Please check the examination de	tails bel	ow before ente	ring your candidate information
Candidate surname			Other names
Pearson Edexcel Level 3 GCE	Cen	tre Number	Candidate Number
Time 2 hours		Paper reference	9PS0/02
Psychology Advanced PAPER 2: Application	ns of	psychol	ogy
You do not need any other m	ateria	ls.	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 in Section A.
- Answer ALL questions from **one** of the three options in Section **B**.
- 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.
- Check your answers if you have time at the end.
- Good luck with your examination.

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
	Jigiiiicanice	. O. u	one tanea test

	Level of significance for a one-tailed test											
	0.05	0.025	0.01	0.005	0.0025							
	Le	vel of signifi	icance for a	two-tailed t	est							
Ν	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**

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

## Critical values for chi-squared distribution

Level o	f siar	nificance f	or a one-tai	led test
---------	--------	-------------	--------------	----------

	0.10	0.05	0.025	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

	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N <sub>a</sub>																
$p \leq 0.0$	$p \le 0.05$ (one-tailed), $p \le 0.10$ (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<sub>b</sub>

								$N_{\rm b}$								
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>V</b> a																
0.0 ≥ 0	1 (on	e-tail	ed), <i>p</i>	≤ 0.0	2 (tw	o-tail	ed)									
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	10
19	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101	10
20	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114
20	10		20	34	40	4/	- 33	- 00	- 07	/3	- 00	0/	95	100	107	1 14
								N <sub>b</sub>								
<b>V</b> <sub>a</sub>	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
o ≤ 0.0	25 (o	ne-ta	iled),	<i>p</i> ≤ 0.	05 (tv	vo-ta	iled)									
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	10
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



								N <sub>b</sub>								
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N <sub>a</sub>																
$p \le 0.005$ (one-tailed), $p \le 0.01$ (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**

	0.05	0.025	0.01									
	Level of signif	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**

# **Clinical Psychology**

Answer ALL questions.								
1 (a) Describe how the ICD is used as a classification system for mental health.								
· ·	(4)							
(b) Explain <b>one</b> strength of using the ICD as a classification system for mental health.								
	(2)							
(Total for Question 1 = 6 ma	rks)							
( Total for Question 1 = 6 ma	1 L/2)							



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2	Motsi carried out an investigation to see if culture had an influence on the treatments people accessed for their mental health disorders.	
	She studied people in the UK and people in Japan who had a mental health disorder. She aimed to see if people from the UK were more likely to use a psychological treatment compared to people from Japan.	
	Motsi used a volunteer sampling technique for her investigation.	
	(a) Describe how Motsi may have gathered her volunteer sample.	(0)
		(2)
	(b) Explain <b>one</b> reason why a random sample of participants may be better than a volunteer sample of participants for Motsi's investigation.	
		(2)

	(Total for Question 2 = 6 mai	rks)
	investigation.	(2)
	Explain <b>one</b> weakness of Motsi using an unstructured interview for her	
(c)	Motsi used an unstructured interview to ask her participants about any treatment they were receiving for their mental health disorder.	

3	Rodney carried out an investigation to see whether two different mental health disorders influenced the ability to complete domestic tasks, such as being able to cook.
	The ability to complete domestic tasks was measured using a questionnaire, which was scored from 0 (very poor at completing domestic tasks) to 32 (excellent at completing domestic tasks).

(a)	State a fully operationalised non-directional (two-tailed) alternate hypothesis fo
	Rodney's investigation.

2)





The results for the participants who had a mental health disorder are shown in **Table 1**.

Participant	Domestic skills score
Α	29
В	12
C	25
D	18
E	20

Table 1

(b) Calculate the standard deviation for the participants who had one mental health disorder using the data in **Table 1**. Show your working and give your answer to **one** decimal place.

(4)

## **SPACE FOR CALCULATIONS**

Standard deviation .....

(Total for Question 3 = 6 marks)



4	During your studies of clinical psychology, you will have carried out a practical investigation.		
	Evaluate your practical investigation for clinical psychology.	(8)	



5	Émile has been diagnosed with schizophrenia. She sees ghosts when she is in a room on her own, and thinks that the government is spying on her through her mobile phone. Émile has stopped going out with her friends, and people say that her voice is very dull with no expression of emotion.	
	In the past Émile has been resistant to some biological treatments because she has been worried that the psychiatrist is trying to control her thoughts. However, Émile's current psychiatrist feels that a biological treatment will be the most beneficial.	
	Discuss <b>one</b> biological treatment that Émile's psychiatrist could use with her.	
	You must make reference to the context in your answer.	
		(8)





(Total for Question 5 = 8 marks)	

6	Assess <b>one</b> non-biological theory/explanation for schizophrenia.	(20)









**TOTAL FOR SECTION A = 54 MARKS** 



### **SECTION B**

Answer questions from ONE option in this section.

Indicate which question you are answering by marking a cross in the box  $\boxtimes$ . If you change your mind, put a line through the box  $\boxtimes$  and then indicate your new question with a cross  $\boxtimes$ .

## **OPTION 1: CRIMINOLOGICAL PSYCHOLOGY**

If you answer OPTION 1 put a cross in the box ...

## **Answer ALL questions.**

- **7** You will have learned about one of the following contemporary studies in criminological psychology.
  - Bradbury and Williams (2013)
  - Valentine and Mesout (2009)
  - Howells et al. (2005)

(	a`	State <b>two</b>	findings	of v	/OUR	chosen	contem	norary	study	
١	(a	Jiaie LWO	IIIIuiiigs	OI Y	/UUI	CHOSELL	COLICEIII	porary	/ Stuuy.	

(2)

Chosen study
1
2



(b) Explain <b>one</b> strength of your chosen contemporary study in terms of reliab	oility.
(Total for Question 7	= 4 marks)

8	Nο	ah is investigating a new treatment for offenders.	
-	He	decided to conduct a case study on one offender from his local prison. Before	
	No	ah conducted his case study, he carried out a risk management.	
	(a)	Describe the risk management Noah would have had to carry out for his case study.	
		cuse study.	(3)
	(b)	Noah used a variety of research methods within his case study including an experiment comparing the behaviour of the offender before the new treatment and after the new treatment.	
		Identify the experimental/research design Noah used in the experiment.	
			(1)

when researching criminol		be better than	quantitative data	
wite in research ming cimmins.	og.ea. ps/eo.og/			(2)
l) Explain <b>one</b> weakness of N	loah's investigatio	n into the new ti	eatment for	
offenders.				(2)
		(Total fo	or Question 8 = 8	marks)

9	Peter is 17 years old and has just been arrested for arguing in the street and refusing to go home. His family is well known to the police. Peter's mother has been arrested for being drunk in public and his older brother has been arrested for fighting.	
	Peter lives in an area that has a bad reputation, which means he finds it hard to get a job.	
	In a sporting accident, a few years ago, Peter banged his head and since then his family have noticed that he has become more aggressive.	
	Discuss how Peter's development may have affected his anti-social behaviour.	
	You must make reference to the context in your answer.	
		(8)





	(Total for Question 9 = 8 marks)
l	

10	Detective Inspector Leeming is in charge of leading an investigation into a major crime. As part of the investigation she and another police officer have to interview a suspect. The suspect is under 16 years of age.	
	Detective Inspector Leeming is upset by the details of the crime. The interview is going to take place in two weeks' time and will be recorded. There has been no video footage of the incident found as yet.	
	Ethical interview techniques are going to be used during the interview.	
	Evaluate ethical interview techniques as they will be used by Detective Inspector Leeming.	
	You must make reference to the context in your answer.	
		(16)
•••••		







(Total for Question 10 = 16 marks)

**TOTAL FOR SECTION B OPTION 1 = 36 MARKS** 

## **OPTION 2: CHILD PSYCHOLOGY**

## If you answer OPTION 2 put a cross in the box 🛛 .

## **Answer ALL questions.**

- **11** You will have learned about one of the following contemporary studies in child psychology.
  - Cassibba et al (2013)
  - Gagnon-Oosterwall et al. (2012)
  - Li et al. (2013)

	(a) State <b>two</b> findings of your chosen contemporary study.	(2)
	Chosen study	(-)
•••••		
1		
2		
	(b) Explain <b>one</b> strength of your chosen contemporary study in terms of reliability.	(2)



(Total for Question 11 = 4 marks)

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12	Noah is investigating the influence of day care on children.	
	He decided to conduct an observation on one child from his local nursery. Before Noah conducted his observation, he had to consider issues around the participation and protection of the child.	
	(a) Describe the issues around the participation and protection of the child that Noah	
	would have to consider for his observation.	(3)
	(b) Noah carried out an experiment where he watched the behaviour of the child before they went to day care and then watched the behaviour of the same child after they had been in day care for two months.	
	Identify the experimental/research design Noah used in the experiment.	(4)
		(1)

) For his observation Noah gathered qualitative and quantitative data.	
Explain <b>one</b> reason why qualitative data may be better than quantitative data when researching child psychology.	
	(2)
l) Explain <b>one</b> weakness of Noah's investigation into the influence of day care for	
children.	(2)
	(2)
(Total for Question 12 = 8	marks)

13	Peter is 6 years old. His teachers have noticed that he has problems with communicating and interacting with other children and finds it hard to engage in imaginative play.	
	Peter was cared for by his mother full time before he went to school, as his parents decided that this would be better for him. However, she found it hard work at times so sometimes left him to cry for a few minutes.	
	When he was 2 years old Peter had to go into hospital for a week. His mother visited as often as she could but could not stay with him all the time.	
	Discuss how Peter's development may have affected his behaviour.	
	You must make reference to the context in your answer.	
	,	(8)





(Total for Question 13 = 8 marks)

4 Mrs Leeming is in charge of a local nursery that looks after children aged from 6 months old to 5 years old. During her work she has noticed that different children have different reactions to their mothers when they are picked up from nursery to go home.  She has noticed that some children are happy to see their mothers at the end of the day. Other children do not seem happy to see their mothers, carry on playing, and run away. Mrs Leeming has also noticed that the mothers interact with their children differently.  Evaluate Ainsworth's types of attachment in relation to the children at the nursery.	
You must make reference to the context in your answer.	
 Tod must make reference to the context in your answer.	(16)









(Total for Question 14 = 16 marks)

**TOTAL FOR SECTION B OPTION 2 = 36 MARKS** 

### **OPTION 3: HEALTH PSYCHOLOGY**

# If you answer OPTION 3 put a cross in the box $\square$ .

# **Answer ALL questions.**

- **15** You will have learned about one of the following contemporary studies in health psychology.
  - Mundt et al.(2012)
  - Dixit et al. (2012)
  - Pengpid et al. (2012)

	(a) State <b>two</b> findings of your chosen contemporary study.	(2)
	Chosen study	
1		
2		
	(b) Explain <b>one</b> strength of your chosen contemporary study in terms of reliability.	(2)
	(Total for Question 15 = 4 m	arks)



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Noah is investigating the influence of a new drug treatment for heroin addicts.	
He decided to conduct an experiment on rats. Before Noah conducted his experiment, he had to consider the ethics of using rats to study drug treatments.	
(a) Describe the ethical issues that Noah would have had to consider when	
conducting his experiment.	(3)
(b) Later, Noah carried out an experiment on the effects of the new drug treatment for human heroin addicts using one human heroin addict.	
He compared the behaviour of the heroin addict before they had the new drug treatment and after they had the new drug treatment.	
Identify the experimental/research design Noah used in the experiment.	(1)
	(1)
	experiment, he had to consider the ethics of using rats to study drug treatments.  (a) Describe the ethical issues that Noah would have had to consider when conducting his experiment.  (b) Later, Noah carried out an experiment on the effects of the new drug treatment for human heroin addicts using one human heroin addict.  He compared the behaviour of the heroin addict before they had the new drug treatment and after they had the new drug treatment.



Explain <b>one</b> reason why qualitative data may be better than quantitative data when researching drug treatments.	
when researching drug treatments.	(2)
d) Explain <b>one</b> weakness of Noah's investigation using the human heroin addict.	(2)
(Total for Question 16 = 8 n	narks)
(10001101 Question 10 – 011	iidi kaj

17	Peter is 17 years old and has just been diagnosed with alcohol addiction. His mother is also addicted to alcohol. She drinks alcohol from the moment she gets up in the morning and throughout the rest of the day.	
	Peter started to drink alcohol at the age of 13 in order to fit in with his group of friends, who also drink alcohol.	
	When at parties Peter finds that alcohol makes him feel more confident and he finds it easier to talk to other people. He now wants to drink alcohol every time he goes to a party.	
	Discuss how Peter's development may have affected his addiction.	
	You must make reference to the context in your answer.	(8)





18 Mr Leeming works at a local doctor's surgery. One of his responsibilities is to reduct the number of people in the local area who are addicted to nicotine. In order to on this, he offers help and advice to those addicted to nicotine as well as treatments. Mr Leeming has recently hired a therapist who is qualified to administer aversion therapy, and he has decided to offer this to a small group of people who are additional to nicotine to see if it is effective.	lo
Evaluate aversion therapy in relation to the small group of nicotine addicts.	
You must make reference to the context in your answer.	(16)







(Total for Question 18 = 16 marks)
(

TOTAL FOR SECTION B OPTION 3 = 36 MARKS
TOTAL FOR PAPER = 90 MARKS



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