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WJEC/CBAC

eduqas – Part of WJEC

GCE A LEVEL

A290U20-1

WEDNESDAY, 21 MAY 2025 – MORNING

PSYCHOLOGY – A level component 2

Psychology: Investigating Behaviour

2 hours 15 minutes plus your additional time allowance

ADDITIONAL MATERIALS

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

INSTRUCTIONS TO CANDIDATES

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number at the top of your answer sheet.

Answer ALL questions.

Write your answers using your usual method, taking care to number the question(s) correctly.

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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.

For guidance purposes only, the number of lines left for the answer in the print version of this paper is given in brackets at the end of each question or part-question.

[Braille Page 3]SECTION A – Principles
of Research

Answer ALL questions.

1. (a) Explain what is meant by the term “confounding variable”. [6 print lines; 2 marks]

(b) Explain what is meant by the term “co-variables”. [6 lines; 2 marks]

2. Using appropriate symbols, express the following:

(a) equal to [1 mark]

(b) greater than [1 mark]

(c) probability of less than 10% [2 lines; 2 marks]

3. Explain TWO advantages of using longitudinal research. [18 lines; 6 marks]

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4. (a) Describe how you would use a stratified sampling technique to select a sample of participants. [7 lines; 2 marks]

(b) Explain ONE advantage and ONE disadvantage of using stratified sampling in psychological research. [16 lines; 2 + 2 marks]

5. Explain how you would calculate the mean value of a set of data. [6 lines; 2 marks]

6. (a) Explain the difference between $p < 0.01$ and $p < 0.05$. [6 lines; 2 marks]

(b) Explain the difference between “interval data” and “ratio data”. [6 lines; 2 marks]

7. Evaluate the use of conducting research on-line. [18 lines; 6 marks]

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8. (a) Describe the sample used in Milgram’s (1963) research “*Behavioural study of Obedience*”. [12 lines; 4 marks]

(b) Briefly evaluate the sample used in Milgram’s (1963) research “*Behavioural study of Obedience*”. [15 lines; 5 marks]

(c) Briefly evaluate the ethical issues in Milgram's (1963) research "*Behavioural study of Obedience*". [15 lines; 5 marks]

SECTION B begins on the next page

[Braille Page 6]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 quasi-experiment on age and sleep.

9. (a) State a fully operationalised hypothesis for your quasi-experiment. [6 lines; 2 marks]

(b) Justify ONE reason why a quasi-experiment was the most suitable method for this investigation. [6 lines; 2 marks]

(c) Explain ONE issue of reliability which you considered in your quasi-experiment and how you dealt with the issue. [12 lines; 4 marks]

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(d) Explain ONE ethical issue which you considered in your quasi-experiment and how you managed this ethical issue. [7 lines; 4 marks]

(e) Identify and justify the descriptive statistic you used to describe the data in your quasi-experiment. [9 lines; 1 + 2 marks]

INVESTIGATION TWO: A correlational study using a Stroop test.

10. (a) (i) State the aim of your correlational study. [6 lines; 2 marks]

(ii) State the operationalised co-variables that you used in your investigation. [6 lines; 1 + 1 marks]

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(b) Identify the sampling technique you used to recruit participants for your correlational study and justify your choice of sampling technique. [9 lines; 1 + 2 marks]

(c) (i) Identify an appropriate graphical representation which could be drawn from the data you collected in your correlational study. [3 lines; 1 mark]

(ii) Identify the inferential statistic you used to analyse the data you collected for your correlational study. [3 lines; 1 mark]

(iii) Explain TWO reasons why the inferential statistic identified in 10 (c) (ii) was appropriate. [6 lines; 2 marks]

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(d) Explain ONE issue of validity which you considered in your correlational study and explain how you dealt with this issue. [12 lines; 4 marks]

SECTION C begins on the next page

[Braille Page 10]SECTION C – Application of
research methods to a novel scenario

Answer ALL questions.

11. A researcher wanted to test the hypothesis that left-handed people are more creative than right-handed people. A quota sample of 100 students at university were asked to take part in an online investigation. The participants stated whether they were left-handed or right-handed and also which subjects they had chosen to study for their degree. Subjects such as Art and Photography were classified as “creative” and subjects such as Mathematics and Science were classified as “non-creative” by the researcher.

(a) State an operationalised null hypothesis for this investigation. [6 lines; 2 marks]

The findings are shown on the next page (Figure 1).

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Figure 1: The number of students studying each subject type.

Handedness: Left

Creative - 8

Non-creative - 2

Handedness: Right

Creative - 34

Non-creative - 56

(b) Identify an appropriate measure of central tendency for this data and explain why this measure is suitable for the data in Figure 1. [6 lines; 3 marks]

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(c) The researcher carried out a Chi Square test and found an observed (calculated) value of 6.54. The degrees of freedom (df) was 2. Identify the appropriate critical value from Figure 2 on the next page and explain why the psychologist should accept or reject the null hypothesis at $p < 0.05$. [9 lines; 3 marks]

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Figure 2: Level of significance for a two-tailed test (non-directional hypothesis).

df	0.10	0.05	0.025	0.01
1	2.71	3.84	5.02	6.64
2	4.61	5.99	7.38	9.21
3	6.25	7.82	9.35	11.35
4	7.78	9.49	11.14	13.28
5	9.24	11.07	12.83	15.09
6	10.65	12.59	14.45	16.81
7	12.02	14.07	16.01	18.48
8	13.36	15.51	17.54	20.09
9	14.68	16.92	19.02	21.67
10	15.99	18.31	20.48	23.21

Question 12 begins on the net page

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12. A group of researchers wanted to investigate if adverts aimed at children promoted active or non-active play. They selected 50 adverts shown during children's TV programmes. Each researcher counted the main type of play seen in the advert. The data is displayed in Figure 3 below:

Figure 3: Main types of play seen in the adverts.

Type of play: Running

Number of times the type of play was seen: 14

Type of play: Computer/Screen based

Number of times the type of play was seen: 26

Type of play: Cycling

Number of times the type of play was seen: 6

Type of play: Art and Craft

Number of times the type of play was seen: 4

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(a) Identify the level of measurement of the data in this research. [3 lines; 1 mark]

(b) Explain ONE issue of reliability with this investigation and how the researcher could have assessed the issue. [12 lines; 4 marks]

(c) (i) Calculate the percentage of adverts that contained computer/screen-based activity. Show your workings. [6 lines; 2 marks]

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(ii) Identify the type of graphical representation used in Figure 4 opposite and then complete the labels of the three blank segments on Figure 4. [4 marks]

Label 3 has been completed for you.

Answer:

1 ---

2 ---

3 Running

4 ---

(iii) Apart from the type of graphical representation used in Figure 4, identify an alternative appropriate graphical representation that could be used to display the data in this research. [3 lines; 1 mark]

(d) Evaluate TWO disadvantages of using qualitative data in psychological research. [12 lines; 2 + 2 marks]

END OF PAPER
