



# Joseph Banks Secondary College

**Research Methods and Culture  
and Values**  
**Worth 4% of the School Mark**  
**Question/Answer Booklet**

## PSYCHOLOGY

### Units 3 and 4

Student name : \_\_\_\_\_

#### Time allowed for this paper

Reading time before commencing work:

**three minutes**

Working time for the paper:

**sixty-one minutes**

#### Materials required/recommended for this paper

##### *To be provided by the supervisor:*

This Question/Answer Booklet

Formulae and Data Booklet

##### *To be provided by the candidate:*

Standard items: pens (blue/black preferred), pencils (including coloured), sharpener,  
correction tape/fluid, eraser, ruler, highlighters.

Special items: non-programmable calculators approved for use in the WACE examinations

#### Important note to candidates

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

**Structure of this paper**

Section	Number of questions available	Suggested working time (minutes)	Your Mark	Marks available	Percentage of test
Section One: Research Methods	2	20		33	50
Section Two: Short Answer	3	41		31	50
<b>Total</b>				64	100

**Instructions to candidate**

1. The rules for the conduct of Western Australian external examinations are detailed in the *Year 12 Information Handbook 2016*. Sitting this examination implies that you agree to abide by these rules.
2. Write your answers in this Question/Answer Booklet.
3. When calculating numerical answers, show your working or reasoning clearly. Your working should be in sufficient detail to allow your answers to be checked readily and for marks to be awarded for reasoning.

In calculations, give final answers to one significant figures and include appropriate units where applicable.

4. You must be careful to confine your responses to the specific questions asked and to follow any instructions that are specific to a particular question.
5. Supplementary pages for the use of planning/continuing your answer to a question may have been provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

**Question 1****(17 marks)**

*Ginkgo biloba* is popularly marketed as a powerful medicinal herb that is believed to improve cognitive functions like attention and memory, and promote a healthy brain. It is often sold on its own as a health supplement or mixed with energy drinks. Dr Siva wanted to include this drug in his medical practice but found that scientific evidence about its benefits were conflicting. He decided to carry out his own investigation using patients residing in his area of practice.

Dr Siva recruited 80 patients between 60 to 80 years old who were in the early stages of dementia and 500 healthy volunteers of the same age group. All participants had volunteered to take part in the study after being informed about what the study was about.

Half of the participants were asked to take one capsule of *Ginkgo biloba* while the other half was given a placebo, taken daily. Both the participants and Dr Siva did not know who were taking the *Ginkgo biloba* capsules or the placebo. The Clinical Dementia Rating Scale was used to measure cognitive impairment before treatment started and 1 year after.

- a) Identify the research design used by Dr Siva. (1 mark)

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- b) Briefly explain what the placebo effect is and identify the specific technique used in Dr Siva's research to address the placebo effect. (2 marks)

i. Placebo effect: \_\_\_\_\_

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ii. Technique used: \_\_\_\_\_

- c) Why was it necessary for both participants and Dr Siva to be unaware of who was getting the placebo or *Ginkgo biloba* capsules? (2 marks)

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The results of Dr Siva's clinical trial are summarized in the table below.

Table 1. Average clinical dementia ratings of 60–80-year-old participants taking *Ginkgo biloba* capsules or placebo once daily for 1 year. A rating of 0 represents no cognitive impairment while a score of 3 means severe cognitive impairment.

Sample description	Average Rating in the Clinical Dementia Scale		Statistical Significance
	Prior to treatment	1 year after treatment	
Participants with early stage dementia: • Taking <i>Ginkgo biloba</i> capsules	1.8	1.0	$p < 0.05$
• Taking the placebo	2.0	1.7	$p > 0.05$
Healthy participants: • taking <i>Ginkgo biloba</i> capsules	0.5	0.3	$p > 0.05$
• taking the placebo	0.2	0.4	$p > 0.05$

- d) State the purpose of measuring the Clinical Dementia Rating of participants prior to treatment. (1 mark)

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- e) Provide the conclusions for Dr Siva's study based on the statistical results presented in Table 1. (4 marks)

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- f) The study was found to have internal validity, explain what this term means. (2 marks)

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g) Is this study generalisable to the population? Justify your answer. (2 marks)

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h) Create an example of a subjective, quantitative question for this study. (3 marks)

## Question 2

(8 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 whether this study was experimental or non-experimental. (1 mark)

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b) Explain your reasoning with reference to the study. (1 marks)

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c) Identify the purpose of a correlation coefficient. (2 marks)

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

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e) Describe the results of the study. (2 marks)

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**Question 3 (6 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) Describe one of the results of the study.

(1 mark)

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

(5 marks)

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## Section 2 - Culture and Values

### Question 4

(6 marks)

April is the year 8 co-ordinator for a new high school, the students in this year group have been noted by most teachers to be particularly lacking in resilience and a sense of community. Students are not able to regulate their emotions and finding it hard to listen to and take on feedback.

- a) Define the term sense of community.

(1 marks)

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- b) Outline three characteristics of resilience people.

(3 marks)

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- c) Outline two ways in which as year co-ordinator April can help build these students resilience.

(2 marks)

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**Question 5****(5 marks)**

In Kobasa's (1979) experiment, she examined whether personality differences could account for differing responses to events.

a) Outline the method of this experiment.

**(3 marks)**


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b) Evaluate the study by Kobasa

**(2 marks)**


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**Question 6****(20 marks)**

A recent terror attack has occurred during Sydney's largest gay pride event. 140 people have been identified as developing post-traumatic stress disorder as a result of witnessing the horrific event. The local LGBTQIA+ community has tried to do their best to organise group events and the organisers and key members have gone from strength to strength, reporting a greater appreciation for life.

a) List five key criteria or symptoms, that clinicians use to diagnose Post Traumatic Stress Disorder.

**(5 marks)**

- i. 

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- ii. 

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- iii. 

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- iv. 

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- v. 

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b) Define the term trauma

**(1 mark)**


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- c) Other than having a greater appreciation for life, identify three other characteristics of post-traumatic growth (3 marks)

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- d) Define the term community competence. (1 mark)

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- e) Relating your response to the scenario above, describe the two characteristics that classify this even as stressful. (2 marks)

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- f) Compare resilience and post-traumatic growth. (2 marks)

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- g) You have been requested to fly over to New South Wales and work with the individuals diagnosed with PTSD to help them to move forward and improve their quality of life.
- i. Referring to research by McMillian and Chavis outline 3 ways in which you could implement a support group to help these PTSD sufferers (4 marks)

One: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Two: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Three: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Four: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- ii. Outline two additional ways in which to improve the quality of life for those who are suffering from PTSD (2 marks)

One: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Two: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_