Unit 1 Psychology Exam 2023 – Assessment Guide

Section A

VCAA Key Knowledge	Question	Answer guide
the interactive influences of hereditary and environmental factors on a person's psychological development	**Question 1** The genetic traits that are passed on to a child from both parents (e.g. eye colour) are examples of **A.** heredity. **B.** nurture. **C.** environmental influences. **D.** psychological development.	***A*** *Genetic traits are physiological and inherited from our parents (heredity).*
the biopsychosocial approach as a model for considering psychological development and mental wellbeing	**Question 2** External factors, such as education and an individual's local community, can influence psychological development. These factors can be **A.** biological, psychological or social factors. **B.** psychological and social but not biological factors. **C.** psychological factors only. **D.** social factors only.	***D*** *Both biological and psychological factors are internal; external factors are from the environment and can only be social factors.*
the process of psychological development (emotional, cognitive and social development) over the course of the life span	**Question 3** Which of the following are valid examples of each type of psychological development?	***B*** *Controlling your temper shows emotional development; remembering how to multiply numbers is an example of cognitive development; and developing a romantic relationship shows social development.*

	Emotional	Cognitive	Social
A.	crying when you hurt your knee	forming a secure attachment	going to a friend's birthday party
B.	controlling your temper when upset	remembering how to multiply numbers	developing a romantic relationship
C.	learning to play an instrument	making a new friend at school	playing with stuffed toys
D.	hugging a friend when they are sad	using logical reasoning to solve a problem	going through puberty

Use the following information to answer Questions 4 – 6.

Remi is two years old and has been taken into an unfamiliar room with her mother. Remi is feeling safe and happy because she is with her mother and is happy to explore the room. Shortly after, her mother exits the room, leaving Remi alone. Remi becomes scared and begins to cry. She runs to the door and continues to cry.

the process of psychological development (emotional, cognitive and social development) over the course of the life span

Question 4

What is the name of this experiment?

A. the secure attachment experiment
B. the strange situation experiment
C. the avoidance test
D. the emotional development experiment

B *The experiment outlined in this question is Mary Ainsworth's strange situation experiment.*

the process of psychological development (emotional, cognitive and social development) over the course of the life span

Question 5

When the mother returns, Remi continues to cry and cannot be comforted. She does not want to continue exploring the room and squirms to get out of her mother's arms. It appears that Remi has developed

A. a secure attachment.
B. an insecure avoidant attachment.
C. an insecure resistant attachment.
D. an insecure sensitive attachment.

C *Insecure resistant infants openly exhibit anxiety about both exploration and the availability of the attachment figure. The presence of the parent does not have a calming effect, and returning to exploration can be difficult, as seen in Remi.*

the process of psychological development (emotional, cognitive and social development) over the course of the life span

Question 6

Which of the following outlines Remi's emotional response when her mother left the room?

	Subjective feeling	Expressed behaviour	Physiological response
A.	crying	heart racing	scared
B.	scared	crying	heart racing
C.	sad	heart racing	crying
D.	heart racing	crying	sad

B *Remi feeling scared is a subjective feeling; Remi crying is an expressed behaviour; and Remi's heart racing is a physiological response.*

Use the following information to answer Questions 7 and 8.

Stella takes her toy rabbit to childcare with her because she does not want it to feel lonely being left at home by itself.

the process of psychological development (emotional, cognitive and social development) over the course of the life span

Question 7

Stella is demonstrating the cognitive thinking style of

A. egocentrism.
B. animism.
C. classification.
D. symbolic thinking.

B *Stella believing that her toy rabbit will feel lonely is showing the cognitive thinking style of animism (i.e. believing that all things have a form of conscious awareness).*

the process of psychological development (emotional, cognitive and social development) over the course of the life span	**Question 8** It appears that Stella is _____ years old and in the _____ stage of cognitive development. **A.** two to four; sensorimotor **B.** two to four; pre-operational **C.** five to eight; pre-operational **D.** five to eight; sensorimotor	*B*	*Stella is going to childcare, so is most likely two to four years of age. Animism is often shown during the pre-operational stage.*

Use the following information to answer Questions 9 – 12.

Dr Gray is conducting a study to observe the psychosocial changes to 65 infants who are born in a local hospital. Participants will be interviewed throughout their lives at each of Erikson's eight stages of psychosocial development to discover biological, psychological and social impacts on their development. Observations of their behaviour within and outside the laboratory will also occur.

determine appropriate investigation methodology: case study; classification and identification; controlled experiment (within subjects, between subjects, mixed design); correlational study; fieldwork; literature review; modelling; product, process or system development; simulation	**Question 9** What type of study is being conducted when Dr Gray makes observations outside of the laboratory? **A.** product development **B.** fieldwork **C.** literature review **D.** simulation	*B*	*Fieldwork involves observing and interacting with a selected environment beyond the lab.*

the process of psychological development (emotional, cognitive and social development) over the course of the life span	**Question 10** Four years into Dr Gray's study, participants were asked a range of questions about 'what is right and wrong,' with the children discussing rules and ranking behaviours on a scale from one ('naughty behaviour') to five ('nice behaviour'). The children were also observed interacting with a range of toys to see how they plan and coordinate their play. What stage of Erikson's psychosocial development would these children most likely be in? **A.** trust vs mistrust **B.** autonomy vs shame and doubt **C.** initiative vs guilt **D.** industry vs inferiority	*C*	*This question outlines stage three of Erikson's psychosocial theory: initiative vs guilt. This is shown by having questions on 'right and wrong' (guilt) as well as being assessed on planning and coordinating play (initiative).*

analyse and evaluate data and investigation methods

Question 11

What type of data was likely being collected by Dr Gray?

	Observing play	Ranking behaviours
A.	qualitative	quantitative
B.	quantitative	qualitative
C.	qualitative	qualitative
D.	quantitative	quantitative

A *Observational data collected by 'seeing how they plan and coordinate their play' is most likely qualitative; ranking on a scale (from one to five) is numerical and, therefore, quantitative.*

evaluate investigation methods and possible sources of error or uncertainty, and suggest improvements to increase validity and to reduce uncertainty

Question 12

What is a limitation of collecting observational data?

A. it can help to mimic real-world scenarios
B. it is time-consuming
C. it must be conducted in an unusual group setting for the data to be accurate
D. it is unethical as it breaches confidentiality

B *Observational studies are often time-consuming because of how long it takes to set up appropriate observational tools, record behaviours, and summarise them.*

Use the following information to answer Questions 13 and 14.

Whilst travelling around Japan, Kate noticed that people rarely made eye contact with her and she thought that this was quite rude. Later that day, she met up with a friend who informed her that it is sometimes considered to be more respectful to avoid eye contact in Japan.

the usefulness, and limitations, of psychological criteria to categorise behaviour as typical or atypical, including cultural perspectives, social norms, statistical rarity, personal distress and maladaptive behaviour

Question 13

Which of the following is not a reason for why making eye contact is considered atypical?

A. it does not follow the social norms of Japan
B. the cultural upbringing of Japanese people
C. avoiding eye contact is statistically common in Japan
D. eye contact is maladaptive and can cause personal distress

D *Making eye contact is not maladaptive and does not cause personal distress, particularly in contexts where this is normal. The other three options are all reasons for why eye contact may be atypical in Japan.*

the usefulness, and limitations, of psychological criteria to categorise behaviour as typical or atypical, including cultural perspectives, social norms, statistical rarity, personal distress and maladaptive behaviour

Question 14

For the rest of Kate's time in Japan, she wanted to be respectful and tried to ensure that she did not maintain constant eye-contact when she was in conversation with others. This is an example of

A. atypical behaviour.
B. adaptive behaviour.
C. maladaptive behaviour.
D. atypical development.

B *Kate is adapting to the typical behaviour found in Japanese culture.*

Use the following information to answer Questions 15 and 16.

Ollie has recently been diagnosed with attention-deficit/hyperactivity disorder (ADHD). Two of Ollie's main issues are his inability to sit still and constant fidgeting. Ollie is allowed to have a stress ball and fidget spinner when he is in class.

the role of mental health workers, psychologists, psychiatrists and organisations in supporting psychological development and mental wellbeing as well as the diagnosis and management of atypical behaviour, including culturally responsive practices

Question 15

The signs of ADHD that are identified here can be referred to as

A. inattentiveness.
B. hyperactivity.
C. impulsivity.
D. all of the above.

B *An inability to sit still and fidgeting are examples of hyperactivity.*

the role of mental health workers, psychologists, psychiatrists and organisations in supporting psychological development and mental wellbeing as well as the diagnosis and management of atypical behaviour, including culturally responsive practices

Question 16

Ollie was born six weeks premature. This is a _____ risk factor that is believed to contribute to the development of ADHD.

A. biological
B. psychological
C. social
D. atypical

A *Being born premature is a biological risk factor for developing ADHD.*

the role of mental health workers, psychologists, psychiatrists and organisations in supporting psychological development and mental wellbeing as well as the diagnosis and management of atypical behaviour, including culturally responsive practices

Question 17

Patricia has difficulty reading fluently and struggles to distinguish between the sounds of different words. She also gets confused between the letters 'b' and 'd.' Patricia most likely has

A. autism spectrum disorder.
B. ADHD.
C. dyslexia.
D. an intellectual disability.

C *Patricia likely has dyslexia which involves difficulty reading due to problems identifying speech sounds and learning how they relate to letters and words.*

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes

Question 18

The majority of grey matter can be found in the

A. cerebral cortex.
B. corpus callosum.
C. brain stem.
D. thalamus.

A *The greatest amount of grey matter can be found on the surface of the cerebral cortex. The other three options are smaller structures that may also be comprised of white matter.*

different approaches over time in understanding the role of the brain in behaviour and mental processes	**Question 19** The pseudoscientific study of the relationship between the bumpy surface of the skull and a person's behavioural characteristics is known as **A.** brain ablation. **B.** mind-body dualism. **C.** electrical stimulation of the brain. **D.** phrenology.	*D*	*Phrenology involves studying the bumps and grooves of the skull in relation to personality.*

Use the following information to answer Questions 20 and 21.
Yuichi is a healthy adult with an intact brain. He was asked to stare at a dot in the centre of a computer screen. Whilst doing so, an image of a rabbit was presented on the left side of the screen and an image of a squirrel was presented on the right side of the screen simultaneously.

different approaches over time in understanding the role of the brain in behaviour and mental processes	**Question 20** Which animal(s) would Yuichi be able to say he saw? **A.** the squirrel **B.** the rabbit **C.** both the squirrel and the rabbit **D.** neither the squirrel nor the rabbit	*C*	*Yuichi is not a split-brain patient. Information that enters his brain can travel across the corpus callosum to the left hemisphere of the brain (which specialises in speech) in order for him to say both words.*

different approaches over time in understanding the role of the brain in behaviour and mental processes	**Question 21** The image of the rabbit was presented to _____ and was initially sent to the _____ hemisphere of the brain. **A.** the left eye; left **B.** the right eye; right **C.** both eyes; left **D.** both eyes; right	*D*	*The rabbit was presented to the left visual field, which enters both eyes on the right side. This information then travelled to the right hemisphere of the brain.*

Use the following information to answer Questions 22 – 24.
Julius had a motorcycle accident that resulted in an acquired brain injury with damage to the left side of his cerebral cortex.

different approaches over time in understanding the role of the brain in behaviour and mental processes	**Question 22** Julius was taken for a neuroimaging scan to observe his functioning brain. Which technique would show the functioning brain? **A.** PET **B.** MRI **C.** CT scan **D.** X-ray	*A*	*A PET scan shows the functioning brain. All other options only show the structure of the brain.*

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes

Question 23

Which of the following signs would be the least likely to be shown several weeks after Julius' accident?

A. difficulty controlling movements on the left side of his body
B. difficulty solving mathematical equations
C. difficulty speaking fluently
D. difficulty planning and making logical decisions

A *Julius damaged the left side of his brain, so he may have difficulty controlling the right side of his body but not the left side. All other options are potential signs of damage to the left hemisphere of the brain.*

the impact of an acquired brain injury (ABI) on a person's biological, psychological and social functioning

Question 24

After his accident, Julius needed to relearn how to write his name. Over time, with practice, Julius was able to write his name again. Which process of neuroplasticity was most likely involved in allowing Julius to write his name again?

A. destruction of new neural pathways
B. sprouting of dendrites to form new synaptic connections
C. dendritic myelination resulting in faster neural messaging
D. regeneration of damaged neuronal cell bodies

B *Dendritic spouting would most likely occur when relearning after brain injury. Neurons are unlikely to regenerate, and myelination of axons (not dendrites) is a process more involved with growth and development than relearning.*

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes

Question 25

Identify the correct location for the following brain structures.

	Hindbrain	Midbrain	Forebrain
A.	cerebellum	thalamus	cerebral cortex
B.	brain stem	hypothalamus	cerebellum
C.	medulla	cerebral cortex	substantia nigra
D.	pons	substantia nigra	hypothalamus

D *The pons is in the hindbrain; the substantia nigra is in the midbrain; and the hypothalamus is part of the forebrain.*

Use the following information to answer Questions 26 and 27.

Grandpa Barry was sitting on the couch, reading a book, when he noticed that one side of his face felt numb. He turned to tell his partner, but his speech was slurred.

the impact of an acquired brain injury (ABI) on a person's biological, psychological and social functioning

Question 26

It appears that Barry was experiencing

A. dyslexia.
B. epilepsy.
C. chronic traumatic encephalopathy.
D. a stroke.

D *These symptoms are typical of a stroke, which involves a disruption of blood flow to the brain, depriving the tissue of oxygen and nutrients, causing tissue damage and loss of normal function.*

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes	Question 27 Following this incident, Grandpa Barry now has difficulty producing fluent speech and is quick to anger. Barry's partner says that he seems to be a completely different person now. It appears that Barry has had damage to his A. Wernicke's area. B. parietal lobe. C. frontal lobe. D. medulla.	*C*	*Difficulty producing speech would involve damage to his Broca's area, located in the frontal lobe. His personality change could also be due to frontal lobe damage.*

Use the following information to answer Questions 28 – 30.

Matthew and his brother David were playing a game of tennis. Matthew served the ball and hit it using his right hand. The ball then hit David's left ankle, causing his leg to swell and bruise.

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes	Question 28 The area of Matthew's brain that initiated the hit of the ball was his A. left frontal lobe. B. left parietal lobe. C. right frontal lobe. D. right parietal lobe.	*A*	*Matthew would have used his primary motor cortex (which is in the frontal lobe) to initiate the movement. Hitting with his right hand would be controlled by the left hemisphere of the brain.*

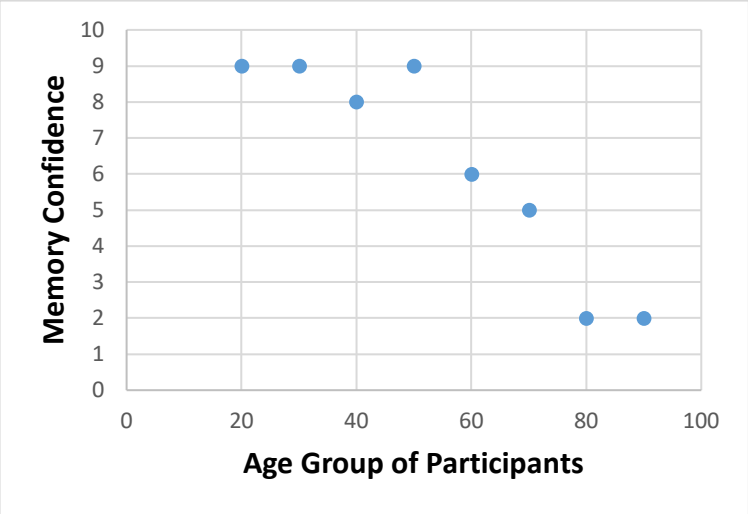
the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes	Question 29 The area of David's brain that received the pain response from his ankle was his A. left frontal lobe. B. left parietal lobe. C. right frontal lobe. D. right parietal lobe.	*D*	*The primary somatosensory cortex in David's parietal lobe would have processed the sensory information; as he was hit on his left ankle, this information would be processed by the right hemisphere of his brain.*

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes	Question 30 Matthew is a well-coordinated tennis player who is very agile and capable of returning tricky shots. Which part of Matthew's brain would be primarily responsible for coordinating his movements? A. the cerebellum B. the thalamus C. the primary auditory cortex D. the corpus callosum	*A*	*The cerebellum is responsible for balance, posture and coordinating movements.*

Use the following information to answer Questions 31 and 32.

A research psychologist was looking at the relationship between ageing and memory confidence. Participants were stratified by their corresponding decade (e.g. a 33-year-old participant was assigned to the 'thirties' group, a 65-year-old participant was assigned to the 'sixties' group, etc.). He then asked them to rate their confidence in remembering a list of items, from zero ('not at all confident') to ten ('extremely confident').

The following graph shows the relationship between ageing and memory confidence.



determine appropriate investigation methodology: case study; classification and identification; controlled experiment (within subjects, between subjects, mixed design); correlational study; fieldwork; literature review; modelling; product, process or system development; simulation

Question 31

What type of methodology was used by the research psychologist?

A. literature review
B. correlational study
C. within subjects design
D. mixed design

B *Because the independent variable of age was not systematically manipulated by the experimenter (in that the researcher used existing groups), this is best described as a correlational study.*

analyse and evaluate data and investigation methods

Question 32

The results of the research psychologist's study show that

A. ageing causes people to lose confidence in their memory.
B. there is a positive correlation between increased age and memory confidence.
C. there appears to be a relationship between falling confidence in memory abilities and increased age.
D. there appears to be no relationship between ageing and memory confidence.

C *Correlations cannot establish a cause-effect relationship. These results suggest that there is a negative correlation between memory confidence and increased age.*

the process of psychological development (emotional, cognitive and social development) over the course of the life span

Question 33

A toddler crawls over to a hairbrush. He holds it up to his head and asks, "Hello?"

Which type of development and which type of adaptation is demonstrated by the toddler?

	Type of development	Type of adaptation
A.	emotional development	assimilation
B.	emotional development	accommodation
C.	cognitive development	assimilation
D.	cognitive development	accommodation

C *Using a hairbrush as a mobile phone is an example of assimilation, where new information is incorporated into an already existing cognitive structure. This is a part of cognitive development.*

the roles of the hindbrain, midbrain and forebrain, including the cerebral cortex, in behaviour and mental processes

Question 34

Which of the following is most important for survival functions, such as breathing, swallowing and heartbeat?

A. the forebrain
B. the midbrain
C. the hindbrain
D. the reticular formation

C *The hindbrain structures (particularly the medulla in the brain stem) are responsible for many survival functions.*

the process of psychological development (emotional, cognitive and social development) over the course of the life span

Question 35

Which of the following statements about Harlow's monkeys is correct?

A. the dependent variable was whether the surrogate mother was a cloth-covered or wire surrogate
B. the infant monkeys would seek comfort from the wire surrogate mother even if it did not provide milk
C. the infant monkeys would seek comfort from the cloth-covered surrogate mother even if it did not provide milk
D. the infant monkeys would spend most time clinging to whichever surrogate mother that provided milk

C *The infant monkeys always preferred the cloth covered surrogate mother and the DV was how much time was spent with the surrogate mothers.*

Section B

VCAA Key Knowledge	Question	Answer guide

Mitchell has above-average intelligence. He is currently studying to become a doctor. Both of his parents are doctors and he was sent to one of the most prestigious secondary schools in Melbourne.

the interactive influences of hereditary and environmental factors on a person's psychological development	**Question 1a** (3 marks) What is the nature versus nurture debate? Identify two reasons for Mitchell's higher intelligence that supports the nurture side of the debate.	**Answer:** ● *The debate is whether heredity (nature) or the environment (nurture) is the main determining factor for how we develop.* ● *Two environmental contributing factors that may have influenced Mitchell's intelligence could include the prestigious school that he attended…* ● *…and parental pressure to be a high-achieving student.* **Marking protocol:** One mark for the first dot-point. One mark each for any valid environmental contributing factor affecting intelligence (e.g. academic/intelligent peers, easy access to resources due to a high socio-economic status, etc.), to a maximum of two.

the process of psychological development (emotional, cognitive and social development) over the course of the life span	**Question 1b** (3 marks) According to Jean Piaget's theory of cognitive development, what stage of development would Mitchell be in? Explain two key cognitive accomplishments that would indicate that someone has reached this stage.	**Answer:** ● *Mitchell has reached the final stage of cognitive development – the formal operational stage.* ● *A key cognitive accomplishment at this stage is:* - *abstract thinking, which is thinking without needing to visualise or experience in order to understand;* - *deductive reasoning, which involves logical reasoning and drawing conclusions from provided information;* - *idealistic thinking, which involves considering a perfect standard and striving towards an ideal.* **Marking protocol:** One mark for the first point. One mark for a key accomplishment with a clear description, to a maximum of two.

Lucy has recently been diagnosed with autism spectrum disorder.

the concepts of normality and neurotypicality, including consideration of emotions, behaviours and cognitions that may be viewed as adaptive or maladaptive for an individual *normal variations of brain development within society, as illustrated by neurodiversity*	**Question 2a** (3 marks) Outline the difference between neurotypicality and neurodivergence. Provide a reason why autism spectrum disorder is considered to be neurodivergent.	**Answer:** • *Neurotypicality refers to neurological and cognitive functioning that conforms with what is considered 'normal'.* • *On the other hand, neurodivergence refers to neurological and cognitive functioning that is considered atypical, meaning that it deviates from what is considered 'normal'.* • *Autism spectrum disorder is considered to be neurodivergent because there is a change in brain functioning (i.e. there is a difference in the brain's 'wiring' or makeup), resulting in altered thoughts, feelings and behaviours.* **Marking protocol:** One mark for each of the above points.

normal variations of brain development within society, as illustrated by neurodiversity	**Question 2b** (2 marks) Identify a social interaction issue and a social communication issue that Lucy may face due to having autism spectrum disorder.	**Answer:** Social interaction issues can include: • *Lacks initiation of interaction with others.* • *Prefers to be alone.* • *Difficulty forming friendships.* • *Little eye contact.* • *Does not seek comfort from caregivers if distressed/hurt.* • *Lacks affection.* • *Oversensitive to being touched.* • *Lacks the ability to engage in imaginary play.* Social communication issues can include: • *Delayed speech and limited language.* • *Limited facial expressions.* • *Difficulty maintaining a back-and-forth conversation.* • *Difficulty understanding others' viewpoints.* • *Monotone/flat voice.* **Marking protocol:** One mark for any appropriate social interaction issue. One mark for any appropriate social communication issue.

the role of mental health workers, psychologists, psychiatrists and organisations in supporting psychological development and mental wellbeing as well as the diagnosis and management of atypical behaviour, including culturally responsive practices	**Question 2c** (2 marks) Lucy's psychiatrist has prescribed medication for her. Explain two differences between a psychiatrist and a psychologist.	**Answer:** • *A psychiatrist is a qualified doctor and can prescribe medication…* • *…whereas a psychologist is specialised in 'talking therapies' (such as cognitive-behavioural therapy) and cannot perform invasive medical procedures.* **Marking protocol:** One mark for any valid difference (e.g. that a psychiatrist completes 10-12 years of tertiary study, whereas a psychologist completes six years of tertiary study; or that a psychiatrist must be registered with the Royal Australian and New Zealand College of Psychiatrists [RANZCP], whereas a psychologist must be registered with the Australian Psychological Society [APS], etc.), to a maximum of two.

Dr Randall is conducting research into CTE. Dr Randall is testing the memory of AFL players who have experienced concussions, comparing their results to players who have not been concussed. Dr Randall selected 45 AFL players who have had more than two concussions in the past year as well as 45 AFL players who have never been concussed to participate in the study.

All participants will be shown 15 images on a screen and must recall as many items as possible in one minute.

chronic traumatic encephalopathy (CTE) as an example of emerging research into progressive and fatal brain disease	**Question 3a** (2 marks) What is CTE?	**Answer:** • *CTE stands for chronic traumatic encephalopathy.* • *It is a progressive neurodegenerative disease that is thought to be caused by repeated concussions and blows to the head (e.g. in boxers as well as AFL and NRL players).* **Marking protocol:** One mark for each of the above points.

plan and conduct investigations	**Question 3b** (3 marks) Identify the population and sample in Dr Randall's study and explain the difference between the two.	**Answer:** • *The population is all AFL players.* • *The sample is the 90 AFL players who have been selected to be part of the study.* • *The population includes the entire group of people that the research concerns, whereas the sample is the smaller group that is taken from the population to be included in a scientific investigation.* **Marking protocol:** One mark for each of the above points.

identify independent, dependent and controlled variables in controlled experiments	**Question 3c** (2 marks) Identify the independent and dependent variables of Dr Randall's study. IV: DV:	**Answer:** • *IV: Whether participants have had more than two concussions in the past year, or have never been concussed.* • *DV: The number of images that they can remember.* **Marking protocol:** One mark for each of the above points.

formulate hypotheses to focus investigations	**Question 3d** (3 marks) Write a research hypothesis for Dr Randall's study.	**Answer:** • *It is hypothesised that AFL players who have had two or more concussions in the past year…* • *will remember fewer images (out of 15 projected images on a screen)…* • *when compared to AFL players who have never been concussed.* **Marking protocol:** One mark for each of the above points.

design and conduct investigations; select and use methods appropriate to the investigation, including consideration of sampling technique (random and stratified) and size to achieve representativeness, and consideration of equipment and procedures, taking into account potential sources of error and uncertainty; determine the type and amount of qualitative and/or quantitative data to be generated or collated	**Question 3e** (2 marks) Define random allocation and explain why it is not appropriate for Dr Randall's study.	**Answer:** • *Random allocation refers to all participants in a sample having an equal chance of being assigned to a particular condition of an experiment.* • *Random allocation would not work because Dr Randall is utilising existing groups (i.e. participants who have been concussed twice or more are in the experimental group and participants who have never been concussed are in the control group) because it would be unethical for Dr Randall to deliberately allocate participants into an experimental group that involves them being concussed.* **Marking protocol:** One mark for each of the above points.

In 1848, Phineas Gage was a construction worker on a new railway track when he was involved in an accident where a metal rod penetrated through his cheek and exited via the top of his skull. Phineas Gage survived this injury; however, he acquired serious damage to his frontal lobe. After this incident, Phineas suffered from an array of symptoms.

Phineas changed from being a well-liked and friendly man to an apathetic, aggressive man who was struggled to maintain relationships with others. He often had a blank expression on his face and would have minimal eye or head movement. Phineas became isolated and disliked. Phineas also had a drop in IQ and had difficulty paying attention. He lost his job as a supervisor and struggled to carry out any planned or goal-directed behaviours.

Source: https://www.smithsonianmag.com/history/phineas-gage-neurosciences-most-famous-patient-11390067/

determine appropriate investigation methodology: case study; classification and identification; controlled experiment (within subjects, between subjects, mixed design); correlational study; fieldwork; literature review; modelling; product, process or system development; simulation	**Question 4a** (1 mark) Phineas Gage is a well-known example of a case study. Explain what a case study is.	**Answer:** • *A case study is an in-depth/detailed investigation of an individual, small group or specific scenario.* **Marking protocol:** One mark for the above point.

determine appropriate investigation methodology: case study; classification and identification; controlled experiment (within subjects, between subjects, mixed design); correlational study; fieldwork; literature review; modelling; product, process or system development; simulation	**Question 4b** (2 marks) What are two limitations of case studies?	**Answer:** • *It is difficult to generalise results when studying one individual or a very small sample.* • *Case studies usually involve unique cases (e.g. Phineas Gage) which are not typical or 'normal' when compared to the rest of the population, which may threaten the external validity of the findings.* • *Case study participants may provide false/untrue details or forget information, which may lead to greater bias in conclusions (more than utilising a large group of participants).* • *Results from case studies can be subjective/biased to the opinions of the researcher (observer bias).* • *Results from case studies may be difficult to replicate.* • *Case studies may be expensive and time-consuming.* • *Case studies cannot determine cause and effect relationships.* **Marking protocol:** One mark for any of the above points, or any other valid limitation, to a maximum of two.

the impact of an acquired brain injury (ABI) on a person's biological, psychological and social functioning	**Question 4c** (3 marks) Identify one biological, one psychological and one social change to Phineas' functioning experienced after the accident.	**Answer:** Biological: • *Minimal movement of the eyes and head.* Psychological: • *Increased apathy.* • *Increased aggression.* • *A drop in IQ.* • *Difficulty solving problems and paying attention.* • *Lack of goal-directed behaviour and undertaking planned activities.* Social: • *Difficulty maintaining friendships/relationships.* **Marking protocol:** One mark each for an appropriate biological, psychological and social change.

the capacity of the brain to change in response to experience and brain trauma, including factors influencing neuroplasticity and ways to maintain and/or maximise brain functioning	**Question 5** (4 marks) What is the difference between experience-expectant plasticity and experience-dependent plasticity? Provide an example of something that may be learnt as a result of each type of plasticity.	**Answer:** • *Experience-expectant plasticity involves changes to brain structure from experiences that are considered typical/ordinary (during a particular critical or sensitive period);* • *…for example, learning to speak your native language.* • *On the other hand, experience-dependent plasticity involves modifications made to the neural structures of the brain due to various experiences that are unique to an individual (and may occur at any time during the lifespan);* • *…for example, learning to play an oboe.* **Marking protocol:** One mark for each of the above points. Note: marks should be awarded to any valid and congruent examples of things learnt due to experience-expectant and experience-dependent plasticity.

Andrea is a 13-year-old girl who was kept imprisoned in the basement of her house by her parents for her entire life. The cruel, neglectful parents were found and imprisoned, and Andrea is now free.

Since her release, psychologists have noticed that Andrea behaves like a typical four-year-old, has not developed many verbal skills, and cannot write. She also refuses to be parted from an old soft teddy bear that she cuddles for comfort whenever she is scared. Andrea rocks herself to sleep and bursts out laughing at random times during the day. She also needs to wear nappies as she has never used a toilet before.

the role of sensitive and critical periods in a person's psychological development. The process of psychological development (emotional, cognitive and social development) over the course of the life span
the usefulness, and limitations, of psychological criteria to categorise behaviour as typical or atypical, including cultural perspectives, social norms, statistical rarity, personal distress and maladaptive behaviour

Question 6 (10 marks)
Analyse this case study including:

- an explanation as to why Andrea has had a delay in cognitive development, with reference to critical and sensitive periods,
- an explanation as to why Andrea refuses to part with her teddy bear with reference to Harry Harlow's findings on attachment,
- an explanation as to why Andrea's behaviours are considered atypical, with reference to social norms and statistical rarity.

Sample answer:

- *Sensitive periods are a stage in development when an individual can most rapidly acquire a particular skill or characteristic. For example, the first year of life is a sensitive period for bonding and for forming an attachment to a primary caregiver.*
- *Sensitive periods are known to be a 'window of opportunity' where there is a more 'sensitive' or optimal time to learn a skill/task.*
- *Learning to speak is a task that is sensitive during childhood. As Andrea is now an adolescent, she has missed the 'window of opportunity' to learn how to speak as she was neglected and socially isolated as a child, preventing her from learning from others.*
- *Tasks that should be completed during these sensitive periods can still be learnt at a later date; this contrasts with critical periods, which are times in which certain kinds of learning must occur, otherwise it will never occur. Critical periods are more commonly seen in non-human animals. For example, newly hatched baby chicks will imprint/attach to the first noisy moving object that they see (usually their mother).*
- *Andrea has missed the 'windows of opportunity' for her speaking and writing abilities and so it will likely take more time for her to learn than usual; however, these skills are still able to be learnt later in life and, with time, she should be able to develop them. Her lack of appropriate experiences during a sensitive period should not permanently and irreversibly affect her future cognitive development.*

- *Harry Harlow's study involved separating infant monkeys from their mothers and providing them with a surrogate wire mother, which provided food/milk, and a surrogate cloth mother, which provided 'contact comfort'.*
- *Harlow found that all infant monkeys preferred to be with the cloth-covered surrogate mother; they sought comfort from this surrogate when they were frightened. Over time, the monkeys developed attachments to the cloth-covered surrogate mothers.*
- *From these findings, Harlow concluded that the contact comfort provided by these mothers was more important than food in creating attachment. It may be possible to generalise these findings to humans.*
- *These conclusions from Harlow's research can be seen in Andrea as she has developed a strong attachment to her soft teddy bear as it appears to provide her with contact comfort.*

- *Atypical behaviours are considered different or uncommon to what most people would ordinarily do in the same situation.*

- *As a society, we follow social norms – general, unspoken rules of standard/acceptable/appropriate behaviour. For example, standing quietly in a lift and facing the doors is the unspoken, accepted social norm.*
- *Some of Andrea's behaviours are considered atypical because they do not follow social norms; for example, random bursts of laughter and not using a toilet do not follow social norms.*
- *Andrea's behaviours are also a statistical rarity, meaning that they are not behaviours that the majority of people would perform. Most adolescents do not carry a teddy bear around and do not rock themselves to sleep; therefore, these behaviours from Andrea are atypical.*

Marking protocol:

This answer is globally marked (i.e., an overall mark is awarded for the entire answer). The following criteria could be used to assess a response:

9-10 Outstanding	• All elements of the question addressed to an outstanding standard. • An insightful, well-structured, and comprehensive application of critical and sensitive periods; Harry Harlow's experiment; and social norms and statistical rarity to explain atypical development. • The response is thoughtfully linked to Andrea and the scenario. • Precise and effective use of appropriate psychological terminology.
7-8 High	• All elements of the question addressed to a high standard. • A thoughtful, detailed, and relevant application of theories (including critical and sensitive periods; Harry Harlow's experiment; and social norms and statistical rarity to explain atypical development). • Formal and appropriate psychological terminology is used throughout the response.
5-6 Medium	• All elements of the question addressed to a satisfactory standard. • A relevant application of theories (including critical and sensitive periods; Harry Harlow's experiment; and social norms and statistical rarity to explain atypical development). • Formal and appropriate psychological terminology is mostly used.
3-4 Low	• Not all elements of the question are addressed or addressed correctly. There may be a lack of discussion on one of: critical and sensitive periods; or Harlow's experiment; or social norms and statistical rarity to explain atypical behaviour. • A generic response; limited links to Andrea and the scenario. • Limited formal and appropriate psychological terminology is used throughout the response.
1-2 Very low	• A superficial attempt at the question. • Not all elements of the question are addressed or addressed correctly. There may be a lack of discussion on two or more of: critical and sensitive periods; or Harlow's experiment; or social norms and statistical rarity to explain atypical behaviour. • Little formal and appropriate psychological terminology is used throughout the response.
0 marks	• The question has not been meaningfully attempted.

VCE Unit 1 PSYCHOLOGY
Written Examination
ANSWER SHEET – 2023

Student name:	

Use a **PENCIL** for **ALL** entries. For each question, shade the box which indicates your answer.

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

NO MARK will be given if more than **ONE** answer is completed for any question.

If you make a mistake, **ERASE** the incorrect answer – **DO NOT** cross it out.

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