Write your name here

Surname	Other names

Pearson Edexcel
Level 3 GCE

Centre Number	Candidate Number

Psychology

Advanced
Paper 1: Foundations in psychology

Sample assessment materials for first teaching September 2015
Time: 2 hours

Paper Reference
9PS0/01

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 critical value 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 CRITICAL VALUE 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.

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_a \ N_b	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
***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* ≤ 0.01 (one-tailed), *p* ≤ 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

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

N_a \ N_b	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

$p \leq 0.005$ (one-tailed), $p \leq 0.01$ (two-tailed)

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

SECTION A: SOCIAL PSYCHOLOGY

1 Annabel carried out research to investigate prejudice. She gave 20 students two reports of a person who had dropped their bag and needed help. One report described the person wearing a hooded top and the other report described the person wearing a suit. The students had to decide if they would help the person in the report or not.

Table 1 shows the total number of students who said they would help or not help a person wearing a hooded top or a person wearing a suit.

	Person wearing a hoodie	**Person wearing a suit**
Total number of students who would help	5	15
Total number of students who would not help	15	5

Table 1

Annabel concluded that people were more prejudiced against people wearing hooded tops.

(a) Identify the level of measurement used in Annabel's study.

(1)

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.....

(b) Identify the experimental design Annabel used.

(1)

.....

.....

(c) Explain **one** improvement that could be made to the experimental design used in Annabel's research.

(2)

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(Total for Question 1 = 4 marks)

2 Tom is busy with his schoolwork and revision. He is told by his teacher, Mrs Smith, to make sure he turns up to lessons early so that he can run errands for her. Mrs Smith orders Tom to do her photocopying and help prepare the classroom for her lessons.

Using agency theory, explain why Tom might have obeyed Mrs Smith's orders even though he was busy.

(Total for Question 2 = 4 marks)

3 Evaluate whether research into obedience can be conducted without violating ethical guidelines.

(Total for Question 3 = 8 marks)

TOTAL FOR SECTION A = 16 MARKS

SECTION B: COGNITIVE PSYCHOLOGY

4 Describe the theory of reconstructive memory.

(Total for Question 4 = 4 marks)

5 A recent research project into brain damage has shown that people tend to retain their episodic memory in remembering their previous personal history. For instance, they could recall the names of their children, what type of food they preferred and their favourite colour. However, they had problems in updating their episodic memory and creating new semantic memories.

Describe how this information could be used to provide appropriate care for brain damaged patients in a hospital situation.

(Total for Question 5 = 3 marks)

6 A group of researchers is testing whether the number of words that can be recalled from a list is affected by age.

One group of participants is under 30 years old, and the other group of participants is over 50 years old.

Participants have to learn and recall words from a list of 100.

Each participant is given a recall score out of 100.

(a) State why an 'independent groups' design is suitable for this investigation.

(1)

.....

.....

Table 2 shows the data from the investigation.

	Under 30 years old	**Over 50 years old**
Mean score out of 100	22	39

Table 2

(b) Explain which statistical test the researchers could have used to analyse the data.

(2)

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(Total for Question 6 = 3 marks)

7 Two possible methods of learning a language are either learning in a formal classroom setting where the language is taught, or acquiring the language by living in the relevant country.

Discuss how the multi-store model of memory explains how language is learnt in a formal classroom setting. You must make reference to the context in your answer.

(Total for Question 7 = 8 marks)

TOTAL FOR SECTION B = 18 MARKS

SECTION C: BIOLOGICAL PSYCHOLOGY

8 Mrs Khan is a recently widowed woman suffering from bouts of intense anger, which is having serious consequences in terms of her health. She has visited a counsellor who believes that her problems might be caused by the events that have happened to her in the last year.

The counsellor carries out an assessment using a well-known scale that gives an arbitrary score for every time a particular event happens. These scores are added up to give an overall score. The size of this score gives an indication of a person's level of stress, which could be the cause of Mrs Khan's recent increase in aggressive behaviour.

Table 3 shows a portion of the scale showing the events that have happened and how Mrs Khan scored on it.

Event	Arbitrary score	Times occurred in the year	Total for each type of event
Death of a spouse	100	1	100
Personal injury	53	4	212
Change in financial status	38	1	38
Son or daughter leaving home	29	2	58
Minor violations of the law	11	2	22
		Total	430

Table 3

(a) State **one** aspect of Mrs Khan's situation that could be described as nature and **one** aspect that could be described as nurture.

(2)

(b) Describe how the counsellor could use this data to advise his client to reduce her aggression.

(4)

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(Total for Question 8 = 6 marks)

9 Val was conducting research into aggression. She asked seven participants to rate their own aggression on a scale of 1–9 and then asked the best friend of each participant to give a peer rating of their friend's aggression level using the same scale.

Table 4 shows the data from the investigation.

Complete the table and calculate Spearman's rank correlation coefficient between self-rated aggression and peer-rated aggression.

Self-rated aggression	Rank 1	Peer-rated aggression	Rank 2	d	d^2
2	6.5	3	6		
2	6.5	6	4		
4	5	2	7		
5	4	5	5		
8	3	7	3		
9	1.5	8	2		
9	1.5	9	1		
				Total:	

Table 4

Spearman's rank correlation coefficient .....

(Total for Question 9 = 4 marks)

10 Assess how both biological and psychodynamic theories have been used to explain aggression.

(Total for Question 10 = 8 marks)

TOTAL FOR SECTION C = 18 MARKS

SECTION D: LEARNING THEORIES

11 Two psychology students are arguing as to whether males or females would be more likely to stop and help a woman with a baby in a pushchair up the stairs at a busy train station.

They decide to settle the argument by carrying out a structured observation.

(a) State an operationalised directional hypothesis for this study.

(2)

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(b) State **two** reasons why chi-squared might be an appropriate statistical test for this study.

(2)

1 .....

.....

2 .....

.....

(c) Explain how the students could make their observation as reliable as possible.

(3)

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(Total for Question 11 = 7 marks)

12 Suraj has severe ornithophobia (fear of birds).

Describe how **one** therapy based on classical conditioning could be carried out to help Suraj overcome his phobia.

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(Total for Question 12 = 3 marks)

13 The media is said to have an ever growing impact on our lives, including the behaviours we show and how we view ourselves and others. For example, the media can be said to affect the style of clothes that young people choose to wear.

Claims have been made that the media is responsible for the increasing number of young people with eating disorders, both male and female.

Discuss the key issue for society of the effect of the media on young people, using concepts, theories and/or research from learning theories. You must make reference to the context in your answer.

(Total for Question 13 = 8 marks)

TOTAL FOR SECTION D = 18 MARKS

SECTION E: ISSUES AND DEBATES

14 Assess the scientific status of the classic studies of Sherif et al. (1954, 1961) and Baddeley (1966b).

(Total for Question 14 = 8 marks)

15 Evaluate the issue of reductionism in relation to the use of biological and learning theories in explaining human behaviour.

(Total for Question 15 = 12 marks)

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