GCE A LEVEL

wjec cbac

A290U20-1

O21-A290U20-1

eduqas
Part of WJEC

FRIDAY, 8 OCTOBER 2021 – MORNING

PSYCHOLOGY – A level component 2
Psychology: Investigating Behaviour

2 hours 15 minutes

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.	4	
2.	8	
3.	6	
4.	8	
5.	8	
6.	12	
7.	18	
8.	12	
9.	14	
10.	10	
Total	100	

ADDITIONAL MATERIALS

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** the questions.

Write your answers in the spaces provided in this booklet. If you run out of space, 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, clear presentation in your answers.

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

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VP*(O21-A290U20-1)

SECTION A – Principles of Research

*Answer **all** questions.*

1. *(a)* Define the term 'probability value'. [2]

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(b) Explain why a psychologist would use 0.05 rather than 0.01 as their probability value. [2]

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2. Define the following terms:

(a) Sampling frame. [2]

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(b) Aim of the research. [2]

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(c) Confounding variables. [2]

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(d) Extraneous variables. [2]

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3. Explain the format for reporting psychological investigations. [6]

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4. *(a)* Explain what is meant by 'on-line research'. [2]

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(b) Critically assess the strengths and weaknesses of conducting research in a laboratory environment. [6]

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5. *(a)* Evaluate the use of quantitative data in psychology. [4]

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(b) Evaluate the use of qualitative data in psychology. [4]

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6. *(a)* Explain **two** ways in which Kohlberg's (1968) research *'The child as a moral philosopher'* could be improved. [3 + 3]

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(b) Explain **two** ways in which Milgram's (1963) research *'Behavioural study of Obedience'* could be improved. [3 + 3]

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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 questionnaire study of perceived wellbeing after exercise.

7. *(a)* State a fully operationalised hypothesis for your questionnaire study. [2]

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(b) Describe **two** ethical issues you considered in your questionnaire study and explain how you dealt with each of these ethical issues. [4 + 4]

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(c) Explain **one** issue of internal reliability that you considered in your questionnaire study. [2]

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Turn over.

(d) Another student carried out correlational research on exercise and wellbeing with five participants. The data collected from these participants is shown in the table below:

Participant Number	Number of minutes spent exercising	Scores on a wellbeing scale 0–10
1	20	8
2	25	8
3	15	6
4	10	3
5	12	5

$$\sqrt{\frac{\sum(x-\overline{x})^2}{n-1}}$$

Calculate the standard deviation of the number of minutes spent exercising. Show your workings. [6]

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INVESTIGATION TWO: A correlational study of time spent revising and scores on a test.

8. *(a)* Explain how you fully operationalised the two co-variables in your correlational study.

[2 + 2]

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(b) (i) With reference to your correlational study, explain **one** issue of validity. [2]

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(ii) Explain **one** way of dealing with the issue identified in **8***(b)*(i). [2]

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(c) (i) Identify the inferential statistical test that you used when analysing the data collected in your correlational study. [1]

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(ii) Fully justify your choice of the inferential statistic identified in **8***(c)*(i). [3]

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SECTION C – Application of research methods to a novel scenario

*Answer **all** questions.*

9. A sports psychologist was interested in the effect a crowd may have on athletes' performance. She decided to investigate by comparing the time taken to run 200 m with and without a crowd. She put 20 athletes into pairs by matching them based on their personal best time over 200 m from the previous season. She then assigned one athlete from the pair to run 200 m in a stadium in front of a crowd and the other athlete from the pair to run in the same stadium when there was no crowd. She measured the time it took for all athletes to complete a 200 m race.

Pair	Time taken to complete 200 m race with a crowd (seconds)	Time taken to complete 200 m race without a crowd (seconds)
A	23.61	24.31
B	25.6	24.63
C	24.04	25.09
D	26.34	26.87
E	23.56	24.21
F	27.08	27.58
G	23.09	24.29
H	24.67	25.63
I	22.87	23.66
J	24.84	25.23

(a) The sports psychologist found that the mean time taken to complete the 200 m race with a crowd was 24.57 seconds.

Showing your workings, calculate the mean time taken to complete the 200 m race without a crowd. [2]

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(b) Suggest an appropriate operationalised null hypothesis for this research. [2]

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(c) Explain **one** confounding variable that could have influenced the results of this research. [2]

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(d) Identify the level of measurement of the data collected in this research. [1]

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(e) The sports psychologist found that, after analysing the data with a Wilcoxon test, the observed (calculated) value was 8. The critical value for $p = 0.05$ (N = 10 and a two-tailed test) is also 8.

   (i) State whether the sports psychologist should accept or reject the null hypothesis. [1]

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   (ii) Explain why the sports psychologist should accept or reject the null hypothesis. [2]

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(f) Explain why the ethical issue of 'risk of stress, anxiety, humiliation or pain' may arise in this research and explain how it could be managed. [2 + 2]

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10. A worker at a local dog rescue shelter was asked by her boss to investigate the best way to raise money for the shelter. She decided to post a questionnaire on-line in order to find out which strategies for fundraising were the most appealing to people who visit the dog rescue shelter's website.

In one of the questions she asked the participants:

> 12. Please tick the fundraising event you are most likely to take part in:
>
> ☐ Raffle
>
> ☐ Charity Fete
>
> ☐ Sponsored Dog Walk

She found that:
- 15 participants would most likely take part in a Raffle
- 10 participants would most likely take part in a Charity Fete
- 20 participants would most likely take part in a Sponsored Dog Walk.

(a) Explain whether the data collected from question 12 above, would produce quantitative or qualitative data. [2]

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(b) Explain **one** strength of the worker conducting this research on-line. [2]

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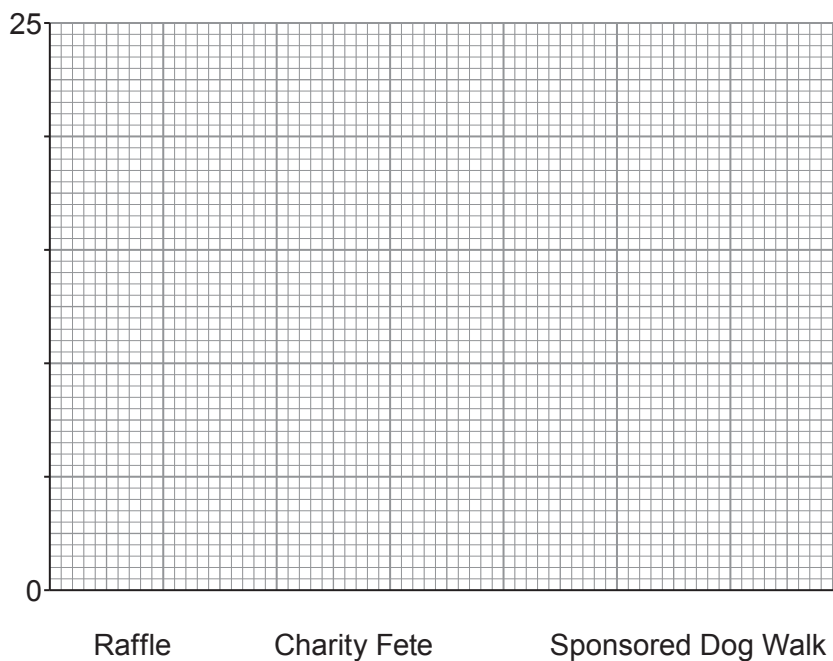...

(c) Complete the following bar chart by:

   (i)   Accurately plotting the data. [1]

   (ii) Labelling both of the axes. [1]

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    Raffle   Charity Fete   Sponsored Dog Walk

(d) Explain **two** ways in which you could improve this research. [2 + 2]

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END OF PAPER

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