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 2 June 2023

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.
- Try to answer every question.
- 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.

Chi-squared distribution formula

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

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   Bowlby proposed the maternal deprivation hypothesis when developing his theory
    of attachment.

    (a) Describe what is meant by the term maternal deprivation hypothesis as proposed
         by Bowlby.

(2)

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2 Natasha is a child psychologist. She was asked to investigate the effectiveness of a new scheme to help parents who found it hard to securely attach to their babies. Natasha counted the number of interactions parents had with their babies before and after taking part in the new scheme.

- Condition A: The parents' interactions with their babies before they took part in the new scheme.

- Condition B: The same parents' interactions with their babies after they took part in the new scheme.

The mean number of interactions for each condition was calculated by Natasha.

Her results are shown in **Table 1**.

Condition A	Condition B
9	14

Table 1

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

(3)

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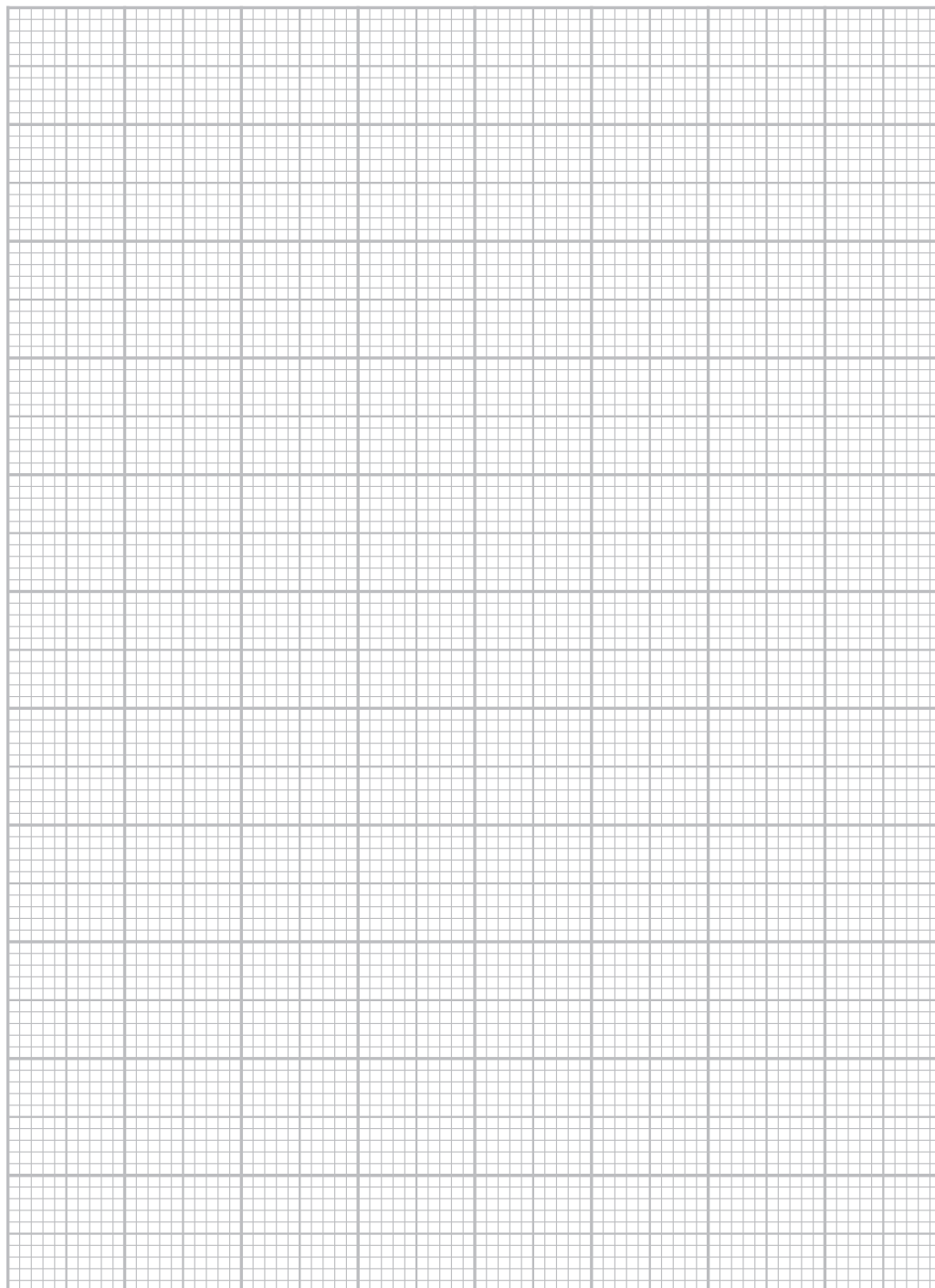
(b) Natasha conducted a statistical test on her data to determine if the results were significant.

State which statistical test Natasha would have used on her data.

(1)

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(c) Explain **one** improvement Natasha could make to her investigation in terms of reliability.

(2)

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(Total for Question 2 = 6 marks)

3 Pierre is conducting a meta-analysis to see if storytelling helps the language development of children. He collected data from 16 studies that had been published within the past 20 years. The studies had all been in journals that were published in the United States of America.

Explain **one** strength and **one** weakness of Pierre conducting a meta-analysis to see if storytelling helps the language development of children.

Strength

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Weakness

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(Total for Question 3 = 4 marks)

4 Evaluate Chomsky's theory of language development.

(8)

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(Total for Question 4 = 8 marks)

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5 Helene investigated the effectiveness of a new play scheme. The play scheme aims to improve the emotional and cognitive development in children from a deprived area.

Helene measures the development of the children when they start the play scheme, after three months and then after a year. She observes the children and tallies behaviours that indicate emotional and cognitive development.

Helene also uses questionnaires with open and closed questions, which she devised herself. The questionnaires are given to parents of the children and workers at the play scheme.

After analysing her results, Helene found that the play scheme did improve the emotional and cognitive development of most of the children after three months and there was further improvement a year later.

Discuss whether Helene's investigation is scientific.

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

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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 question with a cross ☒.

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

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6   In your studies of criminological psychology, you will have learned about factors influencing jury decision-making.

State how pre-trial publicity may influence jury decision-making.

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(Total for Question 6 = 1 mark)

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7 Anatole conducted an experiment to see if self-fulfilling prophecy affected participants' perceptions of how likely someone is to commit theft from a shop.

• Condition A: ten participants were given a scenario about a person who came from a wealthy area.

• Condition B: nine different participants were given the same scenario but the person came from a deprived area.

Anatole then asked his participants to say whether the person in the scenario would commit a theft from a shop or not.

(a) Describe the experimental/research design Anatole used in his experiment.

(2)

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The results from Anatole's experiment are shown in **Table 2**.

Condition	Number of participants who said the person would commit the theft	Number of participants who said the person would not commit the theft
The scenario said the person came from a wealthy area.	3	7
The scenario said the person came from a deprived area.	8	1

Table 2

(b) Calculate the percentage of participants who said the person would commit the theft, out of all participants.

You **must** give your answer to **one** decimal place.

(1)

Space for calculations

Percentage ....

(c) Explain what level of measurement Anatole used for the data shown in **Table 2**.

(2)

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(d) Explain **one** conclusion Anatole could make from his results in terms of the self-fulfilling prophecy.

(2)

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(e) Explain **one** improvement Anatole could make to his experiment.

(2)

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(Total for Question 7 = 9 marks)

8 Sonya works in a prison where she uses cognitive behavioural therapy (CBT) to treat offenders. She is currently treating a prisoner who had taken a car for a drive without the owner's consent. The prisoner showed no remorse for crashing the car as they felt that it did not matter as the insurance company would pay for any damage to the car.

Sonya hopes that by treating the prisoner with cognitive behavioural therapy (CBT) the prisoner will not reoffend once they have been released from prison.

Explain **one** strength of Sonya using cognitive behavioural therapy (CBT) to treat the prisoner.

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(Total for Question 8 = 2 marks)

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9 Greg is a criminological psychologist who was asked to create a psychological (case) formulation on Mary who did not engage with any therapies she was offered whilst in prison. Greg had several sessions with Mary to find out details about her past and present relationships. He also asked her about her current economic and social circumstances. During the psychological (case) formulation Greg also found out how Mary interprets her current and past circumstances.

Based on the psychological (case) formulation Greg was able to recommend further therapies that he thought would be more successful for Mary.

Explain **one** strength and **one** weakness of Greg using a psychological formulation for Mary.

Strength

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Weakness

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(Total for Question 9 = 4 marks)

10 In your studies of criminological psychology you will have learnt about the classic study by Loftus and Palmer (1974).

Assess Loftus and Palmer (1974) in terms of the British Psychological Society (BPS) Code of Ethics and Conduct (2009).

(8)

(Total for Question 10 = 8 marks)

11 Evaluate the influence of the 'other race' effect on the reliability of eye-witness memory.

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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 In your studies of health psychology, you will have learned about Selye's
General Adaptation Syndrome (GAS).

State what is meant by the term 'alarm reaction' as a stage in Selye's
General Adaptation Syndrome (GAS).

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(Total for Question 12 = 1 mark)

13 Anatole conducted an experiment to see if social support affected his participants' perception of how likely someone was to become stressed.

- Condition A: ten participants were given a scenario where the person in a stressful situation at work had social support from friends and family.

- Condition B: nine different participants were given the same scenario but the person had no social support from friends and family.

Anatole then asked his participants to say whether the person in the scenario would be stressed or not.

(a) Describe the experimental/research design Anatole used in his experiment.

(2)

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The results from Anatole's experiment are shown in **Table 3**.

Condition	Number of participants who said the person would be stressed	Number of participants who said the person would not be stressed
The scenario said the person had social support from family and friends.	3	7
The scenario said the person did not have social support from family and friends.	8	1

Table 3

(b) Calculate the percentage of participants who said the person would be stressed, out of all participants.

You **must** give your answer to **one** decimal place.

(1)

Space for calculations

Percentage ....

(c) Explain what level of measurement Anatole used for the data shown in **Table 3**.

(2)

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(d) Explain **one** conclusion Anatole could make from his results in terms of the effects of social support.

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(e) Explain **one** improvement Anatole could make to his experiment.

(2)

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(Total for Question 13 = 9 marks)

14 Sonya works as a doctor in a local health clinic where she treats patients with anxiety. She is currently treating a patient who is highly anxious, and it is affecting their health. The patient has a job interview in the next few weeks and feels their anxiety will affect their performance at the interview. If they do not get the job, they may not be able to afford to go on holiday.

Sonya hopes that by treating the patient with selective serotonin reuptake inhibitors (SSRIs) the person's anxiety will reduce.

Explain **one** strength of Sonya using selective serotonin reuptake inhibitors (SSRIs) to treat the patient.

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(Total for Question 14 = 2 marks)

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15 Greg is a health psychologist who was asked to treat Mary for her stress. Greg had several sessions with Mary to find out what caused her to be stressed. Mary said that her boss at work is constantly asking her to complete work to unrealistic deadlines. Mary was also stressed because she did not have much money left at the end of the month because she likes to go out at least three times a week with her family and friends.

Based on the sessions Greg had with Mary he recommended emotion-focusing strategies that he thinks will help Mary cope with her stress.

Explain **one** strength and **one** weakness of Mary using emotion-focusing strategies to cope with her stress.

Strength

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Weakness

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(Total for Question 15 = 4 marks)

16 In your studies of health psychology you will have learnt about the classic study by Brady (1958).

Assess Brady (1958) in terms of the Animals (Scientific Procedures) Act 1986.

(8)

(Total for Question 16 = 8 marks)

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17 Evaluate Type A personality as a factor that influences 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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