

## VCE Psychology Units 1&2

### Written Examination

### Suggested Solutions

#### SECTION A – MULTIPLE-CHOICE QUESTIONS

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
41	A	B	C	D
42	A	B	C	D
43	A	B	C	D
44	A	B	C	D
45	A	B	C	D
46	A	B	C	D
47	A	B	C	D
48	A	B	C	D
49	A	B	C	D
50	A	B	C	D

**Question 1 B**

**B** is correct. The ancient Egyptians believed that the heart was where all important mental processes took place.

**A** is incorrect. Descartes was not involved in the brain versus heart debate.

**C** and **D** are incorrect. Hippocrates and Plato took the opposite side of this debate; they believed that the brain was the source of all thoughts and emotions.

**Question 2 C**

**C** is correct. Descartes supported the theory of dualism, in which the mind and the body were separate entities. Unlike philosophers in the past – who believed the mind could control the body but the body could not influence the mind – Descartes thought the non-physical mind and the physical body could influence each other and that this influence occurred in the pineal gland.

**A** and **B** are incorrect. These options suggest that the influence of mind and body are unidirectional, which Descartes did not propose.

**D** is incorrect. Descartes did not propose the mind and body influenced each other through the thalamus.

**Question 3 D**

**D** is correct. A PET scan is a functional neuroimaging technique, which would be needed to show how brain function changes when people listen to music.

**A**, **B** and **C** are incorrect. These options refer to structural neuroimaging techniques that would only capture static images.

**Question 4 A**

**A** is correct. The peripheral nervous system (PNS) is divided into two branches: the autonomic and somatic nervous systems.

**B** is incorrect. The sympathetic and parasympathetic nervous systems are subdivisions of the autonomic nervous systems.

**C** is incorrect. The spinal cord and brain are the main parts of the central nervous system (CNS).

**D** is incorrect. The sympathetic nervous system is a branch of the autonomic nervous system.

**Question 5 C**

**C** is correct. Myelin is an insulating, fatty substance that coats the axons of many neurons and enhances the speed and efficiency of the movement of neural impulse (action potential) within the neuron.

**A** and **B** are incorrect. These options are structural descriptions.

**D** is incorrect. Transmission between neurons at the synapse is chemical.

**Question 6 A**

**A** is correct. The thalamus is considered a relay or filtering system in the brain.

**B** is incorrect. The cerebrum controls higher order functions.

**C** is incorrect. The hypothalamus plays a major role in maintaining homeostasis.

**D** is incorrect. The cerebellum helps to maintain posture, control balance and coordinate motor movements.

**Question 7 B**

**B** is correct. Sounds are processed in the auditory cortex, which is located in the temporal lobe.

**A** is incorrect. The parietal lobe plays a role in receiving and processing sensory information.

**C** is incorrect. The occipital lobe plays a major role in vision.

**D** is incorrect. The frontal lobe plays a role in initiating motor movement and higher order thinking functions.

**Question 8 C**

**C** is correct. Vision is processed in the visual cortex, which is located within the occipital lobe.

**A** is incorrect. The parietal lobe contains the primary somatosensory cortex, which plays a role in receiving and processing sensory information.

**B** is incorrect. The temporal lobe is where the auditory cortex is located, so it is crucial to perceiving sounds.

**D** is incorrect. The frontal lobe contains the primary motor cortex, which initiates motor movement.

**Question 9 B**

**B** is correct. The movement of the right hand originates from the motor cortex, which is located within the frontal lobe of the brain. Each hemisphere of the brain controls the contralateral (opposite) side of the body. Therefore, the left hemisphere of the brain controls the right side of the body and the right hemisphere of the brain controls the left side of the body. Thus, Aaron's left frontal lobe controls his right hand.

**A** and **C** are incorrect. The movement does not originate from the right hemisphere of the brain.

**D** is incorrect. The temporal lobe is not involved in motor movement. It contains the primary somatosensory cortex, which is involved in receiving and processing information from the skin and body parts.

**Question 10 A**

**A** is correct. Amir is displaying symptoms of an attentional disorder known as spatial neglect.

**B** is incorrect. Split-brain surgery does not interfere with attention.

**C** and **D** are incorrect. These are not treatments for stroke patients.

**Question 11 A**

**A** is correct. The attentional disorder of spatial neglect originates in the parietal lobe located, in this case, in the left hemisphere.

**B** is incorrect. Although this is the correct hemisphere, the source is not the temporal lobe.

**C** and **D** are incorrect. Amir's condition stems from damage sustained in the left hemisphere, not the right hemisphere, as the left hemisphere controls movement to and receives information from the opposite side of the body.

**Question 12 D**

**D** is correct. The brain increases in size due to synaptogenesis, which is the proliferation of synaptic connections (as well as the process of myelination).

**A** is incorrect. The number of neurons remains stable after birth.

**B** and **C** are incorrect. Increased length of axons and changes in glial cells do not increase brain size.

**Question 13 B**

**B** is correct. The psychological term for this process is rerouting. The process of rerouting provides alternative pathways for neural communication and a bypass system around the site of the injury or damage.

**A** and **D** are incorrect. Although the neurons will rebranch and then reconnect with other neurons, these are not the correct psychological terms for the process.

**C** is incorrect. Sprouting refers to the growth of extra branches on axons or dendrites.

**Question 14 B**

**B** is correct. The variable that is being deliberately manipulated by Genevieve is exercise.

**A** is incorrect. This option refers to the population.

**C** and **D** are incorrect. These options refer to aspects of the dependent variable that is being measured in the experiment.

**Question 15 C**

**C** is correct. The people chosen for the sample were selected in response to an online post.

**A** and **D** are incorrect. The population was not divided into groups (strata) before being sampled.

**B** is incorrect. All members of the population of Australian adults did not have the chance to be selected for this experiment.

**Question 16 A**

**A** is correct. The data is collected by the researcher (primary) and is numerical (quantitative).

**B** and **D** are incorrect. Qualitative data is not numerical.

**C** is incorrect. The data in this scenario is not secondary, which refers to data collected within a different research study.

**Question 17 D**

**D** is correct. Identical twins develop from the fusion of one ovum and sperm, resulting in one zygote. The single zygote subsequently divides and results in two identical offspring.

**A** is incorrect. This option could refer to non-identical twins.

**B** and **C** are incorrect. Identical twins, although sharing almost 100% of their genes, will be influenced by environmental factors as they grow up and, thus, may show different behaviours and thinking processes.

**Question 18 B**

**B** is correct. The infant monkey spent most of its time with the surrogate mother that provided contact comfort. This finding was in contradiction with Harlow's original hypothesis, which predicted the provision of food would be more important than contact comfort in the attachment process.

**A** is incorrect. Nourishment was not as important to the infant monkey as contact comfort.

**C** and **D** incorrect. The size and appearance of the surrogate mother was irrelevant.

**Question 19 D**

**D** is correct. Mental health problems are shorter in duration than mental disorders, which are more enduring.

**A** is incorrect. An individual experiencing a mental disorder can experience marked and ongoing distress.

**B** is incorrect. An individual with a mental disorder will exhibit atypical behaviours.

**C** is incorrect. A mental health problem may prevent an individual from completing some regular activities, such as attending their school or work for a short period of time; a mental disorder can severely impact the everyday functioning of an individual.

**Question 20 C**

**C** is correct. Charmin responds consistently to Jalani's cries, so Jalani is secure in knowing that her needs will be consistently met.

**A, B and D** are all incorrect. These are forms of insecure attachment between caregiver and child, where the needs of the child are not consistently and appropriately met.

**Question 21 D**

**D** is correct. Kiara's paintings are seen to be of a poor standard by her father, which makes Kiara feel that her art skills are inadequate.

**A** is incorrect. This scenario does not involve Kiara planning or carrying out goal-directed behaviours.

**B** is incorrect. This scenario does not refer to Kiara's ability to do things independently or her feelings of self-control.

**C** is incorrect. This scenario does not involve Kiara feeling productive in her life or able to contribute in a meaningful way to the world in which she lives.

**Question 22 D**

**D** is correct. Sheba's problem with falling asleep has occurred for an extended period of time and is interfering with her ability to function efficiently in daily life, as exemplified by her being consistently late for work.

**A** is incorrect. Although it occurs over an extended period of time, Joanna's typical behaviour of frequently attending parties has diminished, not completely stopped.

**B** is incorrect. Pietro's behaviour has only occurred for a few days and shows he is relaxing and enjoying the chance to sleep in after his exams.

**C** is incorrect. Margrit is showing goal-directed behaviour by setting her alarm to enable her to wake up at the correct time.

**Question 23 B**

**B** is correct. Genetic predisposition is the biological inheritance of offspring from parents, so it can contribute towards an individual developing mood disorders such as depression if their parent(s) also suffer from the disorder.

**A, C and D** are incorrect. These options are social factors.

**Question 24 C**

**C** is correct. This type of social support is in Marcus's external environment.

**A, B and D** are incorrect. These are all internal factors.

**Question 25 D**

**D** is correct. Valechka should have obtained written informed consent from each participant.

**A** is incorrect. Valechka has stated she will keep the data anonymous; she has not breached confidentiality.

**B** is incorrect. She informed the participants of their right to stop participating in the study at any time they choose.

**C** is incorrect. She did not deliberately mislead the participants to think that there was another purpose to the study.

**Question 26 D**

**D** is correct. Transduction is the process through which incoming sensory stimuli are changed into a form that can be transmitted by the human nervous system. This occurs in the photoreceptors in the eye for vision and at the taste buds for taste.

**A** and **B** are incorrect. These options are located in the brain, which is responsible for processing and interpreting the stimuli.

**C** is incorrect. The optic and cranial nerves transmit, or carry, the information to the relevant brain areas.

**Question 27 B**

**B** is correct. Light enters the interior of the eye through the pupil, travels through the transparent lens and the jelly-like vitreous humour, then arrives at the retina that lines the back of the interior of the eye.

**A**, **C** and **D** are incorrect. These options do not give the correct pathway.

**Question 28 A**

**A** is correct. Accommodation is the process by which the lens changes shape to allow for light rays to be focused on the retina.

**B** and **C** are incorrect. These options are binocular cues that are required for judging distance.

**D** is incorrect. Transmission is the process of sending sensory information from the sense organs to the brain.

**Question 29 B**

**B** is correct. Figure-ground is the Gestalt principle used to distinguish the black shapes in the diagram from the white background. Similarity is the Gestalt principle used to separate the similarly shaped triangles and similarly shaped circles in the diagram into groups.

**A** and **C** are incorrect. These options do not give both required Gestalt principles.

**D** is incorrect. The spacing between all the shapes is equal.

**Question 30 C**

**C** is correct. For camouflage to work effectively, the figure must blend in or be very similar to the background.

**A** and **B** are incorrect. The contour line, which delineates the figure from the background, would not stand out or be clear when camouflage occurs.

**D** is incorrect. If the figure stood out from the background, it would not blend in with the background and camouflage would not occur.

**Question 31 D**

**D** is correct. The independent variable is the variable that the researcher is manipulating; in this case, it is the use of vitamin B12. To operationalise the independent variable, the type, dosage, frequency and duration of the medication given to participants must be included. The dependent variable is the variable that will reflect the change in the independent variable; in this case, it is anxiety level of the participants.

**A, B and C** are incorrect. These options do not give the correct variables.

**Question 32 B**

**B** is correct. The participants volunteered to be part of the experiment by answering an advertisement. This method is considered convenience sampling because not every member of the population of Australian teenagers had the chance to be represented in the sample.

**A** is incorrect. In random sampling, every member of the population should have the chance to be selected as a participant. In this case, the advertisement may not have been read by all students, which prevented all members of the population from having the opportunity to be included in the study.

**C** is incorrect. Dr Juma did not divide the population into smaller groups and draw participants from those groups.

**D** is incorrect. Dr Juma did not divide the population into smaller groups and randomly select participants from those groups.

**Question 33 D**

**D** is correct. The data is collected by Dr Juma just prior to and during the experiment and is numerical.

**A, B and C** are incorrect. The data is not collected by a secondary individual or group and is not descriptive.

**Question 34 A**

**A** is correct and **D** is incorrect. As group 1 received the vitamin B12 capsules, they received the treatment and, hence, are classified as the experimental group. As group 2 received an inactive substance, they were not being subjected to the treatment and, hence, are classified as a control group.

**B and C** are incorrect. The term 'research' applies to the overall research study, not an individual group within the study.

**Question 35 B**

**B** is correct. The Ames room is trapezoidal in shape and appears to be rectangular when observed from the front through the peephole, which only allows the observer to use one eye (monocular vision).

**A, C and D** are incorrect. As the observer is forced to view the room with monocular vision, the binocular cues that would have been used to help perceive depth and distance are not used. If the Ames room was rectangular in shape, the back wall would not recede into the distance like the back wall of the trapezoidal room; therefore, the size of the person inside the Ames room would not alter with their movement from one side of the room to the other.

**Question 36 A**

**A** is correct. The restriction of monocular vision does not enable the viewer to discern that the distance between them and the person in the Ames room changes as the retinal image changes size. Instead, the viewer perceives the person in the Ames room as becoming larger as they move from the left side of the room to the right side of the room.

**B** is incorrect. The shape of the room is perceived to be the same, despite the slight changes on the viewer's retina as the person in the Ames room moves.

**C** is incorrect. The brightness of the room remains the same even when the person in the Ames room moves; therefore, this constancy is irrelevant in the Ames room illusion.

**D** is incorrect. Colour constancy refers to the ability to perceive colors as being constant over varying levels of light; therefore, this constancy is irrelevant in this case.

**Question 37 C**

**C** is correct. Beginning at 60 years of age, there is steep decline in the sense of taste, which is related to a decrease in the number of taste buds and a diminished sense of smell.

**A** and **B** are incorrect. The size of the taste buds does not significantly change.

**D** is incorrect. A decrease in the number of taste buds is only one factor that causes a change in the perception of taste.

**Question 38 D**

**D** is correct and **B** is incorrect. Jianhong blamed Yuliana personally for missing practice, making it an internal or dispositional factor. Kauri believed Yuliana missed practice because of the external factor of her work, which is a situational factor.

**A** is incorrect. An internal attribution is a personal attribution.

**C** is incorrect. Situational attributions are external and personal attributions are internal and dispositional.

**Question 39 A**

**A** is correct. Ivan has attributed his failure to win the tennis match to a situational factor, which, in this case, is the umpire. According to the self-serving bias, it is likely that Ivan would have taken credit for his success if he had won the match.

**B** is incorrect. The just-world hypothesis states that the world is a fair place in which people generally get what they deserve and vice versa.

**C** is incorrect. If a personal attribution occurred, Ivan would have blamed himself for failing to win the tennis match.

**D** is incorrect. Actor-observer bias refers to the tendency of an individual to attribute their own behaviour to the situation but to attribute the behaviour of other people to personal factors. In the given scenario, only Ivan is mentioned, so the actor-observer bias does not apply.

**Question 40 A**

**A** is correct. The affective component of Suri's attitude is her emotions, which is her dislike of online classes.

**B** is incorrect. This option describes one of Suri's beliefs, which is the cognitive component of her attitude.

**C** and **D** are incorrect. These options describe Suri's actions, which is the behavioural component of her attitude.



**Question 41 B**

**B** is correct. Stereotypes are sets of beliefs about people who belong to a certain group that do not take their individual differences into account.

**A** is incorrect. The views that are held about a group of people are often negative and based on their group membership.

**C** is incorrect. Stereotypes are not based on facts.

**D** is incorrect. Stereotypes do not take the uniqueness of the individuals within a group into account.

**Question 42 C**

**C** is correct. Mr Jenkins has negative feelings about people from France based on their membership to that country, not based on them as individuals. He also shows direct discrimination because he treats the applicants unfairly due to his feelings about French people.

**A** and **B** are incorrect. Mr Jenkins is not demonstrating indirect discrimination; based on the information provided in the scenario, there is no aspect of the application process that disproportionately affects French people.

**D** is incorrect. Based on the information in the scenario, Mr Jenkins is not favouring one sex or gender over another.

**Question 43 C**

**C** is correct. Rupert must follow the instructions given by the authority figure, who is the manager of the supermarket in this example.

**A**, **B** and **D** are incorrect. No authority figure is present in these scenarios. Hilja conforms to the group norm, Trin complete her part in a shared activity and Estevo conforms to the actions of his brother.

**Question 44 D**

**D** is correct. Tracy hesitated to help the man because she was afraid of being negatively judged by the other people in the crowd. This is known as audience inhibition, where the presence of others forming a temporary audience prevents an individual from taking action.

**A** is incorrect. Diffusion of responsibility would involve the spread of feelings of responsibility among members of the crowd, which is not evident from the information given in the scenario.

**B** is incorrect. Altruism is the action of giving without the expectation of receiving something in return, which does not apply to this scenario.

**C** is incorrect. Social influence is a general term and, thus, not relevant to this scenario.

**Question 45 A**

**A** is correct. Removing their individual identities made the guards feel less responsible for their behaviour.

**B** is incorrect. The participants who were allocated to the prisoner role became increasingly passive and dehumanised during the course of the study as they felt they were powerless.

**C** and **D** are incorrect. The uniforms and dark glasses helped the guards to dissociate from their own selves to a certain extent and gave them a sense of personal detachment from the situation; however, these are not correct psychological terms.

**Question 46 D**

**D** is correct. The aim of Milgram's first experiment was to investigate whether individuals would obey an authority figure who instructed them to inflict pain on another individual. The study revealed this to be true for most of the participants.

**A** is incorrect. The study was not focused on general obedience.

**B** is incorrect. The opposite trend was observed. Most of the participants inflicted harm on another individual when following instructions from an authority figure.

**C** is incorrect. The study was designed to test whether individuals would obey an authority figure so that pain would be inflicted upon another person, which is not reflected in this option.

**Question 47 B**

**B** is correct. As Frida's family is part of the Townville community, they will most likely feel that it is their duty or responsibility to help and care for others in their community who are in need, without thinking about whether their actions will be rewarded or reciprocated.

**A** is incorrect. Frida's family does not help the people in their area because they are thinking about what they can receive in return; they are helping because the people in their community are in need.

**C** is incorrect. The just-world hypothesis would determine that those affected by the cyclone damage were targeted because they deserved it, which is not correct and is not the belief held by Frida's family.

**D** is incorrect. Although Frida's family may have felt sympathy or empathy for those affected by the cyclone damage, the drive to help their fellow community members would have been the more prominent reason for them to help.

**Question 48 C**

**C** is correct. There are three important factors associated with a specific situation that will influence whether people will be pro-social and provide help to another person. Recognising that help is required in a certain set of circumstances is one of these situational factors.

**A, B and D** are incorrect. These options are personal factors; that is, they are certain personal characteristics that increase the likelihood that individuals will help another person. Having empathy for others, being in a good mood and being competent or skilled all increase the chance that a person will provide help when needed.

**Question 49 D**

**D** is correct. A stomach ache, or a gastrointestinal upset, is a possible physiological (biological) response a person may experience as a result of being bullied.

**A and B** are incorrect. These options are psychological responses.

**C** is incorrect. This option is a social response.

**Question 50 B**

**B** is correct. Playing violent video games can make the player feel like they are part of the action, and this vested interest increases its impact on children.

**A, C and D** are incorrect. There is no evidence to support the idea that the characters, storylines or colours used in video games are more intense or fear inducing than those used in television programs.

**SECTION B****Question 1** (2 marks)

a. the corpus callosum 1 mark

b. *Any one of:*

- The left and right hemispheres of the brain have different functions/specialisations.
- The left hemisphere of the brain specialises in language (comprehension and expression).
- The left hemisphere of the brain controls movement of the right side of the body while the right hemisphere of the brain controls movement of the left side of the body.
- The left hemisphere of the brain processes sensory information from the right side of the body while the right hemisphere of the brain processes sensory information from the left side of the body.

1 mark

**Question 2** (6 marks)

a. *Any two of:*

- the central nervous system/brain  
The brain interprets the incoming sensory information about the heat of the room and makes the decision to turn on the air conditioner.
- the somatic nervous system  
Sensory receptors detect the heat and sensory neurons transfer the information into the brain.
- the somatic nervous system  
Motor neurons transfer the information to the skeletal muscles to initiate movement to pick up the remote control for the air conditioner.

4 marks

*1 mark for identifying each branch of the nervous system.*

*1 mark for describing the role of each branch of the nervous system.*

*Note: The responses must be congruent to achieve full marks.*

b. the sympathetic nervous system

1 mark

*Note: The autonomic nervous system is not an acceptable response as it is not specific to the changes in this scenario.*

*Any one of:*

- dilated pupils
- increased heart rate
- dilated bronchi
- increased rate of breathing
- reduced saliva production
- glycogen released in the muscles
- relaxed muscles at the neck of the bladder
- reduced digestive processes
- glucose released from the liver

1 mark

**Question 3** (4 marks)

- a. case study 1 mark
- b. A case study focuses on a small group of people (or in this case, one person). Thus, the findings may not apply to a larger population. 1 mark
- c. *Any one of the following biological changes:*
- loss of motor movement in parts of the body
  - reduced facial expression
  - reduced head movements
  - reduced eye movements
- 1 mark
- Any one of the following social changes:*
- displaying socially inappropriate behaviour
  - loss of social support
  - increased risk of unemployment
  - increased risk of homelessness
  - increased risk of social isolation
- 1 mark

**Question 4** (10 marks)

- a. to determine if consuming red-coloured food will affect concentration in children 1 mark
- b. consuming either the red jelly beans or the white jelly beans 1 mark
- c. concentration as measured by the number of times a child was distracted 1 mark
- d. Australian children under five years of age (population) who eat red-coloured foods (independent variable) will not be able to concentrate as well (dependent variable) as those who do not consume red-coloured foods.

3 marks

*1 mark for providing the correct population.*

*1 mark for providing the independent variable.*

*1 mark for providing the dependent variable.*

*Note: Responses must be written in the structure of a hypothesis to receive full marks.*

- e. The concentration levels of children under five years of age will decrease when they consume red-coloured foods. 1 mark
- f. Raahul would not have been able to generalise the results of his study to the population because he used convenience sampling, 1 mark  
which means the sample would not be representative of the target population. 1 mark

**Question 5** (3 marks)

The acquisition of a second language (in this case, French) is much easier and occurs more quickly for Luciano as he is just starting primary school and, therefore, is within the window of opportunity for optimal cognitive development, known as a sensitive period. 1 mark

During this sensitive period, the synaptic connections in Luciano's brain for the French language will be rapidly increasing (synaptogenesis) and, with sustained use, will become stronger. 1 mark

As she is in her late teenage years, Nelly has passed this sensitive period, which, for learning a second language, ends at around twelve years of age. Hence, her ease of learning is lower and her rate of acquisition is slower than Luciano's. 1 mark

**Question 6** (4 marks)

- a. Erikson viewed development as a progression through a number of separate stages. 1 mark  
Each individual must proceed through the same stages in the same order. 1 mark
- b. Psychosocial crisis refers to the personal conflict between the internal needs of the individual and the external demands placed on the individual by society. 1 mark  
The way in which crisis is dealt with and resolved shapes the individual's personality. 1 mark

**Question 7** (6 marks)

a. *Any one of the following positive symptoms:*

- hallucinations
- delusions
- disorganised thinking/speech
- abnormal motor behaviour/catatonia

1 mark

*Any one of the following negative symptoms:*

- decreased motivation (avolition)
- decreased interest or enjoyment in normal activities (anhedonia)
- decreased intensity of emotion (affective flattening)
- decreased speech output (alogia)

1 mark

- b. The two-hit hypothesis explains that the development of schizophrenia results firstly from a genetic vulnerability 1 mark  
and secondly from an environmental stress. 1 mark

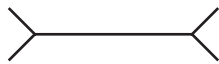
For example, an individual could have inherited the genes from a family member in the first hit 1 mark

and been involved in a traumatic incident in the second hit. 1 mark

*Note: Responses may include varying examples of a second hit, such as continued exposure to a dysfunctional family, being bullied, the loss of a loved one, being subjected to abuse or any other stress-causing incident.*

**Question 8** (3 marks)

- a. A visual illusion refers to an instance in which a person's perception consistently differs from what is seen in reality. 1 mark
- b. The Müller-Lyer illusion comprises of two lines of equal length, each of which has differently shaped ends; one has a feather tail and the other has an arrow head. 1 mark
- The two lines are incorrectly perceived as being different; the feather-tail line is perceived as being longer than the arrow-head line. 1 mark



*Note: A diagram is not required to receive full marks.*

**Question 9** (5 marks)

- a. When foods expire, they become acidic and taste sour. Fruit that is not ripe also tastes sour. 1 mark
- Therefore, being able to perceive a sour taste alerts us that eating expired foods will not be good for our health, which offers a protective function. 1 mark
- b. When orange juice has a deep, rich or bright orange colour, someone who drinks the juice will perceive it as sweeter and more flavoursome. 1 mark
- When orange juice is paler or has a less intense colour, someone who drinks the juice will perceive it to be weaker in taste. 1 mark

*Note: Any relevant example may be used.*

**Question 10** (7 marks)

- a. Conformity involves an individual adjusting their thoughts, feelings or behaviours in order to agree with or be consistent with those of a particular individual, group or the accepted standards of society (social norms). 1 mark
- Obedience involves an individual complying with the instructions of an individual or group of individuals that have authority. 1 mark
- Note: When describe obedience, responses should avoid the word 'obey'.*
- b. i. group size 1 mark
- ii. the number of times the participant agreed with the group and provided an incorrect answer 1 mark
- iii. There would be a high level of conformity in the group with three people (condition 2). 1 mark
- In increased group sizes (conditions 1 and 3), the level of conformity would remain at around the same level. 1 mark
- iv. Confederates are individuals whom the participant believes are other participants in the experiment but are actually playing a role that is determined by the researcher. 1 mark

**Question 11** (2 marks)

The term 'social loafer' refers to an individual in a group who may contribute less effort than they would if they were working alone. This is because they believe that the other members of the group will contribute the effort required to achieve a successful outcome. 1 mark

Katsuo identified that Dana did not contribute as much to the assignment as the rest of the group because Dana most likely knew that the other team members would work hard and complete the assignment to a high standard. 1 mark

**Question 12** (4 marks)

a. Informed consent must include the procedures and possible risks of the experiment and it must be signed by an individual (of legal age). 1 mark  
1 mark

b. debriefing 1 mark

At the conclusion of the experiment, Julia must explain the true nature of the experiment and why deception was necessary. She must provide the contact details of counseling services should the participants' wellbeing be compromised. 1 mark

**Question 13** (4 marks)

a. Proximity refers to the closeness of distance between an individual and an authority figure. This may be the physical distance between the individuals or the social relationship between the individuals. If the individual is physically close to the authority figure, their level of obedience increases. 1 mark

If the individual has a close social relationship to the authority figure, their level of obedience also increases. 1 mark

b. *Any one of:*

- Legitimacy of the authority figure: If the authority figure is perceived to be of a high status and legitimately holding power, obedience levels will increase.
- Group pressure: When an individual observes other people obeying the commands of an authority figure, obedience levels will increase.

2 marks

*1 mark for identifying one factor.*

*1 mark for describing how the factor influences an individual to obey an authority figure.*



**Question 14** (10 marks)

In the Stanford prison experiment, Zimbardo divided the participants into two groups: the guards and the prisoners. Each of these groups had a different status within the hierarchy of the jail and, accordingly, each group had different levels of perceived power.

Each individual member of a group will fit within the hierarchical structure of that group. Hierarchy refers to a system by which members of a group are ranked according to their relative status, power and role within the group. The hierarchy includes the lowest-ranked individuals at the bottom through to the highest-ranked individuals at the top. A hierarchy provides members of the group with an understanding of what is expected of them in their role and how they are expected to relate to other group members. When Zimbardo set up his experiment, he assigned himself the role of superintendent, the highest-ranking individual within the prison. His research assistants were wardens, ranking just below the superintendent in the hierarchy. Below were the prison guards (one group of participants) and at the lowest level were the prisoners (the other group of participants).

Status is the position an individual holds within a group as perceived by other members of the group. Thus, a high status means that the individual has a higher position in the hierarchy. An individual's status within a group ascribes them with a level of power within that group. Group members who have a high status wield more power over the group members who have a lower status and sit in the lower ranks of the group hierarchy. The status within a group can be official or unofficial. In Zimbardo's experiment, Zimbardo was at the top of the hierarchy as he had the highest status through his role as superintendent. The research assistants had the next highest status through their role as wardens. The prison guards were lower in status and thus held considerably less power than Zimbardo and the wardens. However, the prisoners, having the lowest status of all the groups, had the least amount of power.

Power refers to a person's ability to control or influence the thoughts, feelings and behaviours of other people. Individuals can use their power consciously or unconsciously. Psychologists have observed multiple forms of social power. These include informational power, referent power, expert power, legitimate power, coercive power and reward power. Individuals may exert one or more of these forms of power.

In the Stanford prison experiment, the guards believed that they had legitimate power, coercive power and reward power over the prisoners, and the prisoners believed that, due to their low status, they had no power within the prison.

- **Legitimate power:** The participants thought that their assigned role as guards provided the right to and responsibility for enforcing order in the prison, and they believed that legitimately had the right to control the prisoners.
- **Coercive power:** The guards used coercive power on the prisoners by administering punishments such as push-ups or cleaning toilets with toothbrushes when they believed that the prisoners needed to be controlled. The punishments were often cruel and did not suit the perceived wrongdoings of the prisoners.
- **Reward power:** The guards could use reward power to reinforce the prisoners' behaviours that they deemed acceptable. Reward power was usually used to manipulate prisoners, deteriorating the prisoners' group identity and making them easier to control.

The guards' perceived higher levels of power led them to behave in an authoritarian manner, exhibiting behaviour that was aggressive, disrespectful, cruel and abusive.

Zimbardo held several types of power in this experiment.

- **Legitimate power:** As superintendent and lead researcher, Zimbardo's high status and role afforded him with power to control all the individuals in the prison.
- **Coercive and reward power:** Zimbardo could instruct the wardens to punish or reward the prison guards, according to their behaviours.
- **Expert power:** Zimbardo was well regarded as a research psychologist as his knowledge, skills and academic qualifications were widely recognised.
- **Informational power:** Due to his academic standing, Zimbardo had resources and information that were useful in running the experiment.



The prisoners quickly recognised that their low status and lack of power made them vulnerable. As the guards treated the prisoners with increasing levels of cruelty, the prisoners became more withdrawn, passive and compliant. They sometimes even turned against each other to protect themselves against the misused power of the guards. The prisoners became more subdued as the experiment continued, but there were distinct feelings of antagonism towards the guards. The prisoners' feelings of helplessness and rapidly escalating levels of distress contributed to the development of severe anxiety and depression. It also led to the experiment being terminated after only six days.

10 marks

*Marks allocated will depend on the quality of the response as follows: 9–10 high;*

*7–8 medium–high; 5–6 medium; 3–4 low; 1–2 very low; 0 not shown.*

*Note: The question asks students to evaluate the Stanford prison experiment, which suggests that most of the response should be written in prose style.*

*The inclusion of subheadings is acceptable. 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:

- the terms hierarchy, status and power and how they are interrelated
- the types of powers held by the guards and the impact on their behaviours
- the lack of power of the prisoners and the impact on their behaviours.

### *High (7–8 marks)*

The student has provided a detailed explanation of:

- the terms hierarchy, status and power and how they are interrelated
- the types of powers held by the guards and the impact on their behaviours
- the lack of power of the prisoners and the impact on their behaviours.

### *Medium (5–6 marks)*

The student has provided a limited explanation of:

- the terms hierarchy, status and power and how they are interrelated
- some of the types of powers held by the guards and the impact on their behaviours
- the lack of power of the prisoners and the impact on their behaviours.

### *Low (3–4 marks)*

The student has addressed only some of the following:

- the terms hierarchy, status and power and how they are interrelated
- some of the types of powers held by the guards and/or a description of their behaviours
- the lack of power of the prisoners and/or a brief description of their behaviours.

### *Very low (0–2 marks)*

The students has addressed none, or only one, of the following:

- the terms hierarchy, status and power and how they are interrelated
- the types of powers held by the guards and the impact on their behaviours
- the lack of power of the prisoners and the impact on their behaviours.