

Trial Examination 2019

## VCE Psychology Units 3&4

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 C**

Initially, a signal would be sent to the fear centres in the brain, namely the amygdala, which would have sent a distress signal to the hypothalamus. This would have activated the sympathetic nervous system to send a message to the adrenal gland to release adrenaline and noradrenaline into the bloodstream. Thus the fight-flight-freeze response would be activated.

**Question 2 A**

Once the fear centres of the brain had perceived the threat of the attackers, the sympathetic nervous system would have been activated. This would trigger the adrenal gland to release the stress hormones of adrenaline and noradrenaline into the bloodstream in order to rapidly arouse the body and activate the fight-flight-freeze response.

**Question 3 B**

The digestive system would have been suppressed by the sympathetic nervous system, as the resources that normally regulate digestion would have been diverted elsewhere. Increased activity in the cardiovascular and respiratory systems would have been prioritised in order to increase the body's responsiveness. These systems would have responded to the increased activity of the adrenal gland, which triggered the release of adrenaline into the bloodstream to rapidly trigger these physiological changes.

**Question 4 C**

The fight-flight-freeze response is regulated by the autonomic nervous system, specifically the sympathetic subdivision.

**Question 5 C**

Anxiety is a feeling of unease that something wrong is about to happen. Anxiety, stress and phobias can trigger a fight-flight-freeze response.

**Question 6 D**

Benzodiazepines are an example of a depressant because of their inhibitory effect on the postsynaptic neurons (found in the central nervous system) that they target in order to reduce the symptoms of anxiety.

**Question 7 D**

The use of benzodiazepines in this case is an example of a protective factor because the medication is intended to prevent the occurrence or recurrence of Zen's mental condition.

**Question 8 C**

Benzodiazepines act as depressants by slowing down central nervous system activity, thus decreasing brain wave activity. Following a daily dose of benzodiazepines, Zen's brainwaves would show a reduced frequency and an increased amplitude (as measured by an EEG).

**Question 9 B**

Following the initiation of an action potential from the soma, a neural impulse is conducted by the axon away from the soma towards the axon terminal, triggering the release of neurotransmitters into the synaptic cleft.

**Question 10 B**

Eustress is a positive psychological response to a stressor that will increase arousal via activation of sympathetic nervous system activity.

**Question 11 A**

A classically conditioned response is generally triggered by the autonomic nervous system. Examples include the fear response in the 'Little Albert' experiment or salivation in the Pavlov experiment.

**Question 12 B**

The strategy put in place by the shopping centre's management is an example of response cost. An infringement would result in the loss of money (the cost) in order to reduce the negligent behaviour of leaving a child in a locked car (the response).

**Question 13 C**

In terms of the three-phase model of operant conditioning, the antecedent in this case would be arriving at the car park with a child in the car in order to shop. The behaviour would be either leaving the child in car, which would result in the consequence of a fine, or complying with the rules and removing the child from the car to avoid the fine.

**Question 14 A**

Retrieval of the car park rules is an example of a semantic memory because the rules are a set of facts that need to be explicitly recalled.

**Question 15 B**

Ideally, parents would demonstrate stimulus generalisation. This would mean that they apply their learning to all situations where they would potentially leave a child in a parked car, such as during a school drop-off for older siblings.

**Question 16 C**

The use of the symbols would have made it difficult for students to use elaborative rehearsal by linking the symbols to existing material in their long-term memory (LTM). During the exposure time, students would have been more likely to use maintenance rehearsal to keep the symbols in their short-term memory (STM) until they had the opportunity to retrieve them when required for the experimental test.

**Question 17 D**

Using birth dates to allocate students to the two experimental groups was a form of non-random allocation. The participants did not have an equal chance of being allocated to either group, given birth dates cannot be manipulated.

**Question 18 D**

Group 1 used free recall during the retrieval process, as they had no cues and were able to recall the symbols in any order they wished.

**Question 19 A**

The capacity of the participants' STM (5–9 bits) limits the symbols retrieved. Given that the experiment used free and immediate recall, the limitations of STM duration (20 seconds) would have had a lessened impact on the participants' ability to retrieve the symbols from memory.

**Question 20 D**

The students' familiarity with the symbols may have affected the dependent variable. Maths students, for example, may have used the symbols more than other students. **B** and **C** would only be applicable if a repeated-measures research design was used. It is unlikely that gender would have affected the STM capacity of symbols for VCE students.

**Question 21 C**

It would be expected that group 2 would retrieve more symbols than group 1. The 80 symbols provided on the sheet acted as cues to assist group 2 with recognition. Group 1 had no such cues, thus it would be expected that they would retrieve comparatively fewer symbols than group 2.

**Question 22 B**

A leading question is most likely to alter the reconstruction of an episodic memory. An episodic memory is an autobiographical memory of a personal event. When retrieving the details of an episodic memory, the memory needs to be reconstructed in STM, which can access details of memories from multiple sources. If one of the sources includes misinformation from a leading question, then this can alter the memory.

**Question 23 A**

Mavis is in normal waking consciousness, thus her drowsy state would be depicted as occupying a higher level of awareness on the continuum of consciousness. Ernie and Ting are both experiencing altered states of consciousness as their levels of awareness of their perceptions, thoughts, feelings and memories are distinctly different from that of normal waking consciousness.

**Question 24 A**

Self-control is generally reduced when in an altered state of consciousness, thus Mavis (despite suffering from the effects of sleep deprivation) would be expected to currently have a higher level of self-control compared to her two friends.

**Question 25 A**

A 1997 study by Dawson and Reid indicates that a person who has not slept for seventeen hours would have a similar level of cognition as a person with a BAC of 0.05. Given that Mavis had only been awake for sixteen hours and Ting had a BAC over 0.08, it would be expected that Mavis would have a relatively higher level of cognition.

**Question 26 C**

Irritability is an example of an affective symptom of Ting's sleep deprivation. Reduced cognition is a cognitive symptom; slower reaction time and motor impairment are behavioural symptoms.

**Question 27 A**

NREM stage 1 is considered light sleep due to its low arousal threshold (ease of waking up).

**Question 28 B**

The hypnogram in this case has provided primary data that the researcher has sourced. It is quantitative in terms of the breakdown in duration of each of the five stages of sleep (the four stages of NREM sleep and REM sleep).

**Question 29 C**

According to the hypnogram, the subject experienced five episodes of REM sleep. REM sleep is labelled V on the hypnogram.

**Question 30 A**

According to the hypnogram, the subject is most likely to experience a sleepwalking episode during stages 3 and 4 NREM sleep, which occurs during the first two sleep cycles. Stages 3 and 4 are labelled Y and Z respectively on the hypnogram.

**Question 31 B**

According to the hypnogram, the subject spends the most time in stage 2 NREM sleep. Typically, adults spend up to 40% of their sleep in stage 2 NREM. Stage 2 is labelled X on the hypnogram.

**Question 32 D**

High self-efficacy would be considered a protective factor in terms of its effect on the progression of a mental disorder. Self-efficacy refers to a personal belief in an individual's ability to be successful when carrying out a particular task and thus controlling the source of any challenges that may present themselves in daily life.

**Question 33 D**

A conflict from an interpersonal relationship is an external factor because it has a social origin. Rumination and coping skills are psychological factors and are thus internal. Biological factors, such as the balance of neurotransmitters in the brain, are also internal.

**Question 34 C**

When compared to alternative forms of research investigations, an advantage of a case study is that it provides rich detail of the individuals studied. **A** and **D** relate to an experiment. **B** is not a limitation of case studies; the results are not easily generalised to a wider population.

**Question 35 D**

Case studies are an in-depth study of an individual or a group. They are a type of research investigation that can be used to explore psychological phenomena.

**Question 36 D**

Substance abuse in this case would apply to either depressants (such as marijuana) or stimulants (such as cocaine) that are acquired either legally (as is alcohol) or illegally (as is heroin).

**Question 37 B**

The origins of a disorganised attachment originates during infancy due to a parent's inconsistency with care, love, affection, emotional support or nourishment of their child. If left unresolved, a disorganised attachment could make it difficult for Drew to form trusting relationships.

**Question 38 A**

Drew is experiencing rumination, which refers to the tendency to repeatedly think about situations that are upsetting without acting to change them.

**Question 39 B**

Cognitive behavioural therapy (CBT) would attempt to identify the source of Drew's workplace anxiety. It would then attempt to challenge and change his negative thought patterns and equip him with strategies to implement when he experiences the onset of stress and anxiety at either the workplace or home.

Strategies include breathing retraining, psychoeducation and systematic desensitisation. Breathing retraining is used for dealing with the effects of a stress response. Psychoeducation is intended to help the supporters of an individual with a disorder. Systematic desensitisation is a treatment for a phobic disorder.

**Question 40 A**

Drew's stress response would be categorised as a potential biological contributing factor to the development of a mental disorder that can unnecessarily trigger a fight-flight-freeze response to stimuli that do not pose a significant threat to Drew.

**Question 41 B**

Drew's workplace stress can best be classified as a daily pressure, which can have a cumulative effect over time.

**Question 42 A**

In terms of the transtheoretical model of behavioural change, Drew is currently experiencing the contemplation stage. Drew is aware of his problems, but is not ready to change due to his low self-efficacy.

**Question 43 C**

Using alcohol to help reduce anxiety is an example of an avoidant coping strategy as it involves efforts that evade a stressor and deal indirectly with the stressor and its effects.

**Question 44 D**

Sarah's potential inability to attempt the dive is due to the reproduction stage of observational learning. In this case, it is due to a lack of confidence in her ability to execute a dangerous manoeuvre.

**Question 45 C**

The level of acetylcholine in the brain is rapidly reduced in individuals who suffer from Alzheimer's disease in comparison to individuals experiencing the normal ageing process. Acetylcholine plays a key role in memory, as reflected by individuals with Alzheimer's who have memory impairment as the main symptom of their condition.

**Question 46 D**

A child aged 3–10 years old will spend about 80% of their sleep in NREM sleep. The younger age groups in A and C will have a higher proportion (30–50%) of REM sleep and thus a lower proportion of NREM sleep (50–70%).

**Question 47 B**

Bright-light therapy is used to shift sleep-wake cycles either forward or backwards. It is thus most suitable for the treatment of circadian phase disorders such as delayed sleep phase onset, jetlag or sleep disturbances caused by shift work. It is least applicable for treating parasomnias such as sleepwalking.

**Question 48     C**

In the process of systematic desensitisation, a relaxation strategy acts as an unconditioned stimulus. The unconditioned stimulus is repeatedly paired with an approximation of the phobic stimulus (the conditioned stimulus) in order to trigger an unconditioned response of relaxation. Through systematic repetition, this creates a new association between the phobic stimulus and a relaxation response.

**Question 49     A**

Psychoeducation is targeted towards the supporters of a mental health patient to help them develop strategies that they can use to help the patient manage their phobic condition. Examples of this include challenging unrealistic thoughts and discouraging avoidance behaviour.

**Question 50     B**

Social wellbeing refers to the ability to maintain healthy relationships, as reflected by an individual's ability to be socially active and to have a degree of confidence in their interactions with others.

**SECTION B****Question 1** (4 marks)

Sensory neurons: The sensory neurons in Selma's somatic nervous system would have conveyed afferent (sensory) signals to the spinal cord. 1 mark

Interneurons: The interneurons in the spinal cord would have integrated the sensory and motor information (independently) of the brain and triggered a motor response. 1 mark

Motor neurons: An efferent signal would have been sent via the motor neurons to skeletal muscles in the leg, 1 mark

which would have triggered the reflexive withdrawal of the foot from the thistle. 1 mark

*3 marks for identifying and explaining the role of each of the three neurons.*

*1 mark for a clear link to the scenario.*

**Question 2** (6 marks)

a. The neurologist would have observed motor symptoms. 1 mark

*For example, any one of the following observable motor symptoms:*

- tremors (involuntary shaking)
- muscle rigidity (the muscles are unable to relax)
- bradykinesia (slowness of movement)
- instability
- involuntary movements
- reduced facial expressions
- difficulty with speech production
- any other suitable example

1 mark

b. The effects of Parkinson's disease cause degeneration of dopamine-releasing neurons in the substantia nigra (functionally part of a group of structures in the basal ganglia, which is located in the midbrain). 1 mark

Dopamine neurotransmitters control messages to the brain structures that are responsible for initiating and controlling movement – the basal ganglia and the motor cortex. 1 mark

These structures receive insufficient or irregular dopamine messages, resulting in motor impairment. 1 mark

**Question 3** (4 marks)

Adrenaline acts as a hormone when it is released into the bloodstream via the adrenal gland. 1 mark

This plays a key role in the body's stress response by arousing the body and triggering the activation of the fight-flight-freeze response when the body is threatened. 1 mark

Adrenaline acts as a neurotransmitter when it is released (as a result of the stress response) by a neuron in the brain. 1 mark

This can trigger the release of noradrenaline, which activates the emotional part of the brain (the amygdala). The presence of adrenaline strengthens signals sent from the amygdala to the nearby hippocampus and indicates that the details of this event are important, which in turn strengthens the consolidation of the memory of the event. 1 mark



**Question 4** (3 marks)

When GABA is released from a presynaptic axon terminal, it will act as a key. 1 mark

It binds with correspondingly matching-shaped receptors on the postsynaptic neurons, which act as a lock. 1 mark

This results in an influx of negatively charged ions permeating the postsynaptic neuron, which makes the cell less likely to fire. It thus has a calming effect on the central nervous system. 1 mark

**Question 5** (8 marks)

a. A cross-sectional study is a type of independent-groups research design (although it involves the non-random allocation of participants to their respective groups). 1 mark

It involves a comparison of different groups of people at a point of time based on one or more characteristics – in this case, gender. 1 mark

b. A cross-sectional study provides a means of comparison of different groups at a fixed point in time. 1 mark

In this case, it allowed for the comparison between males and females regarding the effect of bright-light therapy on 16–17-year-olds in order to establish if there are any gender differences. 1 mark

c. Circadian rhythm phase disorders are a class of sleep disorders that disturb a person's ability to sleep and wake for periods of time necessary to maintain good health. 1 mark

These disorders occur when there is a mismatch between an individual's sleep-wake cycles and their desired sleep-wake patterns. 1 mark

d. The use of volunteers is a form of convenience sampling as not all members of the population (people aged 16–17 who have been diagnosed with a circadian disorder) had an equal chance of being selected for the cross-sectional study. 1 mark

This will limit the reliability of the study because a non-representative sample of participants could yield inconsistent results from the treatment in comparison to a more representative sample of the population of interest. 1 mark

**Question 6** (10 marks)

a. Little Albert was placed in a room with a white rat – the neutral stimulus (NS). 1 mark

When Little Albert reached for the rat, a loud noise was then produced by a hammer hitting a steel bar – the unconditioned stimulus (UCS). This produced a fearful, startled response from Little Albert, who started crying – the unconditioned response (UCR). 1 mark

Watson repeatedly paired the NS and the UCS. 1 mark

*1 mark for correctly identifying the NS, UCS and UCR.*

*1 mark for identifying the order these elements were presented during the experiment.*

*1 mark for describing the repeated pairing of the two stimuli.*

b. Following the acquisition of the conditioned behaviour, a fear response – the conditioned response (CR) – would be triggered by stimuli that was similar to the conditioned stimulus (CS), such as the white beard on a Santa Claus mask, a dog or a fur coat.

2 marks

*1 mark for correctly describing the processes involved in the stimulus generalisation.*

*1 mark for correctly identifying the CS and the CR in the scenario.*

- c. *For example, any two of:*
- Little Albert's mother as Albert's legal guardian may not have consented to his participation in the experiment.
  - Little Albert's mother may not have been fully aware of the nature of the conditioning.
  - Little Albert's mother may have been unaware of the risks to his well-being or her rights to withdraw her child from the experiment when he became distressed.
- 2 marks
- d. Due to the two stimuli – the white rat (NS) and the loud clang (UCS) – being paired, Albert's postsynaptic neurons in the fear centres of his brain become more responsive to the input from presynaptic neurons through the repeated high-frequency stimulation. 1 mark
- This strengthened the synaptic connections between the presynaptic neuron and the postsynaptic neurons responsible for Albert's conditioned emotional response. 1 mark

**Question 7 (11 marks)**

- a. Consciousness is a psychological construct because it is believed to exist, but it needs to be constructed to describe it. 1 mark
- Thus Jeff's consciousness cannot be measured directly. It can only be inferred from physiological or psychological observations, which will be determined from information gained from the police station. 1 mark
- 1 mark for explanation.  
1 mark for a clear link to the scenario.*
- b. Jeff's drug-induced state of consciousness is purposely induced (it is not naturally occurring). 1 mark
- It is an altered state of consciousness because it is distinctly different from normal waking consciousness in terms of the level of awareness, thoughts, perceptions, memories, behaviours, emotions and sense of time. 1 mark
- c. *For example:*
- A physiological indicator of Jeff's induced altered state of consciousness is an electroencephalogram (EEG). If Jeff was in an induced altered state of consciousness, an EEG would detect, amplify and record a relatively higher level of electrical activity of the brain in comparison to a relaxed normal waking consciousness (or higher frequency, lower amplitude, increase in beta-like waves).
- A psychological indicator of Jeff's induced altered state of consciousness is distorted time orientation. Jeff might have lost track of the time of day (or night, in this case).
- 4 marks
- 1 mark for a suitable physiological indicator.  
1 mark for a corresponding explanation of the physiological indicator.  
1 mark for a suitable physiological indicator.  
1 mark for a corresponding explanation of the physiological indicator.*
- Note: Acceptable physiological indicators include reaction time and EEG. Acceptable psychological indicators include reduced content limitations, reduced emotional awareness, cognitive or perceptual distortions, reduced level of awareness and distorted time orientation.*

- d.** Alarm shock: When Joe first became aware of the stressor of the loss of his licence, he went into shock; his body acted injured and his resistance was lowered.

Alarm countershock: Joe's sympathetic nervous system was activated. His resistance to the stressor rapidly rose as his fight-flight-freeze response was activated, releasing adrenaline into the bloodstream to help arouse his body to deal with the threat.

3 marks

*1 mark for naming both substages.*

*1 mark for discussing the drop and then rise in resistance.*

*1 mark for discussing the physiological changes.*

**Question 8** (14 marks)

- a.** *For example:*

It is hypothesised that patients clinically diagnosed with a phobic disorder will experience a greater reduction in the severity of their symptoms during a six-week consumption of lorazepam in comparison to the reduction in severity of their symptoms during a six-week consumption of a placebo drug.

3 marks

*1 mark for the population (patients clinically diagnosed with a phobic disorder).*

*1 mark for the independent variable (lorazepam versus placebo).*

*1 mark for the dependent variable (severity of symptoms).*

- b.** *For example:*

The experiment enables the researcher to manipulate the independent variable (lorazepam versus placebo) in order to test the effects on the dependent variable (the reduction in the severity of phobic symptoms for patients suffering from a phobic disorder). This is an advantage when compared to a case study, where there is no such control over the variables.

2 marks

*1 mark for an explanation of the advantage.*

*1 mark for a clear link to the scenario.*

- c.** Each group will consume their allocated drugs during the first six-week phase of the experiment before swapping drugs for the second six-week phase of the experiment. This is so both conditions occur equally as often, eliminating the potential for an order effect to confound the results.

2 marks

*1 mark for an explanation of counterbalancing.*

*1 mark for a clear link to the scenario.*

- d.** Validity refers to how effectively an assessment tool measures what is supposed to measure. 1 mark

The scenario describes the use of self-reporting to measure the severity of symptoms. This is a highly subjective process that would thus lack validity.

1 mark

- e.** The use of placebo testing may potentially breach informed consent. In order to comply with the National Statement of Ethical Conduct in Human Research (2007), participants must be fully aware of the nature of the experiment, including their rights and the risks involved.

1 mark

As the participants may not be fully aware that they are consuming placebos (this was not specified in the scenario), this may involve an ethical breach.

1 mark

The participants may not be fully aware of the risks of their involvement, particularly of the potential side effects if ceasing existing medication.

1 mark

- f.** Benzodiazepines target GABA receptors and thus mimic the inhibitory effects of GABA. 1 mark

This provides a calming effect on the central nervous system, reducing arousal and the symptoms of anxiety triggered by phobias.

1 mark

**Question 9** (10 marks)**The role of the psychological model of stress and coping**

The Lazarus and Folkman Transactional Model of Stress and Coping provides a framework that emphasises the role of the appraisal of a stressor. This appraisal evaluates the harm, threats and challenges that result in the process of coping with stressful events. In this scenario, the stressful events relate to the demands of university for a first-year student. In the model, the two key psychological factors that determine the extent of the stress experienced by the student are:

- the student's appraisal of the significance of the stressor; and
- the student's appraisal of their ability to cope with the stressor.

Stress can be thought of as resulting from an imbalance between demands and resources, or as occurring when pressure exceeds one's perceived ability to cope. In order to develop an effective stress-management program, it is first necessary for the student to identify the factors that are central to a person controlling their stress (primary appraisal) and to identify the intervention methods that effectively target these factors (secondary appraisal).

**Primary appraisal:** The first-year university student determines if they are in a stressful state by considering whether they have a personal stake in an encounter. An evaluation is made about the significance of the encounter, which either:

- has no significance for the student;
- is a benign-positive encounter (desirable); or
- is significant (thus leading to harm/loss, threats or challenges).

If the stressor is evaluated as significant, then it will be appraised further as either:

- harm/loss – an assessment that damage will occur to the student (for example, poor grades);
- threats – an assessment that there is potential future harm (for example, an inability to graduate); or
- challenges – an assessment that the student can learn, gain confidence or grow from this experience in terms of dealing with the demands of university.

**Secondary appraisal:** The student assesses their capacity to cope, various coping options and their ability to reduce harm/threats. More specifically, the student assesses their resources, the levels of energy and strategies that they have to cope with the stressor. A secondary appraisal can lead to a reappraisal of the stressor.

**Precipitating factors that may contribute to the development and progression of a mental illness**

Precipitating risk factors both increase susceptibility and contribute to the occurrence of a mental condition.

**Biological:** Substance abuse is a biological precipitating factor that may contribute to the development and progression of a mental illness in the university student. Some students may use substances such as alcohol or cannabis to self-medicate in order to reduce the symptoms of an anxiety disorder. Substance abuse can precipitate a mental condition by altering the chemistry of the brain. The use of alcohol, drugs and stimulants can contribute to the development of symptoms of a mental disorder in the short-term. In some cases, it can also permanently alter the chemicals in the brain that regulate mood and thinking. These substances can interfere with the functionality of neurotransmitters, can reduce the amount of neurotransmitters released or can have a blocking effect on receptor sites.

**Psychological:** Stressful life conditions are a psychological precipitating factor that may contribute to the development and progression of a mental illness in the university student. Chronic stress can, over time, contribute to the development and progression of a mental disorder. The reverse is also true; having a mental disorder can create stress for the student. As a result of the stress response and the activation of the fight-flight-freeze response, cortisol and adrenaline are released into the bloodstream. If these stress hormones linger in the bloodstream as a result of chronic stress, then it will make the student more vulnerable to developing a mental disorder such as depression.

**Social:** The loss of a significant relationship is a social precipitating factor that may contribute to the development and progression of a mental illness in the university student. This could be the grief experienced from a death in the family or the separation from the student's family in order to live near their university. This sense of loss can contribute to the development of a mental disorder such as depression, particularly if the grief is prolonged, if the student feels overwhelmed and if they find it difficult to move on.

**Protective factors in the development of resilience**

Resilience refers to the ability to successfully cope with adversity and the ability to adapt or rebound and restore positive functioning. This ability can be enhanced by employing biopsychological protective factors.

**Biological:** Sleep is a biological protective factor in the development of resilience for the university student. Good sleep hygiene helps foster both mental and emotional resilience. Adequate sleep is reflected by waking up feeling refreshed and positive about the day ahead. Conversely, there is a relationship between poor sleep, insomnia, sleep apnoea and mental health problems. Poor sleep contributes to negative thinking, anxiety and emotional vulnerability.

**Psychological:** Using cognitive behavioural strategies is a psychological protective factor in the development of resilience for the university student. Cognitive behavioural strategies focus on the interaction between thoughts, feelings and behaviour. The cognitive component, which involves cognitive restructuring, could help the student identify negative, persistent thoughts that have contributed to dysfunctional behaviour and then replace them with realistic thoughts. The behavioural component involves implementing behavioural change by helping the student to adapt to any changes that may trigger the negative thoughts entering their mind. In this way, the student can reduce or prevent the recurrence of dysfunctional behaviour.

**Social:** Social support is a social protective factor in the development of resilience for the university student. Social support refers to the care and empathy provided by other people to a person in need. Support from family and friends can assist people to build resilience. Family and friends can listen to the concerns of the student, provide advice about how to manage their stress and offer assistance as required.

10 marks

*Note: Responses discussing other relevant biological, psychological and social factors are acceptable.*

### ***Marking guide***

#### *Very high (9–10 marks)*

The student has provided a highly detailed explanation of:

- the Transactional Model of Stress and Coping, including the role of both the primary and secondary appraisal, and has effectively linked this to the scenario;
- the role of a biological, psychological and social factor that may precipitate a mental illness, including suitable examples; and
- the role of a biological, psychological and social factor that may promote resilience, including suitable examples.

#### *High (7–8 marks)*

The student has provided a detailed explanation of:

- the Transactional Model of Stress and Coping, including the role of both the primary and secondary appraisal, and has effectively linked this to the scenario;
- the role of a biological, psychological and social factor that may precipitate a mental illness, including suitable examples; and
- the role of a biological, psychological and social factor that may promote resilience, including suitable examples.

#### *Medium (5–6 marks)*

The student has provided a limited explanation of:

- the Transactional Model of Stress and Coping, including the role of both the primary and secondary appraisal, and has effectively linked this to the scenario;
- the role of a biological, psychological and social factor that may precipitate a mental illness, including suitable examples; and
- the role of a biological, psychological and social factors that may promote resilience, including suitable examples.

#### *Low (3–4 marks)*

The student has addressed only some of the following:

- the Transactional Model of Stress and Coping, including the role of both the primary and secondary appraisal, and has effectively linked this to the scenario;
- the role of a biological, psychological and social factor that may precipitate a mental illness, including suitable examples; and
- the role of a biological, psychological and social factor that may promote resilience, including suitable examples.

#### *Very low (0–2 marks)*

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

- the Transactional Model of Stress and Coping, including the role of both the primary and secondary appraisal, and has effectively linked this to the scenario;
- the role of a biological, psychological and social factor that may precipitate a mental illness, including suitable examples; and
- the role of a biological, psychological and social factor that may promote resilience, including suitable examples.