

VCE Psychology Unit 1

Written Examination

Suggested Solutions

SECTION A – MULTIPLE-CHOICE QUESTIONS

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

Question 1 A

A is correct. Descartes believed that the mind was a non-physical, spiritual thing and that the body was a physical structure. According to his theory, the mind and body were able to come into contact with each other through the pineal gland, located deep within the central part of the brain. This connection facilitated the interaction of the mind and the brain so that they could influence each other. **B** and **C** are incorrect. Descartes's theory was in direct contrast to theories of the ancient Greeks, who believed that the mind and body were separate things. They also believed that the mind was able to control the body, but the body could not influence the mind. **D** is incorrect. The pituitary gland's main role is to secrete hormones. It does not play any role in connecting the mind and body as described by Descartes.

Question 2 D

D is correct. Galen observed changes in the behaviour of gladiators following head injuries, and thus took the 'brain' side of the debate. **A** is incorrect. The Ancient Egyptians believed that mental processes were held in the heart and so discarded the brain when they entombed the pharaohs. **B** and **C** are incorrect. Empedocles and Aristotle also took the 'heart' side of the debate.

Question 3 D

D is correct. ESB, or electrical stimulation of the brain, was first used in the 1870s. **A** is incorrect. X-rays were developed in 1879. **B** is incorrect. CT (computerised tomography) scans were developed in the early 1970s. **C** is incorrect. MRI, or magnetic resonance imaging, was developed in 1977.

Question 4 A

A is correct. MRI gives clear, coloured, highly detailed images so that minor changes in the brain may be detected. **B** is incorrect. fMRI, or functional magnetic resonance imaging, is a functional technique used to scan activity within the brain. **C** is incorrect. CT scans only produce black-and-white images and, as they rely on X-ray technologies, the image resolution is not as good as that produced by the MRI. **D** is incorrect. X-rays are used for taking images of bones, not soft tissues. The CT scan and MRI both take static images, which is required in this scenario.

Question 5 D

D is correct. The loss of sensation and movement in both of Stefan's legs is due to damage to the ascending and descending tracts of the spinal cord. **A** and **B** are incorrect. If Stefan's injuries were due to problems in the motor cortex in the frontal lobe, he would not have had problems with sensation. **C** is incorrect. The parietal lobe and frontal lobe (apart from the motor cortex) are not involved in motor movement.

Question 6 C

C is correct. The somatic nervous system is active when Marcus kicks the football. This branch sends messages/information via motor neurons to the skeletal muscles. **A** is incorrect. The autonomic nervous system is not involved in voluntary (conscious) responses, such as kicking. **B** and **D** are incorrect. The sympathetic and parasympathetic nervous systems are not consciously controlled.

Question 7 A

A is correct. Skeletal muscle is under the voluntary control of the brain. **B**, **C** and **D** are incorrect. Smooth, cardiac and visceral muscle are not under the voluntary control of the brain but are regulated autonomously (under control of the autonomic nervous system).

Question 8 C

C is correct. An increased release of glucose from the liver provides the muscles with the required nutrients to allow respiration to occur to release energy. **A** is incorrect. When the body is faced with a threat, the sympathetic nervous system causes the pupils of the eyes to dilate to let in maximal amounts of light for visual accuracy. **B** and **D** are incorrect. It also increases the heart rate and breathing rate to supply sufficient oxygen to the cells.

Question 9 B

B is correct. The star-shaped cells that are the largest and most numerous cells in the nervous system are a type of glial cell called astrocytes. **A** and **D** are incorrect. Schwann cells and oligodendroglia both play a role in maintaining the myelin sheath around neurons, but Schwann cells are only found in the peripheral nervous system (PNS) and oligodendroglia are only found in the central nervous system (CNS).

C is incorrect. Compared to astrocytes, microglia are very small in size.

Question 10 C

C is correct. Descriptive statistics provide a simple way to organise, summarise and present data. They include percentages, means, medians and modes and are often organised into tables and graphs. They are statistics that help to describe the data collected about the sample. **A** and **D** are incorrect. Descriptive statistics cannot be used to give meaning to results or infer whether results can be generalised to the research population. **B** is incorrect. They are used with both qualitative and quantitative data.

Question 11 D

D is correct. Kai has sustained damage to his visual cortex, which is located in the occipital lobe. **A**, **B** and **C** are incorrect. The frontal, parietal and temporal lobes have different types of cortices and association areas that are not involved in vision.

Question 12 A

A is correct. The structure within the neuron that integrates incoming information and instigates a neural impulse is the soma (cell body). **B** and **C** are incorrect. The axon transmits information from the soma to the terminal branches (also called axon terminals). **D** is incorrect. Dendrites receive incoming neural messages.

Question 13 D

D is correct. Within a neuron, the dendrites receive incoming neural information (messages or impulses), and the soma (cell body) integrates this information so that a neural impulse is created and travels the length of the axon. The axon is covered with a fatty insulating material known as myelin. When the neural impulse reaches the terminal branches, the synaptic vesicles within this area release neurotransmitters into the synaptic gap (cleft), which is part of the synapse.

Question 14 C

C is correct. Motor neurons are also known as efferent neurons and they transmit neural impulses outward from the CNS to the PNS. **A** is incorrect. Sensory neurons are also known as afferent neurons, as they transmit information from the PNS to the CNS. **B** and **D** are incorrect. Interneurons, also known as association neurons, are located within the CNS and connect neurons.

Question 15 A

A is correct. The primary motor cortex is organised so that the parts of the body that are involved in fine motor movements, such as the fingers, have a greater representation in the cortex. **B**, **C** and **D** are incorrect. The legs, feet and back are not involved in fine motor movements and occupy less area in the primary motor cortex.

Question 16 C

C is correct. The hindbrain consists of the cerebellum, pons and medulla. **A** is incorrect. The midbrain contains the reticular formation. **B** and **D** are incorrect. The forebrain contains the cerebrum, thalamus, hypothalamus and corpus callosum.

Question 17 C

C is correct. The corpus callosum is a thick bundle of nerve fibres that connects the left and right hemispheres of the brain, enabling both hemispheres to exchange information. **A** and **B** are incorrect. The corpus callosum is not involved in coordinating motor movements or forming memories, which takes place in the hippocampus. **D** is incorrect. The corpus callosum does not create neural information.

Question 18 B

B is correct. The left hemisphere of the brain specialises in logic, language and mathematical processes. **A**, **C** and **D** are incorrect. The right hemisphere of the brain specialises in abstract thinking, appreciation of art and music, and creativity.

Question 19 C

C is correct. The two processes that increase brain volume in the first two years of life are myelination (development of myelin around the axons of neurons) and synaptogenesis (the formation of new synapses). **A** and **B** are incorrect. New neurons are not created after birth. **D** is incorrect. Synaptic pruning is the removal of underused synapses, which does not occur in the first two years of life.

Question 20 B

B is correct. During adolescence, the last area of the brain to develop is the prefrontal cortex. It is in this area that higher-order thinking processes such as problem solving, planning and decision making occur. A lag in development in this area may explain the higher risk-taking behaviour of adolescents. **A** is incorrect. The prefrontal cortex is located within the frontal lobe, but the frontal lobe also has other functions, such as the initiation of motor movements. **C** is incorrect. The parietal lobe is primarily responsible for sensations of touch (somatosensory cortex). **D** is incorrect. The auditory cortex processes sound (hearing).

Question 21 A

A is correct. During adaptive plasticity, the brain reorganises its neural structure through the processes of rerouting and sprouting neurons. Rerouting is the process by which an undamaged neuron that has lost its original connections in a damaged area seeks to connect with undamaged neurons. Sprouting is the process by which new dendrites are created to enable new connections. **B** and **D** are incorrect. Synaptic pruning (the elimination of underused synapses) and synaptogenesis (the creation of new synapses) are part of developmental plasticity but are not the most important processes in adaptive plasticity. **C** is incorrect. Myelination is the process of creating a myelin sheath to coat the axon and is not involved in neural plasticity.

Question 22 A

A is correct. Social development includes the development of the skills required to effectively interact and communicate with other people. **B** is incorrect. Cognitive development refers to changes in the thinking processes of individuals as they develop. **C** is incorrect. Emotional development refers to the changing abilities of individuals to control, express and identify emotions in other people. **D** is incorrect. Physiological development refers to the biological changes that occur as people grow.

Question 23 A

A is correct. Verbal fluency (fluency of speech) is classified as a non-motor symptom. **B**, **C** and **D** are incorrect. Resting tremors, a shuffling gait and muscle rigidity are all motor (movement) symptoms.

Question 24 D

D is correct. Parkinson's disease is a progressive neurodegenerative disease. It occurs when the neurons in the substantia nigra, which is located in the midbrain, gradually deteriorate. **A**, **B** and **C** are incorrect. Parkinson's disease does not cause degeneration of the neurons in the cerebellum, which is located within the hindbrain, or of the neurons within the frontal lobe.

Question 25 D

D is correct. Low levels of the neurotransmitter dopamine are detected in individuals with Parkinson's disease. **A**, **B** and **C** are incorrect. Adrenaline is involved in the fight-flight-freeze response, endorphins assist in relieving pain and stress, and glutamate is involved in learning and memory.

Question 26 C

C is correct. The least invasive, most widely used treatment for Parkinson's disease is medication. **A** is incorrect. Deep brain stimulation is a useful treatment but is much more invasive than medication. **B** and **D** are incorrect. Deep tissue massage does not provide control of the symptoms, and radiation therapy is not a viable treatment option for Parkinson's disease.

Question 27 D

D is correct. fMRI is a functional neuroimaging technique that enables the technician to view the release of the neurotransmitter dopamine in the brain of the individual with Parkinson's disease. **A**, **B** and **C** are incorrect. The other neuroimaging techniques only provide static images of the structure of the brain.

Question 28 B

B is correct. During middle childhood (primary school years), hard work (industry) is praised and rewarded. If a child feels inadequate in comparison to their peers, they can develop feelings of inadequacy. **A** is incorrect. Late infancy is when the 'autonomy versus shame and doubt' stage occurs. **C** is incorrect. Adolescence is when the 'identity versus role confusion' stage occurs. **D** is incorrect. Late adulthood is when the 'integrity versus despair' stage occurs.

Question 29 C

C is correct. Jill learning to use an online video platform for school classes demonstrates a relatively long-lasting change in her behaviour, which is characteristic of developmental change. **A**, **B** and **D** are incorrect. Wayne crying when his father leaves the room, Jana temporarily losing her memory, and Sam wearing a new style of shoe do not necessarily show lasting changes in behaviour.

Question 30 D

D is correct. Sensitive periods of development have gradual onsets and closures for ‘windows’ (opportunities) of learning. Learning is most successful during this period, but it still may occur at a later age; however, the process may be slower and not as successful. **A** and **B** are incorrect. Critical periods, not sensitive periods, have a definite and abrupt beginning and end; they refer to periods of time during an individual’s development when that individual is most vulnerable to being deprived of environmental stimuli. **C** is incorrect. Sensitive periods are shorter for physiological developments but longer for psychological developments.

Question 31 D

D is correct and **C** is incorrect. ‘Nature’ refers to the genetic inheritance from parents and ‘nurture’ refers to the environmental influences on the child as they grow and develop. Experiments have been conducted that show identical twins who share almost 100% of their genetic material and who are raised in different family environments will maintain similar IQs, suggesting that nature (genetics) must be more important than nurture (environment) in their development. **A** and **B** are incorrect. If the identical twins are raised in the same family environment, it is difficult to distinguish whether differences between the twins are due to their environment, as they have been exposed to the same environmental stimuli.

Question 32 C

C is correct. When Patty’s father returns to the observation room and is ignored, the type of attachment Patty is showing is insecure avoidant attachment. **A** and **D** are incorrect. If the attachment type were secure, Patty would display happiness and excitement when her father returned to the room. **B** is incorrect. If the attachment type were insecure resistant attachment, Patty would reach out for her father upon his return but would then squirm to be released.

Question 33 A

A is correct. When the caregiver returns to the room, Kai is excited and seeks to be close to the caregiver because he is securely attached to the caregiver. **B**, **C** and **D** are incorrect. Infants that do not display these behaviours would not be securely attached.

Question 34 A

A is correct. Piaget developed the theory of cognitive development to explain how individuals develop cognitively. He used the word ‘schema’ to identify an idea or concept held by an individual. He explained that individuals continuously change their thinking to adapt to the changing world (adaptation). There are two processes involved in adaptation: assimilation and accommodation. Assimilation occurs when a new concept is taken and made to fit into an existing schema. Savesh’s new bike has wheels and he can ride it so he concludes that it must be a scooter, which he knows from experience is a wheeled object that he can ride. If Savesh were using accommodation, he would have changed his existing idea about wheeled toys to fit the new information of the bike.

Question 35 D

D is correct. According to Piaget, children enter the formal operational stage in their cognitive development from around 12 years of age. It is in this stage that children develop the ability to be able to think abstractly. **A**, **B** and **C** are incorrect. In the sensorimotor (0–2 years), pre-operational (2–7 years) and concrete operational (7–11 years) stages, they are still thinking in a more concrete manner.

Question 36 C

C is correct. It is probable that Julia is experiencing a mental health problem. Although her commitment to her physical health, friends and university studies has decreased, Julia is able to continue to attend work and pay her bills and rent. To be classified as having a mental illness, Julia would need a diagnosis from a health professional and symptoms would need to present for a longer period of time.

Question 37 C

C is correct. An example of an anxiety disorder is a specific phobia. Anxiety disorders are characterised by ongoing feelings of fear, apprehension and concern for the future. Phobias are excessive, irrational feelings of fear and apprehension about a specific stimulus (a specific object or situation). **A**, **B** and **D** are incorrect. Depression and bipolar disorder are categorised as mood disorders and schizophrenia is a psychotic disorder.

Question 38 B

B is correct. Internal factors are often biological and thus the genetics of an individual are an internal factor. **A**, **C** and **D** are incorrect. Social factors such as number of family members, position held in the workplace, and level of education are external factors.

Question 39 B

B is correct. As Dr Asher ran the experiments and collected the data herself, the data would be considered primary, or first-hand, data. **A** is incorrect. The experiments resulted in numerical test scores being recorded, which means the data was quantitative. **C** and **D** are incorrect. Secondary data, or second-hand data, is collected by another researcher, and qualitative data is descriptive, using words and not numbers.

Question 40 D

D is correct and **A** is incorrect. A research hypothesis should include the population, but never the sample. It should also include the independent variable and dependent variable, as these two variables relate to a given direction. **B** and **C** are incorrect. A confounding variable is a variable that is not controlled during the experiment and has a systematic and unwanted effect on the dependent variable. Therefore, it is not included in the hypothesis.

SECTION B

Question 1 (4 marks)

a. the sympathetic nervous system 1 mark

Any one of:

- increased heart rate
- pupil dilation
- dry mouth (reduced saliva production)
- increased rate of breathing
- bronchodilation
- release of glycogen in the muscles
- relaxation of the muscles at the neck of the bladder
- reduced digestive processes
- release of glucose from the liver

1 mark

b. the parasympathetic nervous system 1 mark

Any one of:

- decreased heart rate
- pupil constriction
- increased saliva production
- decreased rate of breathing
- bronchiole constriction
- increased digestive processes

1 mark

Question 2 (2 marks)

the medulla (the lowest part of the hindbrain) 1 mark

The medulla controls vital functions such as heart rate, blood pressure and breathing.

Hence, a physical blow to this area in Joel's brain terminated these functions and resulted in his death.

1 mark

Note: Response must refer to Joel to be awarded full marks.

Question 3 (5 marks)

a. *For example, any one of the following biological changes:*

- reduced level of motor activity
- limited facial expressions
- limited eye movements
- possible reappearance of infantile reflexes

1 mark

For example, any one of the following psychological changes:

- ongoing apathy
- lack of emotional responsiveness
- aggressive behaviour
- impulsive behaviour
- limited goal-directed behaviour
- reduced creative thinking
- reduced problem-solving skills
- changes in personality

1 mark

For example, any one of the following social changes:

- poor interpersonal relationships
- reduced social support
- socially inappropriate behaviour

1 mark

b. A case study is an intensive, in-depth study of an individual or a group of people.

1 mark

c. *Any one of:*

- The sample size of the study may be too small.
- It may not be possible to draw a conclusion from the study.
- It may not be possible to make a generalisation based on the study.
- The results of the study may be vulnerable to experimenter bias.

1 mark

Question 4 (3 marks)

Alec shows secure attachment.

1 mark

Any two of:

- Alec may have an easy temperament, which would help his mother to look after him more easily, strengthening the relationship.
- Kristina may have been sensitive and responsive to Alec's needs as an infant, which means Alec can be confident that his needs will be met by his mother, helping to strengthen the bond.
- The family may not have any money problems, which would reduce stress within the family and allow for Kristina to spend more time with Alec.
- Kristina and the other family members may be well-educated, which means they would be able to cope better with the demands of a new infant.
- The cultural background of the family may be one that encourages close relationships. Different cultures encourage different degrees of closeness and different types of responses between caregivers and infants.

2 marks

Question 5 (8 marks)

- a. The frontal lobe within the left hemisphere.

1 mark

1 mark

- b. Broca's area

1 mark

Broca's area is responsible for coordinating the facial areas and vocal cords to produce fluent speech. As Daiki was speaking in short sentences without fluency, it would suggest that his Broca's area has been affected.

1 mark

Note: Response must refer to Daiki to be awarded full marks.

- c. Rerouting: Rerouting occurs when undamaged neurons search for more undamaged neurons to form more connections around the damaged area in the brain.

2 marks

Sprouting: Sprouting occurs when undamaged neurons create more dendritic branches, enabling them to form more new connections with neurons that are in the process of rerouting.

2 marks

1 mark for each identification of the correct process.

1 mark for each appropriate description.

Question 6 (4 marks)

- a. Regardless of whether it was the wire mother or the cloth mother that provided milk for the infant rhesus monkey, the monkey spent most of its time with the cloth mother.

1 mark

- b. Harlow concluded that the contact with the soft, comforting cloth was more important to the infant rhesus monkeys than the provision of nourishment.

1 mark

Thus, the comfort from contact with the mother is important in forming attachment.

1 mark

- c. Harlow generalised from his study that human infants require contact comfort for the development of infant-caregiver (mother) attachment.

1 mark

Question 7 (4 marks)

a. Egocentrism is the tendency for a child to view the world from only their perspective. That is, they are unable to view the world from another person's point of view. 1 mark

b. Jenna could test for egocentrism using a picture card, with a different picture on each side of the card. Jenna could show the children both sides of the card and then hold up the card in front of the children and ask them what she, Jenna, would be able to see. 1 mark

Note: Other appropriate examples such as the Three Mountains Task are acceptable. Students do not need to write the expected results.

c. *For example:*
If the children described the picture that was facing them instead of the picture that was facing Jenna, they would be viewing the world only from their own perspective and thus, would be egocentric. 1 mark

d. The children would be in the pre-operational stage of cognitive development. 1 mark

Question 8 (10 marks)

a. the amount of sleep 1 mark

b. the level of anxiety 1 mark

c. It is predicted that from among the group of students at Santa Romano University (population), those who have adequate sleep (8 hours per night) on a regular basis (independent variable) will experience lower levels of anxiety (dependent variable) than those who have less sleep. 3 marks

*1 mark for the correct population.
1 mark for the independent variable.
1 mark for the dependent variable.*

d. Advantage: Self-reports are an important and valuable method of collecting information about how individuals think or feel (internal factors). 1 mark

Any one of the following limitations:

- Participants may not answer honestly.
- Participants may provide answers that give a more socially desirable image of themselves (social desirability).
- Participants may have poor recall and therefore provide inaccurate information. 1 mark

e. independent groups 1 mark

Any one of the following advantages:

- prevents an order effect
- efficient and less costly than other designs
- repetition unnecessary (unlike repeated measures) 1 mark

Limitation: The design does not control for participant differences. 1 mark

Question 9 (10 marks)**Diagnosis**

It is likely that Geoff is suffering from the psychotic disorder schizophrenia. Geoff's symptoms have been present and developing for over six months. His behaviours have deviated from his past usual behaviours and have impacted on his daily functioning and his relationships with family and friends.

Symptoms

The symptoms that Geoff has presented can be categorised into positive and negative. Positive symptoms include delusions, hallucinations and disorganised speech, while negative symptoms include a loss of motivation.

- Geoff's belief that he is being specially prepared and trained to become the next Prime Minister of Australia is a delusion of grandeur.
- Geoff's belief that he is being followed by men and that bugs have been planted in his home indicates that he is experiencing delusions of persecution.
- His belief that he is being followed is also an example of visual hallucination.
- The static sounds and voices that Geoff has been hearing at night are examples of auditory hallucinations.
- Geoff's confusing and erratic speech indicates disorganised thinking processes.
- Geoff has displayed loss of motivation through not attending university.

Two-hit hypothesis

The first 'hit' of this hypothesis is that Geoff's great-grandfather displayed unusual behaviours, which may suggest that his great-grandfather suffered from a psychotic illness himself. This indicates that there may be a genetic vulnerability.

The second hit could include Geoff's family environment. His parents frequently fighting and arguing will have contributed to a tense and stressful environment. His parents demonstrate a specific type of communication, known as expressed emotion, which may have been instrumental in triggering the development of Geoff's schizophrenia. The second hit could have also come from the use of marijuana, a drug which induces a state of psychosis. It could have also triggered Geoff's genetic predisposition for schizophrenia.

Both hits must be present according to this theory and they must develop in the order of first hit followed by second hit.

Treatments

Biological: Antipsychotic medications are often used for treating schizophrenia. These medications should be prescribed to Geoff as they will help to control his positive symptoms. There are some side effects, such as nausea and weight gain. These medications will not control all of Geoff's symptoms.

Social: Geoff's family would need to be educated about Geoff's condition and advised as to how they can best support Geoff at home. Geoff could attend a support group through the hospital or an organised community group. It is important that Geoff does not perceive there to be a stigma attached to having schizophrenia, as this could impede his treatment.

10 marks

Note: The question asks for a medical report to be written, which suggests that the response should be written in prose style. The inclusion of subheadings is acceptable. Responses must make specific reference to Geoff and the scenario to be awarded full marks. The response shown here is more detailed than a student would be expected to write. This is so that teachers may advise their students of the range of information that could be included.

Marking guide*Very high (9–10 marks)*

The student has:

- provided a highly detailed explanation of Geoff’s diagnosis of schizophrenia, based on a set of criteria;
- provided a highly detailed explanation of schizophrenia as characterised by a loss of/separation from reality. Positive symptoms are described as behaviours that occur in addition to usual behaviours, including delusions, hallucinations and disorganised speech. Negative symptoms are described as a loss of part of Geoff’s everyday functioning and a loss of motivation;
- provided a highly detailed explanation of the two-hit hypothesis, with a clearly identified order. The first ‘hit’ is described as genetic vulnerability (Geoff’s inheritance of the genes from his grandfather) and the second ‘hit’ is described as exposure to an environmental factor (Geoff’s stressful family environment or Geoff consuming the psychotropic drug marijuana);
- provided a highly detailed explanation of one biological treatment and one social treatment.

High (7–8 marks)

The student has:

- provided a detailed explanation of Geoff’s diagnosis of schizophrenia, based on a set of criteria;
- provided a detailed explanation of schizophrenia as characterised by a loss of/separation from reality. Positive symptoms are described as behaviours that occur in addition to usual behaviours, including delusions, hallucinations and disorganised speech. Negative symptoms are described as a loss of something part of Geoff’s everyday functioning and a loss of motivation;
- provided a detailed explanation of the two-hit hypothesis, with a clearly identified order. The first ‘hit’ is described as genetic vulnerability (Geoff’s inheritance of the genes from his grandfather) and the second ‘hit’ is described as exposure to an environmental factor (Geoff’s stressful family environment or Geoff consuming the psychotropic drug marijuana);
- provided a detailed explanation of one biological treatment and one social treatment.

Medium (5–6 marks)

The student has:

- provided a limited explanation of Geoff’s diagnosis of schizophrenia, based on a set of criteria;
- provided a limited explanation of schizophrenia as characterised by a loss of/separation from reality. Positive symptoms are described as behaviours that occur in addition to usual behaviours, including delusions, hallucinations and disorganised speech. Negative symptoms are described as a loss of something part of Geoff’s everyday functioning and a loss of motivation;
- provided a limited explanation of the two-hit hypothesis, with a clearly identified order. The first ‘hit’ is described as genetic vulnerability (Geoff’s inheritance of the genes from his grandfather) and the second ‘hit’ is described as exposure to an environmental factor (Geoff’s stressful family environment or Geoff consuming the psychotropic drug marijuana);
- provided a limited explanation of one biological treatment and one social treatment.

Low (3–4 marks)

The student has failed to address each of the four criteria (diagnosis, symptoms, explanation of two-hit hypothesis and treatments) in terms of the following:

- provided a limited explanation of Geoff’s diagnosis of schizophrenia, based on a set of criteria;
- provided a limited explanation of schizophrenia as characterised by a loss of/separation from reality. Positive symptoms are described as behaviours that occur in addition to usual behaviours, including delusions, hallucinations and disorganised speech. Negative symptoms are described as a loss of something part of Geoff’s everyday functioning and a loss of motivation;

- provided a limited explanation of the two-hit hypothesis, with a clearly identified order. The first ‘hit’ is described as genetic vulnerability (Geoff’s inheritance of the genes from his grandfather) and the second ‘hit’ is described as exposure to an environmental factor (Geoff’s stressful family environment or Geoff consuming the psychotropic drug marijuana).
- provided a limited explanation of one biological treatment and one social treatment.

Very low (0–2 marks)

The student has only addressed one or none of the four criteria (diagnosis, symptoms, explanation of two-hit hypothesis and treatments) in terms of the following:

- provided a limited explanation of Geoff’s diagnosis of schizophrenia, based on a set of criteria;
- provided a limited explanation of schizophrenia as characterised by a loss of/separation from reality. Positive symptoms are described as behaviours that occur in addition to usual behaviours, including delusions, hallucinations and disorganised speech. Negative symptoms are described as a loss of part of Geoff’s everyday functioning and a loss of motivation;
- provided a limited explanation of the two-hit hypothesis, with a clearly identified order. The first ‘hit’ is described as genetic vulnerability (Geoff’s inheritance of the genes from his grandfather) and the second ‘hit’ is described as exposure to an environmental factor (Geoff’s stressful family environment or Geoff consuming the psychotropic drug marijuana);
- provided a limited explanation of one biological treatment and one social treatment.