

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Centre Number

Candidate Number

Pearson Edexcel International Advanced Level

Friday 17 January 2025

Morning (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

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

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

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

<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 In developmental psychology you will have learned about Piaget's stages of cognitive development.

(a) Describe the preoperational stage of development.

(2)

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2 Sabian is investigating the influence of day care on children’s language development. He has arranged to observe two groups of children aged 18 months.

- Group A: Children who attend day care four days per week.
- Group B: Children who do not attend day care.

Sabian also used a semi-structured interview to gather both qualitative and quantitative data. He asked the parents and preschool teachers open questions, such as ‘what activities do you do with your child/children to help their language development?’. He also used a ranked scale to indicate the number of language exercises they do with their child/children each day.

(a) Explain **one** reason why qualitative data may be better than quantitative data in Sabian’s research.

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Sabian also observed each child for a day and recorded the number of different words they could say.

The data gathered by Sabian is shown in **Table 1**.

Group A: Children who attend day care four days per week	The number of different words spoken during the day	Group B: Children who do not attend day care	The number of different words spoken during the day
A	55	F	41
B	70	G	38
C	40	H	50
D	63	I	51
E	50	J	45
Range = 30		Range = 13	

Table 1

(b) Explain **one** weakness of Sabian using the range as his measure of dispersion.

(2)

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

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(Total for Question 2 = 6 marks)

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3 Marina carried out a content analysis to see the effects of a new writing programme on the grammatical ability of 10–11-year-old children. She approached her local school and gathered a stratified sample of boys and girls.

(a) Describe how Marina may have gathered her stratified sample.

(2)

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(b) Describe **one** ethical issue Marina should have considered when investigating the grammatical ability of the children.

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(Total for Question 3 = 4 marks)

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4 Assess Vygotsky's zone of proximal development (ZPD).

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(Total for Question 4 = 8 marks)



5 Rafael is a family therapist who specialises in attachment-based therapy. He has been approached by a local day care centre that is concerned about the type of attachment demonstrated by a number of the children.

Rafael proposes to monitor the children and parent interactions for a week, using the strange situation procedure. He will monitor the parent-child interactions. Raphael will then invite all the families to attend parenting skills classes, whatever the attachment type of the child.

Discuss the ethical issues of the research that Rafael is proposing to conduct in relation to the UNCRC (1989).

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

(8)

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(Total for Question 5 = 8 marks)

TOTAL FOR SECTION A = 32 MARKS



7 Becky is a forensic psychologist who is interested in the relationship between Cognitive Behavioural Therapy (CBT) and levels of aggression. She approached her local prison and recorded the number of Cognitive Behavioural Therapy (CBT) sessions the offenders attended over a six-month period. Becky also asked the offenders about the number of aggressive incidents they had been involved in over the same six-month period.

(a) Complete **Table 2** and calculate Spearman's rank correlation coefficient.

You **must** give your answer to **two** decimal places.

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

(4)

Number of Cognitive Behavioural Therapy (CBT) sessions attended over a six-month period	Rank 1	Number of aggressive incidents over the same six-month period	Rank 2	d	d^2
18	9	9	1	8	
7	1	20	9	8	
16	8	13	3	5	
15	7	12	2	5	
10	3	15	5	2	
9	2	18	8	6	
14	6	17	7	1	
11	4	16	6	2	
13	5	14	4	1	
Total:					

Table 2

Space for calculations

Spearman's rank correlation coefficient



8 Arnold works at the local bank. A man approached the desk, pointed a gun at Arnold and demanded that he handed over a large sum of money. Arnold pressed the alarm and the man ran out of the bank without injuring Arnold.

The police were called and they asked Arnold to give a statement of the events, including a description of the man.

Explain **two** ways that weapon focus could make Arnold's eye witness testimony unreliable.

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(Total for Question 10 = 8 marks)



11 Assess how far social learning from the media can account for criminal and anti-social behaviour.

(8)

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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 the questions in **OPTION 2**, put a cross in the box .

OPTION 2: HEALTH PSYCHOLOGY

12 Describe how the pre-frontal cortex may be associated with stress.

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(Total for Question 12 = 2 marks)

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13 Becky is a clinical psychologist who is interested in the relationship between Cognitive Behavioural Therapy (CBT) and levels of anxiety. She approached her local clinic and recorded the number of Cognitive Behavioural Therapy (CBT) sessions the patients attended over a six-month period. Becky also asked the patients the number of anxious episodes they had experienced over the same six-month period.

(a) Complete **Table 3** and calculate Spearman's rank correlation coefficient.

You **must** give your answer to **two** decimal places.

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

(4)

Number of Cognitive Behavioural Therapy (CBT) sessions over a six-month period	Rank 1	Number of anxious episodes over the same six-month period	Rank 2	d	d^2
18	9	9	1	8	
7	1	20	9	8	
16	8	13	3	5	
15	7	12	2	5	
10	3	15	5	2	
9	2	18	8	6	
14	6	17	7	1	
11	4	16	6	2	
13	5	14	4	1	
Total:					

Table 3

Space for calculations

Spearman's rank correlation coefficient



14 Arnold works at the local bank. A man approached the desk, pointed a gun at Arnold and demanded that he handed over a large sum of money. Arnold pressed the alarm and the man ran out of the bank without injuring Arnold.

Following the incident, Arnold was very upset and experienced high levels of stress.

Explain **two** ways that appraisal-focusing may be an effective coping strategy for Arnold's stress.

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(Total for Question 14 = 4 marks)



16 In health psychology you will have studied factors affecting stress.

Evaluate whether the Holmes and Rahe stress scale is a reliable and valid measure of stress.

(8)

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(Total for Question 16 = 8 marks)



P 7 8 4 8 3 A 0 3 3 3 6

17 Assess how far Type A personality may be associated with stress.

(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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