



PSYCHOLOGY

2019

UNIT 3 EXAM

NAME: _____

Reading time: (15 minutes)

Writing time: (1.5 hours)

QUESTION AND ANSWER BOOK

Structure of book

Number of questions	40 Multiple Choice 6 Short Answer
Total number of marks	90

General Instructions

- Students are permitted to bring into the assessment room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the assessment room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this assessment.

Materials supplied

- Question and answer booklet.
- Additional space is available at the end of the booklet if you need extra paper to complete an answer. Ensure any extra space used is labelled clearly with the question number.

Instructions

- Write your name and student number in the space provided above on this page.
- All written responses must be in English.

SECTION A – MULTIPLE CHOICE

Questions 1-5 refer to the following information:

Jonathon is watching TV late at night when his cat knocks its dinner bowl onto the floor making a loud noise. This startles Jonathon and he quickly hides behind the couch. Once Jonathon realises it is just his cat, he returns to the couch and no longer feels frightened.

Question 1:

Jonathon has experienced the fight-flight-freeze response. Specifically, Jonathon has experienced which reaction as a result of the loud noise?

- A. Fight
- B. Flight
- C. Freeze
- D. All of the above

Question 2:

Considering Jonathon's reaction, which nervous system(s) are most likely to have been activated?

- A. Sympathetic
- B. Parasympathetic
- C. Both sympathetic and parasympathetic
- D. Somatic

Question 3:

To improve his chances of survival, many physiological changes would have occurred for Jonathon. Which of the following best outlines a physiological response and the survival benefit for Jonathon?

- A. Jonathon's pupils would have constricted, allowing more light to enter his pupils so that he can see the stressor more easily
- B. Jonathon's digestion would be stimulated to allow glucose to be released which will provide greater energy for Jonathon
- C. Jonathon's perspiration levels will decrease ensuring that his body is not overly sweaty which will assist him to confront his stressor
- D. Jonathon's heart rate will accelerate enabling more oxygen to be carried to his working muscles

Question 4:

Jonathon's cat continues to knock its dinner bowl onto the floor every night for the next two weeks. Eventually, Jonathon begins to get scared every time he sees his cat. According to classical conditioning, Jonathon has formed an association between which of the following:

- A. The cat and the bowl
- B. The cat and the loud noise
- C. The cat and fear due to the cat
- D. The loud noise and hiding behind the couch

Question 5:

Jonathon's fear response begins to affect his everyday life. He finds himself avoiding cats and decides to give his cat to a friend. One month passes without Jonathon seeing a cat. Unfortunately, Jonathon is in a local park one day and sees a stray cat. He once again experiences fear due to the cat. Which of the following is correct regarding Jonathon?

- A. Extinction occurred when Jonathon didn't see a cat for one month, followed by spontaneous recovery when Jonathon saw a cat in the park
- B. Stimulus generalisation has occurred but not stimulus discrimination
- C. Extinction has occurred but not spontaneous recovery
- D. Spontaneous recovery has occurred, but not extinction

Questions 6-8 refer to the following information:

Rob is cooking a BBQ when he accidentally touches the hot plate with his hand. He immediately withdraws his hand prior to feeling the burning sensation.

Question 6:

The type of response demonstrated by Rob is:

- A. A spinal reflex which is voluntary
- B. The fight-flight-freeze response which is involuntary
- C. An innate response which is involuntary
- D. A sympathetic nervous system response which is involuntary

Question 7:

Which of the following statements is incorrect regarding the response demonstrated by Rob?

- A. The sensory information (of pain) will be sent to the brain after Rob withdraws his hand
- B. The movement of the hand away from the hot plate is caused by the activation of the autonomic nervous system which sends information via motor neurons
- C. The sensory information will be sent from Rob's hand to the spinal cord via sensory neurons in the somatic nervous system
- D. Interneurons in the spinal cord transmit information from sensory neurons to motor neurons

Question 8:

Rob gets ice from the freezer which he applies to the burn. According to the three phase model of operant conditioning, the antecedent, the behaviour and the consequence respectively are:

- A. Relief from the burn, applying ice, touching the BBQ
- B. Burning sensation from BBQ, relief from burn, getting ice from freezer
- C. Relief from burn, touching the BBQ, applying ice
- D. Burning sensation from BBQ, applying ice, relief from burn

Questions 9 – 12 refer to the following information:

Professor Philips wishes to conduct an investigation on the effect that gardening has on alleviating stress levels. To do this, Professor Philips places a pamphlet on the noticeboard of a local church asking for volunteers to be involved in his study. Of the 200 adults who attend the church, 30 adults agree to be involved. He places the names of these 30 adults into a hat and as he pulls out each name, he assigns them to either Group A or Group B. All participants are required to complete an online stress questionnaire prior to the study. The questionnaire gives participants a ranking out of 10 indicating their stress levels, where a score of 1 is low stress and a score of 10 is high stress. Participants in Group A are then instructed to undertake gardening at either their home address or in the garden at the church each day for the next 3 weeks. Participants in Group B are required to undertake their normal activity for the next 3 weeks. At the end of the 3 week period, participants once again complete the stress questionnaire and their results are compared to the original scores.

Question 9:

Which of the following correctly identifies how Professor Philips conducted his investigation?

- A. Professor Philips used random sampling but not random allocation
- B. Professor Philips used random allocation but not random sampling
- C. Professor Philips used both random sampling and random allocation
- D. Professor Philips used neither random sampling nor random allocation

Question 10:

The purpose of using random sampling and random allocation respectively is to:

- A. Ensure that each member of the population has an equal chance of being chosen for the investigation; ensure that the results can be generalised to the population
- B. Ensure that the independent variable is the only variable that is measured; ensure that all members of the sample have an equal chance of being placed into the control or experimental group
- C. Ensure that the results of the investigation can be generalised; ensure that a conclusion can be made
- D. Ensure that the sample is representative of the population; ensure that in large sample sizes that participant related variables are minimised

Question 11:

In his investigation, Professor Philips used:

- A. An independent groups design as participants were placed into either a control or an experimental group
- B. A repeated measures design as participants completed a stress survey at the beginning of the investigation and once again at the end of the investigation
- C. A matched participants design as Professor Philips matched participants with an activity (gardening) which they would like to do
- D. A single-blind procedure as participants did not know whether they were allocated to the control or experimental group

Question 12:

Which of the following is an extraneous variable that has the greatest likelihood of affecting the results based on the investigation?

- A. The age of the participants
- B. The cortisol levels of the participants
- C. Whether or not the participants in Group A gardened every day for 3 weeks
- D. The church that the participants attended

Question 13:

Which of the following statements is incorrect regarding the lock and key process?

- A. The neurotransmitter is the “key” whereas the receptor site on the dendrite is the “lock”
- B. The likelihood of a postsynaptic neuron either firing or not firing is determined by the type of receptor site on the postsynaptic neuron
- C. Excitatory neurotransmitters increase the likelihood of a postsynaptic neuron firing, whereas inhibitory neurotransmitters reduce the likelihood of a postsynaptic neuron firing
- D. Glutamate is an example of an excitatory neurotransmitter whereas GABA is an example of an inhibitory neurotransmitter

Question 14:

Peter has recently been diagnosed with Parkinson’s Disease. Which of the following is a non-motor symptom that Peter is likely to experience?

- A. Difficulty sleeping
- B. Difficulty eating
- C. Difficulty hearing
- D. Difficulty seeing

Questions 15 – 17 refer to the following information:

Mary is unemployed and therefore has limited finances. To add to her stress, Mary has just received a phone call informing her that she has been unsuccessful in a recent job interview. Mary is incredibly disappointed about the news and wonders how she will afford next month’s rent.

Question 15:

Which of the following is correct regarding Mary’s response to the news regarding her new job?

- A. Mary will experience eustress whereby both her parasympathetic and sympathetic nervous systems will be activated
- B. Mary will experience distress whereby her sympathetic nervous system will be activated
- C. Mary will experience eustress whereby her sympathetic nervous system will be activated
- D. Mary will experience distress whereby both her parasympathetic and sympathetic nervous systems will be activated

Question 16:

According to Lazarus and Folkman's Transactional Model of Stress and Coping, which of the following statements correctly reflects Mary's appraisal of the situation?

- A. Mary not getting the job would be appraised as a challenge
- B. Mary not being able to pay next month's rent would be appraised as harm/loss
- C. Mary could appraise not getting the job as harm/loss. Alternatively, she could appraise her inability to pay next month's rent as a threat
- D. Mary has appraised the inability to pay next month's rent as a challenge

Question 17:

Which of the following is the best problem focussed coping strategy that Mary could use?

- A. Exercising to relieve her stress levels
- B. Contact the employer and ask why she didn't get the job
- C. Apply for another job
- D. Make a list of pros and cons as to why she needs to be employed

Questions 18-20 refer to the following information?

Mikaela is currently studying Year Twelve. She is struggling to keep up with her school work and has recently failed two SACs. Her parents are going through a bitter divorce and she is suffering from bullying at school. She is incredibly run down and a recent visit to the doctor indicates that she is showing signs of depression.

Question 18:

According to Hans Selye's General Adaptation Syndrome, which stage is Mikaela experiencing?

- A. Alarm
- B. Resistance
- C. Exhaustion
- D. Shock

Question 19:

Which of the following would not be experienced by a person in the shock phase?

- A. The body responds as though it is injured
- B. Body temperature increases, while blood pressure decreases
- C. People have been known to faint during this phase
- D. Some people have experienced a heart attack during this phase

Question 20:

A person's ability to deal with the stressor initially drops below normal levels of resistance during which stage?

- A. Alarm
- B. Resistance
- C. Exhaustion
- D. Shock

Question 21:

Peter has a driving test scheduled in a few weeks. He feels the need to do some driving practise in the hope that he will pass. Peter practising driving prior to his driving test is an example of:

- A. Context-specific effectiveness and problem focussed coping
- B. Coping Flexibility and emotion focussed coping
- C. An approach emotion-focussed coping strategy
- D. A problem focussed coping strategy that is emotion focussed

Question 22:

Many years ago, Sarah was in the park when a large dog approached her and barked loudly. Although a long time has passed since this incident occurred, Sarah remembers it quite vividly. Which of the following statements best explains the likely reason that Sarah has remembered this memory well?

- A. A large amount of adrenalin was secreted when Sarah saw the dog which increases the likelihood that the episodic memory would be formed
- B. A low amount of adrenalin was secreted when Sarah saw the dog which increases the likelihood that the episodic memory would be formed
- C. A large amount of GABA was secreted when Sarah saw the dog which increases the likelihood that the semantic memory would be formed
- D. A small amount of GABA was secreted when Sarah saw the dog which increases the likelihood that the semantic memory would be formed

Questions 23 and 24 refer to the following information:

Jarrold wants to teach his dog to salivate each time the dog hears a buzzer. To do this, he will use a buzzer and a doggy treat.

Question 23:

According to research into classical conditioning, which of the following statements correctly identifies how Jarrold should teach his dog to salivate each time the buzzer sounds?

- A. The buzzer and the dog treat should be presented at the same time
- B. The buzzer should be sounded 5 seconds prior to the presentation of the dog treat
- C. The dog treat should be presented prior to the sound of the buzzer
- D. The buzzer should be sounded half a second prior to the presentation of the dog treat

Question 24:

How will Jarrod know when classical conditioning has occurred?

- A. When the unconditioned stimulus causes the unconditioned response
- B. When the neutral stimulus causes the conditioned response
- C. When the conditioned response occurs due to the presentation of the conditioned stimulus
- D. When the neutral stimulus becomes the unconditioned stimulus

Question 25:

Samantha is a teacher. She has two students in her class who continually talk when she is trying to teach. She separates the students and tells them that they can sit next to each other once again when they can promise her that they will no longer talk.

- A. When Samantha separates the students she is using punishment; when the students promise not to talk in order to no longer be separated, Samantha is using negative reinforcement
- B. When Samantha separates the students she is using negative reinforcement; when the students promise not to talk in order to no longer be separated, Samantha is using positive reinforcement
- C. When Samantha separates the students she is using punishment; when the students promise not to talk in order to no longer be separated, Samantha is using positive reinforcement
- D. When Samantha separates the students she is using positive reinforcement; when the students promise not to talk in order to no longer be separated, Samantha is using negative reinforcement

Question 26:

Which of the following is an example of response cost?

- A. Removing a detention as a student has submitted their homework
- B. Taking away an Xbox when a child misbehaves
- C. Giving a child a smack
- D. Placing a child in the “naughty corner” until they say sorry

Question 27:

Which of the following correctly identifies a difference between classical and operant conditioning?

- A. In classical conditioning the response is voluntary, whereas the response in operant conditioning is reflexive
- B. In classical conditioning, the stimulus occurs after the response, whereas in operant conditioning, the stimulus occurs before the response
- C. Reinforcement occurs in operant conditioning, but not in classical conditioning
- D. In classical conditioning, the role of the learner is active, whereas in operant conditioning the role of the learner is passive

Question 28:

In terms of observational learning, which of the following is the correct order of the five key processes?

- A. Attention, retention, motivation, reproduction, reinforcement
- B. Retention, motivation, reproduction, reinforcement, attention
- C. Attention, reproduction, retention, motivation, reinforcement
- D. Attention, retention, reproduction, motivation, reinforcement

Questions 29 to 33 refer to the following information:

Susan is walking along the street when she sees a car collide with a parked car. The driver sped away and Susan quickly read the number plate. Unfortunately, she did not have a pen and therefore could not write down the number plate. She repeated the number plate over and over until she could get to a phone to call the police.

Question 29:

The type of rehearsal that Susan used was:

- A. Elaborative rehearsal
- B. Maintenance rehearsal
- C. Repetitive rehearsal
- D. Chunking rehearsal

Question 30:

According to the Atkinson-Shiffrin multi-store model of memory, the type of rehearsal used by Susan would most likely:

- A. Increase the duration of her short term memory
- B. Increase the capacity of her short term memory
- C. Increase the capacity and duration of her short term memory
- D. Encode the information from her sensory memory to her short term memory

Question 31:

The number plate remembered by Susan is an example of a:

- A. Procedural memory
- B. Semantic memory
- C. Episodic memory
- D. Implicit memory

Question 32:

The memory of the number plate and the memory of the emotions experienced during the witnessing of the accident would be consolidated respectively in the

- A. Amygdala; hippocampus
- B. Hippocampus; amygdala
- C. Cerebral cortex; amygdala
- D. Cerebellum, cerebral cortex

Question 33:

When Susan is finally able to ring the police, she is unable to remember the number plate. The police suggest that Susan returns to the scene of the accident as this may assist Susan's ability to remember. In doing so, Susan is using:

- A. Recognition
- B. State dependent cues
- C. Context dependent cues
- D. Relearning

Questions 34 and 35 refer to the following information:

Katrina has recently been diagnosed with Alzheimer's Disease. Sufferers of Alzheimer's Disease will also experience anterograde amnesia.

Question 34:

Katrina will most likely suffer anterograde amnesia because:

- A. Alzheimer's Disease affects the hippocampus which is responsible for the formation of declarative memories
- B. Alzheimer's Disease affects the hypothalamus which is responsible for the formation of declarative memories
- C. Alzheimer's Disease affects the amygdala which is responsible for the formation of procedural memories
- D. Alzheimer's Disease affects the cerebral cortex which is responsible for the formation of episodic memories

Question 35:

Which of the following statements best describes the role of the cerebellum in terms of memory?

- A. The cerebellum stores memory for language
- B. The cerebellum retrieves long term declarative memories
- C. The cerebellum encodes, processes and stores procedural memories
- D. The cerebellum enables the formation of spatial memories

Questions 36 and 37 refer to the following information:

Joseph is playing football when a fight broke out between him and a player from the opposing team. Joseph receives a punch to the head, causing him to fall the ground and lose consciousness. When he “comes to” Joseph is unable to remember aspects of the match including the position he is playing in, the score and the duration of the match.

Question 36:

Joseph’s inability to remember is most likely due to:

- A. A lack of retrieval cues
- B. A disruption to the consolidation process
- C. Anterograde amnesia
- D. Damage to the amygdala

Question 37:

Chris is the football umpire who saw the collision between the two players. Chris is required to attend the tribunal to give evidence as to what he saw on the football field. In doing so, Chris is asked a number of questions. Which of the following is an example of a leading question that Chris may be asked?

- A. Why do you believe the fight occurred between Joseph and the opposition player?
- B. How many people were involved in the fight?
- C. Why do you believe Joseph threw the first punch?
- D. What was the score when the fight occurred?

Question 38:

The main difference between echoic and iconic memory is that:

- A. Iconic memory has a duration of 3-4 seconds whereas echoic memory has a duration of 0.2 seconds
- B. Iconic memory has a greater capacity than echoic memory
- C. Iconic memory holds the memory of visual information, whereas echoic memory holds the memory of auditory information
- D. Iconic memory holds information in its raw form, whereas echoic memory holds information that has already been encoded

Question 39:

Which of the following correctly identifies the methods of memory retrieval from most to least sensitive?

- A. Relearning, recognition, recall
- B. Recall, recognition, relearning
- C. Recognition, recall, relearning
- D. Recognition, relearning, recall

Question 40:

Dane is wishing to learn the first 20 elements from the periodic table. After 30 minutes of studying the periodic table, he asks his mother to test him. Which of the following statements correctly identifies how Dane's mother may determine Dane's knowledge of the periodic table?

- A. Dane's mother could ask Dane to select the first 20 elements from a list of 40 elements. This will require Dane to use cued recall.
- B. Dane's mother could provide the first letter of each element to assist Dane. This will require Dane to use recognition.
- C. Dane's mother could ask Dane to write out the list of elements repeatedly. This will require Dane to use relearning.
- D. Dane's mother could ask Dane to write down the elements in any order he wishes. This will require Dane to use free recall.

SECTION B – SHORT ANSWER

Question 1 (7 marks)

Doug has recently been diagnosed with Parkinson's Disease.

- a. How is Parkinson's disease caused? 1 mark

- b. Identify one motor and one non-motor symptom of Parkinson's Disease that Doug is likely to experience. 2 marks

- c. Explain how neurotransmitter levels can cause both motor and non-motor symptoms of Parkinson's Disease. 4 marks

Question 2 (6 marks)

- a. Explain with the use of an example for each, the difference between long-term potentiation and long-term depression.

4 marks

- b. Provide an example when long-term depression would be considered beneficial. Justify your answer.

2 marks

Question 3 (9 marks)

- a. Using the language of classical conditioning, explain the terms extinction and spontaneous recovery.

2 marks

- b. Explain how Little Albert was conditioned using the three-phase model of classical conditioning.

3 marks

- c. Watson and Raynor failed to un-condition Little Albert at the conclusion of the experiment. Name the ethical principle breached by Watson and Raynor.

1 mark

- d. Using classical conditioning terms, explain how Little Albert could be unconditioned.

3 marks

Question 4 (8 marks)

- a. Tarran is showing his younger brother Morgan how to swim. Name and describe the five elements involved in observational learning that will enable Tarran to teach his brother how to swim.

5 marks

- b. Outline the major difference between observational learning and operant conditioning.

1 mark

- c. Provide two differences between classical conditioning and operant conditioning

2 marks

Question 5 (10 marks)

A number of years ago, Alex learnt how to play the piano. A group of friends have asked him to join their band. He practises with the band weekly and finds that he is improving greatly as a musician. He is now able to identify correct notes amongst a list of incorrect notes. However, he still finds it difficult to write down music from songs that he knows from memory. The band has been invited to play in a music club this Saturday night in front of a large audience.

- a. 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.

4 marks

- b. Alex is feeling stressed as he is worried that he will forget the right notes to play when playing at the music club. Explain how Alex can use state and context-dependent cues to assist him in remembering the notes.

2 marks

- c. According to Lazarus and Folkman's Transactional model of stress and coping, what is Alex's primary appraisal of playing in the band on Saturday night?

1 mark

- d. Explain how the concepts of procedural memory, semantic memory and episodic memory can be applied to this scenario.

3 marks

Question 6: (10 marks)

Professor Hemingway is interested in the effect that alcohol has on the quality of sleep. She decides to conduct an investigation on first year Psychology students at Monash University. She places the names of all first year Psychology students into a random number generator, which selects 40 students for her investigation. Prior to bed, participants will be required to consume alcohol (3 standard alcoholic drinks) and then sleep. The next morning, participants are required to complete a questionnaire where they will be required to indicate the quality of sleep they experienced.

- a. Write a hypothesis for Professor Hemingway's research

3 marks

- b. What is a repeated measures design? How could Professor Hemmingway conduct a repeated measures design in this investigation?

2 marks

- c. Professor Hemingway could have used a matched participant design. What is a matched participant design and what should Professor Hemingway "match" in her investigation?

2 marks

- d. Why does a repeated measures design eliminate more participant variables compared to a matched participant design?

1 mark

- e. What is the placebo effect? How can a placebo be used in this research to eliminate the placebo effect?

2 marks

END OF QUESTION AND ANSWER BOOK

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