Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 3 GCE

Friday 17 May 2024

Morning (Time: 2 hours)

Paper reference **9PS0/01**

Psychology

Advanced

PAPER 1: Foundations in 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.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 90.
- 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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P 7 5 7 6 8 A 0 1 3 6

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FORMULAE AND STATISTICAL TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\Sigma(x-\bar{x})^2}{n-1}\right)}$$

Spearman's rank correlation coefficient

$$1-\frac{6\Sigma d^2}{n\left(n^2-1\right)}$$

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.

Mann-Whitney U test formulae

$$U_a = n_a n_b + \frac{n_a(n_a+1)}{2} - \sum R_a$$

$$U_b = n_a n_b + \frac{n_b(n_b+1)}{2} - \sum R_b$$

(U is the smaller of U_a and U_b)

Critical values for the Mann-Whitney U test

	N_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N_a																
***p* ≤ 0.05 (one-tailed), *p* ≤ 0.10 (two-tailed)**																
5	4	5	6	8	9	11	12	13	15	16	18	19	20	22	23	25
6	5	7	8	10	12	14	16	17	19	21	23	25	26	28	30	32
7	6	8	11	13	15	17	19	21	24	26	28	30	33	35	37	39
8	8	10	13	15	18	20	23	26	28	31	33	36	39	41	44	47
9	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
10	11	14	17	20	24	27	31	34	37	41	44	48	51	55	58	62
11	12	16	19	23	27	31	34	38	42	46	50	54	57	61	65	69
12	13	17	21	26	30	34	38	42	47	51	55	60	64	68	72	77
13	15	19	24	28	33	37	42	47	51	56	61	65	70	75	80	84
14	16	21	26	31	36	41	46	51	56	61	66	71	77	82	87	92
15	18	23	28	33	39	44	50	55	61	66	72	77	83	88	94	100
16	19	25	30	36	42	48	54	60	65	71	77	83	89	95	101	107
17	20	26	33	39	45	51	57	64	70	77	83	89	96	102	109	115
18	22	28	35	41	48	55	61	68	75	82	88	95	102	109	116	123
19	23	30	37	44	51	58	65	72	80	87	94	101	109	116	123	130
20	25	32	39	47	54	62	69	77	84	92	100	107	115	123	130	138

N_a	N_b 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.01$ (one-tailed), $p \leq 0.02$ (two-tailed)																
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6	2	3	4	6	7	8	9	11	12	13	15	16	18	19	20	22
7	3	4	6	7	9	11	12	14	16	17	19	21	23	24	26	28
8	4	6	7	9	11	13	15	17	20	22	24	26	28	30	32	34
9	5	7	9	11	14	16	18	21	23	26	28	31	33	36	38	40
10	6	8	11	13	16	19	22	24	27	30	33	36	38	41	44	47
11	7	9	12	15	18	22	25	28	31	34	37	41	44	47	50	53
12	8	11	14	17	21	24	28	31	35	38	42	46	49	53	56	60
13	9	12	16	20	23	27	31	35	39	43	47	51	55	59	63	67
14	10	13	17	22	26	30	34	38	43	47	51	56	60	65	69	73
15	11	15	19	24	28	33	37	42	47	51	56	61	66	70	75	80
16	12	16	21	26	31	36	41	46	51	56	61	66	71	76	82	87
17	13	18	23	28	33	38	44	49	55	60	66	71	77	82	88	93
18	14	19	24	30	36	41	47	53	59	65	70	76	82	88	94	100
19	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101	107
20	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114

N_a	N_b 5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.025$ (one-tailed), $p \leq 0.05$ (two-tailed)																
5	2	3	5	6	7	8	9	11	12	13	14	15	17	18	19	20
6	3	5	6	8	10	11	13	14	16	17	19	21	22	24	25	27
7	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
8	6	8	10	13	15	17	19	22	24	26	29	31	34	36	38	41
9	7	10	12	15	17	20	23	26	28	31	34	37	39	42	45	48
10	8	11	14	17	20	23	26	29	33	36	39	42	45	48	52	55
11	9	13	16	19	23	26	30	33	37	40	44	47	51	55	58	62
12	11	14	18	22	26	29	33	37	41	45	49	53	57	61	65	69
13	12	16	20	24	28	33	37	41	45	50	54	59	63	67	72	76
14	13	17	22	26	31	36	40	45	50	55	59	64	67	74	78	83
15	14	19	24	29	34	39	44	49	54	59	64	70	75	80	85	90
16	15	21	26	31	37	42	47	53	59	64	70	75	81	86	92	98
17	17	22	28	34	39	45	51	57	63	67	75	81	87	93	99	105
18	18	24	30	36	42	48	55	61	67	74	80	86	93	99	106	112
19	19	25	32	38	45	52	58	65	72	78	85	92	99	106	113	119
20	20	27	34	41	48	55	62	69	76	83	90	98	105	112	119	127

N_a	N_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***p* ≤ 0.005 (one-tailed), *p* ≤ 0.01 (two-tailed)**																
5	0	1	1	2	3	4	5	6	7	7	8	9	10	11	12	13
6	1	2	3	4	5	6	7	9	10	11	12	13	15	16	17	18
7	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24
8	2	4	6	7	9	11	13	15	17	18	20	22	24	26	28	30
9	3	5	7	9	11	13	16	18	20	22	24	27	29	31	33	36
10	4	6	9	11	13	16	18	21	24	26	29	31	34	37	39	42
11	5	7	10	13	16	18	21	24	27	30	33	36	39	42	45	48
12	6	9	12	15	18	21	24	27	31	34	37	41	44	47	51	54
13	7	10	13	17	20	24	27	31	34	38	42	45	49	53	56	60
14	7	11	15	18	22	26	30	34	38	42	46	50	54	58	63	67
15	8	12	16	20	24	29	33	37	42	46	51	55	60	64	69	73
16	9	13	18	22	27	31	36	41	45	50	55	60	65	70	74	79
17	10	15	19	24	29	34	39	44	49	54	60	65	70	75	81	86
18	11	16	21	26	31	37	42	47	53	58	64	70	75	81	87	92
19	12	17	22	28	33	39	45	51	56	63	69	74	81	87	93	99
20	13	18	24	30	36	42	48	54	60	67	73	79	86	92	99	105

The calculated value must be equal to or less than 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.

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

SECTION A

Social Psychology

1 Jacinda and Nicola are sisters who got into an argument about a dress they share that they both want to wear to the same party. Jacinda said the dress is her favourite and that she wants to wear it for the party. Nicola said the dress looks better on her so she should wear it, not Jacinda.

Using realistic conflict theory, describe why Jacinda and Nicola argued about the dress.

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(Total for Question 1 = 2 marks)

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2 Noah investigated locus of control as a personality factor affecting obedience. He sampled 24 participants. Noah gave each participant a questionnaire containing 30 Likert scale questions to test whether they demonstrated traits for an internal or external locus of control.

Noah found that $\frac{18}{24}$ participants demonstrated traits of an internal locus of control.

(a) Convert Noah's findings from a fraction into a percentage.

(1)

SPACE FOR CALCULATIONS

Percentage .....

(b) Out of the 24 participants, Noah found 18 had traits of an internal locus of control compared to 6 who had traits of an external locus of control.

Convert Noah's findings about those who had an internal locus of control to those who had an external locus of control into a ratio. You must express your answer in the lowest form.

(1)

SPACE FOR CALCULATIONS

Ratio .....

(c) Noah's sample of participants included 8 males.

Calculate the male participants as a fraction of all participants. You must express your answer in the lowest form.

(1)

SPACE FOR CALCULATIONS

Fraction .....

(Total for Question 2 = 3 marks)

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3 Suzanne conducted an interview with 20 participants about their likelihood of obeying an authority figure. She described several scenarios of situations where instructions had been given by a person in authority.

Suzanne first asked her participants to state 'Yes' or 'No' as to whether they would follow the instructions in each scenario. She then asked further questions about why they would or would not obey based on their response.

Explain **one** strength and **one** weakness of Suzanne using an interview to ask about participants' likelihood of obeying an authority figure.

Strength

Weakness

(Total for Question 3 = 4 marks)

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QUESTION 4 BEGINS ON THE NEXT PAGE.

4 Discuss the key question you have studied from social psychology.

(8)

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(Total for Question 4 = 8 marks)

TOTAL FOR SECTION A = 17 MARKS

SECTION B

Cognitive Psychology

5 In your studies of cognitive psychology, you will have learned about how developmental psychology looks at the influences on memory as the brain ages.

Describe **one** developmental influence on memory.

(Total for Question 5 = 2 marks)

6 In your studies of cognitive psychology, you will have learned about how individual differences influence memory.

Describe **one** individual difference that influences memory.

(Total for Question 6 = 2 marks)

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7 Dylan is eight years old and is learning how to spell six words for a spelling test in school. He has copied out each word ten times to practise writing them. Each time Dylan copies a word out, he says each letter of the word out loud. He asks his Dad to test him on the spellings. Dylan spells five out of the six words correctly.

(a) Using the multi-store model of memory, describe how Dylan was able to remember the spellings for five out of the six words.

(2)

(b) Explain **one** weakness of using the multi-store model of memory to account for Dylan's memory of the words.

(2)

(Total for Question 7 = 4 marks)

8 Evaluate the use of experimental methods when researching memory.

(8)

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(Total for Question 8 = 8 marks)

TOTAL FOR SECTION B = 16 MARKS

SECTION C

Biological Psychology

9 Jude's manager at work shouted at her for a mistake that another employee made. When Jude tried to explain this, the manager just shouted louder and made nasty comments. Jude was very angry and upset, but felt she could not say anything to the manager as she was worried she may lose her job.

Jude decided to go to the gym to take part in a kickboxing session after work. After taking part in the kickboxing session, Jude felt much calmer.

Using catharsis, describe why Jude felt calmer after the kickboxing session.

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(Total for Question 9 = 2 marks)

10 Dan is 15 years old and is playing in a school football match.

During the football match, an opposition player tripped Dan over when he was about to try and score a goal. The referee awarded a penalty kick to Dan's team. In response, the opposition player shouted and swore.

Dan took the penalty kick and scored a goal. He laughed at the opposition player and made offensive gestures towards him. Dan and the opposition player then started to fight each other and both of them were sent off the pitch.

Describe how hormones could account for the football players' aggression.

(Total for Question 10 = 4 marks)

11 Amari carried out a correlational study to investigate whether there was a relationship between the hours someone spends on social media in a day and the hours of sleep they get per night.

The results from Amari's investigation are shown in **Table 1**.

(a) Complete **Table 1** and calculate the Spearman's rank correlation coefficient for Amari's investigation.

(4)

Hours spent on social media	Rank 1	Hours of sleep per night	Rank 2	d	d^2
4	2.5	9	5.5		
6	4	8	4		
3	1	9	5.5		
8	6	7	2.5		
7	5	6	1		
9	7	7	2.5		
4	2.5	10	7		
				Total:	

Table 1

SPACE FOR CALCULATIONS

Spearman's rank correlation coefficient .....

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(b) Using the Spearman's rank correlation coefficient that you calculated for 11(a), determine whether Amari's data were significant at $p \leqslant 0.05$ for a non-directional (two-tailed) hypothesis.

(1)

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(Total for Question 11 = 5 marks)

12 In your studies of biological psychology, you will have learned about the effect of recreational drugs on the transmission process in the central nervous system.

Discuss the effects of recreational drugs on the transmission process in the central nervous system.

You must make reference to examples of recreational drugs in your answer.

(8)

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(Total for Question 12 = 8 marks)

TOTAL FOR SECTION C = 19 MARKS

SECTION D

Learning Theories

13 Mischa is investigating the healthy and unhealthy food choices made by people and decides to use the observational method. For one day, he observed the food purchased by customers in a local café. Mischa gathered quantitative data in his observation.

(a) Describe how Mischa could use tallying to gather his quantitative data.

(2)

(b) Describe the sampling technique used by Mischa to gather the participants for his observation.

(2)

(c) Explain **two** improvements Mischa could make to his investigation.

(4)

1 .....

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2 .....

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(Total for Question 13 = 8 marks)

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14 Explain **one** strength of Bandura et al.'s (1961) Bobo doll experiment.

(Total for Question 14 = 2 marks)

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QUESTION 15 BEGINS ON THE NEXT PAGE.

15 Evaluate Pavlov's (1927) experiment with salivation in dogs.

(8)

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(Total for Question 15 = 8 marks)

TOTAL FOR SECTION D = 18 MARKS

SECTION E

Issues and Debates

16 Assess the ethical issues of research conducted in biological psychology.

(8)

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(Total for Question 16 = 8 marks)

17 To what extent is research in social and cognitive psychology socially sensitive?

(12)

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(Total for Question 17 = 12 marks)

TOTAL FOR SECTION E = 20 MARKS
TOTAL FOR PAPER = 90 MARKS

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