Pearson Edexcel Level 3 GCE

Monday 15 May 2023

Afternoon (Time: 1 hour 30 minutes) | **Paper reference** **8PS0/01**

Psychology
Advanced Subsidiary
PAPER 1: Social and Cognitive 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 70.
- 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 ▶

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.

P 7 0 7 9 9 A 0 2 3 2

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.

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

N_a	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

$p \leq 0.05$ (one-tailed), $p \leq 0.10$ (two-tailed)

N_a	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

N_a

$p \leq 0.01$ (one-tailed), $p \leq 0.02$ (two-tailed)

	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

N_a

$p \leq 0.025$ (one-tailed), $p \leq 0.05$ (two-tailed)

	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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

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| | N_b | | | | | | | | | | | | | | | |
N_a	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.005$ (one-tailed), $p \leq 0.01$ (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.

SECTION A

SOCIAL PSYCHOLOGY

Answer ALL questions.

1 When studying social psychology you will have learned about realistic conflict theory (Sherif, 1966).

(a) Define the concept of 'superordinate goals' as used in realistic conflict theory.

(1)

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(b) Explain **two** strengths of realistic conflict theory (Sherif, 1966).

(4)

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(Total for Question 1 = 5 marks)

2 Natasha has just moved from a small rural school to a large city school and is finding it difficult to make new friends. The children in her class are mean to her and laugh at her accent. One girl in particular tells her that she is 'not good enough' and should never have been allowed to join their class.

(a) Describe **one** way that personality could account for the discrimination Natasha is experiencing.

(2)

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(b) Prejudice and discrimination can also be affected by the situation.

Describe **one** way that the situation could account for the discrimination Natasha is experiencing.

(2)

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(Total for Question 2 = 4 marks)

3 Explain **one** strength and **one** weakness of social impact theory as an explanation of obedience.

Strength

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Weakness

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(Total for Question 3 = 4 marks)

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4 Megan was interested in whether there was a difference in obedience reported by males and females.

Megan recruited a group of males (group A) and a group of females (group B) from a local college for her investigation. To measure obedience, she asked the participants to record how many times they disobeyed a parent or guardian's request during a 30-day period.

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

Group A: Males	Number of times the participant disobeyed a parent / guardian request (in 30 days)	Group B: Females	Number of times the participant disobeyed a parent / guardian request (in 30 days)
A	2	A	16
B	10	B	4
C	12	C	13
D	8	D	5
E	10	E	11
F	8	F	10
G	5	G	18
H	9	H	11

Table 1

(a) Calculate the median number of times the **male** participants disobeyed a parent / guardian request (in 30 days).

(1)

SPACE FOR CALCULATIONS

Median for males ....

(b) Calculate the mean number of times the **female** participants disobeyed a parent / guardian request (in 30 days).

(1)

SPACE FOR CALCULATIONS

Mean for females ....

Group A: Males	Number of times the participant disobeyed a parent / guardian request (in 30 days)	$(x - \bar{x})$	$(x - \bar{x})^2$
A	2	−6	36
B	10	2	4
C	12	4	16
D	8	0	0
E	10	2	4
F	8	0	0
G	5	−3	9
H	9	1	1
Total	64	Total	
Mean $\bar{x}$	8		

Table 2

(c) Using the data in **Table 2**, calculate the standard deviation for the number of times the male participants disobeyed a parent / guardian request (in 30 days).

You must show your working and give your answer to **two** decimal places.

(3)

SPACE FOR CALCULATIONS

Standard deviation ....

(Total for Question 4 = 5 marks)

5 Elijah and his friends are in a fancy restaurant and are sat at their table.

Elijah's friends are swearing and being very loud. Elijah begins to speak at a louder volume and also to swear. The manager of the fancy restaurant comes to the table and asks Elijah and his friends to stop swearing and be quieter. Elijah and his friends stop swearing and speak at a lower volume.

Later in the evening, Elijah and his friends are on the bus going home, and are swearing and speaking very loudly. The manager from the fancy restaurant is also on the bus, and asks them to stop swearing and speaking so loudly. Elijah and his friends ignore the manager from the fancy restaurant.

Describe how Milgram's research into obedience could account for Elijah and his friends' behaviour.

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(Total for Question 5 = 3 marks)

P 7 0 7 9 9 A 0 1 5 3 2

6 In social psychology you will have learned about one of the following contemporary studies in detail:

- Burger (2009)

- Reicher and Haslam (2006)

- Cohrs et al. (2012)

Evaluate your chosen contemporary study in terms of reliability and validity.

(8)

Chosen study

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(Total for Question 6 = 8 marks)

TOTAL FOR SECTION A = 29 MARKS

COGNITIVE PSYCHOLOGY

Answer ALL questions.

7 In your studies of cognitive psychology you will have learned about the working memory model (Baddeley and Hitch, 1974).

(a) Describe the phonological loop.

(2)

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(b) Explain **one** weakness of the working memory model (Baddeley and Hitch, 1974).

(2)

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(Total for Question 7 = 4 marks)

8 Explain **two** weaknesses of using case studies of brain-damaged patients when researching memory.

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(Total for Question 8 = 4 marks)

P 7 0 7 9 9 A 0 1 9 3 2

9 Stefan is a psychology teacher who is investigating the influence of note-taking on the performance of his students.

He splits his students into two groups.

Group 1: Students who write summary notes of the lesson content in their own words.

Group 2: Students who do not write any summary notes of the lesson content and just use the printed notes given to them.

After a two-week period, Stefan gives his students a test on the lesson content he has taught since the students were assigned to their groups. Stefan assesses their performance on the test, which was out of 32 marks.

The results of Stefan's investigation are shown in **Table 3**.

Group 1: Students who wrote summary notes	Test performance (out of 32)	Group 2: Students who did not write summary notes	Test performance (out of 32)
A	28	I	22
B	26	J	19
C	30	K	25
D	18	L	31
E	23	M	20
F	21	N	20
G	16	O	14
H	22	P	17

Table 3

(a) From the total number of students in **group 1**, calculate the percentage of students who scored higher than 20 in the test.

(1)

SPACE FOR CALCULATIONS

Percentage ....

(b) The student participants in Stefan's sample consisted of twelve females and four males.

Calculate what fraction of Stefan's sample were female.

You must express your answer in its simplest form.

(1)

SPACE FOR CALCULATIONS

Fraction ....

(c) Stefan wanted to analyse his data using a Mann-Whitney U test.

Complete **Table 4** and calculate the Mann-Whitney U test for Stefan's data.
You must give your answer to **one** decimal place.

(4)

Group 1: Students who wrote summary notes		Group 2: Students who did not write summary notes	
Test performance (out of 32)	Rank 1	Test performance (out of 32)	Rank 2
28	14	22	9.5
26	13	19	5
30	15	25	12
18	4	31	16
23	11	20	6.5
21	8	20	6.5
16	2	14	1
22	9.5	17	3
Total		**Total**	

Table 4

SPACE FOR CALCULATIONS

$U_a =$ ....

$U_b =$ ....

$U =$ ....

(d) Stefan was concerned about making a Type I error when analysing the results of his investigation.

Define what is meant by a Type I error.

(1)

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(e) Explain **one** improvement Stefan could have made to his investigation.

(2)

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(Total for Question 9 = 9 marks)

10 During your course you will have studied the multi-store model of memory (Atkinson and Shiffrin, 1968).

(a) Describe the 'sensory register' as part of the multi-store model of memory (Atkinson and Shiffrin, 1968).

(2)

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(b) Explain **one** strength of the multi-store model of memory (Atkinson and Shiffrin, 1968).

(2)

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(Total for Question 10 = 4 marks)

11 Assess the key question you have studied from cognitive psychology.

(8)

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(Total for Question 11 = 8 marks)

TOTAL FOR SECTION B = 29 MARKS

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SECTION C

12 Evaluate the use of interviews and field experiments when conducting research in psychology.

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(Total for Question 12 = 12 marks)

TOTAL FOR SECTION C = 12 MARKS
TOTAL FOR PAPER = 70 MARKS

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