

Trial Examination 2020

## VCE Psychology Unit 1

Written Examination

### Question and Answer Booklet

Reading time: 15 minutes

Writing time: 1 hour 30 minutes

Student's Name: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

#### Structure of booklet

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	40	40	40
B	15	15	50
			Total 90

Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.

Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.

No calculator is allowed in this examination.

#### Materials supplied

Question and answer booklet of 19 pages.

Answer sheet for multiple-choice questions.

Additional space is available at the end of the booklet if you need extra paper to complete an answer.

#### Instructions

Write **your name** and your **teacher's name** in the space provided on this booklet and in the space provided on the answer sheet for multiple-choice questions.

All written responses must be in English.

#### At the end of the examination

Place the answer sheet for multiple-choice questions inside the front cover of this booklet.

**Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.**

## SECTION A – MULTIPLE-CHOICE QUESTIONS

### Instructions for Section A

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1; an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

### Question 1

Hippocrates took the ‘brain’ side of the heart–brain debate.

He believed that the brain

- A. was the source of all thoughts and emotions.
- B. was the source of thoughts and the heart was the source of emotions.
- C. was the source of rational thinking processes while irrational thoughts and behaviours originated from the heart.
- D. instigated all thoughts and emotion, but the heart regulated and controlled them.

### Question 2

Phrenologists investigated personality by studying

- A. the lines on the palms of the hands.
- B. astrological birth signs.
- C. the bumps on a person’s skull.
- D. responses to a series of inkblots.

### Question 3

The procedure of removing, destroying or disabling specific parts of the brain is referred to as

- A. electrostimulation of the brain (ESB).
- B. hemispherectomy.
- C. split-brain surgery.
- D. brain ablation.

### Question 4

A research hypothesis is a

- A. testable prediction of the relationship between two or more variables within a population.
- B. testable prediction of the relationship between two or more variables within a sample.
- C. prediction of the relationship between two or more variables within a population that cannot always be tested.
- D. prediction of the relationship between two or more variables within a sample that cannot always be tested.

**Question 5**

Which one of the following is a structural neuroimaging technique?

- A. fMRI
- B. PET
- C. ECG
- D. CT

**Question 6**

Which division of the nervous system receives information from the sensory receptors?

- A. peripheral nervous system
- B. autonomic nervous system
- C. somatic nervous system
- D. central nervous system

**Question 7**

A spinal reflex

- A. always involves the brain.
- B. only involves the brain when an immediate response is required.
- C. is a conscious response to external stimuli.
- D. is an automatic response to external stimuli by the peripheral nervous system.

**Question 8**

Which one of the following is **not** controlled by the autonomic nervous system?

- A. glands
- B. smooth muscles
- C. skeletal muscles
- D. visceral organs such as the lungs

**Question 9**

Which one of the following statements is **incorrect**?

- A. The brain is part of the central nervous system.
- B. The sympathetic nervous system is a division of the peripheral nervous system.
- C. The autonomic nervous system is a division of the parasympathetic nervous system.
- D. The somatic nervous system is a division of the peripheral nervous system.

**Question 10**

The sympathetic nervous system

- A. assists the body to survive when threatened.
- B. detects incoming sensory stimuli.
- C. restores the body to a steady state of functioning.
- D. is active during most of an average person's day.

**Question 11**

Which one of the following is considered to be a specialty of the right hemisphere of the brain?

- A. mathematical calculations
- B. moving the right arm
- C. spirituality
- D. logical and deductive reasoning

**Question 12**

Which one of the following statements about myelin is correct?

- A. Myelin is a continuous fatty coating along the length of the axon.
- B. Myelin is made by astrocytes.
- C. Myelin insulates neurons.
- D. Myelin is found in all neurons.

**Question 13**

Neurons that transmit information to the brain are referred to as

- A. interneurons.
- B. motor neurons.
- C. efferent neurons
- D. sensory neurons.

**Question 14**

Microglia are a special type of glial cell.

Which one of the following statements about microglia is correct?

- A. Microglia are found in the peripheral nervous system.
- B. Microglia produce the myelin sheath of neurons.
- C. Microglia act as the main form of immune defence for neurons.
- D. Microglia are shaped like stars.

**Question 15**

The forebrain contains the

- A. hypothalamus, thalamus and cerebrum.
- B. hypothalamus, thalamus and cerebellum.
- C. pons, medulla and cerebrum.
- D. pons, medulla and cerebellum.

**Question 16**

Functions of the medulla include

- A. coordinating fine muscle movements.
- B. controlling important life-sustaining functions such as heart rate and breathing.
- C. processing visual stimuli.
- D. regulating alertness.

**Question 17**

The structure in the brain that is responsible for filtering incoming sensory information is the

- A. hypothalamus.
- B. thalamus.
- C. cerebellum.
- D. pons.

**Question 18**

From birth, the brain rapidly increases in size and volume until the individual reaches adulthood.

This is due to

- A. an increase in the number of neurons.
- B. an increase in the thickness and size of neurons.
- C. the development of myelin.
- D. the development of glial cells.

**Question 19**

Synaptic pruning is an important process in the brain.

Which one of the following statements about synaptic pruning is **incorrect**?

- A. Weak and unused synaptic connections are pruned.
- B. Synaptic pruning helps to fine-tune the brain.
- C. Synaptic pruning is a short-term process that slows down and ceases once adulthood is reached.
- D. Synaptic pruning usually occurs in the sensory areas first.

**Question 20**

Dr James was studying bullying behaviours in Victorian primary schools. She used a questionnaire that included questions asking students to rate their experiences at school on a scale of 1 to 5, 1 being very bad and 5 being very good.

The data collected by Dr James was

- A. primary and qualitative.
- B. primary and quantitative.
- C. secondary and qualitative.
- D. secondary and quantitative.

**Question 21**

The brain undergoes periods of rapid change and development from birth to early adulthood.

These changes

- A. involve the development of many new neurons.
- B. are very rapid in infancy but gradually slow down as the individual grows towards adulthood.
- C. occur in the forebrain before the midbrain and hindbrain.
- D. occur in an orderly, sequential manner.

**Question 22**

When conducting studies, researchers aim to control

- A. all variables.
- B. the independent variable.
- C. the dependent variable.
- D. extraneous variables.

**Question 23**

Brain injuries occur when part or parts of the brain are damaged, interfering with brain function.

Which one of the following statements about acquired brain injuries is **incorrect**?

- A. Acquired brain injuries can be caused by a bacterial infection.
- B. Acquired brain injuries can be sudden or gradual.
- C. Acquired brain injuries can be caused by long-term use of alcohol.
- D. Acquired brain injuries can occur before birth.

**Question 24**

In 1848, Phineas Gage was the foreman to a construction crew working on laying new railway tracks. As Gage was packing down some gunpowder with a metal rod, a spark ignited the gunpowder and the rod shot through his left cheek and out through the top of his skull. Immediately after the accident, no major psychological changes in Gage were noticed, but changes became evident as time progressed.

Some of the psychological changes that were noticed in Gage included difficulty

- A. with motor activities.
- B. maintaining relationships with his friends.
- C. keeping a job.
- D. with goal-directed behaviour and planning.

**Question 25**

Spatial neglect is a neurological disorder.

The area of the brain that is most commonly affected in cases of spatial neglect is the

- A. visual cortex.
- B. temporal lobe.
- C. motor cortex.
- D. parietal lobe.

**Question 26**

Parkinson's disease is a progressive neurodegenerative disease.

Which one of the following statements about Parkinson's disease is correct?

- A. In cases of Parkinson's disease, there is an over-production of the neurotransmitter dopamine.
- B. Parkinson's disease is caused by genetic factors.
- C. An early symptom of Parkinson's disease is the loss of taste.
- D. Age is the most significant risk factor for developing Parkinson's disease.

**Question 27**

Monozygotic twins are important for research in human development.

Monozygotic twins

- A. have identical genotypes and phenotypes.
- B. are conceived when one sperm fertilises one ovum.
- C. have the same phenotype but different genotypes.
- D. are conceived when two sperm fertilise two ova.

**Question 28**

An infant beginning to crawl is considered to be

- A. due to learning.
- B. due to maturation.
- C. an example of the influence of nurture.
- D. part of their cognitive development.

**Question 29**

The sensitive period in which a person learns their first language

- A. continues throughout their life, although it gradually weakens from adolescence.
- B. finishes at the age of seven.
- C. continues to the age of twelve, although it gradually weakens from the age of seven.
- D. continues throughout childhood, although it weakens during the latter part of adolescence.

**Question 30**

In Ainsworth's test, when the caregiver of an infant leaves the room and leaves the infant alone with a stranger, the infant cries.

In this test the infant demonstrates

- A. stranger anxiety.
- B. disorganised attachment.
- C. insecure resistant attachment.
- D. separation anxiety.

**Question 31**

When referring to how children have to change or modify a pre-existing idea so that it can fit in with new information, Jean Piaget used the term

- A. assimilation.
- B. reconstruction.
- C. schema.
- D. accommodation.

**Question 32**

Students in a VCE Psychology class were excited to be conducting their own research. One group of students planned to investigate the effect of adding different food colouring to various foods on people's perceptions of flavour. Group member Jess had a younger sister Eliza and suggested that the group ask Eliza and her friends to be participants in the group's study. Jess said they wouldn't need to send letters to the participants' homes because she personally knew them and they were willing to participate.

What could be the main ethical concern with this method of selecting the sample of students?

- A. lack of withdrawal rights
- B. lack of informed consent
- C. lack of confidentiality
- D. lack of debriefing

**Question 33**

Aria, Audrey and Joanne are playing in the backyard at Aria's house. They find a large box and sit inside it, pretending to have a tea party.

According to Piaget, the children are

- A. in the sensorimotor stage of development.
- B. demonstrating egocentrism.
- C. demonstrating symbolic thinking.
- D. in the concrete operational stage of development.

**Question 34**

Erikson developed a psychosocial theory of development.

According to his theory, the psychosocial crisis of autonomy versus shame and doubt occurs between the ages of

- A. 18 months to 3 years.
- B. 3 to 5 years.
- C. 5 to 12 years.
- D. 12 to 18 years.

**Question 35**

Chanelle and Emily were on the bus on their way to school, wearing their pajamas for a special fundraising event. People on the bus looked at them strangely, thinking their behaviour was quite odd. Once at school, the girls donated their money to the fundraiser and went to class with the rest of the students, who were all wearing their pyjamas.

The girls wearing pajamas to school is considered normal from a

- A. statistical approach.
- B. sociocultural approach.
- C. historical approach.
- D. situational approach.



**Question 36**

Which one of the following social factors could contribute to a mental disorder?

- A. very high levels of a neurotransmitter, such as dopamine
- B. genetic vulnerability
- C. persistent bullying in the workplace
- D. behaviours that are atypical for an individual

**Question 37**

A mental health problem may be described as a

- A. psychological condition diagnosed by a psychologist or similar healthcare professional.
- B. mental health condition that may resolve itself in time.
- C. mental health condition that interferes with everyday functioning.
- D. psychological condition that requires medication in order for successful treatment to occur.

**Question 38**

Which one of the following is an anxiety disorder?

- A. bipolar disorder
- B. schizophrenia
- C. agoraphobia
- D. major depression

**Question 39**

One day, Michael was listening to the radio in his car, when he heard the radio announcer directing comments at him personally. He thought it was a coincidence. However, over the following week, he noticed that on every radio station he listened to, the announcer was sending him personal messages.

Michael was experiencing delusions of

- A. control.
- B. persecution.
- C. grandeur.
- D. reference.

**Question 40**

A positive symptom of schizophrenia is

- A. feeling positive about the future.
- B. loss of motivation.
- C. hallucinations.
- D. affective flattening.

**END OF SECTION A**

**SECTION B**

**Instructions for Section B**

Answer **all** questions in the spaces provided. Write using blue or black pen.

**Question 1** (2 marks)

Describe René Descartes' theory of dualism.

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**Question 2** (2 marks)

Neurosurgeon Wilder Penfield made a significant contribution to psychology and medicine when he mapped the cortical areas of the brain.

Identify and describe the technique used by Penfield that enabled him to construct the cortical map.

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**Question 3** (3 marks)

Liliana and Alex were having lunch under the shade of a tree. Suddenly, their friend Amelie jumped out from behind the tree, scaring them. They screamed loudly.

- a. Identify **one** possible physiological change in Lilliana and Alex's functioning. 1 mark

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- b. Identify the branch of the nervous system that was responsible for the changes. 1 mark

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- c. When Liliana and Alex realised that their friend Amelie was playing a joke on them, they laughed about their reaction.

Which division of the nervous system was activated in Liliana and Alex? 1 mark

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**Question 4** (1 mark)

What is the function of a synapse?

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**Question 5** (2 marks)

Explain why an adult has far fewer synapses than a three-year-old child.

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**Question 6** (4 marks)

Adaptive plasticity often occurs following a brain injury.

Identify and describe **two** neuronal mechanisms by which the brain is able to recover.

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**Question 7** (5 marks)

Parkinson's disease affects just over 82 000 Australians.

- a.** Identify **one** motor symptom and **one** non-motor symptom of the disease. 2 marks

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- b.** Researchers working in the field of Parkinson's disease use animals to assist with their research. Identify **one** contribution to the treatment of Parkinson's that is due to animal research. 1 mark

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- c.** Identify **one** functional neuroimaging technique that has assisted in the understanding of Parkinson's disease and explain how it has assisted in the understanding of the disease. 2 marks

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**Question 8** (2 marks)

Fran gave birth to identical twin girls, Lauren and Charlie. It was very difficult to tell the twins apart when they were infants. However, when the twins were in Grade 6, they showed obvious differences. Charlie spent most of her time inside, either drawing or painting, while Lauren was part of an outdoors swimming team. Lauren was taller, more muscular and a faster swimmer than Charlie. Lauren's skin was more tanned and her hair a lighter shade of brown than Charlie's.

Identify the influences of nature and nurture on the similarities and differences of the twins.

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**Question 9** (2 marks)

Isaac was excited when his cat Lulu gave birth to a litter of four kittens. One of the kittens was born with her left eyelid sealed, so she could only use her right eye. When the kitten was three months old, the vet operated on her left eyelid so that she could open her eye. However, the kitten never gained full eyesight in her left eye.

Explain why the kitten never gained full eyesight in her left eye.

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**Question 10** (2 marks)

Identify and describe **one** key accomplishment in the cognitive ability of a child who has moved from the concrete operational stage of Piaget's theory to the formal operational stage.

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**Question 11** (6 marks)

Josie was interested in the effect that temperature had on levels of alertness of students at school. She believed that when adolescents are subjected to high temperatures, causing them to feel uncomfortably hot and to not be as alert as compared to when they are subjected to moderate temperatures and feel comfortable.

Josie used a mental speed test on a computer as a measure of alertness. The time to complete the mental speed test was measured in seconds. Josie asked for volunteers from the local secondary college and first tested the participants when they were in a room set to 22°C and then a week later in a room set to 32°C.

The results are shown in the table below.

Participant	Time taken in the 22°C room (seconds)	Time taken in the 32°C room (seconds)
1	20	40
2	25	40
3	20	30
4	15	40
5	20	50

a. What was the independent variable in Josie’s study? 1 mark

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b. What was the dependent variable in Josie’s study? 1 mark

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c. What type of sampling method did Josie use? 1 mark

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d. Did Josie collect qualitative or quantitative data? Explain your answer. 2 marks

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e. Describe **one** important ethical principle that Josie must have upheld in her research. 1 mark

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**Question 12** (2 marks)

Explain how maladaptive behaviours can be considered to be dysfunctional behaviours. In your response, refer to **one** example.

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**Question 13** (2 marks)

Describe self-stigma and explain how it can interfere with treatment.

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**Question 14** (5 marks)

Schizophrenia is a psychotic disorder.

- a.** Identify and describe **two** negative symptoms that may be experienced by a person with schizophrenia. 2 marks

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- b.** In terms of the two-hit hypothesis, what are the **two** ‘hits’ required for schizophrenia to develop within an individual? 2 marks

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- c.** What is the main treatment for schizophrenia? 1 mark

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Trial Examination 2020

## VCE Psychology Unit 1

Written Examination

### Multiple-choice Answer Sheet

Student's Name: \_\_\_\_\_

Teacher's Name: \_\_\_\_\_

#### Instructions

Use a **pencil** for **all** entries. If you make a mistake, **erase** the incorrect answer – **do not** cross it out. Marks will **not** be deducted for incorrect answers.

**No** mark will be given if more than **one** answer is completed for any question.

All answers must be completed like this example: 

A	B	C	D
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Use pencil only

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D
21	A	B	C	D
22	A	B	C	D
23	A	B	C	D
24	A	B	C	D
25	A	B	C	D
26	A	B	C	D
27	A	B	C	D
28	A	B	C	D
29	A	B	C	D
30	A	B	C	D
31	A	B	C	D
32	A	B	C	D
33	A	B	C	D
34	A	B	C	D
35	A	B	C	D
36	A	B	C	D
37	A	B	C	D
38	A	B	C	D
39	A	B	C	D
40	A	B	C	D