

## VCE Psychology 2017 Unit 3 & 4 Trial Examination Assessment Guide

### Section A – Multiple Choice Questions

#### Question 1

C

*Reflexes occur at the level of the spinal cord.*

#### Question 2

C

*It is a controlled process and controlled processes require selective attention (and a high mental effort – not minimal)*

#### Question 3

B

*It is LTP that strengthens synaptic connections. LTD weakens them.*

#### Question 4

D

*This is the only example of autonomic nervous system*

#### Question 5

B

*A reduction in dopamine is a contributing factor in Parkinson's disease.*

#### Question 6

D

*Dendrites of the post-synaptic nerve receive nervous information.*

#### Question 7

A

*The bladder relaxes when the sympathetic nervous system is activated*

#### Question 8

C

*Eustress and Distress result in the same physiological responses as a result of sympathetic nervous system activation.*

**Question 9**

B

*Illness tends to occur in the exhaustion stage of the GAS and a contributing factor is a weakening of the immune system.*

**Question 10**

B

*The dentist has become the CS. The UCS was the painful injection which would have induced the UCR of fear of the painful injection*

**Question 11**

D

*Kevin developed his fear of dentist by CC and he maintains that fear by negatives reinforcement (operant conditioning) by not returning to the dentist.*

**Question 12**

C

*All other statements are incorrect.*

**Question 13**

D

*The most specific answer is response cost (removal of a pleasant stimulus rather than punishment and this differentiation has been required in past VCAA exams.*

**Question 14**

A

*Observational learning is learning by observing the consequences of others.*

**Question 15**

C

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

**Question 16**

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 17**

B

*Information can also enter STM by being retrieved from LTM.*

**Question 18**

C

*Hippocampus is needed to form new declarative memories so anterograde amnesia will result from a damaged hippocampus.*

**Question 19**

A

*The amygdale is needed to form a classically conditioned fear response*

**Question 20**

D

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

**Question 21**

D

*All of these factors have the potential to contribute to the reconstruction of memory.*

**Question 22**

C

*It was a controlled process requiring greater mental effort*

**Question 23**

B

*John could now divide his attention between watching TV and tying his shoelaces.*

**Question 24**

C

*In an ASC the content of our consciousness becomes less limited – less control*

**Question 25**

D

*A depressant would decrease beta waves.*

**Question 26**

C

*There are no muscles “in” the eye.*

**Question 27**

D

*The purpose of REM sleep is more applicable to the restorative theory.*

**Question 28**

B

*All other statements are incorrect.*

**Question 29**

D

*Sleep deprivation affects simple task performance more than complex tasks.*

**Question 30**

B

*The effects of sleep deprivation are not long lasting*

**Question 31**

A

*Jetlag is a circadian rhythm disorder.*

**Question 32**

B

*The cessation of breathing is sleep apnoea which is a parasomnia.*

**Question 33**

B

*Bright light therapy in early evening will hopefully delay the release of melatonin meaning that Gary will not feel sleepy until later in the evening.*

**Question 34**

C

*Jack is avoiding/removing the unpleasant stimulus of the fine. This strengthens the likelihood that he will continue the behaviour.*

**Question 35**

D

*All of these factors are characteristics of a mentally healthy person*

**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**

C

*Disorganised attachment is a social risk factor*

**Question 38**

D

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

**Question 39**

A

*Rumination involves repeatedly focusing on undesirable thoughts which can prevent some from seeing a solution to the problem or a way to minimise it.*

**Question 40**

B

*Exercise promotes the release of endorphins*

**Question 41**

A

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

**Question 42**

B

*The level of fear in a specific phobia is irrational.*

**Question 43**

D

*Systematic desensitisation is a treatment for specific phobia.*

**Question 44**

C

*Preparation means you are ready to change and talking to others about plans*

**Question 45**

B

*Family support and taking small steps is a strategy linked to the preparation stage.*

**Question 46**

D

*Graduated exposure is a treatment*

**Question 47**

C

*This is a cross-sectional study.*

**Question 48**

A

*Memory ability can confound the age differences when comparing the memory results of the words.*

**Question 49**

C

*Counterbalancing is applicable to a repeated measures design which was not used.*

**Question 50**

B

*The number of nonsense syllables recalled is the dependent variable – it is what is being measured.*

## Section B – Short Answer Questions

### Question 1

*Glutamate is the main excitatory neurotransmitter and GABA is the main inhibitory neurotransmitter (1 mark). Each neurotransmitter has a distinct chemical shape (key) that matches a specific receptor site on the dendrites of the post-synaptic neuron (lock) (1 mark).*

### Question 2

*LTP is a form of neural plasticity and repeated stimulation of nerves would have resulted in long term strengthening of the synaptic connections enhancing transmission between neurons making them more likely to fire which would have occurred when Mark was practicing piano. (1 mark) After practicing for many years the synaptic connections would have weakened, LTD, causing Mark to struggle to remember (1 mark).*

### Question 3

- a. *Parkinson's disease is due to the degeneration of neurons in the substantia nigra which decreases the amount of dopamine available for motor activity (1 mark). These dopamine neurons also release GABA which has an inhibitory effect on neuronal activity (1 mark).*
- b. *Alzheimer's disease is a neurodegenerative disease resulting from amyloid plaques (1 mark) and neurofibrillary tangles (1 mark)*

### Question 4

- a. *Steve would be experiencing eustress which is a positive psychological response to a stressor (1 mark) and Gary distress which is a negative psychological response to a stressor (1 mark).*
- b. *Steve would have appraised the situation as a challenge (1 mark) and Gary as a threat (1 mark).*

### Question 5

- a. *Circadian phase disorder (1 mark)*
- b. *Bright light therapy would be used (1 mark). It would be used in the early evening (1 mark) to shift the sleep wake cycle, circadian rhythm to a later time, so that melatonin would be released later in the night (1 mark) so Ryan becomes tired later in the evening.*
- c. *Being a teenager, Will has most likely experienced an adolescent sleep-wake shift (1 mark) where his sleep wake cycle has shifted forward, melatonin is not released until 1-2 hours later (1 mark) meaning Will does not become tired until later in the evening(1 mark) .*
- d. *Affective functioning levels involved amplified emotional responses (1 mark). For example, Ryan may become far more irritable at work over the need to make a minor decision (1 mark). Or any other appropriate example.*
- e. *Sleep apnoea is the cessation of breathing whilst asleep.*

### Question 6

- a. *NWC (1 mark) and beta brain waves (1 mark).*
- b. *It acts as a basis for comparison of the effect of the IV (alcohol) on the DV (driving performance)*
- c. *Consumption of too much alcohol lowers awareness and may lead to an ASC (1 mark). In an ASC, we can experience perceptual distortions causing signals in the driving simulator to be missed affecting our performance (1 mark).*
- d. *Independent groups (1 mark)*
- e. *The driving simulator test would accurately measure the requirements of driving in real circumstances (1 mark).*
- f. *The results indicate that the higher the BAC, the more significant is the negative affect of alcohol on driving performance (1 mark). Driving is a controlled process that requires a high level of awareness, high mental effort and fully focused attention (1 mark). In an ASC, due to a lower level of awareness, controlled processes are more difficult making drinking and driving dangerous (1 mark).*

### Question 7

- a. *MC questions involve recognition (1 mark) whereas written questions require recall (1 mark) and recall is less sensitive than recognition (detects less information in the memory) (1 mark).*
- b. *Jane learned some topics quite quickly because of relearning (1 mark). Even though Jane thought she had forgotten the information, there was still some information in her memory allowing her to learn some topics quicker (1 mark).*

### Question 8

- a. *Positive punishment*
- b. *Positive reinforcement*
- c. *Response cost*
- d. *Stimulus discrimination*
- e. ***Antecedent** condition (discriminative stimulus), Bill gets sent out of class again. Bill's mum punishes Bill by removing a pleasant stimulus – taking his phone from him for two weeks which is the **behaviour** (1 mark). As a **consequence**, Bill cannot use his phone, contact friends etc. which will weaken the likelihood of the behaviour being repeated (1 mark).*

### Question 9

*In dealing with the numerous stressful situations and decisions, Greg would be in the resistance stage attempting to deal with them and his resistance to a stressor would be above normal (1 mark). Physiological arousal would be higher than normal with continued high blood cortisol levels (1 mark). The elevated cortisol levels weaken the immune system (1 mark). If the stressors are not dealt with, Greg can enter the exhaustion stage whereby resistance is weak and Greg is far more susceptible to bacterial and viral infections (1 mark).*

### Question 10

*Mental health is not viewed as something that we all have or do not have (1 mark). Therefore, it is seen as a continuum where we can shift from being mentally healthy to having a mental health problem which may become a mental health disorder (1 mark).*

### Question 11

- a. *First year university students at Sunkiss University will have a better recall of items when using immediate free recall at the end of the presentation of items compared to serial recall or delayed recall.  
Identification of population (1 mark)  
Identification of IV and DV (1 mark)*
- b. *Type (time) of recall (1 mark) operationalised as being able to recall a list of 30 six letter words in any order immediately after presentation of the words, or in serial order, or after a 30 second delay (1 mark).*
- c. *Memory (1 mark) operationalised as the number of six letter words correctly recalled from a list of 30 words with free recall, serial recall and delayed recall.*
- d. *So that the sample is representative of the characteristics of the population (1 mark).*
- e. *The group with free recall would remember more words at the beginning (primacy effect) and end of the list (recency effect) than both of the other groups (1 mark). The serial recall group will remember more words at the beginning of the list (primacy effect only (1 mark). The delayed recall group will also remember more words at the beginning of the list (primacy effect only (1 mark).*

### Question 12

*This answer should be marked “holistically” and then classified as being high (8, 9 or 10), medium (5, 6 or 7) or low (1, 2, 3 or 4).*

*Neville has a specific phobia which is disrupting his daily functioning by preventing him from seeing his children and grandchildren.*

*It is likely that Neville developed the specific phobia by making an association between a plane (NS) and the turbulence (UCS) that he experienced that resulted in the fear (UCR) of the turbulence. Therefore, the plane has now become a CS stimulus resulting in the CR of fear of flying which has developed into a specific phobia being an intense and irrational fear of flying. Neville has maintained his fear of flying by simply avoiding planes altogether which acts as negative reinforcement and strengthens this type of behaviour.*

*This specific phobia could be exacerbated by a psychological risk factor of;*

**Memory bias** whereby Neville distorts his beliefs, feelings and knowledge in a manner that allows him to selectively remember situations that incorporate and exaggerate his fear of flying.

*OR*

**Catastrophic thinking** in that Neville is always predicting the worse possible outcome of flying

*Medication to assist Neville would be in the form of benzodiazepine agents such as those that mimic the inhibitory effects of GABA. Drugs of this nature are also referred to as sedatives or depressants.*



*Their aim is to reduce the activity of the CNS and hence lower physiological arousal. The effectiveness of these medications has highlighted the role of GABA in specific phobic reactions.*

*In addition to medication, Neville can also undergo systematic desensitisation which aims to replace the fear response to the phobic stimulus with one of relaxation. This would involve Neville learning some form of relaxation strategy or mental imagery. Then a fear hierarchy would be formed of his least fearful to most fearful stimuli of flying in a plane. Starting at the lowest stimuli in the fear hierarchy, Neville would practice pairing that stimulus with the relaxation response. This would desensitise him to each step of the hierarchy until eventually he moves up the hierarchy and the CS no longer produces the CR of fear. This can be done using imagery, virtual reality or in vivo.*