Pearson Edexcel

INTERNATIONAL ADVANCED LEVEL

PSYCHOLOGY

SAMPLE ASSESSMENT MATERIALS

Pearson Edexcel International Advanced Subsidiary in Psychology (XPS01)
Pearson Edexcel International Advanced Level in Psychology (YPS01)
First teaching September 2015
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Contents

Introduction

The Pearson Edexcel International Advanced Level in Psychology is designed for use in schools and colleges. It is part of a suite of International Advanced Level 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.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, a senior examiner 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
International
Advanced Level

Centre Number | | | | | |

Candidate Number | | | | |

Psychology

International Advanced Subsidiary
Paper 1: Social and Cognitive Psychology

Sample assessment material for first teaching
September 2015
Time: 1 hour 30 minutes

Paper Reference
WPS01/01

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 64.
- 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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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.

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.

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SECTION A

Answer ALL questions. Write your answers in the spaces provided.

1 (a) Chetna wanted to investigate levels of conformity in her local library. She staged a study where confederates were either silent (condition one) or noisy (condition two). For each condition she recorded how many of the other library users made a noise. She interviewed each library user after each condition, and asked them how they felt about the noise in the library, and about their own noise levels. The interviews were conducted one day apart.

Explain **one** ethical issue that Chetna would need to consider before she recruited participants for her investigation.

(2)

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(b) Chetna chose to gather both qualitative and quantitative data for her investigation into levels of conformity.

Define the term 'qualitative data'.

(1)

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(c) State **two** ways in which Chetna gathered qualitative data to investigate non-conformity in her study.

(2)

1 .....

2 .....

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(d) Chetna used an experimental method when she set up the two conditions. Explain an appropriate experimental design for this part of her study.

(3)

(e) **Table 1** is a tally chart showing conformity in silent and noisy conditions.

	Condition one	**Condition two**
Conforming behaviour	𝍸 𝍸 II	𝍸 𝍸 𝍸 I
Non-conforming behaviour	II	IIII

Table 1

Calculate the percentage of non-conforming behaviour in condition two of Chetna's investigation.

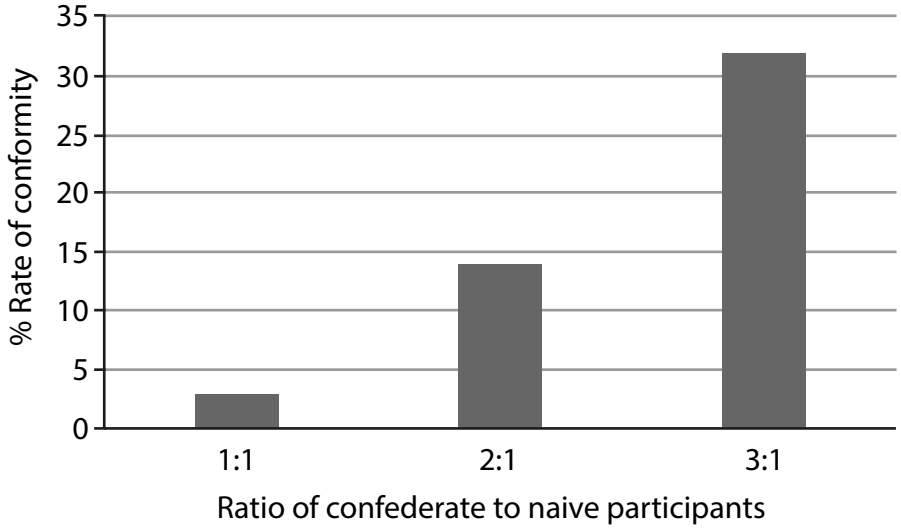
(1)

(Total for Question 1 = 9 marks)

2 (a) Describe the procedure used in Asch's (1951) original conformity study from when the participants entered the laboratory.

(3)

(b) **Graph 1** shows the percentage of conformity in Asch's variation study.



Graph 1

Describe how the ratios shown in **Graph 1**, from one of Asch's variation studies (1952, 1956) can be used to explain conformity.

(3)

(c) Explain whether Asch's original procedure can be considered a valid measure of conformity.

(3)

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(Total for Question 2 = 9 marks)

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3 Assess the credibility of Milgram's research following the findings of Burger's (2009) replication study of obedience.

(Total for Question 3 = 8 marks)

TOTAL FOR SECTION A = 26 MARKS

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SECTION B

Answer ALL questions. Write your answers in the spaces provided.

4 Mr Evans conducted an experiment to test the multi-store model of memory. He gave his class two lists of words to remember; 'list one' on Monday and 'list two' on Friday. He presented each list one word at a time for one second on a whiteboard.

Below are the lists of words shown to the class.

List one	List two
Frog	Big
Dog	Large
Log	Huge
Hog	Great
Blog	Vast
Fog	Giant

(a) Mr Evans used immediate recall and delayed recall.

Explain the purpose of using immediate **and** delayed recall as a way of testing the multi-store model of memory.

(2)

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(b) **Table 2** shows the results of Mr. Evans's memory test.

	List one		List two	
	Immediate recall	**Delayed recall**	**Immediate recall**	**Delayed recall**
Participant A	2	5	5	2
Participant B	3	4	6	3
Participant C	4	5	4	2
Participant D	2	3	5	4
Participant E	3	4	6	2
Participant F	4	6	6	2
Participant G	1	3	4	3
Participant H	2	4	5	2
Participant I	3	4	5	5
Participant J	3	5	6	2

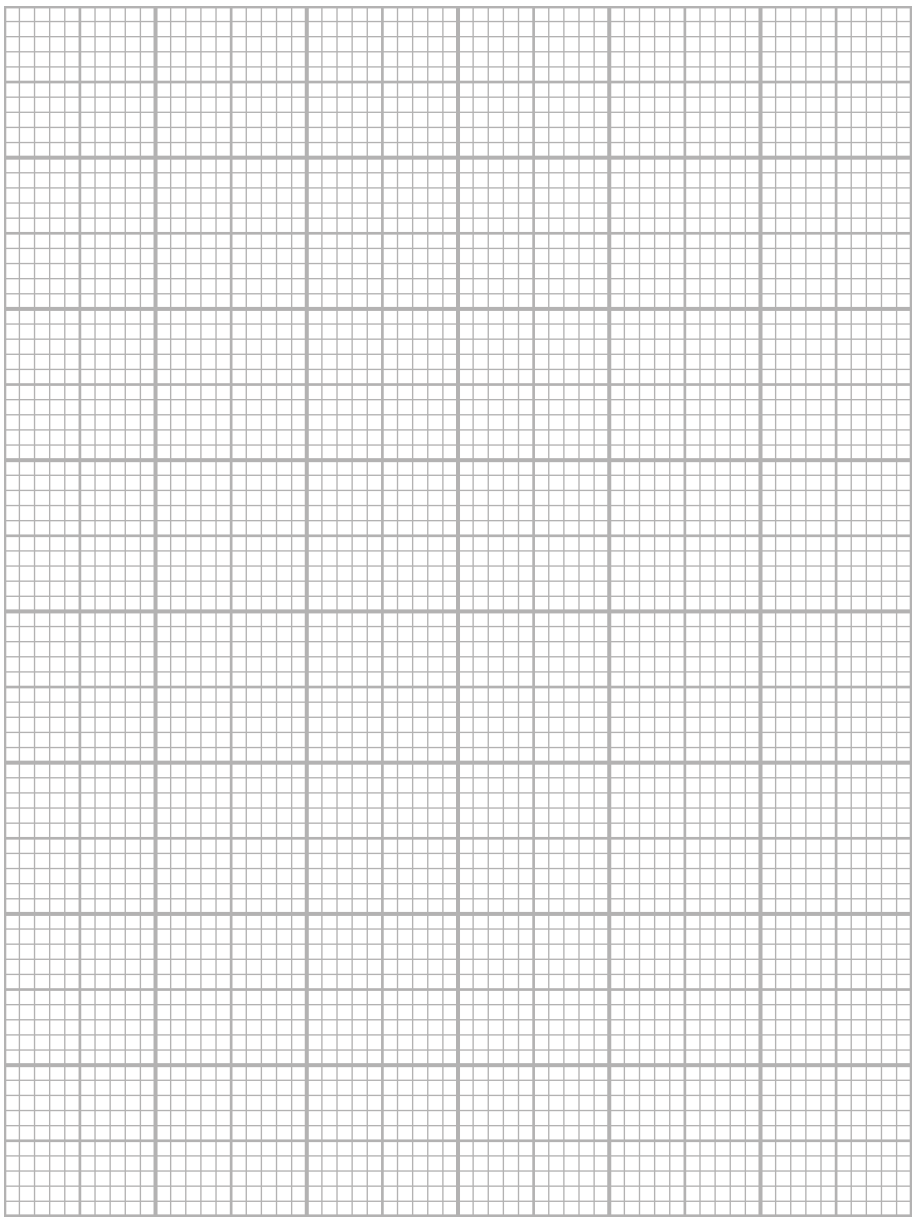
Table 2

Using the data in **Table 2**, draw a histogram to illustrate the frequency of the immediate recall of words in list one.

You should title and label your histogram appropriately.

(3)

Title



(c) Calculate the average immediate recall of list two, using an appropriate measure of central tendency.

(1)

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(d) A Wilcoxon Signed Ranks test was used to calculate statistical significance for delayed recall. The calculated (T) value was 4 (T=4) for a one-tailed test at $p<0.05$ with N=9.

Determine whether this result is significant or not.

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

(1)

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(e) Explain the findings of Mr. Evans's study, using your knowledge of encoding in short-term memory **and** long-term memory described by the multi-store model of memory.

(2)

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(Total for Question 4 = 9 marks)

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QUESTION 5 BEGINS ON THE NEXT PAGE.

5 (a) A criticism of laboratory experiments is that they lack ecological validity. Give one reason for this.

(1)

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(b) Explain why laboratory experiments may be seen as one of the most reliable research methods to use to investigate memory.

(4)

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(Total for Question 5 = 5 marks)

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6 (a) During your course, you will have conducted a practical investigation into cognitive psychology using laboratory experiments. Describe how you operationalised the variables in your investigation.

(2)

(b) Explain **one** way that you could have changed the procedure of your experiments to improve the validity of your practical investigation.

(2)

(Total for Question 6 = 4 marks)

7 Evaluate the significance of reconstructive memory as a theory of everyday memory, using your knowledge of Bartlett's (1932) War of the Ghosts study.

(8)

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(Total for Question 7 = 8 marks)

TOTAL FOR SECTION B = 26 MARKS

SECTION C

Answer the question in this section. Write your answer in the space provided.

8 Mr Meek, the geography teacher at a school, wanted to start a recycling programme. This would involve all staff and students separating their waste and using the correct recycling bins, and the removal of mixed waste in bins where all waste is placed in the same one irrespective of whether the rubbish can be recycled.

Many staff and students argued that this would take too much of their time and believed that the school would not be able to cope with a strict recycling policy. The head teacher endorsed the policy, and within a few months the recycling programme was working.

Evaluate research into social influence as a way of explaining the success of Mr Meek's recycling programme.

You **must** make reference to the context in your answer.

(12)

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(Total for Question 8 = 12 marks)

TOTAL FOR SECTION C = 12 MARKS
TOTAL FOR PAPER = 64 MARKS

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Psychology Paper 1 Mark Scheme

Question Number	Answer	Mark
1(a)	**AO1 (1 mark), AO2 (1 mark)** One mark for identifying an appropriate ethical issue. One mark for providing a justification of why the ethical issue would need to be considered, for this investigation, before participants are recruited. For example: **Informed consent** (1) The library users would need to be informed that they are part of a psychological investigation before they are observed in the library (1). **Right to withdraw** (1) The library users would need to be able to leave the study at any point without negative consequence (1). **Incentives** (1) The library users should not be offered any form of incentive to take part in the study as this may violate their right to withdraw/given consent (1). **Protection from harm** (1) The library users should not be subject to any procedure that they may find distressing or embarrassing (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(b)	**AO1 (1 mark)** One mark for a definition of qualitative data. Reject definitions of quantitative data. For example: • Data that is prose/non-numerical.	**(1)**

Question Number	Answer	Mark
1(c)	**AO2 (2 marks)** One mark each for how qualitative data was gathered in the study. For example: • Using interviewing to ask how the library users felt about the noise in the library. • Using interviewing to ask how the library users felt about their own noise levels. **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(d)	**AO1 (1 mark), AO2 (2 marks)** One mark for identifying an appropriate design and a further two marks for justifying the choice. For example: **Design** Independent groups design (1) **Justification** Because the library can have one condition with people and the other condition on the next day with people (1). This means there will be different people on each day as you would not expect someone to visit a library two days in a row, and this would give validity (1). OR Because a repeated measures design may lead to demand characteristics (1) as library users may guess the study aim and behave accordingly if they are asked to return on a different day realising that the conditions are different (regarding noise) (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
1(e)	**AO2 (1 mark)** Accept only 20 Reject all other figures.	**(1)**

Question Number	Answer	Mark
2(a)	**AO1 (3 marks)** One mark for each procedural detail given about Asch's original conformity study (1951) in the laboratory, up to three marks. Ignore sampling method, details that would have occurred before participants entering the lab. Ignoring variation study details. For example: Each naïve participant was shown a line and three comparison lines and had to judge which comparison line was the same length as the target line (1). Each confederate said out loud which line matched the target line, and the confederate answered last (1). Of the 18 trials, the confederates agreed to say the same wrong comparison line on 12 trials (1). **Look for other reasonable marking points.**	**(3)**

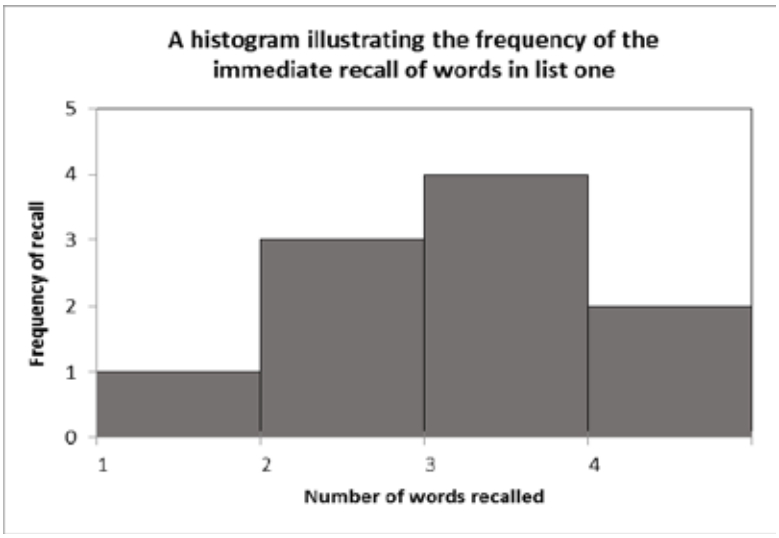
Question Number	Answer	Mark
2(b)	**AO2 (3 marks)** One mark for each point explaining the ratios with regard to conformity, up to three marks. No credit for analysing the data without reference to conformity. For example: • When only one confederate and one naïve participant were tested, the rate of conformity was low because one confederate did not amount to a majority influence (1). • When there were two confederates to one naïve participant there was conformity of just under 15%, suggesting that a small majority had a modest impact upon the responses given by participants (1). • Three confederates presented a greater majority, resulting in the highest level of conformity of over 30% (1). • It can be seen that the greater the majority, in terms of ratios of confederates over naïve participants, the higher the rate of conformity, with three confederates exerting the maximum level of conformity (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
2(c)	**AO3 (3 marks)** Credit can be given for internal or external validity. One mark for each point explaining how the procedure may or may not be considered valid, up to three marks. For example: The procedure involved a line judgement task, which may not be a valid measure of conformity because it lacks mundane realism (1). Real-life conformity concerns complying with social conventions or group norms, not judging whether a line matches another (1). This means that the rates of conformity found by the study, as a result of the procedure used, may not reflect real life/or be applicable to everyday situations involving conformity (1). Or The experiment had internal validity because it was conducted in a controlled environment (1). Asch could be fairly sure that conformity was a direct result of majority influence rather than any other factor (1) so cause and effect could be established (1). Accept other answers that refer to the validity of the procedure, such as demand characteristics, motivation (reluctance to be involved in conflict rather than compliance), altered perception. **Look for other reasonable marking points.**	**(3)**

Question Number	Indicative content	Mark
3	**AO1 (4 marks), AO3 (4 marks)** **AO1** • Milgram found 65% level of obedience and Burger found a 70% obedience level. • Burger replicated Milgram's study, including Experiment 5 where the victim called out. He felt that at 150 volts, in Milgram's study, either the participants carried on or they stopped so he could complete his study at 150 volts and assume that anyone carrying on would have continued to the end. • Milgram used verbal prods that were set up clearly and the same for all participants. Burger used the same prompts in his replication of Milgram's work. • Milgram's study used male volunteers, recruited through advertising. • Burger included males and females in his study, and had a more diverse sample. • Although Burger's participants were repeatedly told that they could withdraw at any point, they still continued, as did Milgram's. **AO3** • Burger's replication found similar levels of obedience to Milgram's research, suggesting it was not a product of era, which adds to the credibility of the claim that situation gives obedience. • Despite Burger's similar obedience rates, his study only tested up to 150 volts and he speculated that participants who went to this level would continue on. His claim of finding high levels of obedience may not be as strong as Milgram's research. This suggests that Burger's findings may not support the credibility of Milgram's work. • Although Burger used the same prods, it can be argued that they were not used in a similar way, as Burger was more likely to have stopped the study with successive refusal. This suggests that the replication had differences so did not add to Milgram's credibility. • Similar to Milgram, Burger did not find any differences between men and women, offering credibility to Milgram's findings. • The credibility of Milgram's research has also been questioned with regards to the potential for demand characteristics and forceful use of verbal prods. • The methodology, other than the prods and volts, was very similar, offering support for the credibility of Milgram's findings. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding versus evaluation/conclusion in their answer.**		
	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	Mark
4(a)	**AO1 (2 marks)** One mark for justification of immediate recall. One mark for justification of delayed recall. Need not refer to MSM, but must explicitly refer to STM and LTM. For example: • Immediate recall tests short-term memory as a store described by the MSM because it is a temporary and immediate store of information (1). • Delayed recall tests long-term memory as a store described by the MSM because it stores information for more than a few minutes (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
4(b)	**AO2 (3 marks)** One mark for appropriate title/labelling. One mark for appropriate plotting of frequency (may not be accurate bars). One mark for accurate bars. For example:  **Accept reverse axes.**	**(3)**

Question Number	Answer	Mark
4(c)	**AO2 (1 mark)** One mark for either mean or median calculated. • Mean is 5.2 • Median 5 Reject modal score as not useful here.	**(1)**

Question Number	Answer	Mark
4(d)	**AO2 (1 mark)** One mark for correct identification of significance. This result is significant (4 is less than the critical value 8).	**(1)**

Question Number	Answer	Mark
4(e)	**AO2 (2 marks)** One mark for explaining findings of encoding in STM. One mark for explaining findings of encoding in LTM. **Encoding in STM** Immediate recall of similar sounding words was lower because short-term memory uses acoustic encoding and similar sounding words are more difficult to rehearse/become confused (1). OR Immediate recall of semantically associated words is higher than similar sounding words because STM uses acoustic encoding and they are easier to rehearse/recall (1). **Encoding in LTM** Delayed recall of similar sounding words is higher because LTM uses semantic encoding, which is unaffected by sounds of words (1). OR Delayed recall of semantically associated words is lower because LTM uses semantic encoding so the words become confused (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
5(a)	**AO3 (1 marks)** One mark for an appropriate reason for why laboratory experiments lack ecological validity. For example: • They are conducted in unnatural environments • Participants are asked to do unnatural tasks (mundane realism) • They lack generalisation to real life situations. **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
5(b)	**AO1 (2 marks), AO3 (2 marks)** One mark for each comment related to the reliability of laboratory experiments used in memory research, up to four marks. Maximum 2 for generic comments concerning reliability of laboratory experiments without reference to memory research. **Reliability of laboratory experiments** • Laboratory experiments are reliable methods because there is a high level of control over extraneous variables (1). • Cause and effect can be reliably established as there is deliberate manipulation of the IV and the effect on the DV can be measured (1). **Application to memory** • Noise and distractions can be controlled to ensure that encoding and recall are not disrupted (1). • A researcher can manipulate word lists or length of time for encoding and establish whether this manipulation directly affected recall (1). • Laboratory experiments typically study memory for random letters/words/trigrams, in order to remove context/meaningfulness of learned material (1). • These factors do not tarnish recall because individual people may recall specific things more than others because of personal experiences, so recall is more reliable (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
6(a)	**AO1 (2 marks)** One mark for operationalisation of IV (a repeated measures design needs to be used, so ignore IV's that refer to one group of participants were in one condition whereas a different group of participants were in a different condition). One mark for operationalisation of the DV (DV should be of ordinal level data or above, so ignore nominal data references, e.g. whether or not the target item was recalled). For example: Example IVs • Schema appropriate or inappropriate images. • Whether the learning task was visual or verbal. Example DVs • Number of words recalled (from STM). • Number of target items recalled (from LTM). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
6(b)	**AO3 (2 marks)** One mark for a suggested way of improving validity. One mark for explaining how the suggestion would have improved validity. For example: • Use more everyday words/task (1) to make the findings more ecologically valid/more mundane (1). • Organise the word lists into categories (1) to make sure participants used the categories to organise when remembering the list (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Indicative content	Mark
7	**AO1 (4 marks), AO3 (4 marks)** **AO1** • Reconstructive memory is a theory of everyday memory because it describes how we perceive, encode and retrieve information according to our own experiences. • Schema are used to explain how we perceive sensory information according to pre-existing knowledge that affects how we see our world and subsequently what is stored. • When we come to recall this knowledge again, effort after meaning described how we again use this pre-existing personal knowledge to interpret our stored memories. • Everyday memories are reinvented each time they are recalled and affected by personal experiences or information given to us after the event. • Unlike other explantions of memory, this theory takes in to account personal stored knowledge and its impact on perception and recall. **AO3** • The multi-store model of memory and working memory do not explain individual differences in encoding and recall, so ignore the everyday aspect of memory. • Bartlett's War of the Ghosts study deliberately used a story rather than meaningless words/digits, because it was a test of everyday memory. • Lists of words are rarely an everyday memory experience, but stories are meaningful and reflect realistic use of memory. • The War of the Ghosts study demonstrated that we use our schema to perceive and recall the story according to cultural knowledge and experience, which is realistic. • The study shows us that memory is not a video player, but that everyday memory is active, reconstructive and fallible. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding versus evaluation/conclusion in their answer.**		
	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	Indicative content	Mark
8	**AO1 (4 marks), AO2 (4 marks), AO3 (4 marks)** **AO1** • Moscovici argued that a minority can exert influence if they take a consist, unbiased approach and have confidence in their message. • Consistency means that opposition will be more convinced because they have to take notice and a consistent message is more likely to be believed by the majority, which will challenge the existing norms. • Compliance means people agree with others an keep their opinions (dissenting ones) private. • Identification is when people are influenced by someone they like and respect. • Obedience could also explain this situation because people comply to the demands of authority. • Eventually the minority become a majority and the norm established is to recycle, encouraging others to conform. • Normative social influence is when people agree with others because they want to be liked and be part of the norms of a group. **AO2** • Mr Meek was in a minority, so would have been in a minority within the school because of the resistence to his ideas. • He would have been able to influence others if his message to recycle was consistent and flexible. • The staff and students may seem resistent to begin with but then they will have the norm to not recycle, challenged by Mr Meek's consistent message.. • The headteacher has the status and authority necessary to exert strength according to social impact theory. • The head is an authority figure the staff and students will act as an agent an comply with the recycling policy even if they did not want to voluntarily. • As the staff start to join in with the policy others may join in, showing normative infuence. **AO3** • However, minority influence can only be successful if Mr Meek adopts a flexible and not a dogmatic approach. • The influence of minorities is supported by Moscovici's blue/green study, where a small consistent minority had more of an influence than an inconsistent minority. • Asch supports the idea that the eventual majority will exert an influence over staff and students as he found high levels of conformity in his line study.	**(12)**

Question Number	Indicative content	Mark
8 (cont'd)	• Milgram's research is evidence for the role of authority because obedience rates were higher when an authority figure was present, compared to not present/plain dressed experimenter. Milgram felt that people obeyed according to the situation rather than their individual decision-making, and so supports the recycling policy being adopted, if pushed by an authority figure. • Studies tend to be experiments that are set up, including Asch, Moscovici and Milgram's work. These may lack validity and might not be sufficient for what happens in real life. **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 versus application vs evaluation/conclusion in their answer.**		
	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 and 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 and 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 and 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	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)

Write your name here

Surname	Other names

Pearson Edexcel
International
Advanced Level

Centre Number | | | | | |

Candidate Number | | | | |

Psychology

International Advanced Subsidiary
Paper 2: Biological Psychology, Learning Theories and Development

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

Paper Reference
WPS02/01

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 96.
- 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 STATISTICAL 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.

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

Answer ALL questions. Write your answers in the spaces provided.

1 (a) **Figure 1** shows a cross-section of the human brain.

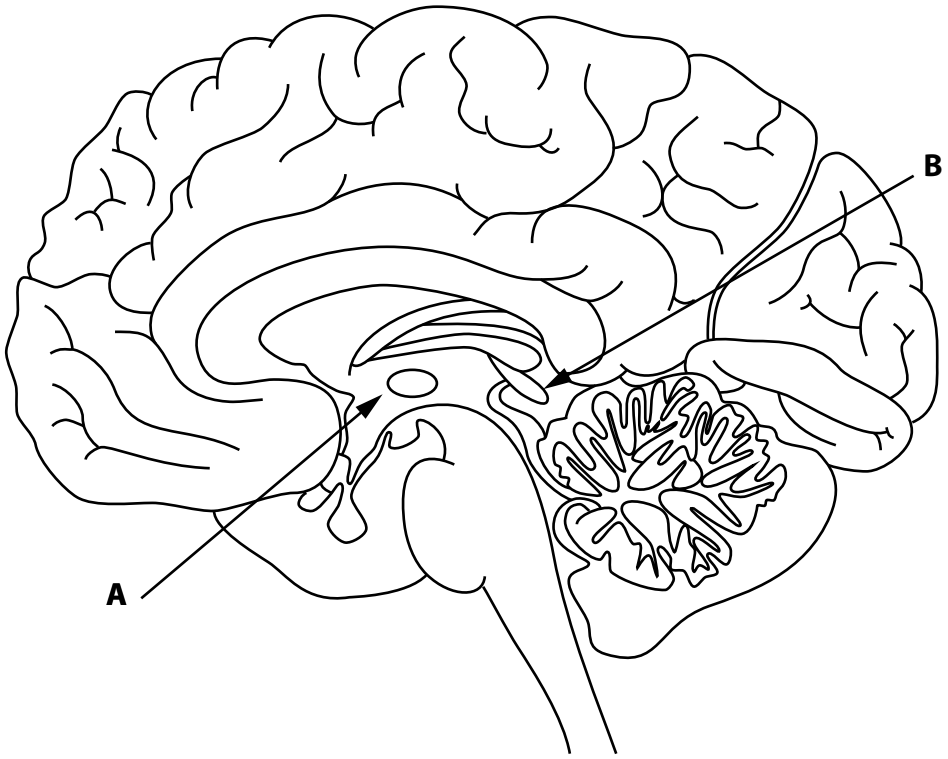

Figure 1

Name structures **A** and **B** which are involved in the monitoring of external daylight in the control of circadian rhythms.

(2)

A .....

B .....

(b) Describe how the brain responds to falling exogenous light levels in order to bring about sleep.

(3)

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(Total for Question 1 = 5 marks)

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2 (a) Tynjala et al. (1993) surveyed 11 to 16 year olds in relation to sleep duration. Information from over 40,000 participants was recorded in different countries with similar patterns of day length. The data is displayed in **Table 1**.

Country	Mean number of hours sleep			Mean number of hours sleep for 11 to 16 year olds
	11/12 years' old	13/14 years' old	15/16 years' old	
Switzerland	10	9.6	9.2	9.6
Belgium	9.7	9.3	8.9	9.3
Scotland	9.7	9.2	8.8	9.2
Norway	9.6	9.2	8.9	9.2
Sweden	9.6	9.1	8.6	9.1
Wales	9.4	9.1	8.9	9.1
Hungary	9.4	9.1	8.9	9.1
Finland	9.3	8.9	8.6	8.9

Table 1

Calculate, from the data in **Table 1**, how much greater the sleep duration of a typical 11/12 year-old-child from Switzerland is compared to a typical 15/16 year-old-child from Finland. Express your answer as a percentage to one decimal point.

(2)

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.....

(b) Describe what the results in **Table 1** show about duration of sleep for children in different countries.

(4)

(c) One possible conclusion from this research is that other factors can override the external zeitgeber of day length in the control of sleep duration.

Explain how the data in **Table 1** supports this conclusion.

(2)

(d) A recent report stated that half of teenagers in Scotland are sleep deprived. Pilot studies in three Scottish schools were carried out in 2013 to assess the scale of the problem.

Suggest **three** questions that could be used in an interview with the teenagers to gather qualitative data on the effect of sleep deprivation.

(3)

1 .....

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2 .....

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3 .....

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(Total for Question 3 = 11 marks)

3 The sleep-wake cycle is an important biological rhythm in humans in relation to maintaining a healthy life-style.

In 1982, a study focusing on the prevention of cancer asked participants about their sleep habits.

The researchers wanted to know whether sleep duration was associated with an increase in mortality over a six-year follow-up period.

A hazard ratio of 1.0 was given to a seven-hour sleep duration, based on previous studies. The hazard ratios for other sleep durations were given relative to this.

A hazard ratio of 1.12 would indicate that the participants were 12% more likely to die within the six-year follow-up period than those sleeping seven hours.

Table 2 shows the hours of sleep and hazard ratios for men and women.

Hours of sleep	% women	hazard ratio	% men	hazard ratio
3	0.1	1.33	0.1	1.19
4	0.7	1.11	0.6	1.17
5	3.5	1.07	2.9	1.11
6	15.9	1.07	15.5	1.08
7	31.8	1.00	33.8	1.00
8	38.8	1.13	38.0	1.12
9	6.0	1.23	5.7	1.17
10+	1.5	1.41	2.0	1.34
Missing data	1.7	no data	1.4	no data

Table 2

(a) (i) Describe the relationship between the hours of sleep and the hazard ratio, using the data in **Table 2**.

(3)

(ii) State which test could be used to see if the relationship between the hours of sleep and hazard ratio is significant.

(1)

(b) **Table 3** shows the number of men and women whose sleep duration was more than seven hours and the number whose sleep duration was less than seven hours.

Number of hours' sleep	Women	Men
Fewer than seven hours	202	191
More than seven hours	480	471

Table 3

(i) Calculate chi-squared for this data by completing **Table 4**.

(4)

		Observed	Expected	O–E	$(O–E)^2$	$(O-E)^2/E$
Males	**<7 hours**	**202**	**199**			
	>7 hours	**480**	**483**			
Females	**<7 hours**	**191**	**194**			
	>7 hours	**471**	**468**			
				chi-squared =		

Table 4

(ii) State the critical value for chi-squared, for this data, at p0.05, for a two-tailed test.

(1)

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.....

(iii) There is no significant gender difference in the relationship between duration of sleep and hazard ratio. Use the data above to justify this statement.

(1)

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.....

(Total for Question 2 = 10 marks)

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QUESTION 4 BEGINS ON THE NEXT PAGE.

4 Assess the validity of **one** piece of research into the role of external zeitgebers in the control of the infradian rhythm of the menstrual cycle.

(8)

(Total for Question 4 = 8 marks)

TOTAL MARKS FOR SECTION A = 34 MARKS

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SECTION B

Answer ALL questions. Write your answers in the spaces provided.

5 (a) Describe the main features involved in the process of classical conditioning.

(3)

(b) Using the concept of operant conditioning, explain how a negative reinforcement strategy would differ from a punishment strategy to bring about a change in a person's behaviour.

(4)

(Total for Question 5 = 7 marks)

6 Jones & Friman (1999) carried out a case study of a 14-year-old boy suffering from a phobia of insects.

The presence of insects in the class room seriously disrupted his performance at school.

The boy said that when he thought insects might be present in the classroom he had difficulty concentrating and that he was often teased by his classmates about his phobia.

He said that the insects he was most afraid of were ladybirds and crickets. Teachers observed him ignore his work, pull his hood over his head, or yell when he saw insects.

He was treated using systematic desensitisation, starting with pictures of insects to having insects near him. At each stage he was rewarded for concentrating on maths tasks given to him.

After his therapy was completed he was observed to examine insects and was unresponsive to the taunts of his peers.

(a) State **one** piece of qualitative data collected in the study.

(1)

.....

.....

(b) State the avoidant behaviour shown by the boy in his initial response to insects.

(1)

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(c) Describe how positive reinforcement was used successfully in the context of this study.

(2)

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(Total for Question 6 = 4 marks)

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7 (a) Capafóns et al. (1998) carried out a study into the use of systematic desensitisation to overcome the fear of flying. In this study patients were recruited through a media campaign (radio, press and television) set up by the research team.

Identify how this is an example of volunteer sampling.

(1)

(b) Explain **one** advantage and **one** disadvantage of using a volunteer sampling technique in this study.

(4)

Advantage

Disadvantage

(c) An alternative therapy to treat phobias could be the use of psychoanalysis.

Explain **two** ways in which psychoanalysis could be an appropriate alternative to using systematic desensitisation to treat phobias.

(4)

(Total for Question 7 = 9 marks)

8 (a) During your course, you will have conducted a practical investigation to observe human behaviour.

Describe how you created and subsequently recorded the behavioural categories used.

(3)

(b) For your practical investigation, state **three** observations could have been improved.

(3)

1 .....

2 .....

3 .....

(Total for Question 8 = 6 marks)

9 Mrs Walker is suffering from a bird phobia. A clinical psychologist suggests that she might benefit from therapy involving systematic desensitisation. Discuss how systematic desensitisation could be used to treat Mrs Walker's bird phobia.

You must make reference to the context in your answer.

(8)

(Total for Question 9 = 8 marks)

TOTAL MARKS FOR SECTION B = 34 MARKS

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SECTION C

Answer ALL questions. Write your answers in the spaces provided.

10 An educational psychologist is helping a teenager at school with problems of depression. During the course of his initial sessions the boy describes his problems as being more severe in the winter months than in the summer. He explains that he is having trouble sleeping properly and as a result falls asleep in class. The psychologist suspects that the teenager's problems might be due to Seasonal Affective Disorder and recommends light therapy.

Evaluate the psychologist's decision to use light therapy as a treatment for Seasonal Affective Disorder.

You must make reference to the context in your answer.

(12)

(Total for Question 10 = 12 marks)

11 Brendgen et al. (2005) examined genetic and environmental effects on aggression. The study used six-year-old twins and looked at the contribution of genes and environment to aggression. One aim was to see whether the correlation between social and physical aggression could be explained by similar genetic or environmental factors.

Evaluate the importance of biological factors **and** social learning theory factors in explaining the development of aggression in pairs of twins.

(16)

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(Total for Question 11 = 16 marks)

TOTAL MARKS FOR SECTION C = 28 MARKS
TOTAL FOR PAPER = 96 MARKS

Psychology Paper 2 Mark Scheme

Question Number	Answer	Mark
1(a)	**AO1 (2 marks)** One mark for naming A as the suprachiasmatic nucleus One mark for naming B as the pineal gland Accept A as hypothalamus.	**(2)**

Question Number	Answer	Mark
1(b)	**AO1 (3 marks)** One mark for describing that the SCN sends signals to the pineal gland. One mark for describing how the pineal gland responds. One mark for describing how melatonin affects sleep. For example: When light levels fall the SCN sends signals to the pineal gland (1) which induces the production of the hormone melatonin (1). This inhibits the brain mechanisms that promote wakefulness causing sleep to occur (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
2(a)	**AO2 (2 marks)** One mark for the correct difference of 1.4, between a typical 11/12-year-old child from Switzerland (10) and a typical 15/16-year-old child from Finland (8.6). One mark for the correct answer of 16.3 % (1.4/8.6 x 100). **Only accept answer to one decimal place as above.**	**(2)**

Question Number	Answer	Mark
2(b)	**AO2 (4 marks)** One mark for each point describing the results up to a maximum of four marks, providing a logical description of sleep duration for children in different countries. **Answers must relate to the data provided in Table 1.** For example: There is a variation in the amount of sleep duration that children have between different countries (1) however the younger children (11/12-year-olds) within a country always have more sleep than the older children (15/16-year-olds) (1). Children from Finland have less sleep at each age compared to the other countries (1) in particular the 11/12-year-olds have only slightly more sleep than the oldest children from Switzerland (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
2(c)	**AO3 (2 marks)** One mark for recognising that the children of the same age should have the same sleep duration. One mark for recognising a relevant factor, which could include social, cultural, gender and genetics. For example: If the external zeitgeber of light controlled sleep duration then the children should have similar patterns of sleep duration, since in the study it stated that the countries all had similar patterns of day length (1). Since this is not the case, there must be some other factors, e.g. cultural that are influencing the sleep duration (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
2(d)	**AO2 (3 marks)** One mark for each suitable question, up to a maximum of three marks. Do not accept questions that elicit closed responses. For example: • How do you think your ability to concentrate in lessons is affected when you do not get enough sleep? (1) • How does the lack of sleep affect your relationships with friends? (1) • What is the effect on your mood when you have not had a good night's sleep? (1) • How is your performance in a test affected if you have not slept well the night before? (1) **Look for other reasonable marking points.**	**(3)**

	Answer	Mark
3(a)(i)	**AO2 (3 marks)** One mark for describing that for below seven hours of sleep for both men and women the hazard ratio is greater than one. One mark for describing that for above seven hours of sleep for both men and women the hazard ratio is greater than one. One mark for describing a directional correlation. Maximum one mark for describing a directional correlation. For example: As the number of hours of sleep decrease below seven for men and women, the hazard ratio increases (1), similarly as the number of hours increase above seven hours the hazard ratio increases (1). There is a positive correlation above seven hours sleep (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
3(a)(ii)	**AO2 (1 mark)** One mark for stating Spearman rank correlation Cco-efficient. Accept Spearman. **Reject all others.**	**(1)**

Question Number	Answer	Mark
3(b)(i)	**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 four decimal places if offered 0.0452, 0.0186, 0.0463, 0.0192). One mark for correct answer 0.129 (0.1293). Accept answer 0.13. Award all four marks for a correct answer to chi-squared value if the table is not used to aid the calculation.	**(4)**

		observed	expected	O-E	$(O-E)^2$	$(O-E)^2/E$
Females	<7 hours	202	199	3	9	0.045
	>7 hours	480	483	3	9	0.019
Males	<7 hours	191	194	3	9	0.046
	>7 hours	471	468	3	9	0.019
						0.129

Question Number	Answer	Mark
3(b)(ii)	**AO2 (1 mark)** X^2 is 3.84 **Reject all others.**	**(1)**

Question Number	Answer	Mark
3(b)(iii)	**AO3 (1 Mark)** One mark for using the figures to justify that the duration of sleep is not significantly different between males and females. For example: X^2 calculated is 0.130 and the critical value is 3.84 ($p \leq .05$, df1, two -tailed), as 0.130 is less than 3.84 (1) there is no significant difference.	**(1)**

Question Number	Indicative content	Mark
4	**AO1 (4 marks), AO3 (4 Marks)** **Example case studies** • Studies on synchronisation of menstrual cycles when women live closely together, e.g. Sabbagh and Barnard 1984 • Studies on pheromones, e.g. lint on lip study Russell et al. 1980 • Cave studies, e.g. Reinberg 1967 • Onset of menarche varying with seasons and with blind girls • Variation in conception rates with season **AO1: Knowledge of one piece of research, e.g. Cave studies Reinberg (1967)** • A young woman • Spent three months in a cave with only dim light from a lamp. • Her menstrual cycle shortened to 25.7 days. • Her circadian sleep-wake cycle lengthened to 24.6 hours. • It took a year to return to its normal frequency. **AO3: Evaluation points may include:** • limited sample sizes • cultural variations being subject to biological differences as well as external zeitgebers • evolutional advantage in support • evidence that the male monthly cycle also exists • controlled experiment approach • supporting circadian evidence of sleep-wake cycle • use of research studies into internal pacemakers to show that internal factors can over-ride the external zeitgeber, e.g. universality of PMS. **For example: Cave study** • Only one woman used so might exhibit bias. • Carried out in controlled environment so other variables are controlled but might not be ecologically valid. • Other isolation studies have been done and support the outcome, showing external validity. • The woman used was Caucasian and may not be generalised to other cultures. • Low light levels have been shown to affect the reproductive cycle, such as affecting the onset of menarche and levels of fertility. • Blind girls reach menarche earlier than sighted ones. **Look for other reasonable marking points.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding versus evaluation/conclusion in their answer.**		
	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	Mark
5(a)	**AO1 (3 marks)** One mark describing the unconditioned stimulus-response (UCS–UCR). One mark describing the use of a new conditioning stimulus (CS). One mark for describing the link of the new conditioned stimulus (CS) to the now conditioned response (CR). For example: Classical conditioning uses a stimulus-response that already exists such as when dogs salivate at the sight of food (1). A bell is rung when presenting food and the response of salivation is seen (1). After several times the bell alone can produce salivation and the response is now considered a conditioned response to the new condition stimulus of a bell (1). **Look for other reasonable marking points, using an appropriate example.**	**(3)**

Question Number	Answer	Mark
5(b)	**AO1 (2 marks), AO3 (2 marks)** One mark for a description of negative reinforcement strategy and one mark for a description of punishment strategy, up to two marks. One mark for providing each justification of how the two strategies differ, up to a maximum of two marks. For example: • In negative reinforcement strategy the aversive stimuli is removed when a change occurs in the person's behaviour to a more desired form, for example, a school pupil might be allowed back into class after exclusion for disruptive behaviour when they promise to behave appropriately (1). • A punishment strategy such as exclusion is administered with no requirement for the person to change their behaviour (1). • The use of negative reinforcement strategy involves exhibiting the more desired behaviour, for example, commitment from a pupil to not misbehave, whereas in using punishment strategy there is no such requirement (1). • The person is more likely to develop a deceitful nature, such as manipulating people in the class so as to shift the blame for their own poor behaviour, when a punishment strategy is used rather than negative reinforcement, to avoid being caught and punished (1). **Look for other reasonable marking points, using an appropriate example.**	**(4)**

Question Number	Answer	Mark
6(a)	**AO2 (1 mark)** One mark for stating qualitative data from the text. For example: • He had difficulty concentrating when he thought insects were present. • He was teased by his classmates. • He said ladybirds and crickets were his most feared insects.	**(1)**

Question Number	Answer	Mark
6(b)	**AO2 (1 mark)** One mark for identifying the boy's behaviour of pulling his hood over his head. **The answer must make reference to the boy's behaviour.**	**(1)**

Question Number	Answer	Mark
6(c)	**AO2 (2 marks)** A logical description linking the reward to the reduction in anxiety, up to two marks. For example: The boy was suffering anxiety when he was in the presence of insects and was not able to succeed in his school-work, using rewards gained from completing mathematical problems (1). He was able to associate the reward with his success which replaced his previous anxiety in the presence of insects (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
7(a)	**AO1 (1 mark)** One mark for identifying the use of media to ask for volunteers (1).	**(1)**

Question Number	Answer	Mark
7(b)	**AO1 (4 marks)** One mark for a valid example and one mark for justification, for each advantage and disadvantage. For example: **Advantages:** • Participants may have less ethical problems (1) owing to their volunteering at the outset (1). • The studies will be ecologically valid (1) since the participants have the phobic condition being explored (1). **Disadvantages** • The sample maybe biased (1) where the participants might be engaged for the wrong reason such as a need for attention (1). • Might not be representative (1) due to the target group of the campaign being too specific (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
7(c)	**AO3 (4 marks)** Up to two marks for each explanation as to how psychoanalysis is an appropriate alternative to systematic desensitisation to treat phobias. For example: Psychoanalysis addresses the root cause of the phobia, whereas systematic desensitisation only treats the symptoms (1). Therefore the phobia is unlikely to spontaneously re-emerge (1). Psychoanalysis is more ethical (1) in that the client is engaged in an understanding of their problem and gains insight, whereas in systematic desensitisation the therapist does not attempt to allow the client to gain an understanding of their phobia and only takes them through the agreed hierarchy of exposure (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
8(a)	**AO1 (3 marks)** Three marks for a description of how behavioural categories were created and recorded. For example: We initially observed the …… to see what behaviours were visible (1). We made a list of these and compared lists between the different observers to agree on a complete list (1). We then grouped them into categories of similar activities, for example…… Once the record sheet was created we trialled it by independent observations to see if it was feasible to record these categories clearly (1). **Look for other reasonable marking points relating to student's own observation investigations.**	**(3)**

Question Number	Answer	Mark
8(b)	**AO3 (3 mark)** One mark for each statement improving the observations. For example: • To increase reliability we could have modified the record sheet by …….(1). • Increased the time spent observing …….(1). • Repeat the observations in other situations such as …….(1). • Have more than one observer rating the same behaviour (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Indicative content	Mark
9	**AO1 (4 marks), AO2 (4 marks)** **AO1: A description of the systematic desensitisation process** • Constructing an anxiety hierarchy that is rated from lowest to highest. • Relaxation training is given so that complete relaxation is achieved at each stage of the therapy. • If anxiety arises at any stage then the previous stage is revisited. • The client must continue with sessions until the highest rated step has been achieved and no anxiety shown for the treatment to be considered complete. **AO2: Examples used from the scenario such as** • A set of stimuli involving birds such as photographs of feathers, progressing up to holding single feathers to contact with live birds. • Mrs Walker gives rating to the hierarchy that has been designed between her and the therapist. • Mrs Walker has to give her informed consent agreeing to continue to attend sessions until the therapist has taken her through the complete hierarchy. • Mrs Walker practises the relaxation techniques she had been taught. • The therapist gains her trust at the outset by reassuring her that at every step is she becomes anxious then the previous step will be revisited. • Mrs Walker will be informed that this process will need to be carried out over several sessions and will need her motivation to continue. **Look for other reasonable marking points in the context of the scenario.**	**(8)**

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding versus application in their answer.**		
	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 (4 marks), AO2 (4 marks), AO3 (4 marks)** **AO1** • SAD is more common in winter months. • Due to lack of light as day length shortens. • Melatonin is made later in the day and so reduces the production of serotonin and the quality of sleep. • Less REM is achieved. • This leads to many symptoms such as depression. • Light therapy is the usual treatment for SAD to increase the amount of light during the day. **AO2** • The boy is exhibiting poor sleep patterns. • He describes his problems as increasing in the winter months when day length is short. • He is falling asleep during the day showing that he is sleep deprived. • He is said to be exhibiting symptoms of depression. • His symptoms are serious enough to be of concern to him and his school to warrant the help of a counsellor. **AO3** • Given the serious nature of the boy's condition it would seem reasonable to try light therapy. • This therapy is non-invasive and so cannot harm the boy by trying it. • The application of light therapy is very precise with the light being used at the right duration and at the right timings. • He will need to follow a distinct schedule for it to be effective which he might not be able to maintain if he is distracted, for example, by his social life. • It is not clear as to whether the therapy brings about an effect because of physical changes in physiology or due to psychology (placebo effect) but since the therapy itself is not harmful it is irrelevant as to which it is. • Light equipment is expensive and there may not be enough funds to help him. • Alternative medication might bring about a quicker solution to his depression but does have side effects. **Look for other reasonable marking points.**	**(12)**

Level	Mark	Descriptor
AO1 (4 marks), AO2 (4 marks), AO3 (4 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding versus application vs evaluation/conclusion in their answer.**		
	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 and 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 and 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 and 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	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
11	**AO1 (6 marks), AO3 (10 marks)** **AO1: Social learning theory** • Learning of behaviour occurs through imitation of role models. • The observation of the role model being rewarded leads the observer to imitate. • Role models are people the observer respects, e.g. a parent, sibling, teacher or idol. • Refer to Bandura's study on aggression. **AO1: Biological theory** • Biological factors can control behaviour. • Aggression can be influenced by hormones such as testosterone and by anatomical structures in the brain such as the functioning of the amygdala. • Genes carry the information to produce biological variety which might be expressed as varying amounts of aggressive tendencies in humans. • Refer to monoamine oxidase A. **AO3** • Concordance studies of twins can show if there is a genetic factor involved in behaviour such as aggression. • If a concordance of 1 is found between two twins then a genetic factor might be indicated. • But twins live together and so share the same environment so they could have learnt their behaviour by observing violent role models. • By using identical and non-identical twins some of the environmental factors can be separated from the genetic factors. • If higher concordance between identical than non-identical twins then genetic factors more likely than SLT. • But twins who are identical tend to be treated more similarly so might have a similar SLT exposure, e.g. follow same idols. • Adoption studies can aid the separation of environmental factors from genetic factors. If identical twins reared apart have higher concordance than non-identical twins reared together, then genetic rather than SLT factors are highlighted.	**(16)**

Question Number	Indicative content	Mark
11 (cont'd)	• But adoption might still not be unbiased and the twins may already have observed the same violent role models before the adoption or might still have access to the same violent role models. • If adopted from a violent home then even if reared apart they both might be subject to self-fulfilling prophecy and might seek out violent role models. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (6 marks), AO3 (10 marks) **Candidates must demonstrate an equal emphasis between knowledge and understanding vs application versus evaluation/conclusion in their answer.**		
	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)

Write your name here

Surname	Other names

Pearson Edexcel
International
Advanced Level

Centre Number	Candidate Number

Psychology

International Advanced Level
Paper 3: Applications of Psychology

Sample assessment materials for first teaching September 2015
Time: 1 hour and 30 minutes

Paper Reference
WPS03/01

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 in Section A, and **all** questions from **EITHER** Option 1 criminological psychology **OR** Option 2 health psychology.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 64.
- 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 STATISTICAL 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.

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

Answer ALL questions. Write your answers in the spaces provided.

1 (a) Jacob was teaching his younger brother how to complete a puzzle. Jacob's younger brother had not seen a puzzle before.

Using your knowledge of Vygotsky's theory of cognitive development, describe **one** way in which Jacob could teach his brother to complete a puzzle.

(2)

.....

.....

.....

.....

(b) Explain **one** reason why Vygotsky's theory of cognitive development could be considered a better way of teaching Jacob's brother to complete a puzzle compared to Piaget's theory.

(2)

.....

.....

.....

.....

(Total for Question 1 = 4 marks)

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QUESTION 2 BEGINS ON THE NEXT PAGE.

2 Claude investigated Erikson's psychosocial stages of development using a questionnaire. Claude was particularly interested to see whether teachers and charity workers showed a greater level of caring compared to other participants. The level of caring was measured by a scoring system, where a high score related to a greater level of caring shown by the participant.

Claude scored each participant on traits of generativity and stagnation. Participants with generativity traits were given a high score and those with stagnation traits given a low score.

Table 1 shows the mean scores in the investigation.

	Teachers and charity workers (Mean age 40 years)	**Other participants (Mean age 40 years)**
Mean score (out of 20)	14	8
Standard deviation	4	1.2

Table 1

(a) Interpret the data in **Table 1**.

(2)

(b) State what Erikson meant by generativity.

(1)

(c) Claude's interpretation of the results is the same as your interpretation of **Table 1**. Use your knowledge of Erikson's psychosocial stages of development to explain why Claude's study might be flawed.

(3)

(Total for Question 2 = 6 marks)

3 (a) A study looked at the relationship between the security of infant attachment and factors such as infant temperament (negative emotions and positive mood), maternal sensitivity (the amount the mother responded to the child's needs) and parental confidence in their child-rearing skills.

The data was gathered using questionnaires with the mothers. The correlation co-efficients, along with an indication of the levels of significance, are shown in **Table 2**.

Note: *= $p < 0.05$, **= $p < 0.01$

	Infant positive mood	**Parental confidence**	**Maternal sensitivity**	**Infant attachment security**
Infant positive mood	-	-0.26*	0.50**	0.44**
Parental confidence	0.26*	-	-0.17	0.24*
Maternal sensitivity	0.50**	-0.17	-	0.32*
Infant attachment security	0.44**	0.24*	0.32*	-

Table 2

Give the number of significant findings in **Table 2**.

(1)

.....

.....

(b) Describe the meaning of p<0.01.

(2)

.....

.....

.....

.....

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(c) This study used questionnaires and gathered quantitative data.
Describe an alternative research method that would gather qualitative data, giving more detail about attachment issues.

(3)

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.....

.....

.....

(Total for Question 3 = 6 marks)

4 Connor's attachment type is investigated using the strange situation. During the observation he becomes distressed and cannot be calmed.

Discuss how Connor's behaviour can be interpreted using the strange situation.

You must make reference to the context in your answer.

(8)

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(Total for Question 4 = 8 marks)

5 Bowlby's maternal deprivation hypothesis is one explanation of attachment. Evaluate theories of attachment, including Bowlby's maternal deprivation hypothesis.

You must refer to research evidence within your answer.

(8)

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(Total for Question 5 = 8 marks)

TOTAL FOR SECTION A = 32 MARKS

SECTION B

Answer ALL questions from EITHER OPTION 1: CRIMINOLOGICAL PSCHOLOGY or OPTION 2: HEALTH PSYCHOLOGY.

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6 (a) One symptom of anti-social personality disorder is a lack of empathy. A psychologist often assesses the presence of this symptom using clinical interviews.

Define the term 'empathy'.

(1)

.....

.....

(b) Give **one** reason why the use of clinical interviews in this diagnosis might be invalid.

(1)

.....

.....

(Total for Question 6 = 2 marks)

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QUESTION 7 BEGINS ON THE NEXT PAGE.

7 (a) Amelie and Kai undertook research to explore the accuracy of eyewitness testimony. They asked each participant 20 questions about what they saw during a film clip of a street robbery. The questions required a 'Yes/No' response, and they recorded whether participants' responses were correct or incorrect.

The results of the study are shown in **Table 3**.

Participant	Number of correct responses	Number of incorrect responses
A	14	6
B	10	10
C	16	4
D	15	5
E	12	8
F	16	4
G	9	11
H	18	2
Total	**110**	**50**

Table 3

Calculate the range of correct responses given by the participants.

(1)

.....

.....

(b) Amelie and Kai overheard two participants saying they had guessed the answers, responding 'Yes' or 'No' randomly to the questions, as this would give them a 50:50 chance of being correct.

Calculate the percentage of participants that showed greater accuracy than if they had been guessing the answer.

(1)

.....

.....

(c) Using the information given below in **Table 4**, **calculate** the standard deviation for the number of incorrect responses, to two decimal points.

The formula can be found in the formulae and statistical tables at the front of the paper.

You must show your working.

(2)

	Number of incorrect responses	$x - \bar{x}$	$x - \bar{x}$
Participant A	6	-0.25	0.0625
Participant B	10	3.75	14.0625
Participant C	4	-2.25	5.0625
Participant D	5	-1.25	1.5625
Participant E	8	1.75	3.0625
Participant F	4	-2.25	5.0625
Participant G	11	5.75	33.0625
Participant H	2	-4.25	18.0625
Total sum	50	1	80
Mean of incorrect responses = 6.25			

Table 4

(d) It was only possible for Amelie and Kai to use eight participants in their research, all of whom were psychology students.

Explain **two** implications that this has on the conclusions they can draw from the data collected.

(4)

(Total for Question 7 = 8 marks)

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8 (a) Harper studied court records to investigate if there was any ethnic bias in the rates at which offenders are found guilty by a jury.

She tallied the number of guilty and innocent verdicts for white and black defendants, shown in **Table 5**.

Jury verdict	White defendants	Black defendants
Guilty	IIII IIII	IIII IIII IIII IIII II
Innocent	IIII IIII IIII	IIII IIII II

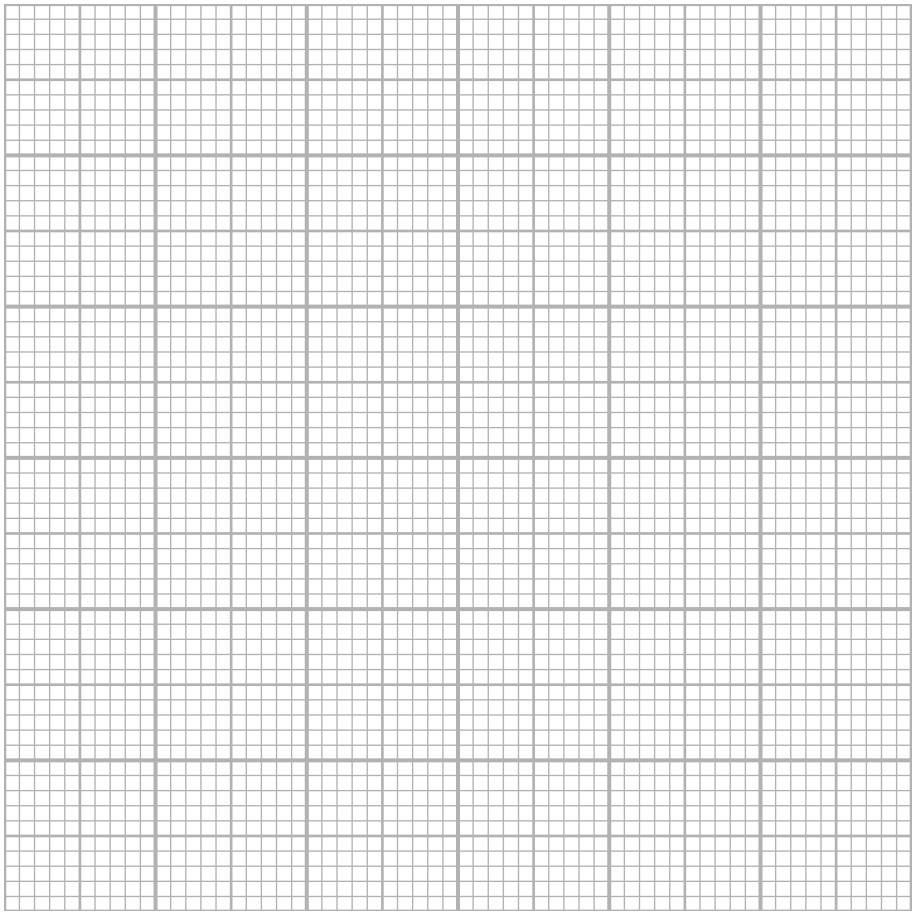
Table 5

Using the data in **Table 5**, draw a bar chart to illustrate the jury decisions for black defendants.

You should title and label your bar chart appropriately.

(2)

Title



(b) Many researchers have investigated the effect of race on jury decision-making by using mock juries.

Explain **two** issues with drawing conclusions from research using mock juries.

(4)

(Total for Question 8 = 6 marks)

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QUESTION 9 BEGINS ON THE NEXT PAGE.

9 Evaluate ethical issues when researching offenders.

(8)

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(Total for Question 9 = 8 marks)

10 Freya has been having problems managing her anger and struggles to control her behaviour when angry, which can lead to aggression. Haruto also becomes angry but he is not sure what makes him angry.

Discuss how Cognitive Behavioural Therapy (CBT) could be used to help both Freya and Haruto manage their anger.

You must make reference to the context in your answer.

(8)

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(Total for Question 20 = 8 marks)

TOTAL FOR SECTION B OPTION 1 = 32 MARKS

OPTION 2: HEALTH PSYCHOLOGY

11 (a) Selye's General Adaptation Syndrome explains how we may react to stress. One stage is the 'Resistance stage'. Self-report data is used to determine a person's stage of stress.

Describe the resistance stage.

(1)

.....

.....

(b) Give **one** reason why self-report data is a valid way to assess stages of stress in an individual.

(1)

.....

.....

(Total for Question 11 = 2 marks)

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QUESTION 12 BEGINS ON THE NEXT PAGE.

12 (a) James and Amira conducted research to investigate the types of coping strategy used amongst students studying for their A-level examinations.
They gave 12 participants a structured questionnaire asking them about the number of times they had used several coping strategies in the month before their exams. The results of the research are shown in **Table 6**.

	Appraisal-focused coping	Problem-focused coping	Emotion-focused coping
Participant A	2	9	8
Participant B	4	6	13
Participant C	5	9	7
Participant D	7	12	6
Participant E	3	9	7
Participant F	4	16	2
Participant G	8	8	8
Participant H	6	8	14
Participant I	9	13	11
Participant J	8	17	9
Participant K	8	4	12
Participant L	4	10	14

Table 6

Calculate the range of appraisal-focused coping strategy used by students.

(1)

.....

.....

.....

(b) Calculate the percentage of participants who used problem-focused coping strategies more than emotion-focused strategies.

(1)

.....

.....

(c) Using the information in Table 7, calculate the standard deviation for the number of times the students resorted to emotion-focused strategies to manage their exam stress, to two decimal points.

The formula can be found in the formulae and statistical tables at the front of the paper.

(2)

	Emotion-focused coping	$x - \bar{x}$	$(x - \bar{x})^2$
Participant A	8	-1.25	1.5625
Participant B	13	5.75	14.0625
Participant C	7	-2.25	5.0625
Participant D	6	-3.25	10.5625
Participant E	7	-2.25	5.0625
Participant F	2	-7.25	52.5625
Participant G	8	-1.25	1.5625
Participant H	14	4.75	22.5625
Participant I	11	1.75	3.0625
Participant J	9	-0.25	0.0625
Participant K	12	2.75	7.5625
Participant L	14	4.75	22.5625
Total sum	111	2	146.25
Mean number of emotion-focused strategies = 9.25			

Table 7

(d) James and Amira used closed questions in their questionnaire.

Explain **two** implications that this has on the conclusions they can draw from the data collected.

(4)

(Total for Question 12 = 8 marks)

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QUESTION 13 BEGINS ON THE NEXT PAGE.

13 (a) Elliott has been studying factors that contribute to stress, specifically the relationship between personality type and level of stress.

He tallied the level of stress of participants and their personality type, which are shown below in **Table 8.**

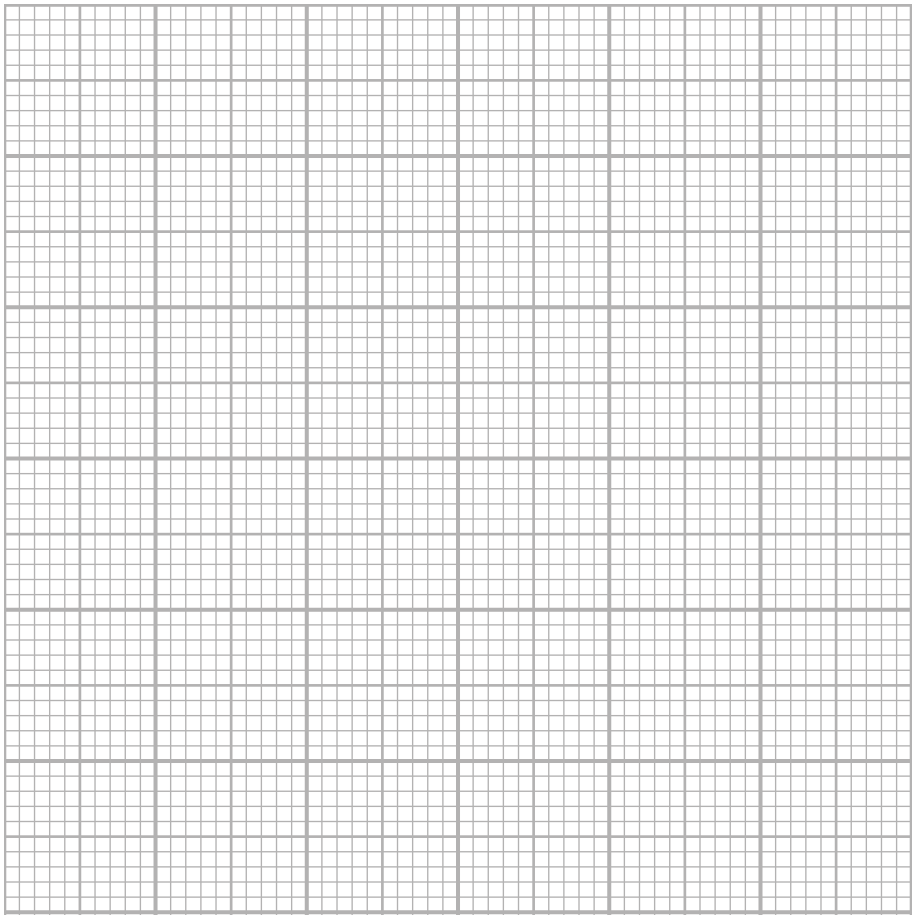
Levels of stress	Type A personality	Type B personality
High	IIII IIII III	IIII
Low	IIII	IIII II

Table 8

Using the data in **Table 8**, draw a bar chart to illustrate the levels of stress of those with Type B personality.

You should title and label your bar chart appropriately.

Title



(b) Researchers investigating the relationship between personality type and stress have collected self-report data.

Explain **two** issues with drawing conclusions from this research into Type A

(4)

(Total for Question 13 = 6 marks)

14 A focus group is a selection of people chosen to participate in a discussion. Focus groups discuss issues such as their experience of stress levels in the workplace.

Evaluate the ethics of using focus groups within health research.

(8)

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(Total for Question 14 = 8 marks)

15 Javier becomes anxious when he leaves his house. He is also anxious in public places, particularly when it is crowded. When Javier gets anxious he often panics, which makes him feel more anxious.

Discuss how Cognitive Behavioural Therapy (CBT) could be used to help Javier manage his anxiety.

You must make reference to the context in your answer.

(8)

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(Total for Question 15 = 8 marks)

TOTAL FOR SECTION B OPTION 2 = 32 MARKS
TOTAL FOR PAPER = 64 MARKS

Psychology Paper 3 Mark Scheme

Question Number	Answer	Mark
1(a)	**AO1 (1 mark), AO2 (1 mark)** One mark for describing a concept that could be used and a further mark for applying this concept appropriately to the scenario. For example: • Jacob could use Vygotsky's concept of scaffolding by slowly removing support (1). He could do this by demonstrating how to place the puzzle pieces and slowly encouraging his younger brother to place the pieces himself (1). • Jacob could use his knowledge of the zone of proximal development to identify what his younger brother can do with help (1). He could show how the puzzle pieces fit together, which his younger brother does not know, and observe when this skill becomes actual rather than proximal (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(b)	**AO2 (1 mark), AO3 (1 mark)** One mark for identifying why Vygotsky's theory of cognitive development is better and a further mark for relating this to the scenario. For example: Vygotsky's theory of cognitive development is better than Piaget's because it takes account of the social aspect of learning which Piaget would not take into account as he says that children are independent learners (1). By completing the puzzle with his brother he is more likely to complete it faster (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
2(a)	**AO2 (2 marks)** One mark for interpreting the mean and one mark for interpreting the standard deviation. For example: • The mean shows that teachers and charity workers were more likely to be caring because they have a higher score for generativity than the other participants (1). • The standard deviation suggests that there is a greater spread in the caring rating for the teachers and charity workers compared to the small spread of scores around the mean for the other participants (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
2(b)	**AO2 (1 mark)** One mark for stating what Erikson meant by generativity. For example: Generativity is for caring and guiding the next generation (1). **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
2(c)	**AO3 (3 marks)** Three marks for ideas as to why this interpretation may be flawed. For example: • The researchers did not ask participants about whether or not they had children/were involved in occupations that needed caring. The 'other group' may include doctors and nurses or those with children and grandchildren (1). • The mean age of both groups was 40 years, which means that not all participants were in this psychosexual stage of development. Erikson has been criticised for the ambiguity between ages and stages (1). • Participants may guess the nature of the study and respond in a way that makes themselves look caring or satisfy the perceived aims of the study which might cause bias (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
3(a)	**AO2 (1 mark)** One mark for identification of number of significant findings (each separate relationship should only be counted once). • 5/Five (1). **Reject other answers.**	**(1)**

Question Number	Answer	Mark
3(b)	**AO1 (2 marks)** One mark for description and one mark for development. • The probability of results being by chance factors in less than 1%/The likelihood of the relationship occurring by chance alone is 1% (1). • This result is considered to be (statistically) highly significant (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
3(c)	**AO3 (3 marks)** One mark for each point describing an alternative research method linked to how the data would be more detailed. Alternative methods include interviews, case studies, focus groups or observations. No credit is given for interviewing the infant, as this would not be feasible. For example: • The researcher could spend some time observing the child's interactions with the caregiver to gather a greater range of behaviours (1). • They should observe the level of emotional warmth the caregiver shows to the child when the child needs something that reduces social desirability (1). • The researcher could document comments made by the caregiver to the child and comments made by the child to the caregiver to determine temperament and maternal sensitivity increasing mundane realism (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Indicative content
4	**AO1 (4 marks), AO2 (4 marks)** **AO1** • The strange situation set up a procedure of caregiver and stranger entrance and exits to observe the reactions of the children. • The stranger enters the room in the presence of the caregiver, and is left alone with the child as the caregiver leaves the room. • An observer/video camera records the behaviour/emotional reaction of the child/when a caregiver leaves the room and stranger enters. • The stranger attempts to console the child in the absence of the caregiver. • On reuniting, the caregiver tries to console the child. **AO2** • Connor would have demonstrated stranger fear, being wary of the stranger and distressed by their presence. • He demonstrated separation anxiety at his caregiver leaving him in the room. • Connor is likely to show resistance at the prospect of exploring the room, including the toys in it. • When the caregiver returned Connor would demonstrate resistance to their return, and be difficult to console. **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 versus application in their answer.**		
	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
5	**AO1 (4 marks), AO3 (4 marks)** **AO1** • Classical conditioning would suggest that the child gains pleasure in food. They associate the caregiver with food which makes them happy when they see the caregiver. • A caregiver will also tend to the child when distressed. This reduces the child's distress. Over time they associate the caregiver with an absence of distress. • If the caregiver reinforces the child's behaviour, i.e. smiles to the child when they try and talk, the child will continue to talk to the caregiver, and gains pleasure in being rewarded. • The caregiver also receives reward as they gain pleasure from seeing the child talk. This reciprocal reinforcement strengthens the attachment between caregiver and child. • Bowlby's maternal deprivation hypothesis suggests a child has an innate need to attach to a main attachment figure (monotropy). • The quality of this attachment is significantly greater than any future attachments. **AO3** • Bowlby concluded that prolonged separation/maternal deprivation in the first two years of life increases the likelihood that the child will exhibit affectionless psychopathy. • Evidence for maternal deprivation can be found in his forty-four thieves study (1944). Fourteen children from the main group were identified as affectionless psychopaths. Of these, twelve had experienced prolonged separation from their mothers in their first two years of life. • These theories suggest infants would be unable to form attachments with others than those who feed them or calm them. This has been disproved by Schaffer & Emerson (1964) as children can form relationships with more than one care giver. • Harlow's monkeys showed that they were soothed by a surrogate mother that did not give them food as it was a padded frame. This would not occur if they associated the parent just with food. • Harlow's monkeys did show that monkeys reared in isolation from their mothers suffered emotional and social difficulties as they grew. • Research into animals may not be applicable to humans due to the complexity of human social relationships. • Rutter has found that children form attachments to a number of caregivers, and even inanimate objects. • Attachment research has influenced childcare, resulting in guidance regarding a high staff to child ratio and low staff turnover in childcare settings. **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 versus evaluation/conclusion in their answer.**		
	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)

SECTION B: OPTION 1 CRIMINOLOGICAL PSYCHOLOGY

Question Number	Answer	Mark
6(a)	**AO1 (1 mark)** One mark for description of empathy. For example: • They do not think of others • The ability to understand and share the feelings of others **Look for other reasonable marking points.**	**(1)**

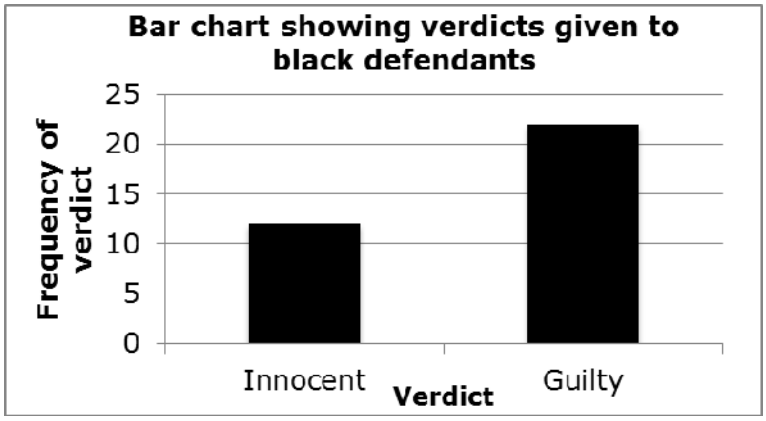
Question Number	Answer	Mark
6(b)	**AO3 (1 mark)** One mark for commenting on the validity of clinical interviews. For example: • The diagnosis is undertaken by clinical assessment, which can be very subjective, based on the clinician's opinion (1). **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
7(a)	**AO2 (1 mark)** One mark for calculation of the range. 9/Nine (1). **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
7(b)	**AO2 (1 mark)** One mark for correct percentage. (6/8)*100 = 75% **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
7(c)	**AO2 (2 marks)** One mark for dividing the (sum of values)^2 by 7 (n-1). One mark for deriving the correct answer. Award two marks for correct answer, if no working shown. The (sum of values)^2 /(n-1) = **80/7** One mark for calculating the square root = **3.38** to two decimal points. **Reject all other answers.**	**(2)**

Question Number	Answer	Mark
7(d)	**AO3 (4 marks)** One mark for identifying the implication and one mark for justifying the implication. Maximum two marks for identifying implications with no justification. For example: • It is not possible to say that eight participants represent the wider population (1). It can therefore be difficult to confidently say that these factors really do affect eyewitness testimony (1). • They may have responded in a way that demonstrated their knowledge of psychology, not how they would have typically reacted without this information (1). Their responses would therefore not reflect a naïve population, presenting biased results (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
8(a)	**AO2 (2 marks)** One mark for appropriate title/labelling. One mark for accurate bars. For example:  **Accept reverse axes.**	**(2)**

Question Number	Answer	Mark
8(b)	**AO3 (4 marks)** One mark for each identification and one mark for linked justification, for each issue. For example: • The participants may be less emotionally invested in a mock trial than a juror in a real case (1). This may reduce the effort they put into their responses (1). • Mock juries often use students as jury members (1). This is not representative of the age and experience of a real jury (1). • Mock juries do not reflect real life criminal cases (1). This results in low ecological validity (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Indicative content
9	**AO1 (4 marks), AO3 (4 marks)** Response should include more than one ethical issue, i.e. distress, protection of participant, consent etc. **AO1** • When undertaking research it is important that the offender has the right to withdraw from the research if they choose not to continue. • The offender may experience distress when speaking of their crimes. They may be traumatised by their offence and not want to speak about it. • The offender should provide voluntary consent to participate. Due to some offences being potentially high profile, it is important that they are informed what will happen with the information they provide. • The type of research undertaken, i.e. interviews or questionnaires, presents with different ethical issues. **AO3** • To cause an offender distress by speaking about their offence goes against ethical guidelines. • If an offender has committed a specific crime, documenting this may make them identifiable, which goes against the guideline of protection of the participant and can contribute to distress. • Offenders may believe that they have to participate and may be negatively viewed by prison staff if they do not. This may mean that they agree to participate to avoid perceived repercussions rather than because they want to take part. • To use questionnaires it is possible to undertake anonymous research, whereas interviews would involve meeting the offender directly. **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 versus evaluation/conclusion in their answer.**		
	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	Indicative content
10	**AO1 (4 marks), AO2 (4 marks)** **AO1** • CBT works by changing a person's thoughts about a situation, which affects how they react to that situation. • It involves a person spending time with a therapist and learning to reflect on their own behaviour. • It can be accessed in a number of ways, such as self-help materials and via therapists. This makes it more accessible to a wider range of people. • It can help to reduce the irrational beliefs and physical symptoms experienced with anger. **AO2** • Haruto can be supported to start to recognise his anger triggers. • He can then be taught how to change his thoughts about these triggers, so that they no longer make him angry. • Freya can be introduced to relaxation skills to reduce her anger, which will make her less aggressive. • They could both address the faulty thinking that is associated with making them experience anger in the first place. **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 versus application in their answer.**		
	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)

SECTION B: OPTION 2 HEALTH PSYCHOLOGY

Question Number	Answer	Mark
11(a)	**AO1 (1 mark)** One mark for description of the resistance stage. • The body lowers production of the stress hormones (1). • Physiological functions return to normal (1). • Blood glucose levels and adrenaline levels remain high (1). **Look for other reasonable marking points.**	**(1)**

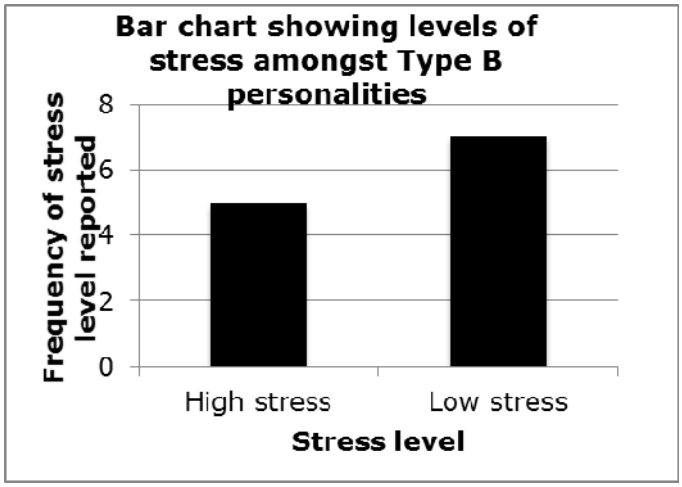
Question Number	Answer	Mark
11(b)	**AO3 (1 mark)** One mark for commenting on why self-report data is valid to measure stress. • Self-report data is directly about the individual which is 'real life' data (1). **Look for other reasonable marking points.**	**(1)**

Question Number	Answer	Mark
12(a)	**AO2 (1 mark)** One mark for calculation of the range. 7/Seven (1). **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
12(b)	**AO2 (1 mark)** One mark for correct percentage. (7/12)*100= 58%. **Accept 58.3%** **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
12(c)	**AO2 (2 marks)** One mark for dividing the (sum of values)^2 by 11 (n-1) One mark for deriving at the correct answer. Award two marks for correct answer, if no working shown. The (sum of values)^2 /(n-1) = **146.25/11** One mark for calculating the square root = **3.65** to two decimal points. **Reject all other answers.**	**(2)**

Question Number	Answer	Mark
12(d)	**AO3 (4 marks)** One mark for identifying the implication and one mark for justifying the implication. Maximum two marks for identifying implications with no justification. No credit is given for description of the methodology. • The participants may not have been able to fully respond in the way they wanted (1). This means their responses may not reflect their stress-management skills (1). • The over structured nature of the questions may have led to bias in the responses (1). The questions therefore may have guided participants to respond in a particular way rather than giving an open response (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
13(a)	**AO2 (2 marks)** One mark for appropriate title/labelling. One mark for appropriate bars. For example:  **Accept reverse axes.**	**(2)**

Question Number	Answer	Mark
13(b)	**AO3 (4 marks)** One mark for each identification and one mark for linked justification, for each issue. For example: • Assessment of personalities tend to categorise people into types (1). This is an oversimplified way of defining personalities (1). • People have pre-conceived ideas of their own personality type (1) and answer in a way which is consistent with this (1). • The data is self-report so individuals may feel embarrassed to discuss their true stress levels (1). As a result they may lie about their stress level, resulting in demand characteristics (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Indicative content
14	**AO1 (4 marks), AO3 (4 marks)** All issues regarding human ethics, i.e. consent, right to withdraw are accepted, as long as this is applicable to focus groups. More than one ethical issue must be introduced. **AO1** • Human research is heavily regulated by legislation in order to protect participants. • All individuals should be offered the ability to leave the study at any point, even part way through a focus-group discussion. • No one should be forced to take part in the focus group, and provide consent willingly. • Focus groups are often video/tape recorded to help with data collection. The purpose of this recording and how it will be stored securely needs to be considered clearly. **AO3** • Individuals may experience heightened distress if the topic is personal to them, and others will witness this distress, which can heighten distress further. • As the researcher is actively involved in the study and responding to the comments being given, the questions they ask have the potential to appear judgemental if not controlled carefully. • Focus groups may not be the most ethical methodology when discussing a sensitive topic due to concerns about confidentiality within the group, as a result of the public nature of the disclosure. • Individuals may be reluctant to leave the study, even if distressed for fear of being judged by others in the group. • Participants are less likely to be deceived by the nature of the discussion. **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 versus evaluation/conclusion in their answer.**		
	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	Indicative content
15	**AO1 (4 marks), AO2 (4 marks)** **AO1** • CBT works by changing a person's thought about a situation, which affects how they react to that situation. • It is helpful as a way of treating anxiety as it can help to reduce the irrational beliefs and physical symptoms experienced with this condition. • It can be accessed in a number of ways, such as self-help materials and via therapists. • It involves an individual spending time with a therapist and learning to reflect on their own behaviour, such as triggers for their anxiety. **AO2** • Javier can be supported to start to recognise what specifically makes him anxious when he leaves the house. • He can then be taught how to change his thoughts about these triggers, so that they no longer make him anxious. • He can be introduced to relaxation skills to reduce his anxiety. • He could also address the faulty thinking that is associated with making him experience anxiety in the first place. **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 versus application in their answer.**		
	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)

Write your name here

Surname	Other names

Pearson Edexcel
International
Advanced Level

Centre Number	Candidate Number

Psychology

International Advanced Level
Paper 4: Clinical Psychology and Psychological Skills

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

Paper Reference
WPS04/01

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 96.
- 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 STATISTICAL 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

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

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.

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

Answer ALL questions. Write your answers in the spaces provided.

1 (a) (i) Explain **one** consequence for the patient when diagnosing mental disorders, with reference to validity.

(2)

(ii) Explain **one** consequence for the patient when diagnosing mental disorders, with reference to reliability.

(2)

(b) Explain why a clinician might prefer to use the ICD classification system over the DSM.

(2)

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(c) A content analysis was carried out by Robles et al. (2015) analysing replies to open-ended questions from 505 clinicians from eight countries.

The analysis showed some agreement about which disorders they would remove from mental health disorder classifications.

The reasons they gave for removing disorders include the difficulty in specifying boundaries for mental disorders. 305 of the clinicians recommended the removal of one or more disorders and were questioned further. Some of their recommendations are given in **Table 1**.

Disorder	**Number of clinicians recommending removal**
Gender identity disorder	98
Primary insomnia	45
Alzheimer's dementia	31
Reactive attachment disorder	31

Table 1

(i) Calculate the percentage of clinicians that recommended the removal of one or more disorders, to two decimal points.

(1)

.....

.....

(ii) Calculate the difference in percentage between the number of clinicians recommending the removal of gender identity disorder and the number of clinicians recommending the removal Alzheimer's dementia from the 305 clinicians, to two decimal points.

Show your working.

(2)

.....

.....

.....

.....

(d) Robles et al. found that participants from Japan and China were most likely to suggest the removal of sexual dysfunction and participants from Mexico, Spain and India were less likely to suggest the removal of this disorder. The researchers carried out a chi-squared analysis on the findings, with df=7, X^2=23.3 and p≤0.001.

Give 0.001 as a ratio.

(1)

(e) When the study asked about removal the researchers used a limited set of disorders. Explain why this was a possible source of bias in the study.

(2)

(f) Robles et al. used responses to open-ended questions. Explain **two** advantages of using this type of data for this study.

(4)

(Total for Question 1 = 16 marks)

2 A clinical psychologist was listening to a client talking about their symptoms, which included hallucinations. On hearing this, she began to ask more about the client's feelings and experiences. She started to think about referring the client to a psychiatrist.

(a) Taking into account the mental health disorders that you have studied, name **one** mental health disorder that the clinical psychologist might be considering in her diagnosis of this client.

(1)

(b) Describe **two** symptoms, other than hallucinations, that the psychologist might be expecting if she agrees with your initial thoughts about diagnosis.

(4)

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(c) Explain, using research evidence, why drug therapy might be an appropriate treatment for this client.

(4)

(Total for Question 2 = 9 marks)

3 (a) Describe the procedure of Rosenhan's (1973) study On Being Sane in Insane Places.

(3)

(b) Explain **one** strength and **one** weakness in the generalisability of Rosenhan's (1973) study.

(4)

Strength

Weakness

(Total for Question 3 = 7 marks)

TOTAL FOR SECTION A = 32 MARKS

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SECTION B

Answer the question in this section. Write your answer in the space provided.

4 In the treatment of unipolar depression or anorexia nervosa, different therapies are used with varying effectiveness.

Effectiveness can be measured by using randomised controlled clinical trials that use one group that has the treatment and another group (the control group) that does not have the treatment. This is a scientific method.

Some psychologists prefer Cognitive Behavioural Therapy (CBT) to drug therapy as a treatment. Both these therapies have evidence from scientific research.

Using research evidence, **assess** the effectiveness of drug therapy for **either** unipolar depression **or** anorexia nervosa.

You must make reference to the context in your answer.

(16)

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(Total for Question 4 = 16 marks)

TOTAL FOR SECTION B = 16 MARKS

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SECTION C

Answer ALL questions. Write your answers in the spaces provided.

5 (a) Grant (2013) looked at the relationship between a person's ability to control their emotions and how much they would speak up about issues of concern at work.

Being passionate about an issue is what leads someone to want to speak up. However, emotion such as this prevents the person from doing so.

The study was carried out to see if the more someone could control their emotions the more likely it was that they would speak up.

The measures in the study were:

- self-report data, using a questionnaire giving a score for the control over emotions
- ratings from the workplace for how likely the person was to speak up.

Give a directional hypothesis for this study.

(2)

.....

.....

.....

.....

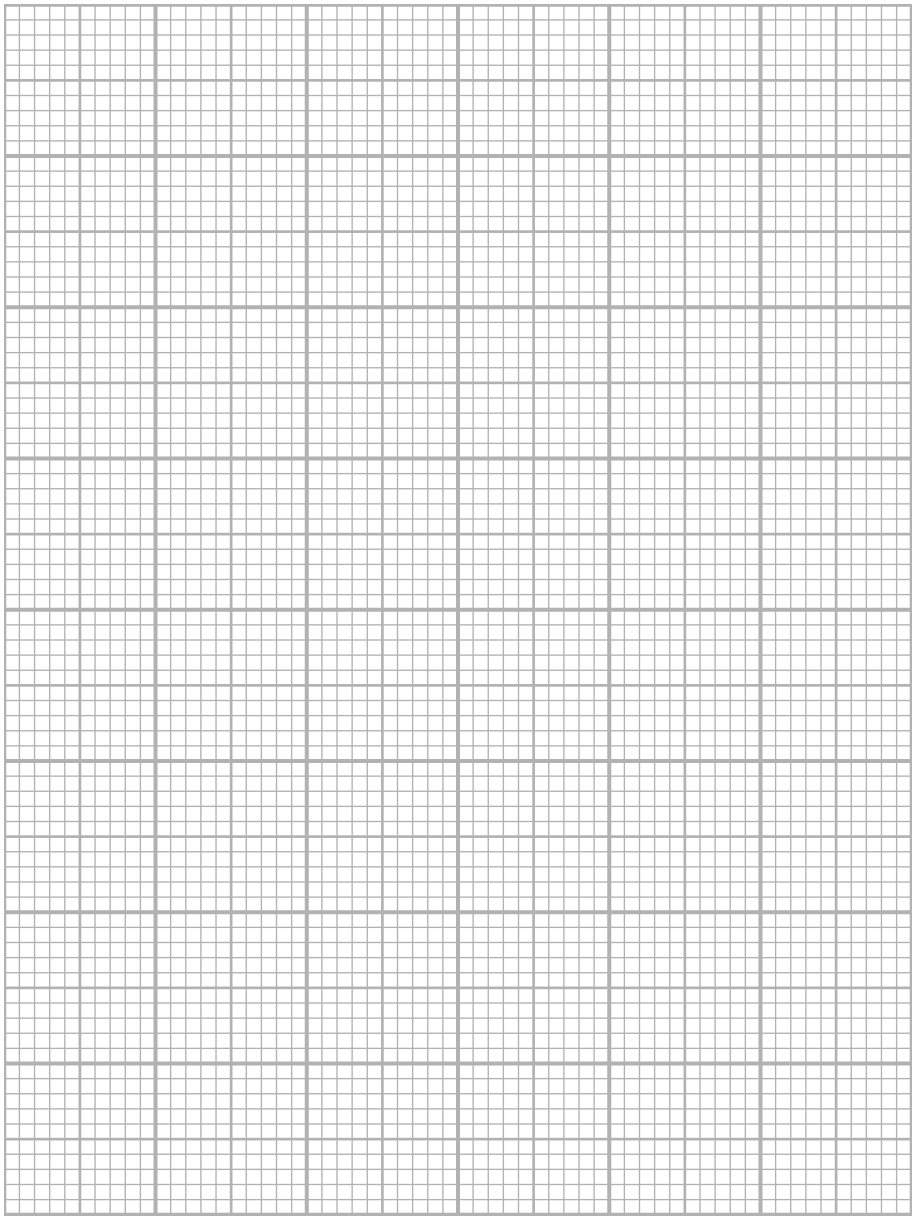
(b) **Table 2** contains data for 10 participants showing their self-ratings of emotion control (out of 20) and the workplace rating showing how likely they were to speak up (out of seven).

	Self-rated emotion control	Workplace rated likelihood of speaking up
Participant 1	18	6
Participant 2	12	1
Participant 3	10	4
Participant 4	15	6
Participant 5	9	2
Participant 6	14	5
Participant 7	12	5
Participant 8	19	6
Participant 9	8	2
Participant 10	12	5

Table 2

Draw a scatter diagram for the participants' two scores in **Table 2**.

(2)



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(c) **Table 3** contains ranked data for 10 participants showing their self-ratings of emotion control and the workplace rating showing how likely they were to speak up.

	Self-rated emotion control	Rank 1	Workplace rated likelihood of speaking up	Rank 2	d	d^2
Participant 1	18	2	6	2		
Participant 2	12	6	1	10		
Participant 3	10	8	4	7		
Participant 4	15	3	6	2		
Participant 5	9	9	2	8.5		
Participant 6	14	4	5	5		
Participant 7	12	6	5	5		
Participant 8	19	1	6	2		
Participant 9	8	10	2	8.5		
Participant 10	12	6	5	5		

Table 3

Complete **Table 3** and calculate Spearman's rank correlation co-efficient between self-rated control over emotion and workplace-rated likelihood of speaking up.

(4)

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(d) Explain how useful the result of a Spearman's rank correlation co-efficient is when drawing conclusions from results in psychology.

(4)

(e) Anne carried out a field experiment in the same research area as Grant (2013). She investigated how there might be a difference in confidence when speaking to a stranger depending on the participant's ability to control their emotions.

The time taken for each participant to approach each stranger was recorded. Then the participants were interviewed as to how they felt about the control of their emotions.

Explain **two** improvements in this second research design compared to Grant's (2013) study.

(4)

Improvement 1 .....

Improvement 2 .....

(Total for Question 5 = 16 marks)

6 In psychology, laboratory studies use animals and draw conclusions about the findings, which are then applied to humans.

Explain **two** advantages of using animals in laboratory studies instead of using humans.

(4)

(Total for Question 6 = 4 marks)

TOTAL FOR SECTION C = 20 MARKS

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SECTION D

Answer the question in this section. Write your answer in the space provided.

7 A key question for society is how to explain aggression and deal with issues such as people becoming desensitised to violence.

A laboratory study in 2010 found that when 22 boys aged 14 to 17 watched 60 four-second violent video clips, they tended to become emotionally desensitised to aggression.

One explanation of their desensitisation is that there is a change in the way the brain processes emotional responses. The lateral orbitofrontal cortex in the brain showed less activity the more clips the boys watched.

Another explanation might be that as the boys watched more violent video clips they considered violence as more acceptable. The boys judged the aggression as less severe the more they watched the clips.

Discuss the key question of how to explain aggression, using concepts, theories and/or research studied in your psychology course.

You must make reference to the context in your answer.

(8)

(Total for Question 7 = 8 marks)

TOTAL FOR SECTION D = 8 MARKS

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SECTION E

Answer the question in this section. Write your answer in the space provided.

8 To what extent is being reductionist an advantage for psychological research.

(20)

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(Total for Question 8 = 20 marks)

TOTAL FOR SECTION E = 20 MARKS
TOTAL FOR PAPER = 96 MARKS

Psychology Paper 4 Mark Scheme

Question Number	Answer	Mark
1(a)(i)	**AO1 (2 marks)** One mark for identifying a validity consequence and one mark for justifying it as a consequence. For example: Subjective nature of the disorder's symptoms (1) may lead to a diagnosis that's inappropriate (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(a)(ii)	**AO1 (2 marks)** One mark for identifying a reliability consequence and one mark for justifying it as a consequence. For example: Different clinicians may have a different view as to what constitutes a disorder (1) and therefore the diagnosis may be inconsistent (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(b)	**AO3 (2 marks)** One mark for identifying a reason and one mark for justifying the reason. For example: The ICD is the responsibility of the World Health Organization and has a more global focus than the DSM (1), therefore it has more generalisability to all cultures (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(c)(i)	**AO2 (1 mark)** One mark for giving the correct percentage to two decimal points. (305/505)*100 = 60.40% **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
1(c)(ii)	**AO2 (2 mark)** One mark for giving the calculation: 98 – 31 (67) / 305 × 100 = One mark for giving the percentage to two decimal points: 21.97% **Accept other appropriate calculations.** **Award two marks for the correct answer with no calculation.**	**(2)**

Question Number	Answer	Mark
1(d)	**AO1 (1 mark)** One mark for giving the ratio for 0.001. 1:1 000 or one in a thousand. **Reject all other answers.**	**(1)**

Question Number	Answer	Mark
1(e)	**AO3 (2 marks)** One mark for a point relating to bias in the study and one mark for justification. For example: Only the disorders that were in the list for comment on by the mental health professionals could be commented on (1). For example gender identity disorder had a high number of comments about removal, whereas other disorders might have been even higher (1). **Look for other reasonable marking points.**	**(2)**

Question Number	Answer	Mark
1(f)	**AO2 (2 marks), AO3 (2 marks)** One mark for each advantage and one mark for justification of each advantage in the context of the study. For example: The aim was to find out the mental health professionals' views about diagnoses, not only which could or should be removed but also why (1). Qualitative data from open-ended questions would be useful as that would be a good way to find out the rationale behind the choice of which diagnoses to remove (1). The study was done in eight different countries and asking open-ended questions means fewer limitations compared with closed questions (1) and so more likelihood of getting the different cultural views (1). **Look for other reasonable marking points**.	**(4)**

Question Number	Answer	Mark
2(a)	**AO2 (1 mark)** One mark for schizophrenia. **Reject any other disorder.**	**(1)**

Question Number	Answer	Mark
2(b)	**AO2 (4 marks)** Two marks for each symptom related to schizophrenia in the context of the study other than hallucinations. One mark for a simple description off each symptom and an additional elaboration mark for each symptom. For example: As well as hallucinations the psychologist might listen out for thought insertion which is the feeling that your thoughts are not your own (1). The psychologist might see if the client talks about someone else putting ideas in their head (1). Another symptom is delusions which are when someone believes something that is false (1). The psychologist might look out for mention of the flicker of a television seeming to have meaning for the client (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
2(c)	**AO2 (2 marks), AO3 (2 marks)** One mark for each reason of drug therapy being suggested linked to the client, up to two marks. Two marks for evaluation points about the reason(s). For example: • Hallucinations may come from an excess of dopamine at the synapse (1).This is supported by Reynolds (1994) who suggests that there is a correlation between the dosage of antipsychotic drug and dopamine receptors in the brain (1). • The psychologist might have read that new information shows glutamatergic, GABAergic and cholinergic neurotransmitters are also implicated in schizophrenia (1). Evidence that drugs might target these areas comes from Coyle et al. (2010) who use findings from studies that show a pathologic circuit is involved (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
3(a)	**AO1 (3 marks)** One mark for each descriptive point related to the procedure of Rosenhan's (1973) study, up to a maximum of 3 marks. For example: • Eight sane people with different backgrounds gained admission into 12 hospitals by calling the hospital for an appointment (1). • Individually, a pseudo-patient presented to the hospital saying they had been hearing voices that were unclear, saying things like 'empty' and 'hollow' (1). • After that the pseudo-patient answered any questions truthfully using their own background and life history (1). **Look for other reasonable marking points.**	**(3)**

Question Number	Answer	Mark
3(b)	**AO3 (4 marks)** One mark for one strength focusing on generalisability and one mark for justification of the strength; one mark for one weakness focusing on generalisability with one mark for justification of the weakness. For example, a strength: • The eight pseudo-patients were called a 'varied' group, which adds to possible generalisability of the findings (1) because the sample included people from different backgrounds and ages, including one psychology graduate in his 20s (1). For example, a weakness: • The researcher himself was one of the eight in the sample and, knowing the full aims of the study, might have acted differently from the other eight (1), which means generalisability of the findings is questioned as the data gathering from one of the participants may have shown researcher bias (1). **Look for other reasonable marking points.**	**(4)**

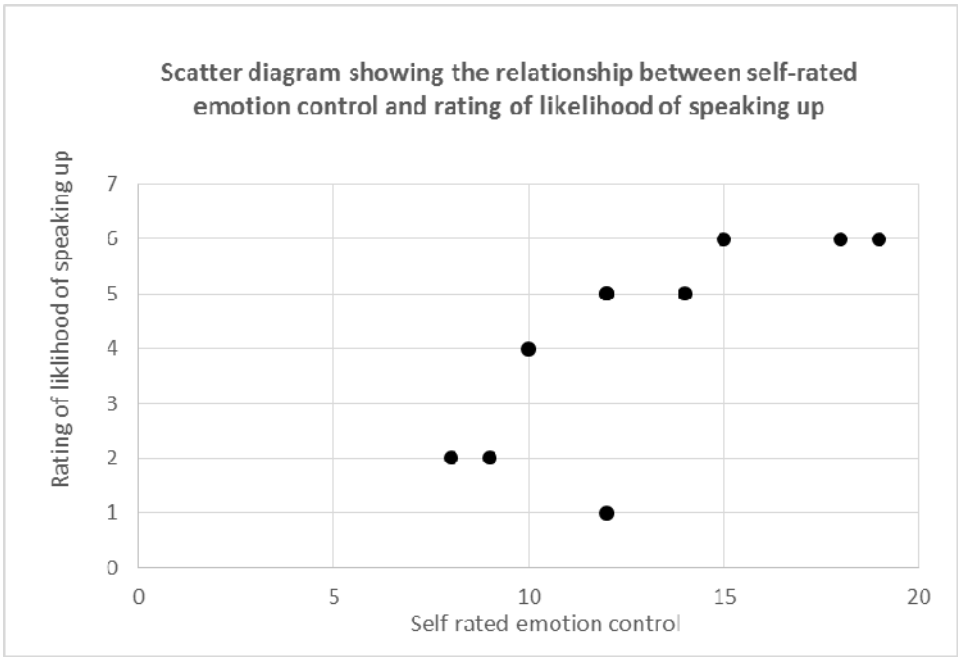
Question Number	Indicative content	Mark
4	**AO1 (6 marks), AO2 (4 marks), AO3 (6 marks)** **AO1 - unipolar depression** • Antidepressants work by affecting neurotransmitters in the brain, such as serotonin. • There are side effects such as feeling sick and have sleep problems. • Selective serotonin reuptake inhibitors (SSRIs) work by affecting the levels of serotonin in the brain. • Tricyclic antidepressants are less used currently and they are sometimes used for severe depression. They include amitriptyline and imipramine. • Monoamine oxidase inhibitors (MAOIs) are harder to take as some foods must be avoided, examples include phenelzine (Nardil). • CBT can be used for someone with depression, to look at their thinking processes and to work on vicious circles in thinking. **AO1 - anorexia nervosa** • Depression, anxiety, self-harm and low self-esteem can be associated with anorexia nervosa. • People with anorexia nervosa often hide it as part of the desire to be thin. Those around them tend to uncover the illness and/or persuade someone to get help. • Treatment tends to be psychological therapy, supervised weight gain and medication. • SSRIs (selective serotonin reuptake inhibitors) are used in anorexia nervosa alongside psychological therapies, for depression and anxiety. • An example is olanzapine which can help in anxiety about weight and diet. Cyproheptadine hydrochloride is also a weight-inducing drug that can be used • CBT focuses on unhealthy and unrealistic thoughts about food and diet. **AO2 - unipolar depression/anorexia nervosa** • Randomised controlled trials (RCTs) are useful because the control gives a baseline measure against which effectiveness can be measured. • Psychologists, both researchers and practitioners, generally aim for evidence-based therapies, because science gives reliable findings. • CBT is also measured using randomised controlled trials and CBT is recommended in the NICE guidelines. • Possibly psychologists prefer CBT because it treats the whole person and the issues leading to the depression/anorexia, rather than using medication that might not address the cause.	**(16)**

Question Number	Indicative content	Mark
4 (cont'd)	**AO3 - unipolar depression** • Unipolar depression, and anorexia because it can involve depression, can be caused by neurotransmitter issues (such as lack of serotonin) and so drug therapy might affect the cause, which suggests it is likely to be effective. • The idea that CBT is preferred because it addresses the cause of mental disorders like unipolar depression and anorexia nervosa is not upheld if drug therapy, adjusting neurotransmitter functioning, does address the cause. Drug therapy can be as effective as CBT if affecting the cause is a measure. • The NHS suggests that antidepressants are not that effective for mild depression but they can relieve symptoms quickly particularly in severe depression. • The Royal College of Psychiatrists suggests that between 50% and 65% of people taking an antidepressant will improve, compared to 25% to 30% of a control group taking a placebo. This shows a placebo effect to an extent, although more of an effect from taking antidepressants (drug therapy). • The National Institute of Mental Health (NIMH) study in 1989 put people with major depression (a severe form) into four groups. They found that most in all four groups improved. For less severely depressed people (60% of those involved), all four treatments were equally effective. This suggests that both drug therapy and CBT can be effective. • However, in the NIMH study for those who were severely depressed (40% of those involved) it was the antidepressant drug therapy that was most effective. 76% improved on imipramine and just 18% improved on the placebo. This suggests that it is drug therapy that is effective. **AO3 - anorexia nervosa** • The NHS mentions that SSRIs have side effects that can be serious for those who are seriously underweight, so psychological therapies like CBT are preferred. • In a randomly assigned study (reported by Halmi et al., 1986), cyproheptadine had a small effect in that it reduced the number of days someone took to get to normal weight - although looking at bulimia versus anorexia, cyproheptadine did significantly more for the anorexia group compared with those having the tricyclic depressant or the placebo. To an extent this means drug therapy was effective.	

Question Number	Indicative content	Mark
4 (cont'd)	• It tends to be thought that a combination of CBT and drug therapy is the best option as found using RCTs (e.g. Flament et al., 2011; Hay and Claudino, 2011; Reinblatt et al., 2008). • Bowers and Ansher (2008) found that using cognitive therapy was effective (using before and after measures, not RCTs) although weight restoration was used as well. It was found that all 32 patients involved in the study became less depressed and their eating behaviour was affected too. This effect was found again at the one-year follow-up, suggesting some longevity in the effectiveness of the treatment. • Kishi et al. (2012) carried out a meta-analysis using 8 studies and 221 patients and found that anti psychotics were not effective for anorexia nervosa, so not all medication works. • For those who have gained a lot of the weight they need to regain, SSRIs (fluoxetine) helps recovery, but perhaps are more helpful for addressing OCD issues rather than helping with weight. **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 versus assessment/conclusion in their answer.** **Application to the context is capped at maximum 4 marks.**		
	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
5(a)	**AO2 (2 marks)** One mark for the statement of what is expected as long as one of the variables is operationalised (and is directional). Two marks for the statement of what is expected as long as both the variables are operationalised (and is directional). For example: The more someone *says* they can control their emotions the more they are likely to speak up (1). The higher the *self-report score* for ability to control emotions, the higher the *rating* about the likelihood of speaking up about issues of concern at work (2). **Look for other ways of expressing the directional hypothesis.**	**(2)**

Question Number	Answer	Mark
5(b)	**AO2 (2 marks)** One mark for accurate scatter diagram with all plots for both variables correct. One mark for the title and both axes labelled correctly Does not have to have the line of best fit. For example:  Y axis: Rating of likelihood of speaking up. X axis: Self-report of control over emotions. **Accept reversed axes.**	**(2)**

Question Number	Answer	Mark
5(c)	**AO2 (4 marks)** One mark for correct d results (no mark if not correct or not completed). One mark for correct d^2 results (no mark if not completed). One mark for substituting into the equation (using the Σ found if incorrect is okay) (no mark if not substituted). One mark for the correct answer (two significant figures as that is expected) (no mark if answer not given).	**(4)**

d	**d^2**
0	0
-4	16
1	1
1	1
0.5	0.25
-1	1
1	1
-1	1
1.5	2.25
1	1
	24.5

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

$$1 - \frac{6 \times 24.5}{10(100-1)} = 1 - \frac{6 \times 24.5}{10 \times 99} = 1 - \frac{147}{990}$$

= 1-0.147147 = 0.852853 = *0.85*

Accept 0.853.

Question Number	Answer	Mark
5(d)	**AO3 (4 marks)** One mark for each point about how useful Spearman's rank correlation co-efficient is, up to a maximum of two marks Two marks for linked justification. For example: It shows the direction of the correlation stating whether it is positive or negative (1) which helps to show the direction of the relationship (1). The results can be used to find if the null hypothesis can be rejected (1) which helps to see the level of significance at which the result might be due to chance (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
5(e)	**AO3 (4 marks)** One mark for an improvement and one mark for a justification of the improvement, up to four marks. For example: The study gathered interval data (time) which enables a stronger inferential statistical test to be carried out (1) which leads to greater confidence in your results (1). A field experiment has more control over extraneous variables (1) leading to a greater confidence as to cause and effect (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Answer	Mark
6	**AO1 (2 marks), AO3 (2 marks)** One mark for an advantage of using animals in laboratory studies and one mark for justifying each advantage of using animals instead of humans, up to a maximum four marks. For example: • Experiments can be carried out on animals that would not be allowed on humans because of human ethical guidelines. Humans should use the means available to improve their health and well-being and that can include using animals in laboratory experiments (1). • Studies that can give results benefitting the largest number of people are justified because of the principle of doing the greatest good (1). The use of animals is justified because they are similar enough to humans for findings to be generalised to humans and humans are not harmed (1). **Look for other reasonable marking points.**	**(4)**

Question Number	Indicative content	Mark
7	**AO1 (4 marks), AO2 (4 marks)** **AO1** • Social learning theory explains aggression using the idea of observational learning. We use attention, retention, reproduction and motivation to produce learned behaviour. • Aggression is linked to brain processing such as serotonin, dopamine and norepinephrine having a role in aggression. • Neurotransmitter functioning can work to prevent inhibition of aggression or can lead to aggression more directly. • Activity in parts of the brain is linked to aggression such as the prefrontal cortex and the limbic system/amygdala. • The theory of natural selection suggests that we have evolved traits to survive and aggression, or lack of aggression, might be a survival traits. **AO2** • Bandura's studies (1961, 1963, 1965) showed that children who watched aggression tended to be more likely to behave aggressively than those who did not watch aggression, which is evidence for social learning taking place and backs up the claims of this study. • The boys who watched violent video clips in the study were said to show more 'emotional desensitisation' in the brain, which supports the social learning explanation in that watching violent video clips affected their judgement of aggression levels. • The source suggests that the way the brain in which the brain processes information can be affected by watching a series of video clips that show violence, which might be evidence for neurotransmitter functioning affecting aggressive behaviour. • The lateral orbitofrontal cortex is mentioned as showing less activity the more clips that are watched which is evidence for brain structure and functioning affecting aggressive behaviour. • Evolution might have led to the reactions of the boys to watching the violent clips in that there is a mechanism perhaps for reducing sensitivity and 'blunting' the brain if there is overload. **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 versus application in their answer.**		
	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
8	**AO1 (8 marks), AO3 (12 marks)** **AO1** • Reductionism is part of doing science. • It means looking at the parts of something when studying it. • Holism is looking at the whole thing (such as a behaviour) and is the opposite of reductionism. • Science involves a theory, deriving a hypothesis from the theory, testing against reality and then amending the theory accordingly. • Testing against reality (empirical) testing involves testing parts of behaviour. • To test something it has to be measurable and parts of the whole are measurable. • Raine et al. (1997) used brain-scanning techniques to assess aggression in 'murderers'. • The case of Henry Molaison (HM) involved a lot of detail about his whole life. **AO3** • Biological psychology looks at parts such as structures in the brain which would be hard to study as a whole as it is so complex. • Learning theories look at parts such as single behaviours like a pigeon pecking at a disk because observable behaviour was required to be studied in a scientific way. • Experimental method involves setting up an independent variable, measuring a dependent variable and controlling all other variables, and the IV and DV are parts of a whole behaviour usually so that it is replicable • Bandura and others (1961, 1963, 1965) used experiments to study aggression in young children and focused on measuring their play including their hitting of a Bobo doll. This measures aggression by acts of hitting a doll, which is reductionist and not valid. • Milgram (1963) measured obedience by how far a person would go in giving electric shocks (which they thought were real) to another, which is reducing obedience to a specific and possibly unnatural behaviour. • Case studies of brain-damaged patients (such as Henry Molaison and Schmolck et al.'s (2002) study) take a more holistic view which will include experiences and social interactions. • However, they focus on neuroimaging of brain deficits, which is only part of what makes up behaviour so again lacking in validity. • Looking at neuro transmitter functioning can lead to biological treatments which has been shown to be effective.	**(20)**

Question Number	Indicative content	Mark
8 (cont'd)	• Rosenhan (1973) had participants immersed in a psychiatric hospital environment looking at the whole picture which was the only way to find out how they would be treated by the staff. • Watson and Rayner (1920) reduced 'little Albert's' fear to measured reaction like crying and falling over which made a phobia measurable to see what caused it, and looking at causes is hard doing it any other way. • However, using the reductionist approach and a specific child means that the conclusions are hard to generalise. • Using a reductionist approach gives a study scientific credibility in that an operationalised hypothesis can be formulated and empirically tested to develop scientific knowledge. **Look for other reasonable marking points.**	

Level	Mark	Descriptor
AO1 (8 marks), AO3 (12 marks) **Candidates must demonstrate a greater emphasis on assessment/conclusion versus knowledge and understanding in their answer.** **Knowledge and understanding is capped at maximum 8 marks.**		
	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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