

PRACTICE EXAM PLC 2023

**Semester One
ATAR course examination, 2023
Question/Answer Booklet**

PSYCHOLOGY - UNIT 1

WA Student Number: In figures

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In words

Student Name

Time allowed for this paper

Reading time before commencing work: ten minutes
Working time: three hours

Number of additional
answer booklets used
(if applicable):

Materials required/recommended for this paper

To be provided by the supervisor

This Question/Answer booklet

To be provided by the candidate

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

Special items: up to three calculators, which do not have the capacity to create or store
programmes or text, are permitted in this ATAR course examination

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 material. 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	Number of questions to be answered	Suggested working time (minutes)	Marks available	Percentage of examination
Section One Short answer	5	6	90	90	70
Section Two Extended answer - Part A	1	1	60	30	10
- Part B	2	1		30	20
Total					100

Instructions to candidates

- The rules for the conduct of the Western Australian external examinations are detailed in the *Year 12 Information Handbook 2023: Part II Examinations*. Sitting this examination implies that you agree to abide by these rules.
- Write your answers in this Question/Answer booklet preferably using a blue/black pen. Do not use erasable or gel pens.
- Answer the questions according to the following instructions.

Sections One: Write your answers in this Question/Answer booklet. Wherever possible, confine your answer to the line spaces provided.

Section Two: Consists of two parts. Part A with one question, part B with two questions. You must answer one question from each part.

- You must be careful to confine your answers to the specific questions asked and to follow any instructions that are specific to a particular question.
- Supplementary pages for planning/continuing your answers to questions are 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.

Section one: Short Answer**55% (90 Marks)**

This section has **six (6)** questions. Answer **all** questions. Write your answers in the spaces provided.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet are for planning or continuing an answer. If you use these pages, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 90 minutes

Question 1**(15 marks)**

Merlin loved to bake and would take cake orders from family, friends and referrals from friends. She was thinking of turning her hobby into a small business and starting a Facebook page to advertise her products. Before doing that, she wanted to find out what her customers' responses were to her cakes so that she can plan for what materials and equipment she needed. She wanted to streamline her products and focus on cakes that were popular with customers. First she made a tally of the cakes she sold in the past year. Her data is presented in the following table.

Table 1. Number of cakes sold per month

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Number of cakes sold	60	22	14	25	12	16	49	15	20	38	26	75

- a) i. Would you consider Merlin's approach as scientific or non-scientific? (1 mark)

- ii. Explain your answer. (2 marks)

See next page.

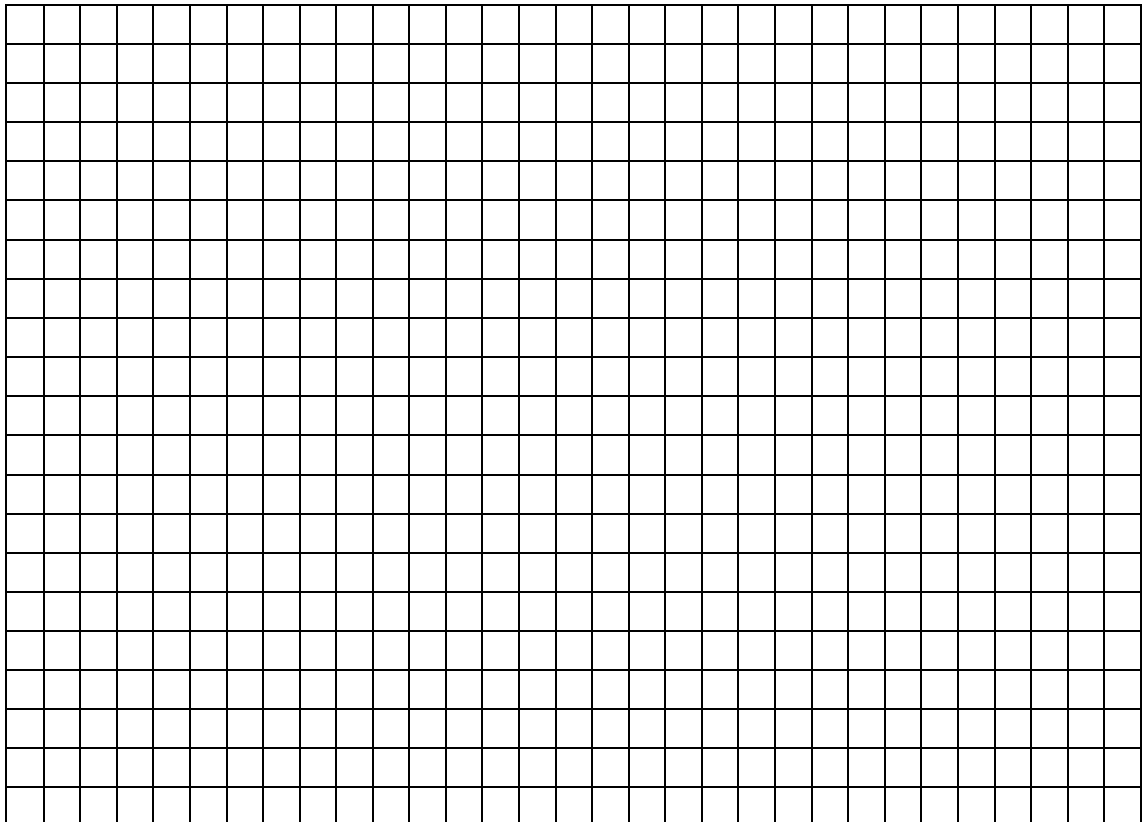
Question 1 continued

b) What type of data did Merlin collect? (1 mark)

Circle your answer: Qualitative OR Quantitative

c) State **one** limitation of the data she has collected. (1 mark)

d) Merlin wanted to have a visual representation of the data she collected. Present her results as a graph in the gridline below. (5 marks)



- e) Briefly describe **two** main findings or trends from her data that she can use to make informed decisions about her business plan. (2 marks)

i. _____

ii. _____

- f) Give **one** example of qualitative data that Merlin can collect to help her with her business plan. (1 mark)

- g) State **two** pieces of additional information that the qualitative data will give which her previous results did not provide. (2 marks)

i. _____

ii. _____

Question 2**(12 marks)**

- a) Andy is excited as he gets ready to bungee jump from a platform above a rugged cliff.

Describe how his somatic nervous system is responding to the sensory information he is getting in his excited state. (2 marks)

- b) He looks down from the bungee platform at the sheer drop below. He could feel the wind blowing against him as he balances himself. He could hear the rustle of the tree branches swaying in the wind.

Outline how each of the following parts of his brain is responding to sensory stimuli from his surroundings by filling in the missing information in the following table. (8 marks)

Lobe of the brain	Area of cortex	Description of response
	Primary visual cortex	
		Controls the muscles of his neck allowing him to bend/turn his head so he could look down
Parietal lobe		
		Receives the sound waves from the rustling of tree branches and interprets the information

Question 2 continued

- c) After an exciting day, Andy goes home. He has a light relaxing meal and spends some time watching his favourite TV show before going to bed. Describe how his autonomic nervous system would be responding. (2 marks)

Question 3

(15 marks)

After the fall of Nicolae Ceausescu’s regime in 1990, a documentary on Bucharest’s street children shocked the world with images of children languishing in cribs with very little attention from caregivers and no social stimulation from playing with toys or other children. Prof Charles Nelson and his colleagues at Harvard University started the Bucharest Early Intervention Project where they removed 66 children between 6 months to 2 ½ years old from orphanages and placed them in high quality foster care. They followed the development of these children over 5 years and observed huge improvements in physical, cognitive and social skills after the first year of foster care.

- a) Prof Nelson referred to Bowlby’s critical or sensitive period and maternal deprivation hypothesis to justify the need for immediate intervention in the care of these orphaned children.
 - i. Explain Bowlby’s critical period and how it relates to his maternal deprivation hypothesis. (2 marks)

Question 3 continued

b) In the 1950's and 1960's Harry Harlow conducted an experiment on baby Rhesus monkeys separated from their mother at birth.

- i. Describe Harlow's experiment including its aim, dependent and independent variables, procedure and results. (6 marks)

- ii. State how Harlow's experiment can be applied to the case of Bucharest's orphaned children. (1 mark)

Question 3 continued

c) Using Ainsworth’s attachment types, identify the possible type of attachment an orphaned child from Bucharest would have shown towards each caregiver and briefly describe how the child would behave in the separation and reunion steps of the Strange Situation method.

i. Attachment and behaviour towards the caregiver in the orphanage: (3 marks)

Attachment type: _____

Behaviour during separation:

Behaviour during reunion:

ii. Attachment and behaviour towards foster parents who have provided high quality care for a year or more: (3 marks)

Attachment type: _____

Behaviour during separation:

Behaviour during reunion:

Question 4**(17 marks)**

Dr Casey, a school psychologist, was concerned about the widespread use of high energy caffeinated beverages amongst high school students. She interviewed twenty Year 11 and Year 12 students who she came across drinking caffeinated high energy drinks in the school yard. She conducted an informal unstructured interview with open-ended questions and learned that they consumed at least 3 caffeinated high energy drinks to counteract sleepiness during school hours and while studying after school.

- a) Provide **two** advantages of Dr Casey's manner of interviewing students to gather preliminary information. (2 marks)

i. _____

ii. _____

Dr Casey came across a comprehensive report from the Sleep Health Foundation that reported exposure to screens of technological devices one hour before sleeping significantly delayed sleep onset and shortened sleep hours leading to daytime sleepiness and decreased attention.

Knowing that all Year 11 and 12 students in her school had a technological device, she was concerned about the interaction of caffeine consumption with use of technological devices before bedtime. She wanted to know if taking caffeinated drinks during the day was actually preventing daytime sleepiness or if it made the students more sleep deprived the next day. She focused her investigation on students who use technological devices one hour or more before going to bed. Participants would be asked to record the number of times they felt sleepy and lost focus during school hours over one week.

- b) Identify the population that Dr Casey's findings would apply to. (1 mark)

Question 4 continued

c) Dr Casey had to write an operational hypothesis in her research proposal to get support from her department. Describe **four** pieces of information that should be included in her operational hypothesis. (4 marks)

1. _____

2. _____

3. _____

4. _____

Dr Casey recruited 200 Year 11 and Year 12 students from two neighbouring high schools. All of the students used at least one technological device for 1 hour or more each night before going to bed.

d) Participants were randomly allocated to either the control or experimental group.

i. What is the purpose of using random allocation when assigning participants to a designated group? (1 mark)

ii. Describe the Control group: (1 mark)

Question 4 continued

- e) Identify **one** confounding variable in Dr Casey's research and explain how it should be controlled to ensure that her results are valid. (2 marks)

Confounding variable:

How it should be controlled:

- f) Explain how Dr Casey would obtain informed consent from Year 11 and 12 participants. (2 marks)

A colleague of Dr Casey suggested that she should use a placebo in her investigation.

- g) Identify a placebo that she could use and explain how it would improve the validity of her results. (2 marks)

- h) When a placebo is used, what should Dr Casey do after the study is completed to ensure that she meets all the ethical guidelines of psychological research? (2 marks)

Question 5

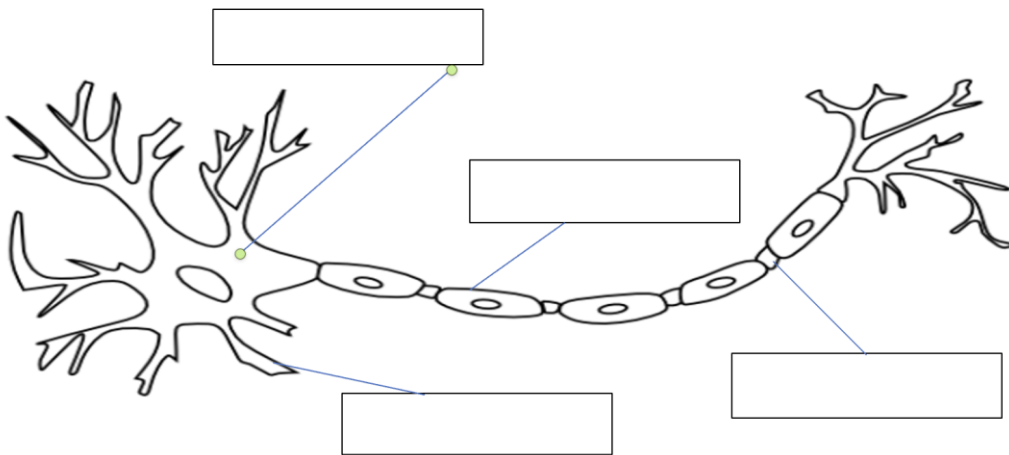
(16 marks)

- (a) Name the **two (2)** components of the central nervous system. (2 marks)

One: _____

Two: _____

- (b) The neuron has a very distinctive structure. Label the **four (4)** identified parts of the following neuron. (4 marks)



- (c) On the diagram above, draw an arrow to indicate the direction of transmission. (1 mark)

- (d) Name the type of neuron in the diagram. (1 mark)

- (e) For the diagram above state where in the body the cell body would be located. (1 mark)

- (f) State the role of the dendrites. (1 mark)

Question 6**(15 marks)**

- (a) Fill in the table below regarding developmental changes across the lifespan.
(6 marks)

Stage	Physical development	Cognitive development	Social and emotional development
		Improvement in perceptual abilities, understanding and ability to communicate through language. Increase in memory and learning.	Development of self-recognition and self-identity. Beginning to understand gender identity. Enjoyment of family centred social interactions and basic pretend play.
Childhood (Preschool children)	Continued rapid brain development. Hand preference established.	Large increase in the use and understanding of language. Thoughts generally guided by perceptions rather than logic.	
Childhood (School age children)	Physical growth slows. Motor skills improve.		More independent from parents and carers. Friendship groups more stable and closer, mainly with the same sex.
		Sophisticated and logical thinking skills. Gains knowledge and understanding.	A quest for independence. More sophisticated ideas of self: self-image, self-esteem, and self-identity. Emotionally closer friendships, usually with one or two others.

Question 6 continued

(b) Fill in the correct terms regarding brain plasticity.

(6 marks)

Term	Definition
	The movement of new neurons to the locations where they will function
	Elimination of excess neurons and synapses
	The making of new neurons
	The increase in the number of neurons and synapses in this part of the brain during adolescence may cause a temporary clumsiness
	Axons of the new neurons grow out to target cells and form synapses with them
	The last part of the brain to develop, accounting for snap decision making and impulsivity in adolescence

(c) Explain the differences between developmental plasticity and adaptive plasticity.

(3 marks)

End of Section One

Section Two: Extended answers**30% (60 Marks)**

Section Two consists of **three** questions.

Answer **one** question from Part A and **one** question from Part B.

Supplementary pages for planning/continuing your answers to questions are 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.

Suggested working time: 60 minutes

Part A**10% (30 marks)**

This part has **one** compulsory question. Write your answer to Question 7 on pages 18–23. When you have answered this question, turn to page 24 for Question 8 and Question 9 and write your answer on pages 25-30.

Question 7**(30 marks)**

Throughout history many different methods have been used to learn information about the brain. Summarise the following techniques and what we have learned from them.

In your response you should:

- Describe a case study that looked at brain function and explain what we have learned from it (5 marks)
- Summarise the method and findings of Walter Sperry's split brain studies in animals (5 marks)
- Summarise the method and findings of Walter Sperry's split brain studies in humans (5 marks)
- List the functions of the left and right hemispheres of the brain (4 marks)
- Describe the contemporary method of EEGs and explain what we can learn from them (3 marks)
- Describe the contemporary method of fMRIs and explain what we can learn from them (4 marks)
- Use appropriate psychological terminology (4 marks)

See next page.

Choose **either** Question 7 **or** Question 8.

Indicate the question you will answer by ticking the box next to the question. Write your answer on pages 25 – 30.

Question 8

(30 marks)

Piaget is one of the most influential psychologists of all time. His work on how our thinking processes has informed teaching and parenting practices for generations.

In your response you should:

- Use an example to outline the processes involved in building a schema (7 marks)
- Describe Piaget's stages of cognitive development (16 marks)
- Explain a criticism of Piaget's work (4 marks)
- Communicate your psychological understandings appropriately (4 marks)

OR

Question 9

(30 marks)

Geraldine is having lunch at a restaurant with her Dad. When her juice arrives, it is in a tall, skinny glass. Geraldine is very excited to have so much juice because at home her juice is always in a short, wide glass. She loves going to restaurants! Geraldine's older brother is 14 years old and is no longer impressed by the restaurant glasses. He is concerned about the science investigation he has to plan for school tomorrow.

- Name and describe the developmental achievement that Geraldine has not yet mastered. (2 marks)
- Describe the task Piaget used to test for this ability, and explain the criticism of Piaget's work relating to this task. (7 marks)
- Name the stage of cognitive development that Geraldine is most likely in and justify your response. (2 marks)
- Describe the other characteristics of this cognitive stage and illustrate them using examples of behaviours Geraldine may exhibit. (4 marks)
- List the age range that Geraldine is likely in. (1 mark)
- Describe in detail the stage of cognitive development that Geraldine's brother is likely in and justify your response. (5 marks)
- Explain the task Piaget used to test for this stage of development. (5 marks)
- Communicate your psychological understandings appropriately (4 marks)

Spare working page.

See next page.

Spare working page.

END OF EXAM.