Surname	Centre Number	Candidate Number
First name(s)		2

GCE A LEVEL

A290U20-1

S24-A290U20-1

WEDNESDAY, 22 MAY 2024 – MORNING

PSYCHOLOGY – A level component 2
Psychology: Investigating Behaviour

2 hours 15 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1.	**8**	
2.	**2**	
3.	**6**	
4.	**4**	
5.	**2**	
6.	**6**	
7.	**12**	
8.	**15**	
9.	**15**	
10.	**19**	
11.	**11**	
Total	**100**	

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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.

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SECTION A – Principles of Research

Answer **all** questions.

1. Define the following terms:

(a) Researcher bias. [2]

(b) Demand characteristics. [2]

(c) Predictive validity. [2]

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(d) Secondary sources. [2]

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2. (a) Identify the type of skewed distribution in this diagram. [1]



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(b) Identify the type of skewed distribution in this diagram. [1]



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3. Explain how psychologists use ethics committees and ethical guidelines to manage the risk posed by ethical issues. [3 + 3]

Additional space for Question **3** only:

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4. (a) Explain why a psychological researcher might use standard deviation for measuring dispersion in a set of data. [2]

(b) Explain why a psychological researcher might use range for measuring dispersion in a set of data. [2]

5. Explain **one** advantage of using quantitative data in psychological research. [2]

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6. Evaluate the use of brain scans in psychological research. [6]

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7. (a) Discuss the limitations of the methodology used by Kohlberg (1968) in his research '*The child as a moral philosopher*'. [6]

Additional space for Question **7**(a) only:

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(b) Discuss ethical issues with Kohlberg's (1968) research *'The child as a moral philosopher'*. [6]

Additional space for Question **7**(b) only:

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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: An experiment on a context dependent memory task.

8. (a) (i) Explain how you operationalised the independent variable in your experiment. [2]

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(ii) Explain how you operationalised the dependent variable in your experiment. [2]

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(b) Identify **one** extraneous variable that you considered and explain how you managed this variable in your experiment. [3]

(c) Explain **one** ethical issue that you considered and explain how you managed this ethical issue in your experiment. [4]

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(d) Identify and fully justify the inferential statistic you used to analyse the data in your experiment. [4]

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INVESTIGATION TWO: A non-participant observation of mobile phone use.

9. (a) (i) State an operationalised hypothesis for your non-participant observation. [2]

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(ii) Identify whether your hypothesis in 9(a)(i) is directional or non-directional. [1]

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(b) Identify and briefly explain the observational sampling technique used in your non-participant observation. [3]

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(c) Evaluate the sampling technique you used to select participants for your non-participant observation. [4]

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(d) A psychologist wants to replicate your non-participant observation. Apart from sampling, discuss **two** improvements that they could make. [5]

Additional space for Question **9**(d) only:

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SECTION C – Application of research methods to a novel scenario

Answer **all** questions.

10. A self-selecting sample of 30 college students were randomly allocated into one of two groups – Group A watched an action movie and Group B watched a romantic movie. Students could take as many free bags of popcorn as they wanted during the movie.

The researcher predicted that more popcorn would be eaten during the action movie than during the romantic movie. At the end of the film, the amount of popcorn that each participant had eaten was recorded (**Figure 1**).

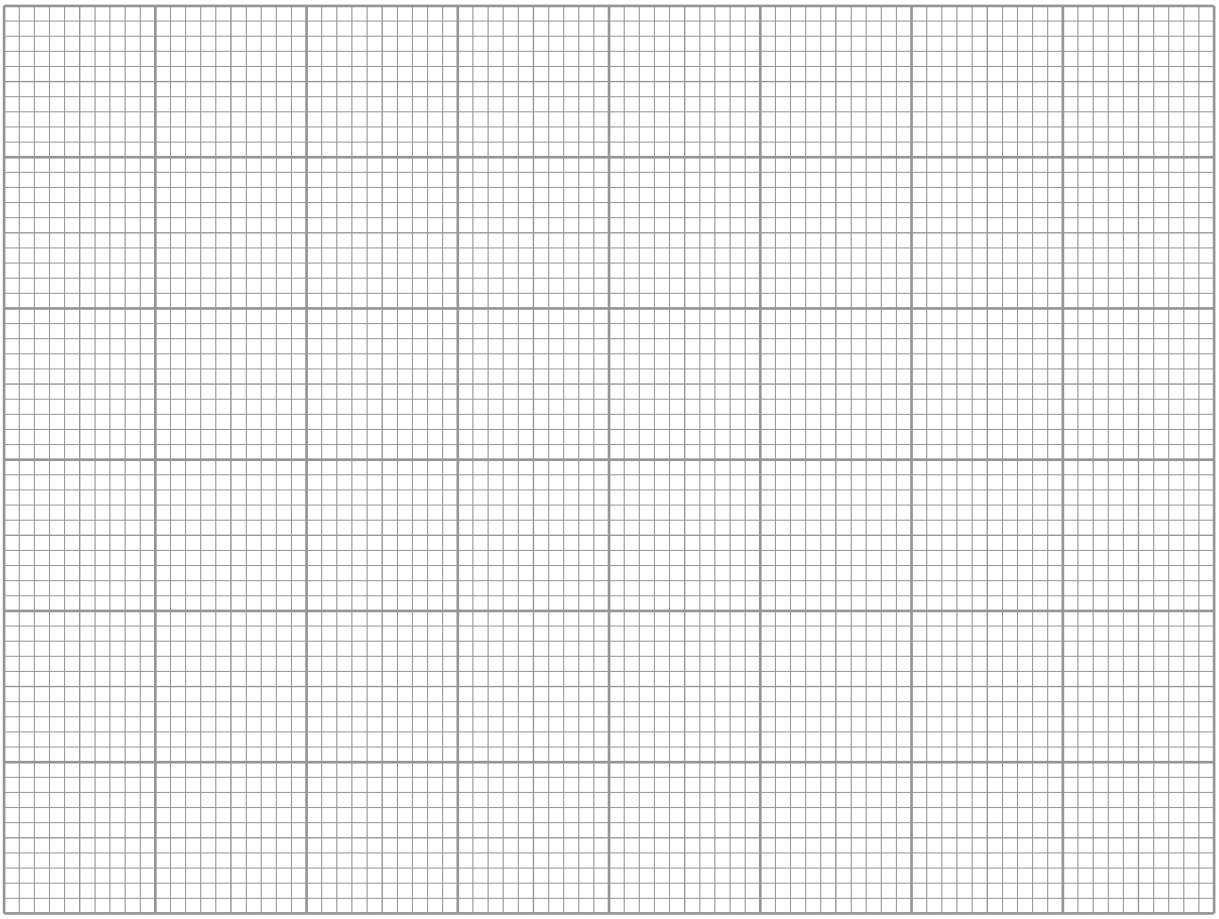
Figure 1: The number of bags of popcorn eaten during the action movie and the romantic movie

Participant number	Number of bags of popcorn eaten by Group A – watching an action movie	Participant number	Number of bags of popcorn eaten by Group B – watching a romantic movie
1	3	16	4
2	2	17	2
3	3	18	4
4	1	19	0
5	4	20	2
6	3	21	1
7	6	22	2
8	4	23	5
9	3	24	1
10	2	25	2
11	4	26	2
12	3	27	2
13	3	28	2
14	5	29	0
15	4	30	2

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(a) Using an appropriate graphical representation, display the data from **Figure 1**. [4]



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(b) (i) Suggest an appropriate measure of central tendency to describe the number of bags of popcorn eaten and fully justify why this is appropriate in this research. [3]

(ii) Calculate the measure of central tendency identified in 10(b)(i) for Group A. Show your workings. [2]

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The psychologist analysed if the findings were significant by performing a Mann Whitney U test. The calculated value was 57.5

Figure 2: Critical values for the Mann Whitney U test, where $p \leq 0.05$

		N_1										
		10	***11***	***12***	***13***	***14***	***15***	***16***	***17***	***18***	***19***	***20***
N_2	***10***	27	31	34	37	41	44	48	51	55	58	62
	11	31	34	38	42	46	50	54	57	61	65	69
	12	34	38	42	47	51	55	60	64	68	72	77
	13	37	42	47	51	56	61	65	70	75	82	84
	14	41	46	51	56	61	66	71	77	82	87	92
	15	44	50	55	61	66	72	77	83	88	94	100
	16	48	54	60	65	71	77	83	89	95	101	107
	17	51	57	64	70	77	83	89	96	102	109	115
	18	55	61	68	75	82	88	95	102	109	116	123
	19	58	65	72	80	87	94	101	109	116	123	130
	20	62	69	77	84	92	100	107	115	123	130	138

(c) (i) Identify the appropriate critical value for this research from **Figure 2** above. [1]

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(ii) Explain what is meant by '$p \leq 0.05$' in this research. [2]

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(iii) Explain why the researcher should accept or reject the null hypothesis. [2]

(d) Explain why a psychologist would use an independent groups design rather than a repeated measures design. [5]

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11. A librarian is worried that the library where they work may be closed down due to a lack of use. A questionnaire was carried out on the high street of the town using an opportunity sample. People were asked for their reasons why they do or do not use library services.

(a) Explain **one** strength of collecting qualitative data rather than quantitative data in this questionnaire. [2]

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(b) Explain **one** issue of reliability with this research and how the researcher could have dealt with the issue. [4]

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(c) Evaluate the use of a semi-structured interview compared to a structured interview in psychological research. [5]

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