

**VCE Psychology 2018
Unit 3 & 4 Trial Examination
Assessment Guide**

Section A – Multiple Choice Questions

Question 1

C

Neurotransmitters are released by the axon terminals and received by receptors on the dendrites.

Question 2

B

Reflexes of this nature occur in the spinal cord.

Question 3

D

Glutamate enhances LTP (not LTD). It is an excitatory neurotransmitter (not inhibitory). It increases sensitivity of the neurons on the post-synaptic neuron (not pre-synaptic). It increases the likelihood of the post-synaptic neuron firing.

Question 4

A

Knitting has now become a more controlled process requiring minimal mental effort. This allows Susan to divide her attention and have a conversation with her mother.

Question 5

B

The autonomic nervous system functions without any conscious effort.

Question 6

C

Some medications can be converted to dopamine by neurons in the CNS.

Question 7

C

There would be a decrease in salivation, not an increase.

Question 8

B

Sally is starting to become ill (symptoms of the flu) which is indicative of the resistance stage.

Question 9

C

Kate has appraised VCE as a challenge whereas Sally has appraised it as harm/loss or threatening.

Question 10

C

William has developed a CR of fear of the dentist.

Question 11

D

This is negative reinforcement. By not going to the dentist, William will be avoiding the unpleasant stimulus of the dentist. This will negatively reinforce and strengthen his fear response.

Question 12

D

The learner is active in both operant conditioning and observational learning.

Question 13

B

This is negative reinforcement; Bill travels at the speed limit to avoid the unpleasant stimulus of another fine.

Question 14

B

Observational learning is learning by observing the consequences of others. Learning can occur by watching the reinforcement or consequences necessary for operant conditioning to take place in others.

Question 15

D

*LTM has a relatively unlimited capacity. Note – the answer is not B. information can enter STM from the LTM. Therefore, it is not the **only way** information can enter STM.*

Question 16

D

The amygdale has a role in forming explicit memories with emotional content.

Question 17

C

Because the students had to recall the list in serial order, there would be no recency effect due to the decay of items from the STM.

Question 18

B

The cerebellum has a role in coordinating muscle control.

Question 19

C

With regard to observational learning, motivation refers to having the motivation to perform the behaviour (not learn it).

Question 20

D

Amyloid plaques would increase.

Question 21

D

This is a state dependent cue. Wendy is remembering details due to her emotional state. Not context dependent because she was not back at the scene of the accident yet.

Question 22

B

Adrenaline is involved in the consolidation of emotionally arousing experiences.

Question 23

D

Recall is a less sensitive measure of memory than recognition.

Question 24

A

The content of our consciousness is less limited. Note that it is possible to have a heightened level of awareness in some ASC's.

Question 25

B

Difficulty with memory is a cognitive distortion.

Question 26

A

There will be a decrease in beta waves which is indicated by a decrease in the electrical activity of the brain.

Question 27

B

When we sleep, we have a lowered level of awareness and may be more vulnerable to predators.

Question 28

C

During the latter stages of sleep, it is likely that there is no NREM stage 3 and/or stage 4 sleep

Question 29

A

Wendy's affective functioning will be affected by sleep deprivation and she will most likely experience mood disturbances.

Question 30

B

A shift in his sleep wake cycle. Melatonin is released 1-2 hours later than normal – not cortisol.

Question 31

B

It is easier to adjust to a longer day (travelling West) than it is to a shorter day (travelling East)

Question 32

C

Having trouble getting to sleep is a dyssomnia – (sleep onset insomnia).

Question 33

C

Jack's sleep wake cycle needs to be advanced. He needs to get sleepier earlier in the day and therefore, should have bright light therapy in the early morning.

Question 34

D

A, B and C are psychological risk factors.

Question 35

C

One concern is the impact on a control group by withholding medication that may alleviate symptoms.

Question 36

B

The loss of a significant other is a social factor that might precipitate, increase susceptibility and contribute to the occurrence, of a mental health disorder.

Question 37

A

Disorganised attachment is a social risk factor.

Question 38

D

Identical twins have been used to research the genetic link of mental health disorders.

Question 39

D

Disorganised attachment is a lack of adequate care and support from the primary care giver.

Question 40

D

Perpetuation by operant conditioning is a psychological contributing factor.

Question 41

D

Medications do not treat the cause of a phobia. Response "A" contains an absolute term. We cannot say that symptoms will ALWAYS return.

Question 42

D

An anxiety disorder interferes with daily living. All other options are quite normal responses.

Question 43

C

Sam developed the phobia through classical conditioning (association) and is maintaining his phobia through the operant conditioning principal of negative reinforcement.

Question 44

C

Mary is getting ready to change.

Question 45

A

This is the only strategy linked to the preparation stage.

Question 46

B

A is not correct. The model does allow for relapse. C and D are strengths of the model.

Question 47

B

This design is independent groups.

Question 48

B

The order effect occurs in a repeated measures study design which was not used in this case.

Question 49

C

This would minimise any bias due to the teachers correcting the tests of their own students.

Question 50

B

The average score is the dependent variable.

Section B – Short Answer Questions

Question 1

What part of the nerve protects it from interference by other neurons and allows for the rapid transmission of nervous information?	<i>Myelin or Myelin Sheath</i>
What part of the nerve is responsible for the release of neurotransmitters?	<i>Terminal buttons or Axon terminals</i>
What part of the nerve is considered to be the “lock” in terms of the lock and key process in the transmission of nervous information?	<i>Receptors on the dendrites</i>

Question 2

- a. *Discriminative Stimulus – Peter driving to Melbourne
Behaviour – Peter speeding
Consequence – Peter being heavily fined and losing 3 demerit points*
- b. *Peter was being negatively reinforced (1 mark). When he drove at the speed limit (behaviour) he avoided the unpleasant consequence of receiving his fine (1 mark). This strengthened Peter’s behaviour of travelling at the speed limit (1 mark).*
- c. *This is stimulus discrimination (1mark). Peter has discriminated the discriminative stimulus of the highway to Melbourne with the less frequently used country roads as he did not expect them to be policed (1 mark).*
- d. *Tom would have learned from observing his father travel at the speed limit. Tom would have formed a memory of this behaviour (retention) (1 mark), he would then have been motivated to perform (not learn) the behaviour of travelling at the correct speed limit (1 mark) as he would have been anticipating being negatively reinforced by not receiving a fine (1 mark).*

Question 3

- a. *It is most likely that Wendy’s grandmother has developed Alzheimer’s disease (1 mark). This would be due to developing amyloid plaques and neurofibrillary tangles in the neurons in her cerebral cortex (1 mark). This most commonly occurs in the hippocampus first (1mark) indicating that Wendy’s Grandmother has difficulty forming new explicit memories – anterograde amnesia (1 mark).*
- b. *Parkinson’s disease is the result of degeneration of neurons in the substantia nigra (1 mark). This results in a lack of dopamine which has a role in controlling voluntary skeletal muscular movements (1 mark). This lack of skeletal muscle control is indicated by tremors and uncontrollable shaking (1 mark) and Wendy’s grandmother did not have these symptoms.*
- c. *Neural plasticity involves a change in the structure and function of nerves to adapt to any new experience (1 mark). This will occur in Wendy’s brain but is less likely to occur in her grandmother’s brain because of Alzheimer’s disease (1 mark).*

Question 4

- a. *Students will have a better memory for learning psychological terms using elaborative rehearsal in the same room (1 mark) compared to those who use maintenance rehearsal in different rooms and/or those who use no form of rehearsal at all (1 mark).*
- b. *Elaborative rehearsal involves making information to be learned more meaningful by linking it to information that is already stored in LTM (1 mark). Maintenance rehearsal is the simple rote learning of information (1 mark).*
- c. *C is the control group and it provides the basis of comparison for comparing the effect of using elaborative rehearsal in the same room and maintenance rehearsal in different rooms on the ability to memorise psychological terms (DV).
NOTE: Students should specifically refer to the IV and DV rather than just give a generic response.*
- d. *The hypothesis is supported. The results indicate that using elaborative rehearsal in the same room is better for memorising psychological terms compared to maintenance rehearsal (1 mark). This implies that students should use elaborative rehearsal when trying to memorise course content in preference to maintenance rehearsal (1 mark).*
- e. *Class A learned the information in the same room. Therefore, it is possible that they had context dependent cues (1 mark) assisting them in learning the information. When they had to recall the words, the environment may have provided cues which assisted the retrieval of information from LTM (1 mark). As a result, it may have been difficult to differentiate between the role of elaborative rehearsal and context dependent cues when analysing the results (1 mark).*

Question 5

- a. *In the primary appraisal, Jeff would have appraised the situation of receiving “D’s” for his SAC’s as threatening (or harm/loss) (1 mark). Because Jeff felt that his dream of receiving a high ATAR was all but gone, his secondary appraisal was most likely that he did not have the resources to improve on these grades (1 mark). In contrast, Jeff has not perceived the situation as stressful at all and he would have appraised the situations as benign or neutral (1 mark).*
- b. *Jeff is most likely in the resistance stage of the GAS (1 mark). If Jeff remains stressed, then blood cortisol levels will remain elevated and result in a suppressed immune system making him more susceptible to viral and bacterial infections (1 mark).*

Question 6

- a. *Driving a forklift is a controlled process requiring a high mental effort and focused attention (1 mark). Sleep deprivation can result in cognitive and behavioural difficulties (1 mark) such as difficulty processing information, paying attention, fatigue and reduced reaction time (1 mark). This will severely impact Bill’s ability to drive a forklift and will increase the risk of an accident occurring (1 mark).*
- b. *Sleep deprivation can also result in affective disturbances (1 mark). Emotions can be amplified, and mood disturbances can also occur. These may impact on Bill’s ability to effectively communicate with his wife (1 mark).*

- c. *The restorative theory implies that sleep is used to repair and replenish the body so that it is ready to function the next day (1 mark). It does this by enhancing our mood, increasing alertness, increasing immunity and activating growth hormones (1 mark). It has been theorised that NREM sleep is important for physiological restoration and repair and this takes place during stages 3 and 4 of NREM sleep. (1 mark). The brain is less active in NREM sleep which may mean cells are being repaired and wastes removed (1 mark) OR animals with a higher metabolic rate spend more time in stages 3 and 4 NREM (1 mark).*
- d. *The reason Bill would spend a week in the sleep laboratory before measurements are taken would be so that he has a better chance of resuming his normal sleep patterns (1 mark). If measurements were taken straight away, the new environment may impact Bill's normal sleep patterns and result is biased measurements (1 mark).*

Question 7

- a. *The study design specifies that the only evidence based social intervention strategy for those with a specific phobia is psychoeducation (1 mark). This would involve education of family and friends on the nature of the phobia and how to challenge any unrealistic thoughts or avoidance behaviours that Margaret displays (1 mark)*
- b. *At first the psychologist would teach Margaret some form of relaxation strategy such as breathing control etc. (1 mark). They would then develop a fear hierarchy involving the least feared stimulus to the most feared stimulus (1 mark). They would then gradually pair each item in the fear hierarchy, starting at the least feared stimulus, with the relaxation response. They would not move to the next feared stimulus until relaxation was achieved (1 mark). This process would continue until the CS no longer produced the CR of fear of driving a car (1 mark).*
- c. *Stress is a common experience that results in physiological and psychological arousal (1 mark). Anxiety is a severe form of stress - physiological arousal that involves feelings of apprehension or worry that something is wrong or that something unpleasant is about to happen (1 mark). A phobia is a severe form of anxiety that is irrational, intense and out of proportion to the phobic stimulus. It is persistent irrational fear of an object or situation that causes significant distress and interferes with everyday functioning (1 mark).*
- d. *A biopsychosocial approach considers how biological, psychological and social factors (1 mark) interrelate in the development and progression of a mental health disorder (1 mark). These factors also need to be considered when treating a mental health disorder and for the maintenance of mental health (1 mark).*

Question 8

When marking extended responses, a 'holistic' approach should be taken. Emphasis should be given to the overall quality of the student's response. At first you would categorise a response as being high (8-10), medium (5-7) and low (<5). You would then make a final decision as to the quality of the response and a final score. A high scoring response will include discussion of the following;

- ***Responses must always link to the scenario***
- *The effect of sleep deprivation on NWC – states of consciousness and how it may impact on levels of awareness and ability to complete controlled processes (driving skills).*
- *How alcohol consumption may result in an ASC.*
- *The difference in performance between Group A (stimulant) and Group B (depressant) and what effect this would have on EEG brain wave patterns. That is an increase in beta waves with a stimulant and an increase in alpha waves with the depressant.*
- *A discussion on how a stimulant and depressant may impact on states of consciousness/level of awareness.*
- *How brain wave patterns are linked to levels of awareness/alertness and how this may impact on driving performance.*
- *A discussion on how sleep deprivation has a similar effect on driving performance when compared to a BAC of 0.05. Included would be a discussion on how this may be related to an ASC which affects attention levels, perceptual distortions etc. and how this is linked to driving performance.*
- *The research design repeated measures and therefore, there is the existence of a possible order effect that may have biased the results. Counterbalancing should have been used to minimise and control for any order effects.*
- *Ethical concerns would revolve around the risk of giving the students stimulants, depressants and alcohol.*