

Write your name here	
Surname	Other names
<b>Pearson Edexcel</b>	Centre Number
<b>Level 3 GCE</b>	Candidate Number
<h1 style="margin: 0;">Psychology</h1> <h2 style="margin: 0;">Advanced</h2> <h3 style="margin: 0;">Paper 1: Foundations in psychology</h3>	
Sample assessment materials for first teaching September 2015 <b>Time: 2 hours</b>	Paper Reference <b>9PS0/01</b>
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.

## 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
4	1.000	1.000	1.000	1.000	1.000
5	0.700	0.900	0.900	1.000	1.000
6	0.657	0.771	0.829	0.943	0.943
7	0.571	0.679	0.786	0.857	0.893
8	0.548	0.643	0.738	0.810	0.857
9	0.483	0.600	0.683	0.767	0.817
10	0.442	0.564	0.649	0.733	0.782
11	0.418	0.527	0.609	0.700	0.755
12	0.399	0.504	0.587	0.671	0.727
13	0.379	0.478	0.560	0.648	0.698
14	0.367	0.459	0.539	0.622	0.675
15	0.350	0.443	0.518	0.600	0.654
16	0.338	0.427	0.503	0.582	0.632
17	0.327	0.412	0.482	0.558	0.606
18	0.317	0.400	0.468	0.543	0.590
19	0.308	0.389	0.456	0.529	0.575
20	0.299	0.378	0.444	0.516	0.561
21	0.291	0.369	0.433	0.503	0.549
22	0.284	0.360	0.423	0.492	0.537
23	0.277	0.352	0.413	0.482	0.526
24	0.271	0.344	0.404	0.472	0.515
25	0.265	0.337	0.396	0.462	0.505
26	0.260	0.330	0.388	0.453	0.496
27	0.255	0.323	0.381	0.445	0.487
28	0.250	0.317	0.374	0.437	0.479
29	0.245	0.312	0.367	0.430	0.471
30	0.241	0.306	0.361	0.423	0.463

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

### Chi squared distribution formula

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

### 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 less than 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
$p \leq 0.05$ (one-tailed), $p \leq 0.10$ (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	82	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		5	6	8	10	11	13	14	16	17	19	21	22	24	25	27
7			8	10	12	14	16	18	20	22	24	26	28	30	32	34
8				13	15	17	19	22	24	26	29	31	34	36	38	41
9					17	20	23	26	28	31	34	37	39	42	45	48
10						23	26	29	33	36	39	42	45	48	52	55
11							30	33	37	40	44	47	51	55	58	62
12								37	41	45	49	53	57	61	65	69
13									45	50	54	59	63	67	72	76
14										55	59	64	67	74	78	83
15											64	70	75	80	85	90
16												75	81	86	92	98
17													87	93	99	105
18														99	106	112
19															113	119
20																127

$N_a$	$N_b$															
	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		2	3	4	5	6	7	9	10	11	12	13	15	16	17	18
7			4	6	7	9	10	12	13	15	16	18	19	21	22	24
8				7	9	11	13	15	17	18	20	22	24	26	28	30
9					11	13	16	18	20	22	24	27	29	31	33	36
10						16	18	21	24	26	29	31	34	37	39	42
11							21	24	27	30	33	36	39	42	45	48
12								27	31	34	37	41	44	47	51	54
13									34	38	42	45	49	53	57	60
14										42	46	50	54	48	63	67
15											51	55	60	64	69	73
16												60	65	70	74	79
17													70	75	81	86
18														81	87	92
19															93	99
20																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

<i>n</i>	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
	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. In his 1963 study of obedience, Milgram recruited 40 men to take part in “a test of memory”.

(a) How did Milgram recruit this sample? (1)

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(b) What type of sampling technique is this? (1)

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(c) Explain **one** weakness with this sampling technique for Milgram’s research. (3)

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**Total for Question 1 = 5 marks**

2. As part of your course, you have studied a Key Question in the social approach.

Describe your Key Question and explain it using concepts, theories and/or research from the social approach. (8)

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[illegible]

3. As part of your course, you will have studied a contemporary research study from the social approach. It will be a study from this list:
- Burger (2009) Replicating Milgram
  - Reicher & Haslam (2006) Rethinking the psychology of tyranny
  - Cohrs et al. (2012) Individual differences in prejudice

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- (b) Outline **one** strength of the way the study was carried out in terms of **either** reliability **or** validity. (2)

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**Total for Question 3 = 5 marks**

**TOTAL FOR SECTION A = 18 marks**

## SECTION B: COGNITIVE PSYCHOLOGY

1. Describe the reconstructive (schema) theory of memory. (4)

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**Total for Question 4 = 4 marks**

2. The classic Cognitive study is Baddeley's research into different types of encoding in long term memory (LTM).

- (a) Describe how Baddeley measured his participants' long term memory (LTM). (3)

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- (b) State **one** result that Baddeley recorded concerning encoding in long term memory (LTM). (1)

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- (c) Outline **one** strength of the procedure in Baddeley's study. (2)

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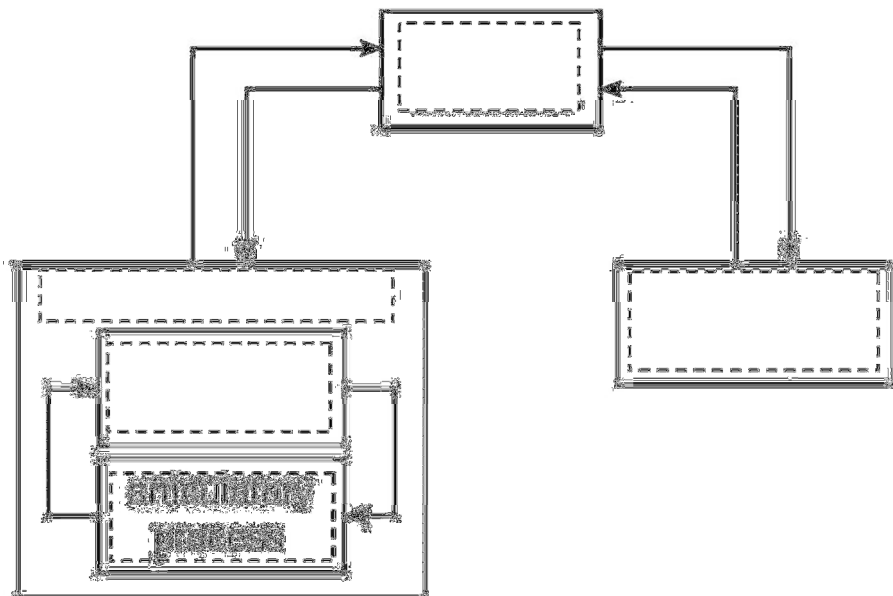
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Total for Question 4 = 6 marks

3. (a) Complete this diagram illustrating the working memory model. There are four labels (with dashed outlines) to fill in; a fifth has been filled in for you. (4)



- (b) Outline **one** strength of this model. (2)

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Total for Question 4 = 6 marks

4. H.M. was a famous patient who suffered an unusual sort of brain damage that affected his memory. However, he still possessed some memories from before his brain damage and he could carry out some memory functions, but not others.  
Even though H.M. immediately forgot what he was told, his doctors had to remind him about his condition. Write a statement that a doctor could read out to H.M. to explain his condition to him. (4)

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**Total for Question 6 = 4 marks**

**TOTAL FOR SECTION B = 18 marks**

### SECTION C: BIOLOGICAL PSYCHOLOGY

5. During your Biological Psychology course, you carried out a correlation.

(a) What were the variables you correlated? (2)

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(b) Which statistical test did you use? (1)

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(c) If you were to carry out the correlation again, explain **one** way it could be improved. (2)

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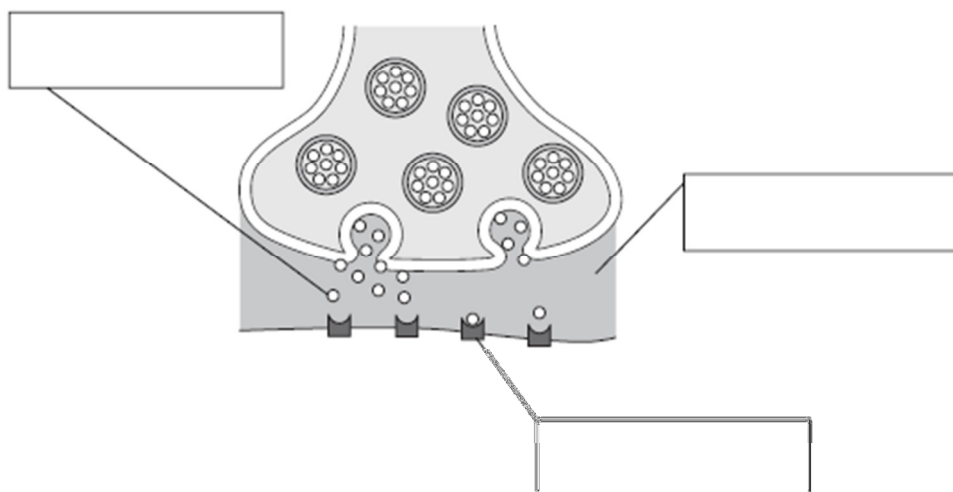
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**Total for Question 7 = 5 marks**

6. This is a diagram of a synapse. Label the diagram using the terms below. (3)

- Synaptic gap
- Neurotransmitters
- Receptors



**Total for Question 8 = 3 marks**

7. Billy has been arrested for a violent crime and he has a history of aggressive behaviour. His lawyer thinks a brain scan might reveal whether there is a biological cause for Billy's aggression.

(a) Identify a brain imaging technique that Billy could use. (1)

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(b) What features might show up on a brain scan that could explain Billy's aggression? (2)

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(c) Explain **one** problem with using evidence from a brain scan to explain Billy's aggression? (2)

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**Total for Question 9 = 5 marks**

8. Kloe is looking at a correlation between the aggression of siblings (brothers & sisters). Her hypothesis is that there will be a positive correlation between the aggression scores of siblings. She gets brothers and sisters to rate their own aggression on a scale of 1-10. Here are her results:

Sibling 1	Sibling 1's aggression	Sibling 1's rank	Sibling 2	Sibling 2's aggression	Sibling 2's rank	d	d <sup>2</sup>
Jack	6	4	David	7	3		
Ethan	9	1	Molly	6	4		
Stephen	7	3	Colin	8	2		
Pieter	4	6	Dorotka	5	5		
Liam	8	2	Conall	9	1		
Alfie	5	5	Cheryl	3	7		
Fatima	2	7	Usman	4	6		
							$\Sigma d^2 =$



- (a) Fill in the columns “d” and “d<sup>2</sup>” then work out the value of  $\sum d^2$ . (3)
- (b) Kloe’s observed value is calculated to be 0.679. Using the correct table of critical values from the front of this exam booklet, state the significance of Kloe’s results in relation to her hypothesis. (2)

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**Total for Question 10 = 5 marks**

**TOTAL FOR SECTION C = 18 marks**

#### SECTION D: LEARNING THEORIES

9. The classic study in Learning Theory is Watson & Rayner's "Baby Albert" study into phobias.

(a) Describe **one** example of how Baby Albert showed fear in the study. (2)

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(b) Explain **one** way that Watson & Rayner conditioned Albert to show fear of something **other** than the white rat. (3)

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(c) Explain how the results of this study can be applied to helping sufferers of phobias. (3)

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**Total for Question 10 = 8 marks**

10. Zack carries out an observation on pupils in the school playground. He observes each pupil for 10 seconds and records their gender and whether they are playing aggressively (chasing, fighting, competing) or non-aggressively (talking, playing alone). Here are Zack's results:

	Aggressive play	Non-aggressive play
Males	12	6
Females	10	6

- (a) State **one** result you could gather from this table of data. (1)

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- (b) Which statistical test should Zack use to check if the differences between the two conditions are statistically significant? (1)

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- (c) Explain why this statistical test would be the most appropriate one to use. (2)

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- (d) Explain **one** problem with **either** the reliability **or** the validity of Zack's procedure. (2)

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- (e) Explain **one** way Zack could solve this problem. (2)

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Total for Question 11 = 8 marks

TOTAL FOR SECTION D = 16 marks

## SECTION E: ISSUES & DEBATES

11. Evaluate the studies by Raine (1994) and Watson & Rayner (1920) in terms of reductionism.  
(8)

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**Total for Question 11 = 8 marks**

12. Evaluate the scientific status of the cognitive approach and the biological approach. (12)

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[illegible]

**Total for Question 14 = 12 marks**

**TOTAL FOR SECTION E = 20 marks**

**TOTAL FOR PAPER = 90 marks**

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