

Name: _____

Joseph Banks Secondary College
Year 11 ATAR Psychology

Assessment Task 7
Investigation = 5% Validation = 5%

UNIT LEARNING CONTEXT:

OUTCOMES:

Outcome 2:	<i>Investigating in psychology</i>
Outcome 4:	<i>Communication in psychology</i>

ALLOCATED TIME FOR THE TASK:

- *You will have one period to complete the test in class.*

INSTRUCTIONS:

- *Attempt all questions*
- *No notes, files etc. to be accessed during the test*

Question 1	/ 14
Question 2	/ 17
Question 3	/14
Question 4	/13
Total	/ 58

Teacher comment: _____

Question 1

(14 marks)

A psychology teacher wanted to investigate the effects of rewarding students for completing their work. She decided to test this idea on her 20 Year 11 students. On the first lesson, students were given a one-page worksheet on Freud's theories before asking students to complete an anonymous survey to indicate how much they enjoyed (or did not enjoy) completing the worksheet. On the second lesson, students were given a chocolate once they had completed a different worksheet on Maslow's theories and were then asked to complete the same anonymous survey.

- a) Identify the research design of this study. (1 mark)

- b) Explain the limitations of using this research design and how it can be overcome. (3 marks)

- c) Explain why this study would not be considered internally valid. (2 marks)

- d) Is this study generalisable to the population? Justify your answer. (3 marks)

- e) Identify the **two** most relevant ethical considerations the psychology teacher did not consider. (2 marks)

- f) Create an example of a subjective, quantitative data collection question for the anonymous survey. (3 marks)

Question 2

(17 marks)

Zara, a Ph.D student studying psychology, was interested in the effects of intermittent dieting (diets that include fasting) on young adults' cognitive abilities, namely their mood and ability to concentrate. She placed flyers around her Perth university asking for volunteers aged between 18-35. 20 people volunteered with equal numbers of males and females. The participants agreed to follow a strict diet for one month as part of the investigation. Half of the participants were asked to follow a diet where they ate three meals a day adding up to 2000 calories. The other half were asked to replace two of their meals with a shake each day, their daily calorie intake each day did not to exceed 600 calories. At the end of the study participants were asked to complete a self-report and a memory test.

The raw data can be seen below:

Table 1: Effects of intermittent dieting on mood and memory

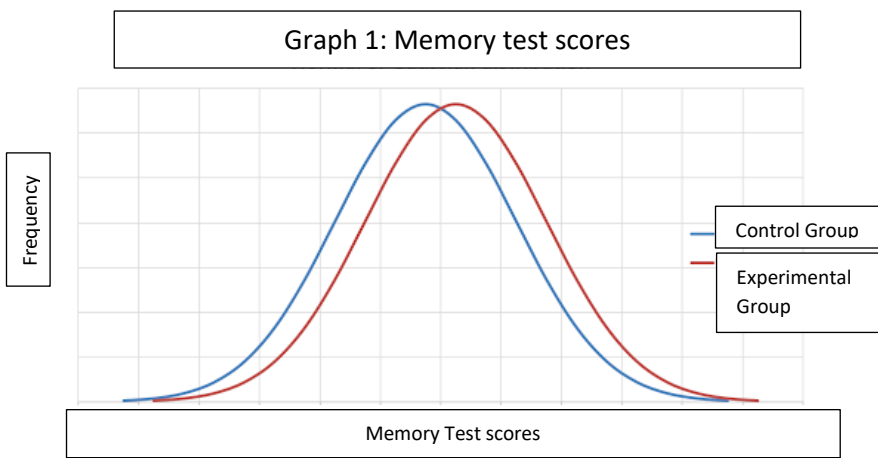
Experimental Group		Control Group	
Mood	Memory test	Mood	Memory test
6	25	8	45
3	28	5	42
5	32	6	31
9	26	7	24
6	24	8	28
4	13	6	14
3	17	4	54
7	37	3	39
4	45	7	58
5	13	6	25

a) Using the data in Table 1, calculate the following:

(3 marks)

- i) Mean memory test score within the experimental group: _____
- ii) Median mood score within the control group: _____
- iii) The mode mood score across both groups: _____

b) If the sample size was much larger in this experiment, Zara would hope to find a normal distribution of results in the memory test as per below. With reference to measures of central tendency, explain why Zara would want a normal distribution. (2 marks)



c) Identify the experimental and control groups of this study

(2 marks)

d) Write an operational hypothesis for this investigation.

(4 marks)

e) Identify two extraneous variables and explain how they could impact the study. (2 marks)

f) Explain the difference between a population and sample and identify the population and sample in this investigation. (2 marks)

g) Identify and describe a technique Zara should utilise to ensure her test is externally reliable. (2 marks)

Question 3**(14 marks)**

A population health specialist wanted to promote healthy living by investigating whether a person's weight impacted their ability function in society. He decided to conduct a study, asking participants to complete a survey on their weight, height and age to determine their BMI (Body Mass Index) as well as how much money they earned over the last financial year. After initially analysing the results, he decided to exclude participants who had an unhealthy low weight (under 18 BMI) as they typically earned less than those in a healthy weight range (18-25). The results can be seen in the table below:

Table 2: Relationship between BMI and money earned in 2019

Participant	BMI	Money Earned in 2019 (\$)
1	27	40, 000
2	25	245, 000
3	24	65, 000
4	22	210, 000
5	24	98, 000
6	18	125, 000
7	30	72, 000
8	35	55, 000
9	27	18, 000
10	24	125, 000
11	32	35, 000
12	18	95, 000
13	35	10, 000
14	29	65,000

a) Identify the research method used in this study.

(1 mark)

b) Explain your reasoning with reference to the study.

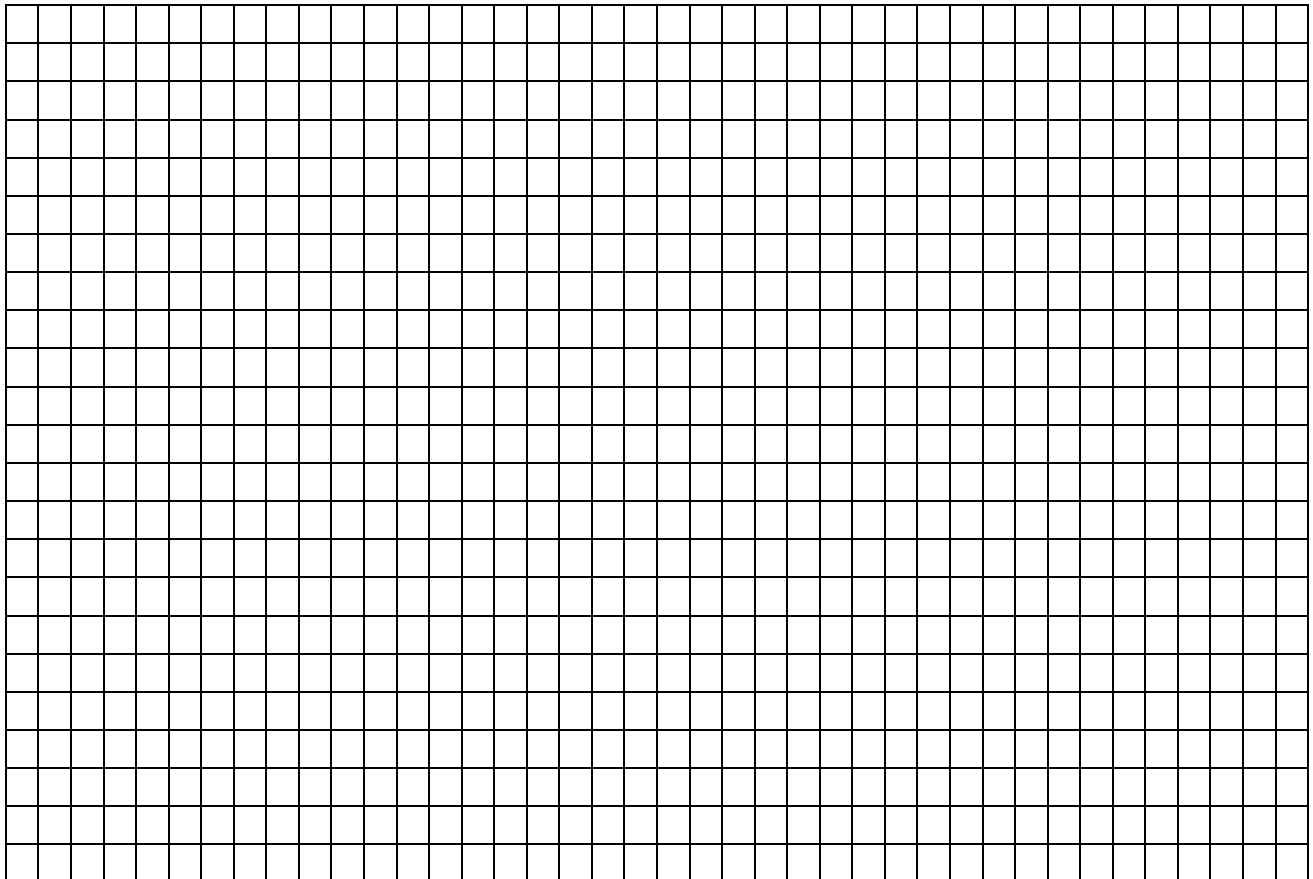
(2 marks)

c) When is it appropriate to use this research method?

(2 marks)

- d) Explain why the population health specialist should not have excluded participants who had a BMI of less than 18. (2 marks)

- e) Create a graph to represent the raw data in Table 2. (5 marks)



- f) Describe the results of the study. (2 marks)

Question 4**(13 marks)**

Psychology students of Blue Bonnet Senior High School learned that face to face communication is important in building healthy relationships. They are concerned that excessive use of telecommunication devices may be increasing conflict and destroying friendships. The students wanted to determine if their concerns were true by testing three conditions:

- A. friends that communicate only by face to face communication
- B. friends that communicate only through telecommunication devices
- C. friends that communicate using both face to face and telecommunication devices

Participants were randomly allocated to one condition and asked to use only the type of communication specified with their friendship groups for two weeks. A 10-point Likert scale questionnaire was given to each participant before and after the investigation to measure the quality of their friendships. The questionnaire consisted of the following question – What is the quality of your friendships within your school group? A table with the results can be seen below:

Table 1. Mean scores on ratings of friendship quality before and after the investigation where a rating of 1= extremely poor quality and a rating of 10 – extremely high quality.

Type of communication	Mean rating scores of friendship quality	
	Before the investigation	After the investigation
A. Face-to-face only	5.1	7.8
B. Telecom devices only	5.5	4.1
C. Combination of face-to-face and telecom devices	5.3	6.1

- a) Why was it necessary to randomly assign participants to each condition? (1 mark)

- b) Identify the research design of this study. Justify your answer. (2 marks)

- c) Identify **one** source of error in the data and briefly describe **one** way of reducing the error. (2 marks)

d) Describe the results of the study.

(3 marks)

e) Write a conclusion for this study, including an interpretation of results and an evaluation of the importance of the findings.

(5 marks)