GradeMax

Please check the examination details below before entering your candidate information

Candidate surname	Other names

Pearson Edexcel
International Advanced Level

Centre Number	Candidate Number

Friday 5 June 2020

Afternoon (Time: 2 hours)	Paper Reference **WPS04/01**

Psychology

International Advanced Level

Paper 4: Clinical Psychology and Psychological Skills

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 96.
- 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

CLINICAL PSYCHOLOGY

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

1 An fMRI brain scanning technique can be used to investigate brain activity.

(a) Describe how an fMRI scan measures brain activity.

(2)

(b) Arthur is investigating the symptoms of schizophrenia.

Give **one** symptom of schizophrenia that Arthur could investigate.

(1)

(c) Arthur samples ten patients with schizophrenia and a control group of ten non-schizophrenic people. Both groups completed a listening task during an fMRI brain scan.

A pre-recorded voice describing a fictional series of events was played to participants and their brain activity was measured.

Explain, in terms of reliability, **two** strengths of Arthur's investigation into symptoms of schizophrenia.

(4)

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(d) Suggest **one** control Arthur could have put in place when selecting his sample of patients with schizophrenia.

(2)

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(Total for Question 1 = 9 marks)

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2 Ruva has been diagnosed with schizophrenia. She is about to begin family therapy to help her cope with the impact of schizophrenia on her daily life.

Ruva's parents and her older brother will be attending the sessions with her as they are often worried about Ruva's behaviour. She has asked her cousin to attend as Ruva trusts her cousin's advice and she has often helped Ruva cope with her symptoms in the past.

(a) Describe how a family therapy session could be conducted with Ruva and her family.

(4)

(b) Explain **two** weaknesses of using family therapy to help Ruva cope with her schizophrenia.

(4)

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(Total for Question 2 = 8 marks)

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3 Laurel used a correlational research method to investigate whether there was a relationship between the severity of anorexia nervosa when patients also had a diagnosis of unipolar depression.

Laurel carried out a Spearman's rank test on her data. Her calculated value was 0.459 with N=26.

(a) State, using the data, whether Laurel's results are significant for a two-tailed test at $P \leq 0.10$.

The formula and statistical tables can be found at the front of the paper.

(1)

(b) Identify the lowest probability level of significance for a two-tailed test that Laurel could use for her calculated value to be significant.

The formula and statistical tables can be found at the front of the paper.

(1)

(c) Explain **one** strength of Laurel using a correlational research method in her investigation.

(2)

(Total for Question 3 = 4 marks)

4 Analyse whether mental health diagnosis can be considered reliable and valid.

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(Total for Question 4 = 6 marks)

5 In your studies of clinical psychology, you will have learned about one of the following mental health disorders:

- Anorexia nervosa
- Unipolar depression.

(a) Give **one** symptom and **one** feature of your chosen mental health disorder.

(2)

Chosen mental health disorder

Symptom

Feature

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(b) Describe **one** biological explanation for your chosen mental health disorder.

(3)

(Total for Question 5 = 5 marks)

TOTAL FOR SECTION A = 32 MARKS

SECTION B

CLINICAL PSYCHOLOGY

Answer the question. Write your answer in the space provided.

6 In your studies of unipolar depression **or** anorexia nervosa, you will have learned about one of the following contemporary studies in detail.

- Hans and Hiller (2013)
- Ma, Quinn and Liu (2014)
- Becker et al. (2002)
- Reichel et al. (2014).

Evaluate your chosen contemporary study.

(16)

Chosen study

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(Total for Question 6 = 16 marks)

TOTAL FOR SECTION B = 16 MARKS

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SECTION C

PSYCHOLOGICAL SKILLS

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

7 **Figure 1** shows a distribution curve.

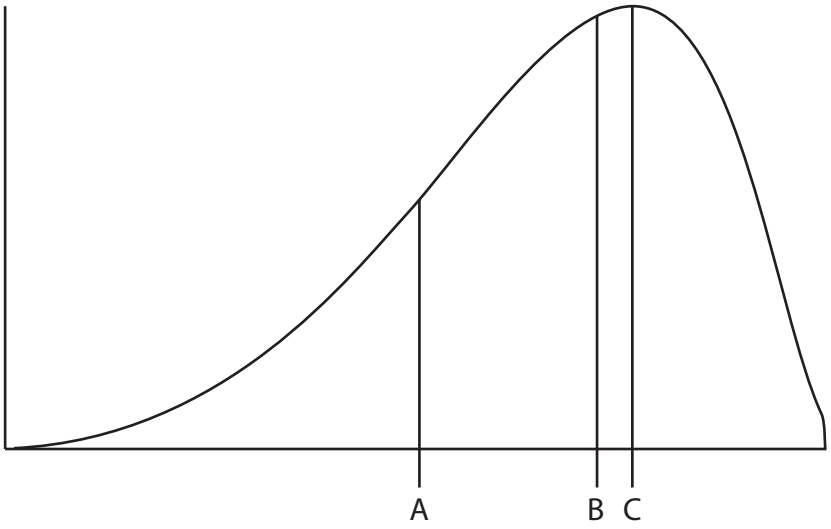


Figure 1

(a) Identify the measure of central tendency shown by **line C** in **Figure 1**.

(1)

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(b) State the type of distribution shown in **Figure 1**.

(1)

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(Total for Question 7 = 2 marks)

8 Spiros wants to investigate the influence of role models on the helping behaviour of 56 adolescent boys aged 13-years old. He asks two 16-year old males, who are both popular and well-liked students, to act as confederate role models.

Spiros will first observe how many of the 56 boys hold a door open for someone else when they enter a lecture hall for a lesson.

During the lecture, a confederate will hold a door open at the front of the lecture hall for another confederate to walk in. He will then repeat this when the confederate walks out of the lecture hall.

Spiros will then observe how many of the 56 boys hold a door open for someone else when they exit the lecture hall.

(a) Give a fully operationalised directional (one-tailed) hypothesis for the investigation by Spiros.

(2)

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(b) Spiros found that 10 boys opened a door for someone else when they entered the lecture hall, and 11 boys opened a door for someone else when they exited the lecture hall.

Calculate the percentage of all boys who opened a door for someone else after observing the modelled behaviour.

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

(1)

Space for calculations

Percentage of boys who opened a door for someone else .....

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(c) State **one** conclusion that Spiros can make from his investigation.

(1)

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(d) Explain **one** way that Spiros could improve the validity of his investigation about the helping behaviour of adolescent boys.

(3)

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(Total for Question 8 = 7 marks)

9 Analyse whether research with human participants in cognitive psychology meets the ethical requirements of the BPS Code of Ethics and Conduct (2009).

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(Total for Question 9 = 6 marks)

10 Khalid wanted to find out if cognitive ability was affected by the time of day. He investigated whether participants could complete mathematical calculations better in the morning or in the afternoon. He used a volunteer sample of ten mathematics students at university.

- Condition A: the participants were given 20 calculations to complete at 10:00 hrs. The number of correct answers was recorded.
- Condition B: the participants were given 20 calculations to complete at 16:00 hrs. The number of correct answers was recorded.

He used a Wilcoxon Signed Ranks test to find out if his results were significant.

(a) Calculate the T value for the data by completing **Table 1**.

The formula can be found at the front of the paper.

You **must** show your working out.

(4)

Participant	Condition A	Condition B	Difference	Ranked Difference
A	15	16		
B	18	19		
C	19	20		
D	20	19		
E	17	16		
F	16	14		
G	12	12		
H	17	11		
I	16	19		
J	14	11		

Table 1

Space for calculations

T value = ...

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(b) State, using the data, whether Khalid's results are significant for a one-tailed test at $P \leq 0.05$.

The formulae and statistical tables can be found at the front of the paper.

(1)

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(Total for Question 10 = 5 marks)

TOTAL FOR SECTION C = 20 MARKS

SECTION D

Answer the question. Write your answer in the space provided.

11 One key question for society is whether knowledge from social and cognitive psychology can help reduce prejudice.

Prejudice is when an individual makes a judgement about another individual or group of people based on preconceived ideas or stereotypical traits. This can result in the unfair treatment of groups or individuals in society.

Tajfel (1970) found that boys in his study developed in-group favouritism towards their own group, even though the boys did not know who was in the other group. He suggested that when the boys were categorised into a social group they identified as part of that group, then compared themselves more favourably to the other group. They saw the other social group as an out-group.

Allport and Postman (1947) showed participants a picture of an argument between a 'white' character who was holding a razor and a character of 'other-race'. Participants then recalled this picture by describing it to another participant. Over half the participants distorted the story on recall, remembering the 'other-race' character as holding the razor.

(Source: adapted from Allport and Postman, 1947)

Discuss the key question of whether knowledge from social and cognitive psychology can help reduce prejudice. You should use concepts, theories and/or research studied in your psychology course.

You must make reference to the context in your answer.

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(Total for Question 11 = 8 marks)

TOTAL FOR SECTION D = 8 MARKS

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SECTION E

Answer the question. Write your answer in the space provided.

12 Evaluate whether nurture is more important than nature in human behaviour.

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(Total for Question 12 = 20 marks)

TOTAL FOR SECTION E = 20 MARKS
TOTAL FOR PAPER = 96 MARKS

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