PSYCHOLOGY
UNIT 3 EXAM ANSWER GUIDE
Please note that these answers are a guide only and do not represent every possible correct answer.

SECTION A - MULTIPLE CHOICE

ANSWER	SUCCESS CRITERIA	ANSWER	SUCCESS CRITERIA
1.B	Flight as he hides (flees) behind the couch	2.A	Sympathetic as he has demonstrated the flight response.
3.D	Acceleration of heart rate allows more oxygen to travel to working muscles.	4.B	The association is made between the NS (now CS) and the UCS
5.B	Extinction has not occurred and therefore neither has spontaneous recovery	6.C	A spinal reflex is an innate response that is involuntary
7.B	This is incorrect as the movement of the hand occurs as a result of the somatic nervous system	8.D	This is the only option that includes the correct order
9.B	He did not use random sampling (all were volunteers/convenience). He did use random allocation (hat)	10.D	Random sampling ensures sample is representative while random allocation reduces participant related variables
11.A	An independent groups design was used	12.C	This was a variable not controlled and may have the potential to affect results.
13.B	The firing of the postsynaptic neuron is determined by the type of neurotransmitter	14.A	Difficulty sleeping is often due to pain and inability to control tremors
15.B	Bad news is distress. Sympathetic nervous system is activated regardless of whether distress or eustress experienced	16.C	Job loss is harm/loss as it has already happened. Not being able to pay future rent is threat as this is in the future
17.C	Applying for another job deals directly with the stressor of not having a job.	18.C	Depression is considered a serious and extreme consequence of stress and would only be evident in the exhaustion stage.
19.B	Blood pressure and body temperature both drop	20.D	During shock, the person's ability to deal with the stressor drops below normal levels

21.A	Peter is dealing with the problem and is performing an action that specifically matches the situation	22.B	Low levels of adrenalin can increase the likelihood that an episodic memory will be remembered
23.D	Research has shown that half a second is the ideal time difference between NS and UCS	24.C	Classical conditioning is said to occur when the CS causes the CR
25.A	Separating students is punishment, as the likelihood of an undesirable behaviour (talking) will decrease. Students promising not to talk is a desirable behaviour that allows them to escape from an undesirable situation (being separated)	26.B	Response cost is the removal of something positive (removal of xbox)
27.C	Reinforcement does not occur in classical conditioning	28.D	This is the only option that demonstrates the correct order
29.B	Repeating over and over without linking to LTM is maintenance rehearsal	30.A	Maintenance rehearsal allows information to be held in short term memory longer therefore increasing its duration
31.B	The number plate is a fact and therefore semantic memory	32.B	The hippocampus consolidates declarative memories, whereas the amygdala consolidates emotional memories
33.C	The scene of the crime is a place, therefore context-dependent cues	34.A	Anterograde amnesia is the inability to remember new declarative memories. This occurs during Alzheimer's when the hippocampus is affected
35.C	This is the only correct option. All other options are performed by other brain structures	36.B	A head injury can cause memory loss as consolidation has been affected. Can't be option C as there is no indication that Joseph is having difficulty remembering events after the accident
37.C	This is a leading question as it suggests Joseph threw the first punch	38.C	Iconic is for visual information whereas echoic is for auditory information
39.A	This option is the only option that shows the correct order from most to least sensitive	40.D	The only option where the task asked by Dane's mother correctly matches the psychological terminology

SECTION B - SHORT ANSWER

Q1

a. To achieve full marks students need to explain how is Parkinson's disease caused

Example Response

Parkinson's Disease is caused due to a degeneration of dopamine releasing neurons in the substantia nigra.

Success Criteria	Mark Allocation
Identification of the cause of Parkinson's Disease	1 mark

b. To achieve full marks students need to identify one motor and one non-motor symptom of Parkinson's Disease that Doug is likely to experience

Example Response

Doug may experience motor symptoms such as slowness of movement. He may also experience non-motor symptoms such as depression.

Success Criteria	Mark Allocation
Motor symptom	1 mark
Non-motor symptom	1 mark

c. To achieve full marks, students need to explain how neurotransmitter levels can cause both motor and non-motor symptoms of Parkinson's Disease

Example Response

The reduction in dopamine levels can cause difficulties with coordination of movement, as dopamine is needed to control messages in the substantia nigra. Without enough dopamine, the neurons fire uncontrollably making it difficult for a person with Parkinson's disease to control movement. Dopamine assists with the feeling of pleasure and reward. Low levels of dopamine can therefore reduce the feeling of pleasure for the sufferer, which can then lead to depression.

Success Criteria	Mark Allocation
Identifying that dopamine controls voluntary movement and therefore low levels result in the inability to control movement	2 marks
Identifying that dopamine assists with the feeling of pleasure. Low levels therefore can lead to depression	2 marks

Q2

a. To achieve full marks, students need to explain with the use of an example for each, the difference between long-term potentiation and long-term depression.

Example Response
Long-term potentiation is the increased tendency of a group of neurons to fire together after they have been electrically stimulated at a particular electrical frequency. For example, when learning a mathematics formula repeatedly and applying it to a number of mathematical problems. On the other hand, long-term depression is the weakening of an existing synapse over time when the frequency of electrical stimulation is reduced. For example, no longer using the mathematical formula.

Success Criteria	Mark Allocation
Identifying the role of long-term potentiation	1 mark
Providing an example of long-term potentiation	1 mark
Identifying the role of long-term depression	1 mark
Providing an example of long-term depression	1 mark

b. To achieve full marks, students need to provide an example when long-term depression would be considered beneficial and justify their answer.

Example Response
Long-term depression could be beneficial when a person would like to forget something that they once knew. For example, a person who is learning the piano would benefit by forgetting the incorrect finger placements on the piano that they used to do when they first started playing.

Success Criteria	Mark Allocation
Identifying the benefit of long-term depression	1 mark
Identifying an example	1 mark

Q3

a. To achieve full marks, students need to use the language of classical conditioning to explain the terms extinction and spontaneous recovery.

Example Response
Extinction occurs when the conditioned stimulus no longer produces the conditioned response. Spontaneous recovery occurs when after a period of extinction; the conditioned stimulus once again causes the conditioned response.

Success Criteria	Mark Allocation
Explanation of extinction	1 mark
Explanation of spontaneous recovery	1 mark

b. To achieve full marks, students need to explain how Little Albert was conditioned using the three phase model of classical conditioning.

Example Response
Before – Before conditioning occurred, the presentation of the neutral stimulus (white rat) caused no response. The unconditioned stimulus (loud noise) naturally caused the unconditioned response (fear due to loud noise)
During – In this phase, the neutral stimulus is repeatedly paired with the unconditioned stimulus. The neutral stimulus is presented prior to the unconditioned stimulus.
After – The presentation of the conditioned stimulus (white rat) now causes the conditioned response (fear due to white rat)

Success Criteria	Mark Allocation
Identification of the "before" phase	1 mark
Identification of the "during" phase	1 mark
Identification of the "after" phase	1 mark

c. To achieve full marks, students need to name the ethical principle breached by Watson and Raynor.

Example Response
Debriefing

Success Criteria	Mark Allocation
Identifying "debriefing"	1 mark

d. To achieve full marks, students need to use classical conditioning terms to explain how Little Albert could be unconditioned.

Example Response

Little Albert could be unconditioned through extinction. The conditioned stimulus (white rat) could be repeatedly presented to Little Albert in the absence of the unconditioned stimulus (loud noise). Eventually, the conditioned stimulus (white rat) would no longer cause the conditioned response (fear due to white rat).

Alternatively, the loud noise (UCS) could be replaced with something pleasant such as a hug from his mother. Little Albert would then feel happiness as a result of the hug (UCR). When the white rat (CS) is paired with the hug (UCS), Little Albert would experience happiness due to the white rat (CR) and therefore would no longer fear the white rat.

Success Criteria	Mark Allocation
Explanation as to how Little Albert could be unconditioned.	3 marks

Q4

    a.   To achieve full marks, students need to name and describe the five elements involved in observational learning that will enable Tarran to teach his brother how to swim.

         Example Response
         Attention – Morgan will need to watch closely as Tarran performs the correct swimming technique
         Retention – Morgan will need to form a mental representation of the swimming technique Tarran is performing so that it can be retrieved at a later time
         Reproduction – Morgan must have the physical and intellectual ability to be able to perform the swimming technique
         Motivation – Morgan must have the want or desire to swim
         Reinforcement – Morgan is more likely to perform the skill if there is the prospect of a positive outcome

Success Criteria	Mark Allocation
Naming and describing the process of "attention"	1 mark
Naming and describing the process of "retention"	1 mark
Naming and describing the process of "reproduction"	1 mark
Naming and describing the process of "motivation"	1 mark
Naming and describing the process of "reinforcement"	1 mark

    b.   To achieve full marks, students need to outline the major difference between observational learning and operant conditioning

         Example Response
         In operant conditioning, the learning happens to the individual and they learn as a result of their own consequences (direct) whereas, in observational learning, the learner learns by watching the consequences of others behaviour (indirect)

Success Criteria	Mark Allocation
Identifying the main difference between operant conditioning and observational learning	1 mark

    c.   To achieve full marks, students need to provide two differences between classical conditioning and operant conditioning

         Example Response
         In classical conditioning, the learner is passive, whereas in operant conditioning, the learner is active. In classical conditioning, the nature of response is reflexive (involuntary) whereas in operant conditioning, the nature of response is voluntary.

Success Criteria	Mark Allocation
Identifying two differences between classical and operant conditioning	2 marks

Q5

a. To achieve full marks, students need to explain why it is easier for Alex to identify correct musical notes from a list of alternative notes than to write down music from memory

Example Response
When Alex identifies the correct musical notes from a list of alternative notes, he is using recognition. When Alex writes down notes from memory he is using free recall. Recognition is a more sensitive measure of retention than recall. Measures of retention that are more sensitive are more easily recalled

Success Criteria	Mark Allocation
Identifying that recognition is used when Alex identifies the correct notes from alternatives	1 mark
Identifying that (free) recall is used when Alex writes down notes from memory	1 mark
Identifying that recognition is a more sensitive measure of retention than recall	1 mark
Identifying that more sensitive measures are more easily recalled	1 mark

b. To achieve full marks, students need to explain how Alex can use state and context-dependent cues to assist him in remembering the notes

Example Response
State dependent cues – Alex should be in the same emotional state when practising as when he is performing at the music club. He can therefore practise in front of people who make him feel nervous. The feeling of nervousness will serve as a retrieval cue when he plays at the music club
Context dependent cues – Alex should practise playing in the same place, as he will be performing. Therefore, Alex should practise at the music club, as this place will serve as a retrieval cue.

Success Criteria	Mark Allocation
Identifying how state dependent cues can be used to assist Alex to remember the notes	1 mark
Identifying how context dependent cues can be used to assist Alex to remember the notes	1 mark

c. To achieve full marks, students need to identify Alex's primary appraisal of playing in the band on Saturday night.

Example Response
Threat

Success Criteria	Mark Allocation
Identifying the term "threat"	1 mark

d. To achieve full marks, students need to explain how the concepts of procedural memory, semantic memory and episodic memory can be applied to this scenario.

Example Response
Procedural memory – The memory of "how to" play the piano
Semantic memory – The memory of knowing that a piano has 88 keys
Episodic memory – The memory of the first time Alex played the piano

Success Criteria	Mark Allocation
Identifying how procedural memory relates to this scenario	1 mark
Identifying how semantic memory relates to this scenario	1 mark
Identifying how episodic memory relates to this scenario	1 mark

Q6

a. To achieve full marks, students need to write a hypothesis for Professor Hemingway's research

Example Response
It is predicted that first year Psychology students at Monash University who consume alcohol will have a reduced quality of sleep compared to those students who do not consume alcohol.

Success Criteria	Mark Allocation
Identifying the IV (alcohol)	1 mark
Identifying the DV (quality of sleep)	1 mark
Identifying the direction (reduced quality of sleep)	1 mark

b. To achieve full marks, students need to describe a repeated measures design and explain how Professor Hemmingway could conduct a repeated measures design in this investigation.

Example Response
A repeated measures design is an experimental design whereby all participants in the sample are exposed to both the control and experimental condition. In this investigation, Professor Hemingway would require all participants to consume no alcohol and then sleep. The following evening, all participants would consume alcohol and then sleep.

Success Criteria	Mark Allocation
Describing a repeated measures design	1 mark
Explanation as to how Professor Hemingway would conduct a repeated measures design in this investigation	1 mark

c. To achieve full marks, students need to describe a matched participant design and identify what Professor Hemingway should "match" in her investigation.

Example Response
In a matched participant design, participants are matched or paired with another participant based on characteristics related to the investigation. One person in the pair would be exposed to the control condition, while the other participant would be exposed to the experimental condition. In this investigation, Professor Hemingway would match participants on their usual quality of sleep.

Success Criteria	Mark Allocation
Description of a matched participant design	1 mark
Identifying a characteristic that would be matched	1 mark

d. To achieve full marks, students need to explain why a repeated measures design eliminates more participant variables compared to a matched participant design.

Example Response
In a repeated measures design, the person who forms the control and experimental condition is the same individual and therefore all participant related variables are eliminated. In a matched participant design, although the participants are similar, they are not identical and therefore participant related variables still exist.

Success Criteria	Mark Allocation
Identifying a reason as to why participant related variables are eliminated in a RMD and not in a MPD	1 mark

e. To achieve full marks, students need to describe the placebo effect and explain how a placebo can be used in this research to eliminate the placebo effect.

Example Response
The placebo effect is the change in behaviour due to the belief that you have taken a drug. To eliminate the effect, all participants must believe that they have taken a drug. In this investigation, participants from the experimental group would be given alcohol, whereas, participants from the control group would be given a drink that smells and tastes like alcohol, yet does not contain alcohol.

Success Criteria	Mark Allocation
Description of the placebo effect	1 mark
Explanation as to how a placebo can be used in this investigation	1 mark

UNIT 3 PSYCHOLOGY EXAM MARKING GUIDE

STUDENT NAME:_____

Question	Marks available	Marks awarded	Comments
Multiple Choice	40		
1a	1		
1b	2		
1c	4		
2a	4		
2b	2		
3a	2		
3b	3		
3c	1		
3d	3		
4a	5		
4b	1		
4c	2		
5a	4		
5b	2		
5c	1		
5d	3		
6a	3		

6b	2		
6c	2		
6d	1		
6e	2		

OVERALL MARK_____/90