Write your name here

Surname		Other names

Pearson Edexcel
International
Advanced Level

Centre Number

Candidate Number

Psychology

International Advanced Level
Paper 3: Applications of Psychology

Sample assessment materials for first teaching
September 2015
Time: 1 hour and 30 minutes

Paper Reference
WPS03/01

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 in Section A, and **all** questions from **EITHER** Option 1 criminological psychology **OR** Option 2 health psychology.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 64.
- 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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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.

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

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

1 (a) Jacob was teaching his younger brother how to complete a puzzle. Jacob's younger brother had not seen a puzzle before.

Using your knowledge of Vygotsky's theory of cognitive development, describe **one** way in which Jacob could teach his brother to complete a puzzle.

(2)

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(b) Explain **one** reason why Vygotsky's theory of cognitive development could be considered a better way of teaching Jacob's brother to complete a puzzle compared to Piaget's theory.

(2)

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(Total for Question 1 = 4 marks)

93

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QUESTION 2 BEGINS ON THE NEXT PAGE.

2 Claude investigated Erikson's psychosocial stages of development using a questionnaire. Claude was particularly interested to see whether teachers and charity workers showed a greater level of caring compared to other participants. The level of caring was measured by a scoring system, where a high score related to a greater level of caring shown by the participant.

Claude scored each participant on traits of generativity and stagnation. Participants with generativity traits were given a high score and those with stagnation traits given a low score.

Table 1 shows the mean scores in the investigation.

	Teachers and charity workers **(Mean age 40 years)**	**Other participants** **(Mean age 40 years)**
Mean score (out of 20)	14	8
Standard deviation	4	1.2

Table 1

(a) Interpret the data in **Table 1**.

(2)

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(b) State what Erikson meant by generativity.

(1)

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(c) Claude's interpretation of the results is the same as your interpretation of **Table 1**.
Use your knowledge of Erikson's psychosocial stages of development to explain
why Claude's study might be flawed.

(3)

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(Total for Question 2 = 6 marks)

3 (a) A study looked at the relationship between the security of infant attachment and factors such as infant temperament (negative emotions and positive mood), maternal sensitivity (the amount the mother responded to the child's needs) and parental confidence in their child-rearing skills.

The data was gathered using questionnaires with the mothers. The correlation co-efficients, along with an indication of the levels of significance, are shown in **Table 2**.

Note: *= $p < 0.05$, **= $p < 0.01$

	Infant positive mood	**Parental confidence**	**Maternal sensitivity**	**Infant attachment security**
Infant positive mood	-	-0.26*	0.50**	0.44**
Parental confidence	0.26*	-	-0.17	0.24*
Maternal sensitivity	0.50**	-0.17	-	0.32*
Infant attachment security	0.44**	0.24*	0.32*	-

Table 2

Give the number of significant findings in **Table 2**.

(1)

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(b) Describe the meaning of $p < 0.01$.

(2)

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(c) This study used questionnaires and gathered quantitative data.
Describe an alternative research method that would gather qualitative data,
giving more detail about attachment issues.

(3)

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(Total for Question 3 = 6 marks)

4 Connor's attachment type is investigated using the strange situation. During the observation he becomes distressed and cannot be calmed.

Discuss how Connor's behaviour can be interpreted using the strange situation.

You must make reference to the context in your answer.

(8)

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(Total for Question 4 = 8 marks)

5 Bowlby's maternal deprivation hypothesis is one explanation of attachment. Evaluate theories of attachment, including Bowlby's maternal deprivation hypothesis.

You must refer to research evidence within your answer.

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(Total for Question 5 = 8 marks)

TOTAL FOR SECTION A = 32 MARKS

SECTION B

Answer ALL questions from EITHER OPTION 1: CRIMINOLOGICAL PSCHOLOGY or OPTION 2: HEALTH PSYCHOLOGY.

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6 (a) One symptom of anti-social personality disorder is a lack of empathy.
A psychologist often assesses the presence of this symptom using clinical
interviews.

Define the term 'empathy'.

(1)

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(b) Give **one** reason why the use of clinical interviews in this diagnosis might be
invalid.

(1)

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(Total for Question 6 = 2 marks)

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QUESTION 7 BEGINS ON THE NEXT PAGE.

7 (a) Amelie and Kai undertook research to explore the accuracy of eyewitness testimony. They asked each participant 20 questions about what they saw during a film clip of a street robbery. The questions required a 'Yes/No' response, and they recorded whether participants' responses were correct or incorrect.

The results of the study are shown in **Table 3**.

Participant	Number of correct responses	Number of incorrect responses
A	14	6
B	10	10
C	16	4
D	15	5
E	12	8
F	16	4
G	9	11
H	18	2
Total	**110**	**50**

Table 3

Calculate the range of correct responses given by the participants.

(1)

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(b) Amelie and Kai overheard two participants saying they had guessed the answers, responding 'Yes' or 'No' randomly to the questions, as this would give them a 50:50 chance of being correct.

Calculate the percentage of participants that showed greater accuracy than if they had been guessing the answer.

(1)

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(c) Using the information given below in **Table 4**, **calculate** the standard deviation for the number of incorrect responses, to two decimal points.

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

You must show your working.

(2)

	Number of incorrect responses	$x - \bar{x}$	$x - \bar{x}$
Participant A	6	-0.25	0.0625
Participant B	10	3.75	14.0625
Participant C	4	-2.25	5.0625
Participant D	5	-1.25	1.5625
Participant E	8	1.75	3.0625
Participant F	4	-2.25	5.0625
Participant G	11	5.75	33.0625
Participant H	2	-4.25	18.0625
Total sum	50	1	80
Mean of incorrect responses = 6.25			

Table 4

(d) It was only possible for Amelie and Kai to use eight participants in their research, all of whom were psychology students.

Explain **two** implications that this has on the conclusions they can draw from the data collected.

(4)

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(Total for Question 7 = 8 marks)

8 (a) Harper studied court records to investigate if there was any ethnic bias in the rates at which offenders are found guilty by a jury.

She tallied the number of guilty and innocent verdicts for white and black defendants, shown in **Table 5**.

Jury verdict	White defendants	Black defendants
Guilty	IIII IIII	IIII IIII IIII IIII II
Innocent	IIII IIII IIII	IIII IIII II

Table 5

Using the data in **Table 5**, draw a bar chart to illustrate the jury decisions for black defendants.

You should title and label your bar chart appropriately.

(2)

Title

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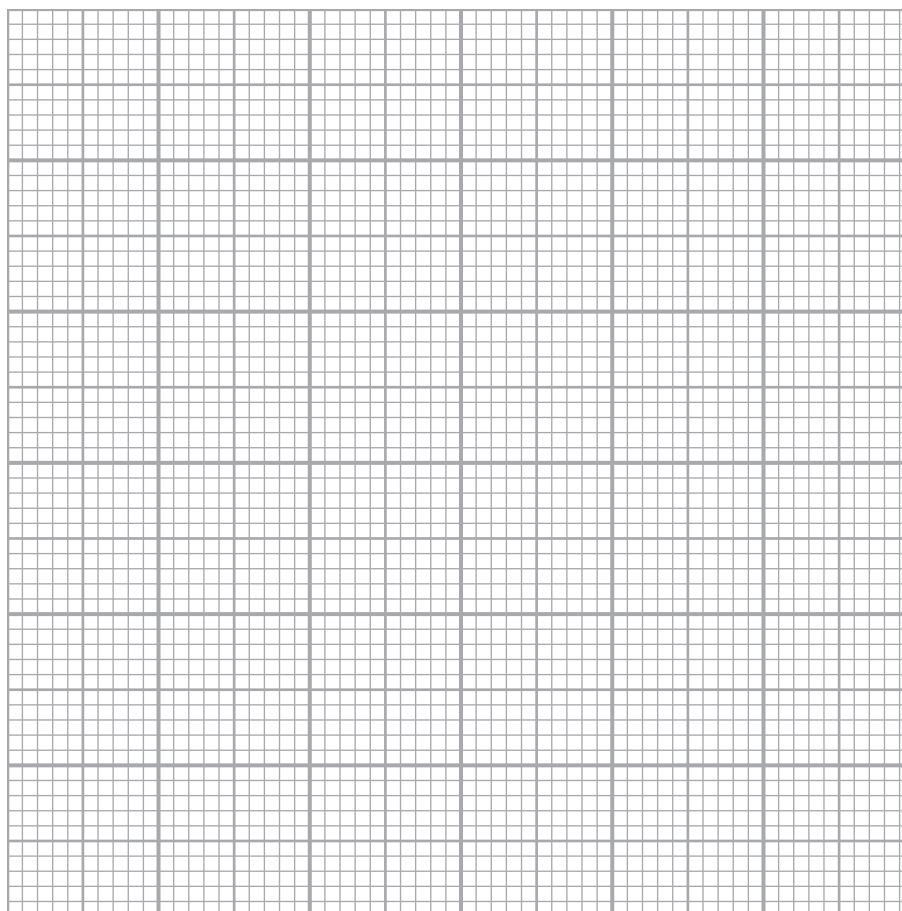
(b) Many researchers have investigated the effect of race on jury decision-making by using mock juries.

Explain **two** issues with drawing conclusions from research using mock juries.

(4)

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(Total for Question 8 = 6 marks)

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QUESTION 9 BEGINS ON THE NEXT PAGE.

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9 Evaluate ethical issues when researching offenders.

(8)

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(Total for Question 9 = 8 marks)

10 Freya has been having problems managing her anger and struggles to control her behaviour when angry, which can lead to aggression. Haruto also becomes angry but he is not sure what makes him angry.

Discuss how Cognitive Behavioural Therapy (CBT) could be used to help both Freya and Haruto manage their anger.

You must make reference to the context in your answer.

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(Total for Question 20 = 8 marks)

TOTAL FOR SECTION B OPTION 1 = 32 MARKS

OPTION 2: HEALTH PSYCHOLOGY

11 (a) Selye's General Adaptation Syndrome explains how we may react to stress. One stage is the 'Resistance stage'. Self-report data is used to determine a person's stage of stress.

Describe the resistance stage.

(1)

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(b) Give **one** reason why self-report data is a valid way to assess stages of stress in an individual.

(1)

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(Total for Question 11 = 2 marks)

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QUESTION 12 BEGINS ON THE NEXT PAGE.

12 (a) James and Amira conducted research to investigate the types of coping strategy used amongst students studying for their A-level examinations.
They gave 12 participants a structured questionnaire asking them about the number of times they had used several coping strategies in the month before their exams. The results of the research are shown in **Table 6**.

	Appraisal-focused coping	**Problem-focused coping**	**Emotion-focused coping**
Participant A	2	9	8
Participant B	4	6	13
Participant C	5	9	7
Participant D	7	12	6
Participant E	3	9	7
Participant F	4	16	2
Participant G	8	8	8
Participant H	6	8	14
Participant I	9	13	11
Participant J	8	17	9
Participant K	8	4	12
Participant L	4	10	14

Table 6

Calculate the range of appraisal-focused coping strategy used by students.

(1)

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(b) Calculate the percentage of participants who used problem-focused coping strategies more than emotion-focused strategies.

(1)

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(c) Using the information in Table 7, calculate the standard deviation for the number of times the students resorted to emotion-focused strategies to manage their exam stress, to two decimal points.

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

(2)

	Emotion-focused coping	$x - \bar{x}$	$(x - \bar{x})^2$
Participant A	8	-1.25	1.5625
Participant B	13	5.75	14.0625
Participant C	7	-2.25	5.0625
Participant D	6	-3.25	10.5625
Participant E	7	-2.25	5.0625
Participant F	2	-7.25	52.5625
Participant G	8	-1.25	1.5625
Participant H	14	4.75	22.5625
Participant I	11	1.75	3.0625
Participant J	9	-0.25	0.0625
Participant K	12	2.75	7.5625
Participant L	14	4.75	22.5625
Total sum	111	2	146.25
Mean number of emotion-focused strategies = 9.25			

Table 7

(d) James and Amira used closed questions in their questionnaire.

Explain **two** implications that this has on the conclusions they can draw from the data collected.

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(Total for Question 12 = 8 marks)

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QUESTION 13 BEGINS ON THE NEXT PAGE.

13 (a) Elliott has been studying factors that contribute to stress, specifically the relationship between personality type and level of stress.

He tallied the level of stress of participants and their personality type, which are shown below in **Table 8.**

Levels of stress	Type A personality	Type B personality
High	IIII IIII III	IIII
Low	IIII	IIII II

Table 8

Using the data in **Table 8**, draw a bar chart to illustrate the levels of stress of those with Type B personality.

You should title and label your bar chart appropriately.

Title

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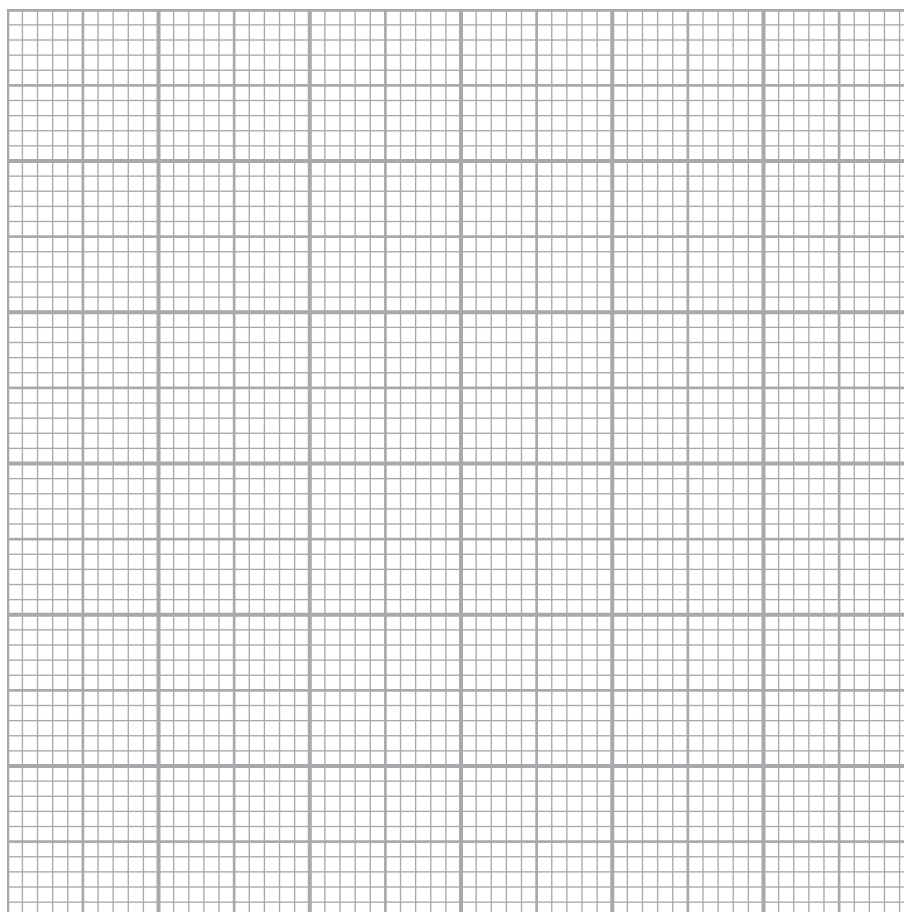
(b) Researchers investigating the relationship between personality type and stress have collected self-report data.

Explain **two** issues with drawing conclusions from this research into Type A

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(Total for Question 13 = 6 marks)

14 A focus group is a selection of people chosen to participate in a discussion. Focus groups discuss issues such as their experience of stress levels in the workplace.

Evaluate the ethics of using focus groups within health research.

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(Total for Question 14 = 8 marks)

15 Javier becomes anxious when he leaves his house. He is also anxious in public places, particularly when it is crowded. When Javier gets anxious he often panics, which makes him feel more anxious.

Discuss how Cognitive Behavioural Therapy (CBT) could be used to help Javier manage his anxiety.

You must make reference to the context in your answer.

(8)

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(Total for Question 15 = 8 marks)

TOTAL FOR SECTION B OPTION 2 = 32 MARKS
TOTAL FOR PAPER = 64 MARKS