Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
International Advanced Level

Centre Number | | | | | |

Candidate Number | | | | |

Monday 18 May 2020

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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Pearson

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

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

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.

SECTION A

DEVELOPMENTAL PSYCHOLOGY

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

1 Ainsworth investigated attachment using the strange situation procedure.

(a) State the research method used for the strange situation procedure.

(1)

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(b) Explain **one** weakness of the strange situation procedure.

(2)

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(Total for Question 1 = 3 marks)

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2 Kieron is 3-years-old. He knows a range of words and can form new sentences using these words. Kieron recently said "I like pizza and cake for lunch" even though he had not heard anyone else say the sentence to him.

(a) Describe, using Chomsky's theory of language, how Kieron can form sentences he has never heard before.

(2)

(b) Explain **one** strength of using Chomsky's theory of language to explain Kieron's language development.

(2)

(Total for Question 2 = 4 marks)

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3 Toby is investigating attachment using a questionnaire with open-ended questions. He asks adult participants about current relationships with their romantic partners, and their childhood relationships with caregivers.

(a) Give **one** open-ended question Toby could include in his questionnaire about attachment.

(1)

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(b) Toby used an opportunity sampling technique to gather the adult participants for his investigation into attachment. He visited a local shopping centre and asked passers-by if they would be willing to complete his questionnaire.

Explain **one** weakness of Toby using opportunity sampling in his investigation about attachment.

(2)

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(c) Toby plans to analyse the responses to his open-ended questions using thematic analysis.

Explain **one** strength and **one** weakness of Toby using thematic analysis to analyse the responses to his open-ended questions about attachment.

(4)

Strength

Weakness

(d) Explain **one** improvement Toby could make to his questionnaire about attachment.

(2)

(Total for Question 3 = 9 marks)

4 Wahida is 6-months-old and cries when her favourite toy is hidden from her sight. When the toy is given back, Wahida is excited and often puts the toy in her mouth.

Her brother, Khalid, is 3-years-old. He points to objects and names them, such as a table or chair. He describes the object to Wahida, for example if it is big or small. Khalid likes dinosaurs and he says that Wahida likes them as well even though she does not.

Discuss, using Piaget's stages of development, the cognitive development shown by Wahida and Khalid.

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

(8)

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(Total for Question 4 = 8 marks)

5 Evaluate the 44 Juvenile Thieves study (Bowlby, 1944) using the British Psychological Society (BPS) code of ethics and conduct (2009).

(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 option with a cross ☒.

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

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6 Describe what is meant by a 'self-fulfilling prophecy'.

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(Total for Question 6 = 2 marks)

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7 Sonia investigated the influence of post-event information on the reliability of eyewitness recall. She had two groups of participants.

- Group A: watched a video of a crime and were then interviewed about what they saw.
- Group B: watched a video of a crime and then read a newspaper article about the crime before being interviewed about what they saw.

(a) Describe the experimental research design used by Sonia in this investigation.

(2)

Sonia counted the number of accurate and inaccurate points about the crime recalled by the participants in their interviews.

The results of Sonia's investigation are shown in **Table 1**.

Group	Total number of accurate points recalled about the crime	Total number of inaccurate points recalled about the crime
Group A did not read the newspaper article	124	36
Group B did read the newspaper article	81	64

Table 1

(b) There were 11 participants in Group B.

Calculate the mean score for **inaccurate** points recalled by Group B.

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

(1)

Space for calculations

Mean score for **inaccurate** points recalled by Group B .....

(c) Calculate the **accurate** points recalled as a percentage of the total number of points recalled by both groups.

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

(1)

Space for calculations

Percentage .....

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Sonia asked the participants to state whether or not they would be confident in identifying the criminal from the video.

The results are shown in **Table 2**.

	Confident in identifying the criminal	**Not confident in identifying the criminal**
Group A did not read the newspaper article	6	6
Group B did read the newspaper article	7	4

Table 2

(d) Sonia decided to carry out a chi-squared test to see if there was a significant difference in the confidence of participants in identifying the criminal.

Calculate the chi-squared for the data gathered by Sonia by completing **Table 3**.

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

(4)

		Observed	**Expected**	**O-E**	**$(O-E)^2$**	**$(O-E)^2/E$**
Group A did not read the newspaper article	**Confident in identifying the criminal**	6	6.78			
	Not confident in identifying the criminal	6	5.22			
Group B did read the newspaper article	**Confident in identifying the criminal**	7	6.22			
	Not confident in identifying the criminal	4	4.78			
					chi-squared =	

Table 3

(e) Determine, using the data in **Table 3**, whether the results are significant for a non-directional (two-tailed) test at P≤0.05 where *df*=1.

(1)

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(f) Suggest **two** conclusions that Sonia could make from her investigation of the influence of post-event information.

(2)

1 .....

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2 .....

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(g) Sonia evaluated her investigation and believed that using cognitive interview techniques to ask the participants about what they saw on the video could have improved her investigation.

Justify how a cognitive interview technique could have improved Sonia's investigation.

(3)

(Total for Question 7 = 14 marks)

8 Assess whether the 'other race' effect can influence eye-witness reliability.

(8)

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(Total for Question 8 = 8 marks)

9 Evaluate the factors that can influence jury decision-making.

(8)

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(Total for Question 9 = 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

10 Describe what is meant by 'personality traits'.

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(Total for Question 10 = 2 marks)

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11 Sonia investigated the influence of life events on the level of stress people report. She had two groups of participants.

- Group A: were interviewed about their levels of stress in the previous week.
- Group B: were made to wait an hour before being interviewed about their levels of stress in the previous week.

(a) Describe the experimental research design used by Sonia in this investigation.

(2)

Sonia counted the number of times participants reported feeling stressed or not stressed.

The results of Sonia's investigation are shown in **Table 4**.

Group	Total number of times participants reported feeling not stressed in a week	Total number of times participants reported feeling stressed in a week
Group A not delayed before the interview	124	36
Group B delayed for one hour before the interview	81	64

Table 4

(b) There were 11 participants in Group B.

Calculate the mean score for feeling **stressed** reported by Group B.

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

(1)

Space for calculations

Mean score for feeling **stressed** in Group B .....

(c) Calculate the reports of feeling **not stressed** as a percentage of the total number of feelings reported by both groups.

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

(1)

Space for calculations

Percentage .....

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Sonia asked the participants to state whether or not they believed their level of stress influenced how well they remembered events from the previous week.

The results are shown in **Table 5**.

	Stress does influence how well they remembered events from the previous week	**Stress does not influence how well they remembered events from the previous week**
Group A not delayed before the interview	6	6
Group B delayed for one hour before the interview	7	4

Table 5

(d) Sonia decided to carry out a chi-squared test to see if there was a significant difference in whether participants believed stress influenced how well they remembered events.

Calculate the chi-squared for the data gathered by Sonia by completing **Table 6**.

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

(4)

		Observed	**Expected**	**O-E**	**$(O-E)^2$**	**$(O-E)^2/E$**
Group A not delayed before the interview	**Stress does influence how well they remember events from the previous week**	6	6.78			
	Stress does not influence how well they remember events from the previous week	6	5.22			
Group B delayed for one hour before the interview	**Stress does influence how well they remember events from the previous week**	7	6.22			
	Stress does not influence how well they remember events from the previous week	4	4.78			
					chi-squared =	

Table 6

(e) Determine, using the data in **Table 6**, whether the result is significant for a non-directional (two-tailed) test at P≤0.05 where *df*=1.

(1)

.....

.....

.....

(f) Suggest **two** conclusions that Sonia could make from her investigation about the influence of life events on stress.

(2)

1 .....

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2 .....

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(g) Sonia evaluated her investigation and believed that using the Holmes and Rahe stress scale for life events instead of her own interview questions would have improved her investigation.

Justify how using the Holmes and Rahe stress scale could have improved Sonia's investigation.

(3)

(Total for Question 11 = 14 marks)

12 Assess whether coping strategies can help individuals deal with stress.

(8)

(Total for Question 12 = 8 marks)

13 Evaluate brain regions as an explanation of stress.

(8)

(Total for Question 13 = 8 marks)

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

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