



# Joseph Banks Secondary College

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

## **PSYCHOLOGY (General)**

### **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	3	31		29	50
Section Two: Short Answer	3	33		30	50
<b>Total</b>				59	100

## Instructions to candidates

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.

**Research Methods****Question 1****(10 marks)**

Researchers were interested in the relationship between exercise and life satisfaction in teenagers aged 14 - 18.

Data from six participants is shown in the table below and was collected through a survey.

Participant	Hours of exercise per week	Life Satisfaction score
1	2.0	14
2	2.5	16
3	1.5	12
4	5.0	18
5	3.5	16
6	1.0	10

- i) Calculate the following scores for Life Satisfaction. (4 marks)
- a) Mean \_\_\_\_\_
  - b) Mode \_\_\_\_\_
  - c) Median \_\_\_\_\_
  - d) Range \_\_\_\_\_
- ii) This is an example of a correlational study, are correlational studies experimental or non-experimental? Why? (2 marks)

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- iii) Write an operationalised hypothesis for the research above. (4 marks)

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**Question 2****(6 marks)**

A teacher was curious how racism affects behaviour by conducting an experiment with her students, without telling their parents. She formed a blue-eyed group and a brown-eye group, informing them that the brown-eye group was superior to the blue-eye group. The brown eyed group had an increased self-efficacy in the classroom, as well as bullied the blue-eye group. Students in the blue-eye group lost self-efficacy and self-respect. The teacher used video footage to record behaviour and released this to the public.

- i) Identify **two** ethical issues with this study and define them. (4 marks)

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ii) Identify the independent variable.

(1 mark)

iii) Identify the dependent variable.

(1 mark)

### Question 3

(13 marks)

a) Define the term operationalise.

(1 mark)

b) Which type of research manipulates an independent variable and measures a dependant variable?

c) Which group in experimental research receives the independent variable?

(1 mark)

d) What is the purpose of the control group in experimental research?

(1 mark)

e) For the following scenarios **operationalise** the independent variable for the experimental and control group and list three **relevant** potential extraneous variables. (10 marks)

i) Independent variable: Sleep      Dependant variable: Attention span in maths class

Experimental group receives...	Control group receives...	Three potential extraneous variables...

ii) Independent variable: Alcohol      Dependant variable: Aggression

Experimental group receives...	Control group receives...	Three potential extraneous variables...

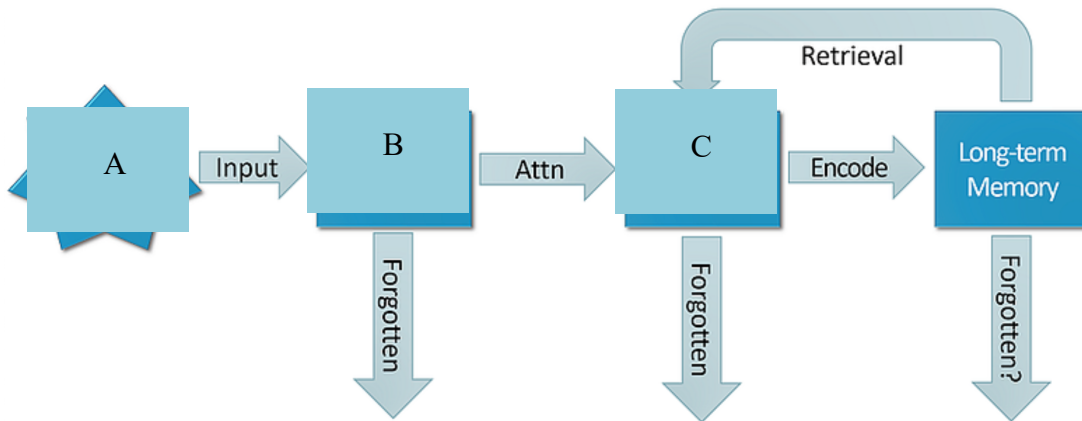
## COGNITION

### Question 4

(7 marks)

Analyse the Information Processing Model below.

## Information Processing Model



i) Identify A and B

a) \_\_\_\_\_ (1 mark)

b) \_\_\_\_\_ (1 mark)

ii) What is the capacity and duration of B?

Capacity: \_\_\_\_\_ (1 mark)

Duration: \_\_\_\_\_ (1 mark)

iii) What is the capacity and duration of C?

Capacity: \_\_\_\_\_ (1 mark)

Duration: \_\_\_\_\_ (1 mark)

iv) What is the capacity and duration of Long-term Memory?

Capacity: \_\_\_\_\_ (1 mark)

Duration: \_\_\_\_\_ (1 mark)

## Question 5

(6 marks)

In order to log into a banking app, Sophie had to remember a 5-digit code she had saved in her notes app.

- i) What method of rehearsal would Sophie use to recall the code 10 seconds after looking at her notes? (1 mark)

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- ii) After using this method successfully, Sophie decided to commit the code into long-term through elaborative rehearsal. Identify one strategy she could use to do this and why it is useful. (2 marks)

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- iii) Eventually, Sophie was able to type the code into her banking app automatically. It was as if her fingers knew what to do on their own. What type of long-term memory is this? (1 mark)

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- iv) Identify another type of long-term memory and provide an example. (2 marks)

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## Question 6

(11 marks)

- a) What does the term encoding mean in relation to memory? (1 mark)

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- b) Name and describe briefly the three main ways in which memory researchers measure how much information people remember. (6 marks)

One:

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Two:

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Three:

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Adam and Lucy chat for a while and she says that they should stay in contact. Lucy tells Adam that her telephone number is 0425 456 785. Adam does not have anything to write the phone number down on, so he tries to remember it.

c) Describe briefly one problem that Adam might have in trying to remember Lucy's telephone number. Explain the reason why, referring to a feature of short-term memory. (2 marks)

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d) Outline two strategies that Adam could use to assist him in remembering Lucy's telephone number. (2 marks)

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**Question 7** (6 marks)

a) Name and describe two slave systems of Baddeley and Hitch (1974) Working Memory Model and state their functions. (4 marks)

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

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

b) Compare the working memory model with that of the multi-store model (2 marks)

Similarity	Difference