

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

**Pearson Edexcel International Advanced Level**

**Tuesday 9 January 2024**

Afternoon (Time: 1 hour 30 minutes)

Paper  
reference

**WPS03/01**

**Psychology**

**International Advanced Level**

**UNIT 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

N	Level of significance for a one-tailed test				
	0.05	0.025	0.01	0.005	0.0025
N	Level of significance for a two-tailed test				
	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**

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

**Critical values for chi-squared distribution**

df	Level of significance for a one-tailed test					
	0.10	0.05	0.025	0.01	0.005	0.0005
df	Level of significance for a two-tailed test					
	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

<i>n</i>	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
	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** (a) State **one** aim of the study by Bowlby (1944).

(1)

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(b) Explain **one** strength of the study by Bowlby (1944).

(2)

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(c) Explain **one** improvement that could be made to the study by Bowlby (1944).

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**(Total for Question 1 = 5 marks)**

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- 2 Andrea carried out an investigation to see whether pre-school children would be able to identify basic shapes more accurately with the help of a more knowledgeable other. The shapes included squares, rectangles, and circles. She gathered a sample of three-year-old children who were available on a Thursday at a local nursery.

Andrea used two groups of three-year-old children.

- Condition A: the children played with different shapes by themselves, putting them into a shape sorter.
- Condition B: the children played with different shapes with a teacher, putting them into a shape sorter after the teacher had named the shape.

After playing for 15 minutes, the children in each group were shown the different shapes and asked the question “what shape is this?”. The number of times the correct shape was identified by the children was recorded.

The results gathered by Andrea are shown in **Table 1**.

	<b>Condition A: the children who sorted shapes by themselves</b>	<b>Condition B: the children who sorted shapes with the help of a teacher</b>
Mean number of times the shapes were correctly identified	3	9

**Table 1**



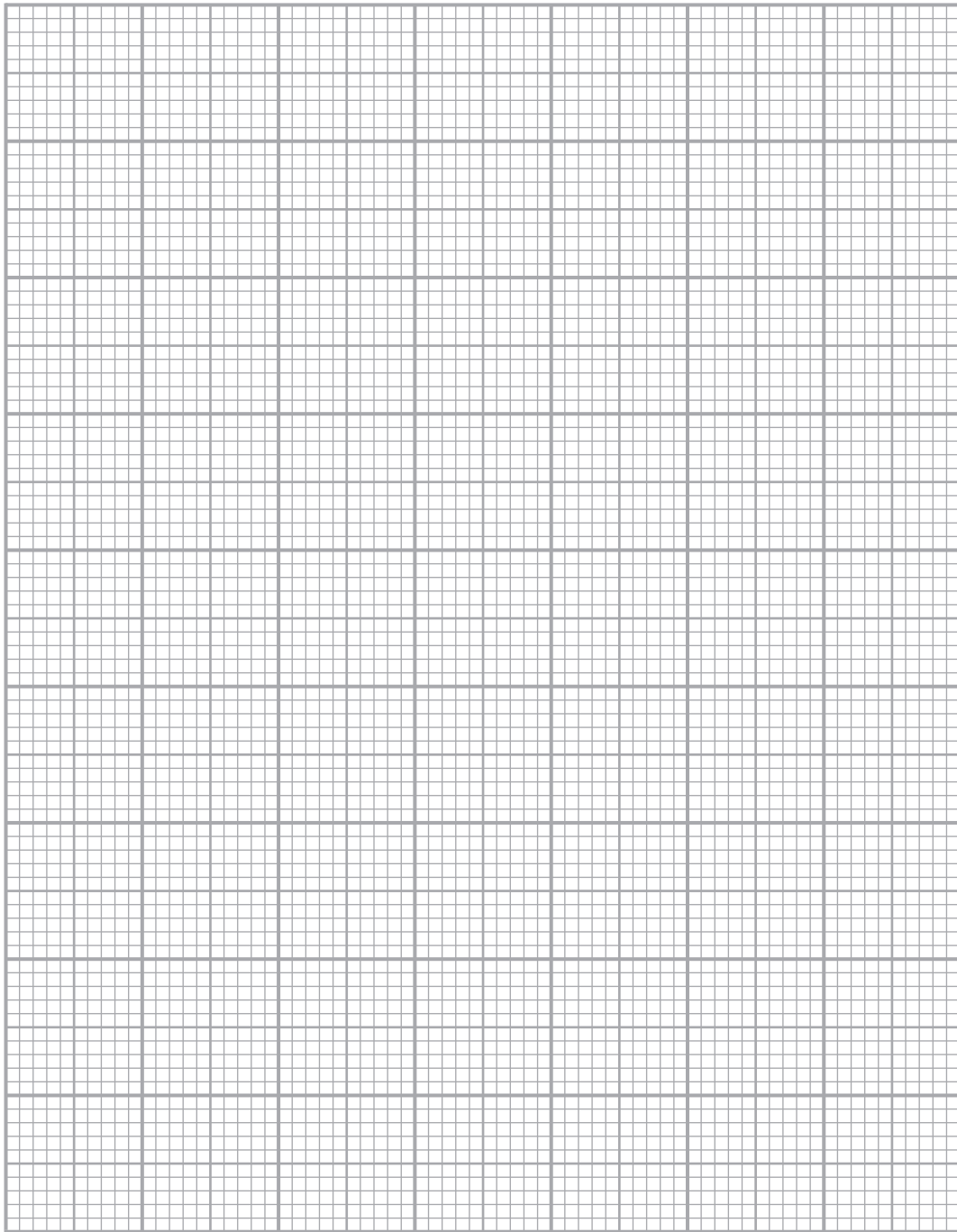


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(a) Draw a suitable graph to show the data from **Table 1**.

(3)

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(b) Explain **one** conclusion that Andrea can make from the data in **Table 1**.

(2)

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(c) Describe **one** ethical issue that Andrea should have considered when she carried out her research.

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**(Total for Question 2 = 7 marks)**



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3 Roberto wanted to investigate whether there was a gender difference in the way that children share their toys. He decided to use a structured observation at a local day care centre.

(a) Describe how Roberto could conduct a structured observation into the gender differences in children's toy sharing.

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(b) Explain **one** weakness of Roberto using a structured observation to investigate the gender differences in children's toy sharing.

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**(Total for Question 3 = 4 marks)**

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(Total for Question 4 = 8 marks)





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(Total for Question 5 = 8 marks)

**TOTAL FOR SECTION A = 32 MARKS**







7 Cognitive behavioural therapy (CBT) is used as a therapy for offenders.

Explain **one** strength and **one** weakness of using cognitive behavioural therapy (CBT) as a treatment for offenders.

Strength

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Weakness

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**(Total for Question 7 = 4 marks)**



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8 Paulo wants to carry out an investigation at a young offender's institution. He wants to see if an anger management programme is an effective treatment for the young offenders. The programme aims to reduce levels of anger through managing emotions that trigger angry and aggressive behaviour.

(a) Describe how Paulo could have used a volunteer sampling technique to gather his participants from the young offender's institution.

(2)

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(b) Explain **one** weakness of Paulo using a volunteer sample for his investigation.

(2)

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Paulo asked the young offenders to rate their levels of anger before and after they completed the programme. He used a scale where 1 is low levels of anger and 10 is high levels of anger.

Paulo carried out a statistical test on the data for before and after the programme to see if there was a significant change in the scores for anger.

(c) Justify which statistical test Paulo could use on his data.

(3)

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**(Total for Question 8 = 7 marks)**







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(Total for Question 10 = 8 marks)



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11 Assess the usefulness of the cognitive interview technique with witnesses.

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(Total for Question 11 = 8 marks)

**TOTAL FOR SECTION B OPTION 1 = 32 MARKS**



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**SECTION B**

If you answer **OPTION 2**, put a cross in the box  .

**OPTION 2: HEALTH PSYCHOLOGY**

**12** State how appraisal focusing may be used as a coping strategy.

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**(Total for Question 12 = 1 mark)**

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**14** Paulo wants to carry out an investigation at a local health centre. He wants to see if an anxiety management programme is an effective treatment for the patients. The programme aims to help patients manage the emotions that are the triggers for their anxiety.

(a) Describe how Paulo could have used a volunteer sampling technique to gather his participants from the local health centre.

(2)

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(b) Explain **one** weakness of Paulo using a volunteer sample for his investigation.

(2)

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Paulo asked the patients to rate their levels of anxiety before and after they completed the programme. He used a scale where 1 is low levels of anxiety and 10 is high levels of anxiety.

Paulo carried out a statistical test on the data for before and after the programme to see if there was a significant change in the scores for anxiety.

(c) Justify which statistical test Paulo could use on his data.

(3)

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**(Total for Question 14 = 7 marks)**



**15** Belinda has recently been to visit her doctor as she is experiencing high levels of stress. She has difficulty sleeping and regularly suffers with illnesses such as colds and stomach aches.

The doctor asked Belinda to describe her current situation. She told the doctor that she had moved to a new house because she has recently divorced. Belinda also said that her new neighbours are very noisy, often playing loud music until the early hours of the morning.

Explain **two** ways that life events and daily hassles may have influenced Belinda's levels of stress.

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**(Total for Question 15 = 4 marks)**



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16 Evaluate the use of positive and negative techniques as coping strategies for stress.

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(Total for Question 16 = 8 marks)





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17 Assess the use of selective serotonin reuptake inhibitors (SSRIs) as a treatment for anxiety.

(8)

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(Total for Question 17 = 8 marks)

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



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