Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel International Advanced Level

Time 1 hour 30 minutes

Paper reference **WPS03/01**

Psychology

International Advanced Level
PAPER 3: Applications of Psychology

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 statistical 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 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.

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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

DEVELOPMENTAL PSYCHOLOGY

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

1 Mungo is 10 months old. He dropped his teddy bear in a puddle and his mum picked it up. She put the teddy bear in her shopping bag as it was wet, and Mungo did not look for it.

When they got home, Mungo's mum put the teddy bear in the washing machine. His three-year-old sister Flora began to cry saying the teddy bear was going to be hurt.

(a) Identify which of Piaget's stages of cognitive development Mungo is in according to his behaviour.

(1)

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(b) Describe, using Piaget's stages of cognitive development, why Flora may have thought that the teddy bear was going to be hurt.

(2)

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(Total for Question 1 = 3 marks)

2 In your studies of developmental psychology, you will have learned about theories of social and emotional development.

Explain **one** strength and **one** weakness of using mindfulness to enhance the development of children.

Strength

Weakness

(Total for Question 2 = 4 marks)

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3 Maud investigated whether using educational games improves children's learning. She sampled one child aged seven years old for her investigation.

The child played with an adult using a spelling game containing 20 words. Each time they completed the game the child had a spelling test on the 20 words from the game. They completed the game five times.

The data gathered by Maud in her investigation is shown in **Table 1**.

Spelling test	Number of words spelt correctly (out of 20)
1	6
2	8
3	10
4	14
5	16

Table 1

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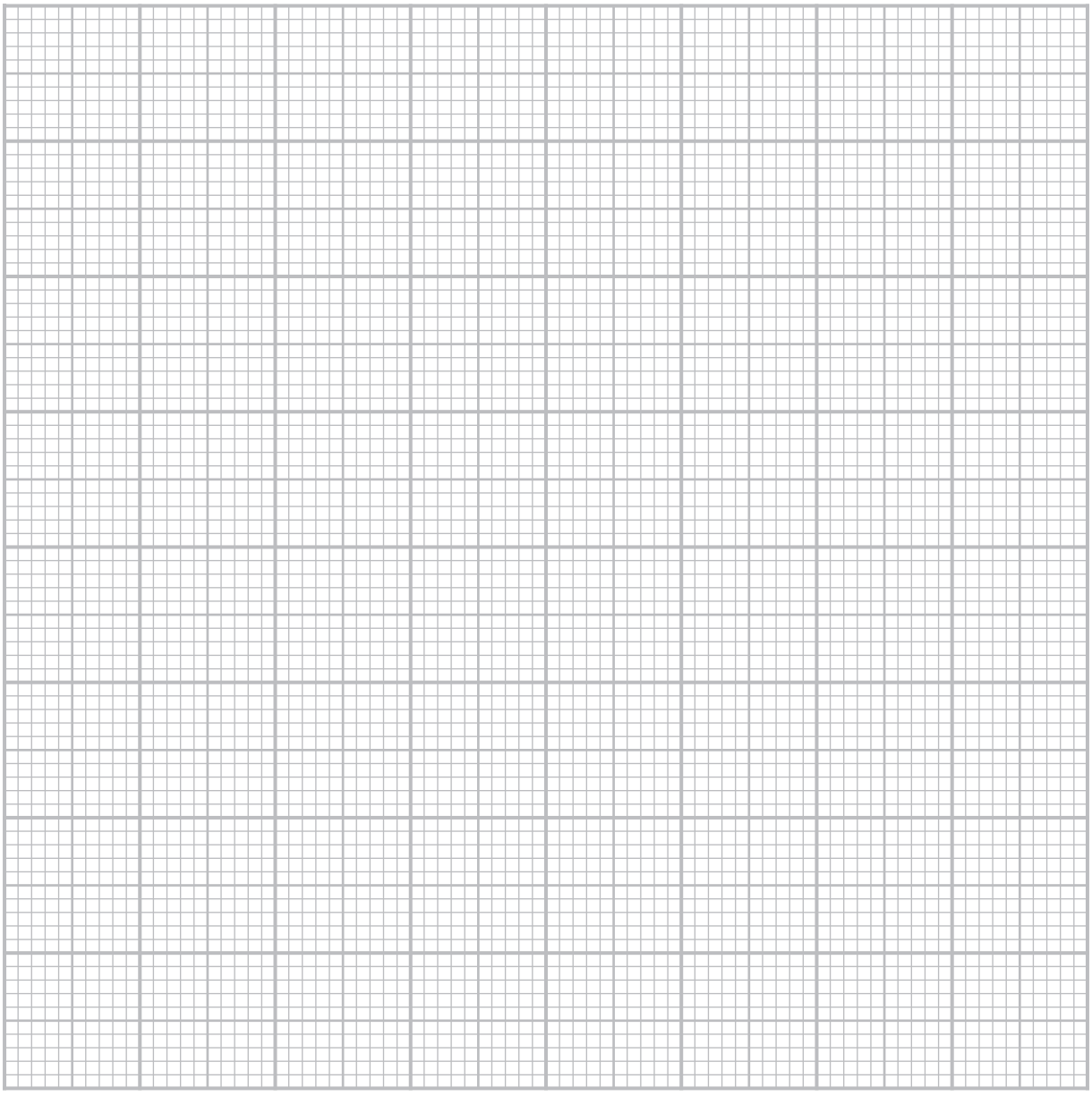
(a) Draw a bar chart to represent the data in **Table 1**.

(3)

Title



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(b) Explain **one** improvement that Maud could make to her investigation.

(2)

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(Total for Question 3 = 5 marks)

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4 Explain **one** strength and **one** weakness of Erikson's stages of psychosocial development.

Strength

Weakness

(Total for Question 4 = 4 marks)

5 Evaluate Skinner's theory of language development.

(8)

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(Total for Question 5 = 8 marks)

6 Assess whether the findings of cross-cultural research into attachment have furthered understanding in developmental psychology.

(8)

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(Total for Question 6 = 8 marks)

TOTAL FOR SECTION A = 32 MARKS

SECTION B

Answer ALL questions from EITHER OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

OR OPTION 2: HEALTH PSYCHOLOGY.

Indicate which option you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new option with a cross ☒.

If you answer the questions in Option 1 put a cross in the box ☒ .

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

7 In your studies of criminological psychology, you will have learned about factors influencing eyewitness memory.

(a) State what is meant by the term 'weapons focus' as a factor that influences eyewitness memory.

(1)

(b) Ludovic witnessed a robbery where he saw a woman fall over after a man stole her handbag. Later that day the local news reported on the robbery and described the injuries sustained by the woman.

The police interviewed Ludovic the next day. He claimed that he saw a man push a woman so hard that she fell over and broke her arm. Ludovic said she was crying in pain and the man then ran off with her handbag.

Describe how post-event information may have influenced the reliability of Ludovic's memory of the robbery.

(2)

(Total for Question 7 = 3 marks)

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8 Jago investigated the effectiveness of cognitive behavioural therapy for reducing the aggressive thoughts had by offenders. He sampled 10 male offenders from a local rehabilitation service.

Offenders were asked to tally the number of aggressive thoughts they had in two different one-week periods. The number of aggressive thoughts were first recorded before the offenders underwent any therapy, and then recorded again after therapy.

The data gathered by Jago is shown in **Table 2**.

Participant	Number of aggressive thoughts before cognitive behavioural therapy	Number of aggressive thoughts after cognitive behavioural therapy
A	17	13
B	15	15
C	18	15
D	12	14
E	16	12
F	14	13
G	18	14
H	20	15
I	16	11
J	15	13

Table 2

(a) Complete **Table 3** and calculate the Wilcoxon Signed Ranks test for Jago's data.

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

(4)

Participant	Number of aggressive thoughts before cognitive behavioural therapy	Number of aggressive thoughts after cognitive behavioural therapy	Difference	Ranked difference
A	17	13		
B	15	15		
C	18	15		
D	12	14		
E	16	12		
F	14	13		
G	18	14		
H	20	15		
I	16	11		
J	15	13		

Table 3

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(b) Explain **one** strength of Jago using a repeated measures design in his investigation.

(2)

(c) Explain **one** improvement that Jago could make to his investigation.

(2)

(Total for Question 8 = 8 marks)

9 When Lucy was young, her parents often told her that she was naughty. She then began stealing from an early age.

Lucy has recently been arrested for burglary for the third time. The police have warned her that she may be sent to prison. Her older brother told Lucy that going to prison was no surprise as he had always said she was unlikely to be successful in life.

(a) Describe how self-fulfilling prophecy may have influenced Lucy's behaviour.

(2)

(b) Describe how cognitive behavioural therapy could be used to help Lucy change her behaviour.

(3)

(Total for Question 9 = 5 marks)

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10 Evaluate the classic study by Loftus and Palmer (1974) in terms of reliability and validity.

(8)

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(Total for Question 10 = 8 marks)

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11 Assess the effect of pre-trial publicity as a factor that influences jury decision-making.

(8)

(Total for Question 11 = 8 marks)

TOTAL FOR SECTION B OPTION 1 = 32 MARKS

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SECTION B

If you answer the questions in Option 2 put a cross in the box ☒ .

OPTION 2: HEALTH PSYCHOLOGY

12 In your studies of health psychology, you will have learned about coping strategies.

(a) State what is meant by the term 'negative technique' as a coping strategy.

(1)

(b) Ludovic was on holiday and when he returned home, he found that his house had been burgled. His personal possessions had been burned and graffiti sprayed on the walls. Ludovic was traumatised by the event and felt very stressed.

Ludovic contacted his doctor to see if she could help him deal with the stress he was experiencing. The doctor suggested that he could use positive techniques as a coping strategy to manage his stress.

Describe how Ludovic could use a positive technique to cope with the stress of the burglary.

(2)

(Total for Question 12 = 3 marks)

13 Jago investigated the effectiveness of cognitive behavioural therapy for reducing the anxiety attacks in patients with anxiety. He sampled 10 male patients from a local mental health service.

Patients were asked to tally the number of anxiety attacks they had in two different one-week periods. The number of anxiety attacks were first recorded before the patients underwent any therapy, and then recorded again after therapy.

The data gathered by Jago is shown in **Table 4**.

Participant	Number of anxiety attacks before cognitive behavioural therapy	Number of anxiety attacks after cognitive behavioural therapy
A	17	13
B	15	15
C	18	15
D	12	14
E	16	12
F	14	13
G	18	14
H	20	15
I	16	11
J	15	13

Table 4

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(a) Complete **Table 5** and calculate the Wilcoxon Signed Ranks test for Jago's data.

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

(4)

Participant	Number of anxiety attacks before cognitive behavioural therapy	Number of anxiety attacks after cognitive behavioural therapy	Difference	Ranked difference
A	17	13		
B	15	15		
C	18	15		
D	12	14		
E	16	12		
F	14	13		
G	18	14		
H	20	15		
I	16	11		
J	15	13		

Table 5

Space for calculations

T value .....

(b) Explain **one** strength of Jago using a repeated measures design in his investigation.

(2)

(c) Explain **one** improvement that Jago could make to his investigation.

(2)

(Total for Question 13 = 8 marks)

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14 Lucy lost her job six months ago and has started to have difficulty sleeping. She finds that her heart rate increases when she is faced with new situations.

Lucy has been trying to find another job, but when she attends interviews she struggles to concentrate and cannot focus on the questions being asked. Lucy visited a doctor who diagnosed her with an anxiety disorder and stress.

(a) Describe how the prefrontal cortex may be associated with Lucy's stress.

(2)

(b) Describe how cognitive behavioural therapy could be used to help Lucy with her anxiety disorder.

(3)

(Total for Question 14 = 5 marks)

15 Evaluate the classic study by Brady (1958) in terms of reliability and validity.

(8)

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(Total for Question 15 = 8 marks)

16 Assess the effectiveness of social support in reducing the symptoms of stress.

(8)

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(Total for Question 16 = 8 marks)

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

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