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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
International Advanced Level

Centre Number | | | | | |

Candidate Number | | | | |

Thursday 25 October 2018

Afternoon (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 The maternal deprivation hypothesis explores the importance of a continuous relationship with a primary caregiver when a child is forming emotional bonds.

Explain, using Bowlby's (1944) study, what may happen if this continuous relationship does not occur.

(Total for Question 1 = 4 marks)

2 Charlotte tested the cognitive skills of 38 children aged 8 years old. She compared their accuracy on a mathematical puzzle to see if there was a difference between what children can do with help and what they can do alone.

- Condition A: 20 participants worked in pairs with 15-year-olds to complete the mathematical puzzle together
- Condition B: 18 participants completed the mathematical puzzle alone.

(a) Identify the research design Charlotte used in her investigation.

(1)

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(b) Charlotte recorded how many children gave a correct or an incorrect answer to the mathematical puzzle. Her results are shown in **Table 1**.

	Number of children giving a correct answer	**Number of children giving an incorrect answer**
Condition A Children working in pairs with 15-year-olds	**16**	**4**
Condition B Children working alone	**6**	**12**

Table 1

Convert the data shown in **Table 1** for **Condition B** to a percentage of all the children in the investigation.

You **must** give your answers in whole numbers.

(2)

Space for calculations

Percentage of children in Condition B giving a **correct** answer .....

Percentage of children in Condition B giving an **incorrect** answer .....

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(c) Calculate the chi-squared for the data gathered by Charlotte in her investigation by completing **Table 2.**

Your answers should **all** be correct to **two** decimal places.

(4)

		Observed	Expected	O-E	$(O-E)^2$	$(O-E)^2/E$
Condition A: Children working in pairs with 15-year-olds	Correct answer	16	11.58			
	Incorrect answer	4	8.42			
Condition B: Children working alone	Correct answer	6	10.42			
	Incorrect answer	12	7.58			
				Chi-squared =		

Table 2

Space for calculations

(d) Charlotte concluded that a child aged 8 years old was more likely to complete a mathematical puzzle correctly when guided by a more knowledgeable other.

Explain, using Vygotsky's zone of proximal development, **two** reasons why Charlotte came to this conclusion in her investigation.

(4)

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(e) Suggest **one** improvement Charlotte could make to her investigation.

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(Total for Question 2 = 12 marks)

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3 Adham is 18 months old and is beginning to form words. He recently said the word 'mummy' and was praised by his mother, who told him that he was very clever and gave him a hug.

He repeated the word 'mummy' when he saw his father, but his father said 'no' to Adham and then said the word 'daddy'. Adham cried, because his father didn't pick him up and give him a hug.

After 5 weeks of Adham's father telling him 'no' and saying the word 'daddy', Adham said the word 'daddy'. His father smiled, clapped his hands and picked him up to give him a hug.

Discuss, using Skinner's theory of language, how Adham was able to learn the new word.

You must refer to the context in your answer.

(8)

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(Total for Question 3 = 8 marks)

4 Assess whether research into attachment can be considered scientific.

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(Total for Question 4 = 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

5 State what is meant by 'criminological psychology'.

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(Total for Question 5 = 2 marks)

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6 Enzo is planning to investigate the effectiveness of cognitive behavioural therapy (CBT) as a therapy for offenders. He decides to ask at a nearby prison whether they would allow him to conduct his investigation there.

Enzo is planning to use questionnaires with closed questions and unstructured interviews for his research.

(a) Explain **one** reason why Enzo may have chosen to use questionnaires with closed questions in his research.

(2)

(b) Explain **one** way that Enzo could make his unstructured interviews reliable.

(2)

(c) Explain **one** way that Enzo could improve the generalisability of his research.

(2)

(d) Explain **two** ethical issues Enzo should consider when researching the effectiveness of CBT with offenders.

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(e) Explain whether Enzo would find CBT to be an effective therapy for offenders.

(4)

(Total for Question 6 = 14 marks)

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7 Assess whether anti-social personality disorder (ASPD) is a credible explanation of crime and anti-social behaviour.

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(Total for Question 7 = 8 marks)

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8 Evaluate whether jury decision-making is objective.

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(Total for Question 8 = 8 marks)

TOTAL FOR SECTION B OPTION 1 = 32 MARKS

SECTION B

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

OPTION 2: HEALTH PSYCHOLOGY

9 State what is meant by 'health psychology'.

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(Total for Question 9 = 2 marks)

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10 Enzo is planning to investigate the effectiveness of cognitive behavioural therapy (CBT) as a treatment for patients with anxiety disorders. He decides to ask at a nearby counselling service whether they would allow him to conduct his investigation there.

Enzo is planning to use questionnaires with closed questions and unstructured interviews for his research.

(a) Explain **one** reason why Enzo may have chosen to use questionnaires with closed questions in his research.

(2)

(b) Explain **one** way that Enzo could make his unstructured interviews reliable.

(2)

(c) Explain **one** way that Enzo could improve the generalisability of his research.

(2)

(d) Explain **two** ethical issues Enzo should consider when researching the effectiveness of CBT for patients with anxiety disorders.

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(e) Explain whether Enzo would find CBT to be an effective treatment for anxiety disorders.

(4)

(Total for Question 10 = 14 marks)

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11 Assess whether the role of hormones is a credible explanation for stress.

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(Total for Question 11 = 8 marks)

12 Evaluate whether the Holmes and Rahe stress scale is objective.

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(Total for Question 12 = 8 marks)

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

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