Surname	Centre Number	Candidate Number
First name(s)		2

GCE A LEVEL

A290U20-1

S23-A290U20-1

THURSDAY, 25 MAY 2023 – AFTERNOON

PSYCHOLOGY – A level component 2
Psychology: Investigating Behaviour

2 hours 15 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1.	**3**	
2.	**7**	
3.	**7**	
4.	**4**	
5.	**4**	
6.	**4**	
7.	**5**	
8.	**12**	
9.	**16**	
10.	**14**	
11.	**11**	
12.	**13**	
Total	**100**	

A290U201
01

ADDITIONAL MATERIALS

In addition to this paper you may require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use gel pen or correction fluid.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. Additional space is provided for some questions within the booklet (if required). If further space is required for any question, you should use the additional page(s) at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

Assessment will take into account the quality of written communication used in your answers.

JUN23A290U20101

© WJEC CBAC Ltd.

Examiner only

SECTION A – Principles of Research

Answer **all** questions.

1. Identify which type of variable is being described in the following statements:

(a) Variables in a study that are not being measured or manipulated by the researcher but affect the results of all participants' behaviour equally. [1]

.....

.....

(b) Variables in a study that are not being measured or manipulated by the researcher, that affect some participants' behaviour but not others. [1]

.....

.....

(c) The variable the psychologist manipulates and controls to see how it affects behaviour. [1]

.....

.....

© WJEC CBAC Ltd.

Examiner only

2. (a) Explain what is meant by the term 'significance level'. [2]

(b) Explain what is meant by '$p \leq 0.01$'. [2]

(c) Explain why a psychological researcher might use a p value of $p \leq 0.01$ rather than $p \leq 0.05$. [2]

(d) Explain the difference between the meaning of the symbol ≤ and <. [1]

© WJEC CBAC Ltd.

Examiner only

3. (a) Briefly explain how a psychologist would select a random sample for research. [2]

(b) Evaluate the use of random sampling in psychological research. [5]

© WJEC CBAC Ltd.

Examiner only

4. Explain the following ways of assessing reliability in psychological research:

(a) 'Test-retest reliability'. [2]

(b) 'Split-half reliability'. [2]

5. Explain **two** advantages of conducting psychological research in the field compared to a laboratory environment. [2 + 2]

© WJEC CBAC Ltd.

Examiner only

6. Briefly explain the process of peer review in psychological research. [4]

7. Discuss the benefits of using quantitative data compared to qualitative data in psychological research. [5]

© WJEC CBAC Ltd.

Examiner only

8. Evaluate methodological and ethical issues that may arise in developmental psychological research, such as Kohlberg's (1968) research *'The child as a moral philosopher'*. [12]

© WJEC CBAC Ltd.

Turn over.

Examiner only

Additional space for question **8** only:

© WJEC CBAC Ltd.

Examiner only

SECTION B – Personal Investigations

You should answer **all** the questions in this section with reference to the investigations carried out in your study of psychology.

INVESTIGATION ONE: A content analysis of anti-social behaviour in the media

9. (a) State the aim of your content analysis. [2]

(b) Describe the procedures you followed when you carried out your content analysis. [6]

© WJEC CBAC Ltd.

Examiner only

(c) (i) Explain **one** issue of validity in your content analysis. [2]

.....

.....

.....

.....

.....

(ii) Explain how you dealt with the issue of validity identified in (c)(i). [2]

.....

.....

.....

.....

.....

(d) (i) Explain **one** issue of reliability in your content analysis. [2]

.....

.....

.....

.....

.....

(ii) Explain how you dealt with the issue of reliability identified in (d)(i). [2]

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

INVESTIGATION TWO: A questionnaire on pet ownership and stress

10. (a) Explain how you operationalised 'stress' in your investigation. [2]

.....

.....

.....

.....

(b) (i) Explain **one** ethical issue which you considered in your investigation. [2]

.....

.....

.....

.....

(ii) Explain how you managed the ethical issue identified in (b)(i). [2]

.....

.....

.....

.....

(iii) Apart from ethical issues, explain **one** strength and **one** weakness of using a questionnaire in this investigation. [2 + 2]

.....

.....

.....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Turn over.

Examiner only

(c) Identify and justify the choice of inferential statistic used to analyse the data in this investigation. [4]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© WJEC CBAC Ltd.

Examiner only

SECTION C – Application of research methods to a novel scenario

Answer **all** questions.

11. Psychological research has shown that a memory of an event can be influenced by information received after the event.

Two days after visiting a museum, 40 people went to a laboratory, where they were randomly allocated into one of two groups. Participants in Group A answered questions in a room with a picture of Queen Victoria wearing a white dress and participants in Group B answered questions in a room without any pictures. One question was: "What was the colour of Queen Victoria's dress in the museum?". The correct answer was blue.

Figure 1: Responses to the question "What was the colour of Queen Victoria's dress in the museum?"

	Number of participants who stated this colour	
Response	Group A: room with a picture of Queen Victoria wearing a white dress	Group B: room without any pictures
Blue	6	10
White	11	6
Another colour	3	4
Total	20	20

(a) State **one** appropriate conclusion that can be drawn from the findings in this research (displayed in **Figure 1**). [2]

.....

.....

.....

.....

(b) (i) Identify which measure of central tendency would be appropriate to describe this data (as displayed in **Figure 1**). [1]

.....

© WJEC CBAC Ltd.

Examiner only

(ii) Explain why this is the most appropriate measure of central tendency for this data. [2]

.....

.....

.....

.....

(iii) Analyse the data in Group B using the measure of central tendency identified in (b)(i). [2]

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(c) A Chi Square test was carried out and the calculated value was 5.78. The degrees of freedom are 2. Using an appropriate critical value from the table below **(Figure 2)**, justify whether the researcher should accept or reject the null hypothesis. [4]

Figure 2: Critical values for Chi Square test

Degrees of freedom (df)	0.05
1	3.84
2	5.99
3	7.81
4	9.49
5	11.07
6	12.59

© WJEC CBAC Ltd.

BLANK PAGE

PLEASE DO NOT WRITE ON THIS PAGE

© WJEC CBAC Ltd.

12. A researcher was asked to report on the effectiveness of a campaign to reduce harmful emissions into the environment. A sample was selected from students aged 13 to 16 years who lived within a safe walking distance of the school and currently travelled by car.

The students were asked to watch the campaign video and then given a questionnaire to measure their attitude towards environmental change. They were then asked to walk to school for a month. The score on the attitude scale and the number of days out of the month in which they walked to school are shown in the table below.

Figure 3: Students' scores on the attitude scale and the number of days they walked to school.

Student	Score on a scale of 1–20 measuring positive attitudes to environmental change	Number of days walked to school out of the 20 school days in the month
1	7	9
2	7	12
3	5	2
4	8	9
5	12	14
6	9	12
7	18	20
8	12	16
9	11	12
10	16	18

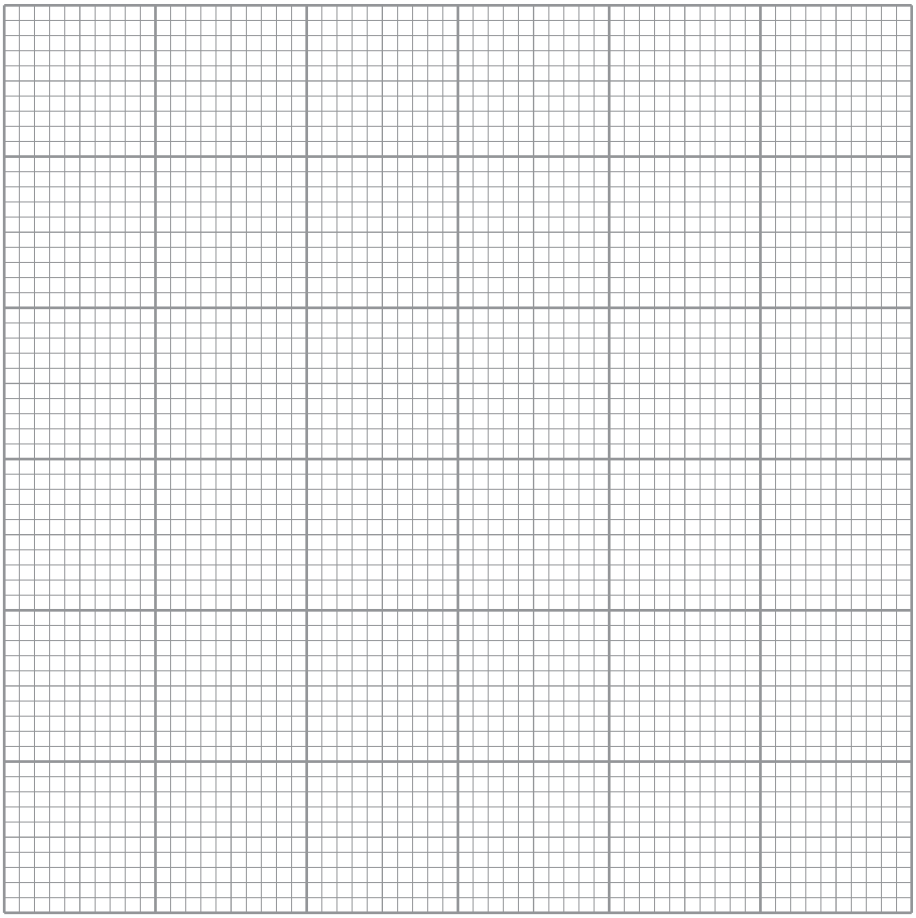
© WJEC CBAC Ltd.

Examiner only

(a) (i) Identify **one** appropriate graphical representation that could be used to display the data in this research. [1]

.....

(ii) Using the graphical representation that you identified in (a)(i), display the data in this research. [4]



(b) Identify the level of measurement of the 'scores on the attitude scale' in this research. [1]

.....

© WJEC CBAC Ltd.

Examiner only

(c) (i) Identify **one** appropriate measure of dispersion for the data 'number of days walked to school' in this research. [1]

.....

(ii) Justify why the measure of dispersion identified in (c) (i) is appropriate for 'number of days walked to school'. [2]

.....

.....

.....

.....

(d) Explain **one** advantage and **one** disadvantage of using a self-selecting sampling technique. [2 + 2]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

END OF PAPER

© WJEC CBAC Ltd.

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.

Examiner only

© WJEC CBAC Ltd.

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.

Examiner only

© WJEC CBAC Ltd.

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.

Examiner only

© WJEC CBAC Ltd.

Question number	Additional page, if required. Write the question number(s) in the left-hand margin.

Examiner only

© WJEC CBAC Ltd.