Level 0	0	No rewardable material
Level 1	1–2 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 2	3–4 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Discussion is partially developed, but is imbalanced or superficial occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 3	5–6 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. Candidates will demonstrate a grasp of competing arguments but discussion may be imbalanced or contain superficial material supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). (AO2)
Level 4	7–8 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical balanced discussion, containing logical chains of reasoning. Demonstrates a thorough awareness of competing arguments supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). (AO2)

Question Number	Indicative content	Mark
18	**AO1 (6 marks), AO2 (4 marks), AO3 (6 marks)** **AO1** • Drug misuse refers to taking recreational (or other) drugs when they are not prescribed, and usually it refers to when they are not legal. • There are legal highs, but they are also frowned upon so that can come within drug misuse. • Nature refers to what people are born with and relates to genes and biology. It is what is innate in the person. • Nurture refers to upbringing and the environment and influences on our 'natural' core. • Nurture can come from parents and schooling as well as from the wider society. • We are also influenced by environmental factors such as media, our actual physical environment and anything outside our selves that affects us. • Nurture can include the womb as an environment. **AO2** • Psychologists have a belief in biological causes for behaviour. • They will emphasise the role of genes in affecting behaviour such as addictive behaviour. • The belief is that chemical imbalances in body bring can about drug misuse. • Psychologists also emphasis the environment as a cause for addiction. • They will explore the client's family history, for example. • Learning from the environment (such as peers) can lead to drug misuse, such as getting rewards from misusing drugs and being 'accepted' or 'praised'.	**(16)**

Question Number	Indicative content	Mark
18 cont.	**AO3** • Both explanations can explain why drugs misuse can occur in generations of the same family. • Nature because family members have inherited genes that make them more susceptible to addiction. • Nurture because people see parents as role models and copy their behaviour. • Alcohol is more likely to be nurture because the addict is more likely to have experienced contact with alcohol due to role models, legal, socially acceptable, readily available, reasonably cheap, many varieties. • Any addictions could be the result of a genetic predisposition. • However, types of addicts could have been influenced by their situational interactions. • The nature explanation does not look at social factors such as friends whereas social learning theory says we may imitate our peers. • The nurture explanation would support an individual being able to change their drug use, whereas a biological explanation might suggest that an individual's biology might have an effect on their ability to fight addiction. • It is possible to see the influence of the environment on the psychological treatment of substances by influencing through a ban on tobacco advertising and positive role models. This is not evident with the nature explanation. • For both explanations it is important to consider that there could be additional factors affecting the individual's likelihood to use drugs. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO2 (4 marks), AO3 (6 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs evaluation/conclusion in their answer. Application to the context is capped at maximum 4 marks.**		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Write your name here

Surname	Other names

Pearson Edexcel
Level 3 GCE

Centre Number	Candidate Number

Psychology

Advanced
Paper 3: Psychological skills

Sample assessment materials for first teaching
September 2015
Time: 2 hours

Paper Reference
9PS0/03

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The list of formulae and critical value tables are printed at the start of this paper.
- Candidates may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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PEARSON

FORMULAE AND CRITICAL VALUE TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\sum(x-\bar{x})^2}{n-1}\right)}$$

Spearman's rank correlation coefficient

$$1-\frac{6\sum d^2}{n(n^2-1)}$$

Critical values for Spearman's rank

	Level of significance for a one-tailed test				
	0.05	**0.025**	**0.01**	**0.005**	**0.0025**
	Level of significance for a two-tailed test				
N	**0.10**	**0.05**	**0.025**	**0.01**	**0.005**
5	0.900	1.000	1.000	1.000	1.000
6	0.829	0.886	0.943	1.000	1.000
7	0.714	0.786	0.893	0.929	0.964
8	0.643	0.738	0.833	0.881	0.905
9	0.600	0.700	0.783	0.833	0.867
10	0.564	0.648	0.745	0.794	0.830
11	0.536	0.618	0.709	0.755	0.800
12	0.503	0.587	0.678	0.727	0.769
13	0.484	0.560	0.648	0.703	0.747
14	0.464	0.538	0.626	0.679	0.723
15	0.446	0.521	0.604	0.654	0.700
16	0.429	0.503	0.582	0.635	0.679
17	0.414	0.485	0.566	0.615	0.662
18	0.401	0.472	0.550	0.600	0.643
19	0.391	0.460	0.535	0.584	0.628
20	0.380	0.447	0.520	0.570	0.612
21	0.370	0.435	0.508	0.556	0.599
22	0.361	0.425	0.496	0.544	0.586
23	0.353	0.415	0.486	0.532	0.573
24	0.344	0.406	0.476	0.521	0.562
25	0.337	0.398	0.466	0.511	0.551
26	0.331	0.390	0.457	0.501	0.541
27	0.324	0.382	0.448	0.491	0.531
28	0.317	0.375	0.440	0.483	0.522
29	0.312	0.368	0.433	0.475	0.513
30	0.306	0.362	0.425	0.467	0.504

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Chi squared distribution formula

$$X^2 = \sum \frac{(O-E)^2}{E} \qquad df = (r-1)(c-1)$$

Critical values for chi-squared distribution

	Level of significance for a one-tailed test					
	0.10	**0.05**	**0.025**	**0.01**	**0.005**	**0.0005**
	Level of significance for a two-tailed test					
df	**0.20**	**0.10**	**0.05**	**0.025**	**0.01**	**0.001**
1	1.64	2.71	3.84	5.02	6.64	10.83
2	3.22	4.61	5.99	7.38	9.21	13.82
3	4.64	6.25	7.82	9.35	11.35	16.27
4	5.99	7.78	9.49	11.14	13.28	18.47
5	7.29	9.24	11.07	12.83	15.09	20.52
6	8.56	10.65	12.59	14.45	16.81	22.46
7	9.80	12.02	14.07	16.01	18.48	24.32
8	11.03	13.36	15.51	17.54	20.09	26.12
9	12.24	14.68	16.92	19.02	21.67	27.88
10	13.44	15.99	18.31	20.48	23.21	29.59
11	14.63	17.28	19.68	21.92	24.73	31.26
12	15.81	18.55	21.03	23.34	26.22	32.91
13	16.99	19.81	22.36	24.74	27.69	34.53
14	18.15	21.06	23.69	26.12	29.14	36.12
15	19.31	22.31	25.00	27.49	30.58	37.70
16	20.47	23.54	26.30	28.85	32.00	39.25
17	21.62	24.77	27.59	30.19	33.41	40.79
18	22.76	25.99	28.87	31.53	34.81	42.31
19	23.90	27.20	30.14	32.85	36.19	43.82
20	25.04	28.41	31.41	34.17	37.57	45.32
21	26.17	29.62	32.67	35.48	38.93	46.80
22	27.30	30.81	33.92	36.78	40.29	48.27
23	28.43	32.01	35.17	38.08	41.64	49.73
24	29.55	33.20	36.42	39.36	42.98	51.18
25	30.68	34.38	37.65	40.65	44.31	52.62
26	31.80	35.56	38.89	41.92	45.64	54.05
27	32.91	36.74	40.11	43.20	46.96	55.48
28	34.03	37.92	41.34	44.46	48.28	56.89
29	35.14	39.09	42.56	45.72	49.59	58.30
30	36.25	40.26	43.77	46.98	50.89	59.70
40	47.27	51.81	55.76	59.34	63.69	73.40
50	58.16	63.17	67.51	71.42	76.15	86.66
60	68.97	74.40	79.08	83.30	88.38	99.61
70	79.72	85.53	90.53	95.02	100.43	112.32

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Mann-Whitney U test formulae

$$U_a = n_a n_b + \frac{n_a(n_a+1)}{2} - \sum R_a$$

$$U_b = n_a n_b + \frac{n_b(n_b+1)}{2} - \sum R_b$$

(U is the smaller of U_a and U_b)

Critical values for the Mann-Whitney U test

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.05 (one-tailed), *p* ≤ 0.10 (two-tailed)**																
5	4	5	6	8	9	11	12	13	15	16	18	19	20	22	23	25
6	5	7	8	10	12	14	16	17	19	21	23	25	26	28	30	32
7	6	8	11	13	15	17	19	21	24	26	28	30	33	35	37	39
8	8	10	13	15	18	20	23	26	28	31	33	36	39	41	44	47
9	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
10	11	14	17	20	24	27	31	34	37	41	44	48	51	55	58	62
11	12	16	19	23	27	31	34	38	42	46	50	54	57	61	65	69
12	13	17	21	26	30	34	38	42	47	51	55	60	64	68	72	77
13	15	19	24	28	33	37	42	47	51	56	61	65	70	75	80	84
14	16	21	26	31	36	41	46	51	56	61	66	71	77	82	87	92
15	18	23	28	33	39	44	50	55	61	66	72	77	83	88	94	100
16	19	25	30	36	42	48	54	60	65	71	77	83	89	95	101	107
17	20	26	33	39	45	51	57	64	70	77	83	89	96	102	109	115
18	22	28	35	41	48	55	61	68	75	82	88	95	102	109	116	123
19	23	30	37	44	51	58	65	72	80	87	94	101	109	116	123	130
20	25	32	39	47	54	62	69	77	84	92	100	107	115	123	130	138

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.01 (one-tailed), *p* ≤ 0.02 (two-tailed)**																
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6	2	3	4	6	7	8	9	11	12	13	15	16	18	19	20	22
7	3	4	6	7	9	11	12	14	16	17	19	21	23	24	26	28
8	4	6	7	9	11	13	15	17	20	22	24	26	28	30	32	34
9	5	7	9	11	14	16	18	21	23	26	28	31	33	36	38	40
10	6	8	11	13	16	19	22	24	27	30	33	36	38	41	44	47
11	7	9	12	15	18	22	25	28	31	34	37	41	44	47	50	53
12	8	11	14	17	21	24	28	31	35	38	42	46	49	53	56	60
13	9	12	16	20	23	27	31	35	39	43	47	51	55	59	63	67
14	10	13	17	22	26	30	34	38	43	47	51	56	60	65	69	73
15	11	15	19	24	28	33	37	42	47	51	56	61	66	70	75	80
16	12	16	21	26	31	36	41	46	51	56	61	66	71	76	82	87
17	13	18	23	28	33	38	44	49	55	60	66	71	77	82	88	93
18	14	19	24	30	36	41	47	53	59	65	70	76	82	88	94	100
19	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101	107
20	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.025$ (one-tailed), $p \leq 0.05$ (two-tailed)																
5	2	3	5	6	7	8	9	11	12	13	14	15	17	18	19	20
6	3	5	6	8	10	11	13	14	16	17	19	21	22	24	25	27
7	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
8	6	8	10	13	15	17	19	22	24	26	29	31	34	36	38	41
9	7	10	12	15	17	20	23	26	28	31	34	37	39	42	45	48
10	8	11	14	17	20	23	26	29	33	36	39	42	45	48	52	55
11	9	13	16	19	23	26	30	33	37	40	44	47	51	55	58	62
12	11	14	18	22	26	29	33	37	41	45	49	53	57	61	65	69
13	12	16	20	24	28	33	37	41	45	50	54	59	63	67	72	76
14	13	17	22	26	31	36	40	45	50	55	59	64	67	74	78	83
15	14	19	24	29	34	39	44	49	54	59	64	70	75	80	85	90
16	15	21	26	31	37	42	47	53	59	64	70	75	81	86	92	98
17	17	22	28	34	39	45	51	57	63	67	75	81	87	93	99	105
18	18	24	30	36	42	48	55	61	67	74	80	86	93	99	106	112
19	19	25	32	38	45	52	58	65	72	78	85	92	99	106	113	119
20	20	27	34	41	48	55	62	69	76	83	90	98	105	112	119	127

N_a	N_b = 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.005$ (one-tailed), $p \leq 0.01$ (two-tailed)																
5	0	1	1	2	3	4	5	6	7	7	8	9	10	11	12	13
6	1	2	3	4	5	6	7	9	10	11	12	13	15	16	17	18
7	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24
8	2	4	6	7	9	11	13	15	17	18	20	22	24	26	28	30
9	3	5	7	9	11	13	16	18	20	22	24	27	29	31	33	36
10	4	6	9	11	13	16	18	21	24	26	29	31	34	37	39	42
11	5	7	10	13	16	18	21	24	27	30	33	36	39	42	45	48
12	6	9	12	15	18	21	24	27	31	34	37	41	44	47	51	54
13	7	10	13	17	20	24	27	31	34	38	42	45	49	53	56	60
14	7	11	15	18	22	26	30	34	38	42	46	50	54	58	63	67
15	8	12	16	20	24	29	33	37	42	46	51	55	60	64	69	73
16	9	13	18	22	27	31	36	41	45	50	55	60	65	70	74	79
17	10	15	19	24	29	34	39	44	49	54	60	65	70	75	81	86
18	11	16	21	26	31	37	42	47	53	58	64	70	75	81	87	92
19	12	17	22	28	33	39	45	51	56	63	69	74	81	87	93	99
20	13	18	24	30	36	42	48	54	60	67	73	79	86	92	99	105

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

Wilcoxon Signed Ranks test process

- Calculate the difference between two scores by taking one from the other
- Rank the differences giving the smallest difference Rank 1

  Note: do not rank any differences of 0 and when adding the number of scores, do not count those with a difference of 0, and ignore the signs when calculating the difference
- Add up the ranks for positive differences
- Add up the ranks for negative differences
- T is the figure that is the smallest when the ranks are totalled (may be positive or negative)
- N is the number of scores left, ignore those with 0 difference

Critical values for the Wilcoxon Signed Ranks test

	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
n	0.1	0.05	0.02
N=5	0	-	-
6	2	0	-
7	3	2	0
8	5	3	1
9	8	5	3
10	11	8	5
11	13	10	7
12	17	13	9

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

Answer ALL questions.

SECTION A: RESEARCH METHODS

1 'Larks and Owls' Study

Researchers used a questionnaire to find out from 500 students whether they preferred carrying out cognitive activities in the morning or in the evening. The students who preferred mornings were called 'Larks' and those who preferred evenings were called 'Owls'. Students found to have no preference were called 'In Betweens'. The results of the questionnaire found 315 'Owls', 53 'Larks' and 132 'In Betweens'.

The researchers wanted to test whether 'Larks' were better at cognitive activities in the morning and 'Owls' better in the evening, as predicted from the preferences.

Using the 368 students who were 'Larks' or 'Owls', the researchers asked them to perform cognitive activities in controlled conditions. There were two types of cognitive activity: one tested creativity and the other tested analysis skills. Each type of activity had 20 cognitive tasks for the students to complete.

Each student had to complete all 40 cognitive tasks twice on one day, between 9am and 10am in the morning, then again between 3pm and 4pm in the afternoon. The scores indicate the number of tasks in each type of cognitive activity that the students performed correctly.

Table 1 shows the mean number of tasks out of 40 that were correct.

	9 am to 10 am		Total	3 pm to 4 pm		Total	Overall total
	Creative	Analysis		Creative	Analysis		
'Larks'	10	15	**25**	6	14	**20**	**45**
'Owls'	8	12	**20**	12	15	**27**	**47**
Totals	**18**	**27**	**45**	**18**	**29**	**47**	**92**

Table 1

(Source: Adapted from Roberts and Kyllonen (1999))

(a) Analyse the data provided in **Table 1** to explain **three** conclusions that the researchers might draw from these results.

(6)

Conclusion 1

Conclusion 2

Conclusion 3

Table 2 shows the mean number of tasks out of 40 that were correct for 'Larks' and 'Owls' in the morning.

	9 to 10 am		Total
	Creative	Analysis	
'Larks'	10	15	**25**
'Owls'	8	12	**20**
Totals	**18**	**27**	**45**

Table 2

(b) Analyse the data provided in **Table 2** to explain whether the results are likely to show a significant difference.

(2)

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(c) State the null hypothesis for the 'Larks and Owls' study.

(2)

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(d) Explain how to improve the effectiveness of **two** controls used in the 'Larks and Owls' study.

(6)

(Total for Question 1 = 16 marks)

2 A researcher carried out semi-structured interviews with five people to find out, retrospectively, about the issues they faced when using mental health services. They were aged between 8 and 18 years old. The interviews took place in a quiet room in a community-based mental health centre.

(Source from: Adapted from DeRoche and Lahman (2008))

(a) Explain how the information gathered would be different if the researchers had chosen to use an unstructured interview in this study.

(2)

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(b) A follow-on investigation was carried out to assess the issues identified with the mental health service, from the retrospective study.

A longitudinal study approach was used to follow five 8 years old until the age of 18.

Compare the longitudinal approach to the retrospective approach, giving **one** similarity and **one** difference.

(2)

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.....

(c) Explain **two** improvements that could be made to the longitudinal approach and to the retrospective approach.

(4)

(Total for Question 2 = 8 marks)

TOTAL FOR SECTION A = 24 MARKS

SECTION B: REVIEW OF STUDIES

3 A study looked at how contact between groups affected prejudice. The study used two different cultural groups of 30 people: Group 1 and Group 2.

The findings supported the hypotheses:

- The more previous contact people have had with an 'out group', the more willing they are to have contact with an 'out group'.
- The less they think that there is conflict with that 'out group', the more willing they are to interact with the group.

This suggests that perceived conflict and social contact both affect behaviour related to prejudice. 'Behaviour related to prejudice', which is whether they were prejudiced or not, was called 'behavioural intentions' in the study. The study found that these results were consistent across different status groups and in different cultures.

Results were analysed using a test for correlation.

Table 3 shows the relationship between perceived conflict, social contact and behavioural intentions (prejudice).

Group 1	**Perceived conflict**	**Social contact**
Social contact	–0.32	NO DATA
Behavioural intentions	–0.36	0.40
Group 1	**Perceived conflict**	**Social contact**
Social contact	–0.44	NO DATA
Behavioural intentions	–0.43	0.48

Table 3

1 indicates a perfect correlation, 0 indicates no correlation.

(Source from: Adapted from Gaunt, 2011))

(a) Using the critical value table for Spearman's rank, state the best level of probability at which the results would be significant for perceived conflict and social contact for Group 1 and for Group 2.

(2)

Group 1

.....

Group 2

.....

(b) Explain how social identity theory supports the findings of this study.

(6)

(Total for Question 3 = 8 marks)

4 Both Raine et al (1997) and Watson and Rayner (1920) have ethical implications.

In their study, Watson and Rayner (1920) wrote as part of their findings, 'The child started violently, his breathing was checked and the arms were raised in a characteristic manner. On the second stimulation the same thing occurred, and in addition the lips began to pucker and tremble. On the third stimulation, the child broke into a sudden crying fit.' (Watson and Rayner 1920, p2).

In their study, Raine et al. (1997) wrote, 'The key findings… are that murderers pleading guilty to NGRI (not guilty by reason of insanity) are characterized by (a) reduced glucose metabolism in bilateral prefrontal cortex… and (b) abnormal asymmetries of activity (left hemisphere lower than right)… These data… provide some general support for pre-existing biological theories of violence…' (Raine et al 1997, p502).

Evaluate the ethical issues of these studies in relation to each other, with reference to their aims and methods.

(16)

(Total for Question 4 = 16 marks)

TOTAL FOR SECTION B = 24 MARKS

SECTION C: ISSUES AND DEBATES

5 Lu, a mother of three young children, is having trouble controlling her anger. She believes that her children are likely to show aggression themselves if she carries on behaving this way. Lu thinks that her anger might have been caused by her own mother's behaviour. Lu has given up a successful career to be a full-time mother and, although she has the support of the children's father when he is not at work, the everyday decisions are her responsibility.

Lu visits a therapist who plans to help her by getting her to reward herself when she is calm with the children and to stop feeling guilty about her behaviour.

Evaluate the application of social learning theory as proposed by the therapist in helping Lu. You must make reference to the context in your answer.

(Total for Question 5 = 12 marks)

6 Applications in psychology include clinical psychology, criminological psychology, child psychology and health psychology.

Assess how psychology could be used as a form of social control, with reference to any **two** of these applications.

(20)

(Total for Question 6 = 20 marks)

TOTAL FOR SECTION C = 32 MARKS
TOTAL FOR PAPER = 80 MARKS

Question Number	Answer	Mark
1(a)	**AO2 (3 marks), AO3 (3 marks)** Candidate responses have to be drawn from evidence presented in Table 1. One mark for identifying each conclusion (3 AO2) and one mark for justifying each conclusion (3 AO3). • There were 47 right answers in the afternoon/evening compared with 45 right answers in the morning (1), so the time of day did not make much difference to performance (1). • In the afternoon, the 'larks' had a total of 20 and the 'owls' had a total of 27, which out of 40 may/may not be significant (1), so being classed as a 'lark' or 'owl' did/did not make a difference in performance overall (1). • In the morning, students scored 18 and 27 on creative/analytical tasks, respectively. In the afternoon/evening they scored 18 and 29 (1), so both the morning and the afternoon/evening creative tasks were performed more poorly than analysis tasks (1). • Overall, the 'larks' succeeded at 5 more analysis than creative tasks in the morning and 8 more in the afternoon/evening, whereas the 'owls' succeeded at 4 more analysis than creative tasks in the morning and 3 more in the afternoon/evening (1). Therefore, both groups performed better at analysis tasks than on the creative tasks, irrespective of whether the tasks were done in the morning or the afternoon/evening (1). **Look for other reasonable marking points.**	**(6)**

Question Number	Answer	Mark
1(b)	**AO2 (1 mark) AO3 (1 mark)** One mark for evidence from data (AO2). One mark for justification of that evidence (AO3). For example: • **Evidence:** the scores for the 'Larks' are 10 and 15, and the scores for the 'Owls' are 8 and 12 (1). **Justification:** The numbers in the table are all quite similar considering they are mean averages out of 40, so there is not likely to be a significant difference/the scores are different from one another, so there is a likely to be a significant difference found (1). • **Evidence:** The scores for creative tasks are 10 and 8 whereas the scores for analysis tasks are 15 and 12, which suggests a difference. However, the scores overall for 'Larks' and 'Owls' are 20 and 25, so not that different out of 40 (1). **Justification:** For both the 'Larks' and the 'Owls' the analysis tasks are done better than the creative tasks so there might be a difference, although as the 'Larks' and the 'Owls' overall do not show that much difference in performance, probably no significant difference (1). • **Evidence:** The totals are 18, 27, 20, 25 out of 45, and the test would compare these numbers against one another, so as they are rather similar, there is probably not a difference/so there are differences here (1). **Justification:** The four totals would be compared to do a test, and they are not that different from one another, so probably there is no significant difference/they are different in some ways, so there might be a difference (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(c)	**AO2 (2 marks)** One mark for stating it is not the case. One mark for stating that both variables are operationalised. Maximum of one mark if only one variable is operationalised. **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(d)	**AO2 (2 marks), AO3 (4 marks)** For each control: One mark for identifying the control (2 AO2). Two marks for explaining how to improve the effectiveness of each control (4 AO3). **Controls** • Participants did their tasks on the same day. • They were categorised using the same questionnaires as morning or evening people. • Tasks were set up as creative or analytic, and the same for everyone. • The times of day were the same for everyone. **Improving the effectiveness of the controls** **Questionnaire** Remove the self-report bias in the assessment of 'Larks' and 'Owls' (1) by an objective pre-test in the morning and evening (1). **Time of day** Remove the generalisation of when the 'Larks' and 'Owls' work best (1), so allow the participants to choose the time they take the task (1). **Tasks** Improve the assessment of the creative and analytical tasks (1) by asking a large sample of people who are already designated as 'creative' or 'analytical' to rate the tasks (1). **Same day** Remove order effects (doing one task influences your performance on the second task) (1) by counter-balancing (one group take their morning task first then their afternoon task, one group take their afternoon task first then their morning tasks, both on different days) (1). **Look for other reasonable marking points.**	**(6)**

Question Number	Answer	Mark
2(a)	**AO2 (1 mark) AO3 (1 mark)** One mark for identifying a difference (AO2). One mark for justification of that difference (AO3). For example: • An unstructured interview would not have a strong schedule with planned questions but would have a general idea of what would be asked (1). The more open format lends itself to allowing the young person to discuss personal issues that the researcher has not anticipated (1). OR • An unstructured interview may include standard opening questions, but it would have more open questions than the semi-structured interview (1), so data collected becomes more qualitative than quantitative, which suits the need to gather rich data to understand their personal issues/mental health issues. (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
2(b)	**AO2 (2 marks)** One mark for a similarity between the two studies. One mark for a difference between the two studies. For example: **Similarities** Both have small sample (cannot take place on a large scale) (1). Both will sample the same mental health issues (1). Both will gather qualitative data (1). **Differences** The retrospective study has a significant participant variable effect / the longitudinal study reduces the participant variable effect (1). The retrospective study has a problem with the accuracy of recall of past memories / the longitudinal study gathers evidence as it happens making it more accurate (1). The issue-bias for the longitudinal study is caused by the drop-out rate / the issue-bias for the retrospective study is caused by the sampling process (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
2(c)	**AO3 (4 marks)** One mark for identifying an improvement, up to two marks. One mark for explaining how to achieve the improvement, up to two marks. For example: Reduce the drop-out rate to reduce bias (1) by giving more support to the participants to enable them to continue in the study (counselling) (1). Increase the range of mental disorders being included in the study (1) by extending the age range of the study (beyond 18 years into mature adulthood) (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
3(a)	**AO2 (2 marks)** One mark apiece for stating significance level at which the results would have been significant, using conventional form. (0.36 > 0.306 therefore) p=/≤0.05 (0.46 > 0.423 therefore) p=/≤0.01	**(2)**

Question Number	Answer	Mark
3(b)	**AO2 (3 marks), AO3 (3 marks)** Up to three marks for applying social identity theory to the findings of the study (3 AO2). Up to three marks for judging/justifying how social identity theory supports the study (3 AO3). Application of social identity theory to the findings: **Social contact** • For both samples perceived conflict in the 'out group' showed a relationship with social contact with that 'out group' as predicted by the hypotheses based on social identity theory because the results show that the more social contact, the less perceived conflict. • Social identity theory suggests that members of an 'in group' show hostility to an 'out group', so having perceived conflict towards an 'out group' in this study is explained by SIT. **Behavioural intentions** • For both groups behavioural intentions related to social contact as was predicted by the hypothesis – because the more social contact, the less prejudice-related behavioural intentions. • Social identity theory might say that more social contact meant widening the 'in group' to include others, so there was less prejudice because those people were no longer in an 'out group'. **Perceived conflict** • For both groups perceived conflict related to behavioural intentions, as was predicted by the hypothesis – because the less perceived conflict, the less prejudice-related behavioural intentions.	**(6)**

Question Number	Answer	Mark
3(b) cont.	• Social identity theory also suggests that if people see others as an 'out group', they will raise their own self-esteem by denigrating the 'out group', so they are likely to perceive conflict between themselves and an 'out group'. Their behaviour is likely to go with their perceptions of conflict. **Judgement of how social identity theory supports the findings:** • Both groups show significant correlations, thus there is reliability being displayed. • The value of 0.01 being used shows that these results are "highly" significant. • The good agreement in the results between the two cultures used here shows that SID theory is applicable across cultures. • Only two cultures are used here, so there is no knowing if all cultures would follow this pattern. • The quality of social contact is not reported; in particular if it involved sufficient contact to mean a widening of who is seen as in group. • Other variables such as gender are not given, so the role of such can't be assessed. • The level of resources is not stated, so the contribution made by the realistic conflict theory can't be assessed; realistic conflict theory might explain the findings better, but this is not clear in the data gathered. • Realistic conflict theory suggests that working towards superordinate goals reduces hostility (perceived conflict), so this theory can also help to explain the results in this study. • Realistic conflict theory also shows that the less there is perceived conflict (for example the more social contact), the less prejudice in respect of behaviour, so might be as good an explanation as social identity theory**.** **Look for other reasonable marking points.**	

Question Number	Indicative content	Mark
4	**AO1 (6 marks), AO3 (10 marks)** **AO1** • Ethical principles come from the BPS Code of Ethics and Conduct (2009). • And are under 4 main headings: respect, integrity, responsibility and conduct. • Studies have to abide by the principles, and areas where there are difficulties in studies can include giving the right to withdraw. • Making sure the researcher is competent to do the study. • Getting informed consent. • Not causing distress and being sure to offer a debrief so that the participants leave in the same state as they start the study in. • Considering risk assessment to protect from harm. • Watson and Rayner's **aim** was to see if they could classically condition a phobia in a child. • Raine et al.'s aim was to see if there are brain differences in structures related to aggression in people pleading not guilty to murder by reason of insanity. • These people had shown aggression and were having a PET scan, so it was a good opportunity to get data. **AO3** **Aims – age of sample** • Watson and Rayner (1920) wanted to classically condition one child, Little Albert, and focused on a baby – issues of using one child, informed consent, and the rights of the child – whereas Raine et al. (1997) aimed to look at differences in brain structures and related issues in adults but in a power relationship with the law. **Methods they chose because of their aims** **Distress** • Raine et al. (1997) used scanning, which would be unfamiliar to the participants. The ethical principle of responsibility means that they had to cause no harm. Similarly, Watson and Rayner (1920) had a scary procedure in their study. They acted out the conditioning using the noise of a metal bar hit behind Little Albert's head and this was scary for him.	**(16)**

Question Number	Indicative content	Mark
4 cont.	• In 1920 although there were ethical requirements, e.g. the APA code, the BPS Code of Ethics and Conduct (2009) was not in force – in fact not in force for Raine et al. either, and it can be said that ethical requirements have tightened and changed over that time. **The ethics of the evidence-based conclusions that might come from the aims** • Raine et al. (1997) found differences in the brain and concluded that differences in the brain can cause aggression. The evidence-based conclusions have ethical implications because of the principle of responsibility and doing no harm. Watson and Rayner also had far-reaching implications as Little Albert could have been left with a phobia that generalised to all furry things. • Watson and Rayner's (1920) study also had ethical implications as the evidence-based conclusions showed that fear can be conditioned. Raine et al.'s study could be used to 'look for' possible murderers before any event and do something about it (using brain scanning) before a crime is committed. This is a consequence of their aims that they needed to think through given the ethical issues of respect, responsibility, integrity and competence. **Ethics related to their procedure, not so much their aims** • Raine et al. (1997) had to find a control group and to do that they had to have another set of participants, giving stress to more participants. They had to match their participants, such as having some in the control group with schizophrenia to match the main group as some in this group had schizophrenia. Their aim was to find cause and effect conclusions, so they needed a control group. • Watson and Rayner (1920) did a single case study, so they did not put anyone else through the stress as Raine et al. did. One child was enough for their aim. **Consent** • Although Albert's mother gave consent there is doubt as to whether it was fully informed as she was an employee of the hospital Watson worked in. The adults in Raine et al. might have been able to understand to give consent, but they were within the criminal system and might not have been empowered to refuse consent.	

Question Number	Indicative content	Mark
4 cont.	**Distress** • Albert's distress was very apparent and long-lasting, especially since he was not de-conditioned due to his mother removing him from the study. (Although subsequently it has been discovered that he died at the age of 6 years old.) • Raine et al.'s participants would not have suffered long-lasting damage from the scan used in the same way. **Code** • Both did have ethical codes to abide by. However Raine et al. being more recent would have been more cognisant about ethical codes, and ethics would have been tighter in 1997 compared with 1920. **Consequences of conclusions** • The scanning on the participants (those pleading NGRI) was for their defence, and it is to be wondered how far Raine et al.'s evidence-based conclusions might be used by the defence or the prosecution and whether the researchers were competent to deal with such issues or whether they needed to consider what their aims led to. • Watson and Rayner's finding could be used by a society to the detriment of the individual. Or it could be used to help individuals, such as with the use of systematic desensitisation as a therapy, so ethically there were 'good' reasons for learning about classical conditioning in humans as well as 'bad' reasons. • Raine et al.'s study could be used to 'look for' possible murderers before any event and do something about it (using brain scanning) before a crime is committed, which would go against the principle of being innocent until proven guilty. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO3 (10 marks) **Candidates must demonstrate a greater emphasis on evaluation/conclusion vs knowledge and understanding in their answer. Knowledge & understanding is capped at maximum 6 marks.**		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning. leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Question Number	Indicative content	Mark
5	**AO1 (4 marks), AO2 (4 marks), AO3 (4 marks)** **AO1** **Learning – social learning theory (SLT)** • Social learning is about behaviour being modelled and then repeated. • There are features to social learning such as paying attention to behaviour and being motivated to repeat it. • Social learning theory can work by using a model to model 'calm' in stressful situations. • Social learning theory suggests we learn by observing and modelling those who are similar to us, such as same gender. • We are motivated to repeat these behaviours by the actual or perceived reward they bring. **AO2** • Lu's mother seems to have modelled aggression and anger, and Lu is likely to have seen her mother as a role model (when she was a child), and so her worry that she is copying her mother's behaviour is likely to be the case – she has learned through social learning theory mechanisms. • Lu's partner could act as a calming model and could help with housework to take the pressure off and also do that calmly to model the calm behaviour that Lu wants. • When Lu thinks, she models on her mother. That is likely as they are the same gender, as well as her mother being a likely role model as she was constantly in Lu's life when Lu was a child, and probably looked up to her mother at that time. • By rewarding herself when she is calm, as the therapist suggests, she will replace the reward that she has associated with anger with an association with calm. • She will then provide the role model that she wishes for her children so that they will not develop anger as she fears. • The father's role as a model is limited since his absence at work leaves Lu in the children's presence for most of the time.	**(12)**

Question Number	Indicative content	Mark
5 cont.	**AO3** **Evaluation points** • There is good evidence from SLT that anger can be controlled by modelling techniques, and this is within a person's capability. • Bandura's work (1961/1963) shows that children **do** copy aggression (including the same sex model) when aggression is modelled in real life or on the screen. • Learning theories, though, also rely on evidence from animals so might not be generalisable to humans, such as Skinner's work on operant conditioning. • If a therapeutic technique is likely to work, or works, then the theory the technique rests on is in a way seen to be a good theory. • If the therapist used social learning principles to explain to Lu the issues, and they worked on understanding and accepting the past, and this works (the therapy did work for Lu), then this can be seen as evidence that social learning explanations are useful. • Although without thorough investigation of course, this is speculation. • It might be that there is no one explanation for all of Lu's issues but a combination of different explanations, as nature (biological aspects) can combine with nurture (learning from the environment) to lead to behaviour. • There are drug treatments that can "calm" a person down, and hormone therapies also exist. • As Lu's mother also showed anger and aggression, it is possible that any aggression or anger is inherited. • Lu may have inherited some such features of limbic system and the amygdala shown to be involved in aggression. • Since Lu thought she was calm before having children, maybe a hormonal change has occurred and increased her level of aggression. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application vs evaluation/conclusion in their answer.**		
Level 0	0	No rewardable material.
Level 1	1–3 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Provides little or no reference to relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) A conclusion may be presented, but will be generic and the supporting evidence will be limited. Limited attempt to address the question. (AO3)
Level 2	4–6 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Line(s) of argument occasionally supported through the application of relevant evidence from the context (scientific ideas, processes, techniques & procedures). (AO2) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made. (AO3)
Level 3	7–9 marks	Demonstrates accurate knowledge and understanding. (AO1) Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques & procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge. (AO2) Arguments developed using mostly coherent chains of reasoning. Leading to a conclusion being presented. Candidates will demonstrate a grasp of competing arguments but evaluation may be imbalanced. (AO3)

Level	Mark	Descriptor
Level 4	10–12 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Line(s) of argument supported throughout by sustained application of relevant evidence from the context (scientific ideas, processes, techniques or procedures). Demonstrates the ability to integrate and synthesise relevant knowledge. (AO2) Displays a well-developed and logical evaluation, containing logical chains of reasoning throughout. Demonstrates an awareness of competing arguments, presenting a balanced conclusion. (AO3)

Question Number	Indicative content	Mark
6	**AO1 (8 marks), AO3 (12 marks)** **AO1** **Clinical psychology** • In clinical psychology drug therapy features often as a main therapy, such as for schizophrenia or for depression, anorexia or OCD. • Anti schizophrenic drugs for schizophrenia (including new ones), anti-depressant drugs for unipolar depression, SSRIs for anorexia (to treat depression or OCD which often go with anorexia) and anti-depressants can also be used for OCD. • Drugs are prescribed by doctors and psychiatrists. • Other therapies and treatments in clinical psychology include cognitive behavioural therapy, which links to cognitive psychology and learning theories, and relates to the links between thoughts, feelings and behaviour and their consequences. • Humanistic therapies for mental health disorders such as person-centred therapy. • Rosenhan (1973) showed patients admitted wrongly (saying they had symptoms they did not and then acting normally) were not recognised as not having schizophrenia or a mental health disorder. **Criminological psychology** • In criminological psychology learning theories put forward ways of controlling aggression, such as rewarding 'good' behaviour (and possibly punishing unwanted behaviour). • Biological explanations include genetics, brain structure and hormones and can be used to remove the blame from criminals and the possibility of self-control. • In criminological psychology, explanations such as the self-fulfilling prophecy can explain a way society controls individuals by predicting who might likely to become a criminal. • Forensic psychologists/clinical psychologists have power in a situation (often) and that can be a form of social control.	**(20)**

Question Number	Indicative content	Mark
6 cont.	**Child psychology** • In child psychology research into day care can show social control, such as advising about the staff-child ratio and what makes good day care for a society. • In child psychology, issues around therapy or helping someone with autism. • Attachment theory dictates the "norm" as to the type of child care and behaviour of children with their caregivers. **Health psychology** • Pengpid et al. (2013) considered screening and brief intervention for alcohol problems, and such interventions can be seen as control. • Treatments for drug addiction can be seen as social control including learning theory treatments using classical conditioning principles. • Drug replacement therapy can be used and involves power to those administering it. **AO3** **Clinical psychology** • CBT asks the client to do homework but leaves choices to the client. • Humanistic therapies (client centred) do give the client control as the therapist models a non-directive non-judgemental relationship whilst the client works on perhaps incongruence between their self-concept and their organismic self. • Rosenhan's study showed the participants/patient as losing control in not being 'allowed out'. • Drugs have to be prescribed and the patient/client does not have control over the situation. • There is an element of control in that there is the power to section someone over mental health issues, so that person then does not have the control and knowing this might lead to them accepting therapy they might otherwise not accept.	

Question Number	Indicative content	Mark
6 cont.	**Criminal psychology** • Drugs may control the behaviour of someone with an aggression issue, which can benefit society as that person fits in more with social norms. • Other methods such as case studies are used to show a wider picture and to suggest that a biological explanation might not be enough. Qualitative data can help to study individual differences and issues, which can help to tailor any treatment of or focus on offenders, and more focused treatment can mean more control for the offender (though prison by definition removes control). Drugs controlling behaviour can be seen as a form of social control. • Whenever behaviour is controlled by a schedule of reinforcements, the person doing the reinforcing has power over the person with the aggression/criminal issues. **Child psychology** • Treatment/help for those with autism can be seen as a form of social control though the intention is to help the individual in their functioning, so this type of 'treatment' can be said to be less 'social control' than other treatments (such as drug therapy). • Day care and rules governing day care can be said to give power to society rather than to individuals or the children. Children can make choices in a day care setting (more perhaps now than in the past), so there is less social control perhaps though choices are limited to what is offered (what is offered is controlled). • Fostering and adoption for children who have had problems with forming attachments can be seen to be about conforming to social norms. • A child who does not conform is likely to be seen as a problem, and the care they are offered is likely to be affected by them not conforming. • Universality of application of attachment theory creates a bias towards particular cultures and child care arrangements.	

Question Number	Answer	Mark
6 cont.	**Health psychology** • Drug therapy is as much social control here as therapy used for offenders, as those prescribing the drugs and administering the programme have power over the client. • Drugs can involve aspects that are illegal and this can give power to society over the individual. • Biological explanations for criminal and antisocial behaviour can suggest that biological 'faults', such as those related to the amygdala, can 'cause' aggression. This leads to the suggestion that we should 'fix' the problem or remove someone from society proactively. • Learning theories can be used to help prisoners re-enter society by, for example, offering assertiveness training to replace aggression with being assertive. • Factors influencing jury decision making can include issues such as characteristics of the defendant. Any deviation from a 'neutral' verdict can be seen as a form of social control. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (8 marks), AO3 (12 marks) **Candidates must demonstrate a greater emphasis on assessment/conclusion vs knowledge and understanding in their answer. Knowledge & understanding is capped at maximum 8 marks.**		
Level 0	0	No rewardable material.
Level 1	1–4 marks	Demonstrates isolated elements of knowledge and understanding. (AO1) Generic assertions may be presented. Limited attempt to address the question. (AO3)
Level 2	5–8 marks	Demonstrates mostly accurate knowledge and understanding. (AO1) Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a generic or superficial assessment being presented. (AO3)
Level 3	9–12 marks	Demonstrates accurate knowledge and understanding. (AO1) Arguments developed using mostly coherent chains of reasoning, leading to an assessment being presented which considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but unlikely to grasp their significance. The assessment leads to a judgement but this will be imbalanced. (AO3)
Level 4	13–16 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a logical assessment, containing logical chains of reasoning throughout which consider a range of factors. Demonstrates an understanding of competing arguments/factors but does not fully consider the significance of each which in turn leads to an imbalanced judgement being presented. (AO3)
Level 5	17–20 marks	Demonstrates accurate and thorough knowledge and understanding. (AO1) Displays a well-developed and logical assessment, containing logical chains of reasoning throughout. Demonstrates a full understanding and awareness of the significance of competing arguments/factors leading to a balanced judgement being presented. (AO3)

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