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YEAR 12 *Trial Exam Paper*

2016

PSYCHOLOGY

Written examination

Sample responses

This book presents:

- high-level sample responses
- explanatory notes
- mark allocations
- tips

SECTION A – Multiple-choice questions

Question 1

Answer: B

Explanatory notes

A is incorrect. The serial position effect relies on free recall of the items on the list, not recognition.
B is correct. When testing for the serial position effect, it is best to use words that are similar in both their characteristics and their significance to the learner. More significant words will stand out, as will words of unusual length or sound, thus confounding the result.
C is incorrect. The serial position curve typically shows a slightly higher level of recall for words at the end of a list than for words at the start of a list, and a much lower level of recall for words in the middle of the list. While the primacy effect can be observed, particularly if there is a delay in testing, testing is usually immediate and the recency effect is more apparent.
D is incorrect. Words in the middle of the list are least likely to be remembered because they are not transferred to long-term memory (LTM) and they are not still retained in short-term memory (STM).

Question 2

Answer: D

Explanatory notes

A is incorrect. The recency effect means that words at the end of the list would still be in short-term memory, but five minutes would be beyond the duration of short-term memory without rehearsal.
B is incorrect. The primacy effect would be most likely to be evident.
C is incorrect. See the explanation for B.
D is correct. It is most likely that some of the words from the beginning of the list would have been transferred to long-term memory, and the primacy effect would be apparent.

Question 3

Answer: C

Explanatory notes

A is incorrect. Auditory information is processed in the temporal lobes, not the occipital lobes.
B is incorrect. The occipital lobes are located to the rear of the cerebral cortex, adjacent to the temporal and parietal lobes.
C is correct. Visual information received on the right side of each retina will be processed in the left occipital lobe and vice versa (contralateral pathways), and this information travels via the optic nerve.
D is incorrect. Interpreting visual information relies on processing in the association areas of the occipital lobes and other parts of the brain, as well as in the primary visual cortices.

Question 4

Answer: D

Explanatory notes

A is incorrect. This is a description of the benefits of using elaborative rehearsal.
B is incorrect. Maintenance rehearsal does not affect the amount of information that can be stored in short-term memory; maintenance rehearsal affects the duration of the storage.
C is incorrect. Maintenance rehearsal increases the duration of short-term memory, not long-term memory.
D is correct. Maintenance rehearsal relies on repeating the information over and over in short-term memory to extend the duration that it can remain in short-term memory.

Tip

- *Be careful not to confuse duration and capacity when discussing these memory stores. Duration is the length of time information can be stored, while capacity is how much information can be stored at any one time.*

Question 5

Answer: B

Explanatory notes

A is incorrect. A positive reinforcer would strengthen her sport-playing behaviour.
B is correct. By avoiding sport, Marissa is removing her embarrassment response, and is therefore negatively reinforcing (strengthening) her avoidance behaviour.
C is incorrect. Punishment is a means of discouraging an individual from practising an undesirable behaviour. The aim is to weaken the inappropriate behaviour, whereas by avoiding embarrassment, Marissa is strengthening her avoidance behaviour.
D is incorrect. Marissa's embarrassment is the consequence of (or response to) her brother's criticism of her running. Marissa's tendency to react with embarrassment is the environment that leads to her response (the discriminative stimulus).

Question 6

Answer: A

Explanatory notes

A is correct. Marissa is including all sport as possible means of embarrassment so she is generalising.
B is incorrect. If Marissa limited her response to soccer only, she would be demonstrating discrimination.
C is incorrect. Extinction refers to the disappearance of the response over time.
D is incorrect. Shaping is a process where a reinforcer is given for each response that is closer and closer to a desired response.

Question 7

Answer: B

Explanatory notes

A is incorrect. Punishment usually applies to a negative consequence immediately following an undesirable behaviour. For example, if David was immediately sent to his room when his mother heard him teasing Marissa, this would be an example of punishment.
B is correct. A response cost is when a desired stimulus (game) is removed in response to the behaviour. The loss of playing computer games is the cost of David's behaviour.
C is incorrect. Reinforcement is always about strengthening a behaviour, not weakening it.
D is incorrect. Shaping is selectively reinforcing responses as they get closer and closer to the desired response, to shape a set of behaviours.

Question 8

Answer: A

Explanatory notes

A is correct. Difficulty in recalling memories laid down before a brain injury is known as retrograde amnesia.
B is incorrect. Anterograde amnesia is an inability to lay down new memories after a brain injury.
C is incorrect. This refers to decay theory, where memories are lost due to the decay or fading of the neural information.
D is incorrect. Proactive interference occurs when previously learned information blocks our ability to recall newly learned information.

Question 9

Answer: C

Explanatory notes

A is incorrect. Decay theory generally applies to much older people, and is believed to be due to the neurons associated with the memories not firing over time, causing the memory trace to fade or decay.
B is incorrect. Older memories may return if the brain injury is not too severe, but because Jenna's memory of the accident was not consolidated, it is unlikely that a retrieval cue will cause her to remember the accident.
C is correct. Consolidation theory states that for a memory to be fully formed there must be an uninterrupted period of around 30 minutes during which the memory trace is formed and consolidated. The accident would have interrupted this process.
D is incorrect. Interference of older memories, or retroactive interference, is not related to brain injury.

Question 10

Answer: A

Explanatory notes

A is correct. For new memories to be formed, new connections must be made between the axon terminals of presynaptic neurons and the dendrites of postsynaptic neurons, a process that is stimulated by glutamate.
B is incorrect. Retrograde amnesia is the inability to recall previously stored memories. An inability to form new memories is anterograde amnesia.
C is incorrect. Jenna was previously a healthy 16-year-old so the deterioration of brain tissue seen in Alzheimer's disease is unlikely.
D is incorrect. If the brain was damaged sufficiently to prevent new learning, glutamate would not be released by the presynaptic neurons.

Question 11

Answer: C

Explanatory notes

A is incorrect. Huong would most likely be in normal waking consciousness while learning in class.
B is incorrect. Huong is learning a new skill and will be unable to use automatic processes when learning to build the website. It is likely, however, that he will employ automatic processes at some times – for example, when typing.
C is correct. It is expected that Huong will divide his attention between the computer and the teacher at times, and at other times, he will focus selectively on applying the new skills.
D is incorrect. While concentrating in class, Huong will remain in normal waking consciousness.

Question 12

Answer: D

Explanatory notes

A is incorrect. This form of logical activity will primarily be a left-brain activity, but the right hemisphere will also be active.
B is incorrect. The left brain will be dominant.
C is incorrect. The learning will not be localised in the frontal lobes. The hippocampi, which are in the temporal lobes, will also be active, as will each of the other lobes of the brain, their primary cortices and association areas.
D is correct. The left hemisphere will most likely be dominant, and glutamate secretion will increase between the presynaptic neurons and postsynaptic neurons as new neural connections are formed.

Tip

- *Always read all of the alternatives before making a selection. In this case, you may have incorrectly selected C after reading the reference to the left hemisphere, but D is the correct response.*

Question 13

Answer: B

Explanatory notes

A is incorrect. While Huong will be observing and learning from his teacher, the neural changes are best described as adaptive plasticity, not as observational learning.
B is correct. Adaptive plasticity allows the adult brain to continue to respond and change when given new experiences. This involves the creation of new synapses and new neural connections.
C is incorrect. Developmental plasticity occurs in the brain during pre-natal development, infancy and childhood.
D is incorrect. Proliferation occurs in the brain during pre-natal development.

Question 14

Answer: D

Explanatory notes

A is incorrect. If Huong had imagined how he had been feeling when in the classroom he could recreate a state that could help his recall. The image of the classroom was a context-dependent cue.
B is incorrect. Relearning is reviewing previously learned information to consolidate the learning.
C is incorrect. If Huong had looked at a range of alternative pieces of information to retrieve his memories, he would have been using recognition.
D is correct. By imagining the classroom, Huong was recreating the context within which he had learned the material; this is a context-dependent cue.

Question 15

Answer: B

Explanatory notes

A is incorrect. This is a sensory function of the somatosensory cortex.
B is correct. The immediate pulling away of the foot is a motor response initiated by the somatic nervous system in response to the sensory information.
C is incorrect. This is a response of the sympathetic nervous system.
D is incorrect. This is not a motor function but a sensory function.

Question 16

Answer: A

Explanatory notes

A is correct. The autonomic nervous system is the sub-system of the peripheral nervous system that is responsible for autonomic arousal. The sympathetic branch of the autonomic nervous system generates the fight-or-flight response.
B is incorrect. The parasympathetic branch of the autonomic nervous system generates a calming response when the perceived threat has passed.
C and D are both incorrect. The somatic nervous system is responsible for movement of skeletal muscles, not activation of visceral muscles, organs and glands.

Question 17

Answer: C

Explanatory notes

A is incorrect. Saliva production is reduced when the fight-or-flight response is triggered, and a sense of fear is a psychological response.
B is incorrect. The bronchi dilate when the sympathetic nervous system triggers the fight-or-flight response.
C is correct. The adrenal glands release adrenalin to trigger the fight-or-flight response and ready the body for action when a threat is perceived.
D is incorrect. The arterioles are dilated and the heart rate is reduced when the perceived threat has passed.

Question 18

Answer: C

Explanatory notes

A is incorrect. This is not a complex series of responses typical of a fixed action pattern.
B is incorrect. Rolling over is not a reflexive response in the situation described.
C is correct. Flora had to reach an appropriate level of maturation to be able to roll over.
D is incorrect. Behaviours dependent on maturation do not respond to external stimuli before the body reaches the appropriate level of development.

Question 19

Answer: D

Explanatory notes

A is incorrect. This is new learning so there are no existing neural pathways for this activity.
B is incorrect. Cell migration occurs in the pre-natal brain.
C is incorrect. The primary motor cortex is in the frontal lobes.
D is correct. The increased motor movement would create new neural development in the frontal lobes as the motor neurons in the primary motor cortex became more developed.

Question 20

Answer: D

Explanatory notes

A is incorrect. While the memory of the layout of the town is a long-term memory, this is very general and not the best explanation.
B is incorrect. The memory of the layout of the town is not a procedural memory.
C is incorrect. The memory of the layout of the town is not an episodic memory.
D is correct. The memory of the layout of the town is a semantic memory, which remains relatively stable across the life span.

Question 21

Answer: A

Explanatory notes

A is correct. By identifying people from old photos, Margot is using recognition.
B is incorrect. Free recall is retrieving memories without any cues.
C is incorrect. While the context of being in her home town may have aided Margot's recall, this is not what was described in the question.
D is incorrect. Relearning is the most effective measure of retention, but this involves reviewing previously learned information.

Question 22

Answer: B

Explanatory notes

A is incorrect. Any cognitive impairment will be temporary and will disappear after a good night's sleep.
B is correct. Margot's performance on simple repetitive tasks will be impaired because these require little selective attention.
C is incorrect. The mental effort needed to focus on complex tasks means that they are likely to be performed adequately, even when sleep deprived.
D is incorrect. In the short term, Margot would be likely to have some difficulty in concentrating or with memory.

Question 23

Answer: C

Explanatory notes

A is incorrect. Microsleeps are brief involuntary moments of sleep. Margot would have been likely to experience these when apparently awake before having the opportunity to catch up on her sleep.
B is incorrect. Following sleep deprivation, we tend to require more rapid eye movement (REM) sleep, not less.
C is correct. Following a period of sleep deprivation, it is common to experience REM rebound, where we spend longer in REM sleep when given the opportunity to have a normal night of sleep.
D is incorrect. See the explanation for C.

Question 24

Answer: D

Explanatory notes

A is incorrect. Throughout adolescence, we tend to need more sleep than we did previously.
B is incorrect. While young people do need more sleep than adults, this does not refer to the sleep–wake shift. During adolescence, we tend to wake later than previously.
C is incorrect. During adolescence, most young people tend to go to sleep later than they did previously.
D is correct. When entering adolescence, most young people experience a tendency to fall asleep later at night and need to sleep for longer in the morning than they did previously.

Tip

- *The use of the term 'best' in the question suggests that there is an alternative response that may be almost right. In this case, B could have been selected, but D was a better response.*

Question 25

Answer: A

Explanatory notes

A is correct. While the emotional memory is formed in the amygdala, this triggers the actions of the hippocampus, which consolidates the memory.
B is incorrect. The hypothalamus is active in triggering the fear response but not in the consolidation of the memory.
C is incorrect. Emotional memories are initially formed in the amygdala but not consolidated there.
D is incorrect. The cerebral cortex is not responsible for consolidation of memory.

Question 26

Answer: A

Explanatory notes

A is correct. The barking dog naturally generated the fear response so it was the unconditioned stimulus.
B is incorrect. Dogs later became the conditioned stimulus, but in the initial situation the dog's loud barking was the unconditioned stimulus.
C and D are incorrect. The dog was a stimulus, not a response.

Question 27

Answer: C

Explanatory notes

A is incorrect. The conditioned stimulus was any dog.
B is incorrect. The conditioned response was acute anxiety around dogs.
C is correct. The original fear response was a natural response to loud barking; this was the unconditioned response.
D is incorrect. The unconditioned stimulus was the original dog.

Question 28

Answer: A

Explanatory notes

A is correct. A conditioned response that is extinguished and then spontaneously reappears after a renewed presentation of the conditioned stimulus is known as spontaneous recovery.
B is incorrect. Extinction occurs when the conditioned response disappears after repeated occurrences where the conditioned stimulus is unaccompanied by the unconditioned stimulus.
C is incorrect. Generalisation occurs when the conditioned response is shown when exposed to a similar, but not identical, stimulus.
D is incorrect. This is not phrased in terms of classical conditioning.

Question 29

Answer: B

Explanatory notes

A is incorrect. Extinction occurs when the conditioned response disappears after repeated occurrences where the conditioned stimulus is unaccompanied by the unconditioned stimulus.
B is correct. The period during which the conditioned response is being learned is known as acquisition.
C is incorrect. Stimulus generalisation occurs when the conditioned response is shown following exposure to a similar, but not identical, stimulus.
D is incorrect. Reproduction is the term used to describe the mimicking of a learned behaviour in observational learning.

Question 30

Answer: A

Explanatory notes

A is correct. This is an incorrect statement about forgetting as described by Ebbinghaus.
B, C and D are incorrect. These all accurately describe Ebbinghaus' findings about forgetting.

Tip

- *Note the use of 'incorrect' in the question stem. There are three responses that correctly describe Ebbinghaus' findings, and a quick response may lead to the wrong choice. There is only one incorrect response.*

Question 31

Answer: C

Explanatory notes

A is incorrect. Difficulty in speech production is a likely outcome of Broca's aphasia.
B is incorrect. Wernicke's area is in the left temporal lobe, and damage to this area does not result in difficulty in producing speech.
C is correct. Broca's area, in the left frontal lobe, is responsible for the production of clear speech. Broca's area is also adjacent to the left primary motor cortex so damage is likely to result in mobility restrictions.
D is incorrect. Broca's area is on the left, not the right.

Question 32

Answer: B

Explanatory notes

A is incorrect. Case studies cannot be generalised because the information collected relates only to the patient being studied, and a *p* value cannot be calculated in a case study.
B is correct. Case studies cannot be generalised because the information collected relates only to the patient being studied.
C is incorrect. Case studies provide quite detailed information, but only on an individual participant.
D is incorrect. There is no independent variable and no dependent variable in a case study.

Question 33

Answer: A

Explanatory notes

A is correct. Withdrawal rights means that a participant can withdraw from a study at any time and may also choose to withdraw any data already collected that relates to them personally.
B is incorrect. Voluntary participation means that no one can be compelled to take part in a study.
C is incorrect. Debriefing is given at the conclusion of participation in a study. If there has been any deception as part of the study, it is necessary to clearly explain this as part of the debriefing.
D is incorrect. Participants do not need to justify their reason for withdrawal. It is freely allowed.

Question 34

Answer: C

Explanatory notes

A and B are incorrect. Language is not centred in the right hemisphere in the majority of people.
C is correct. The condition described is Wernicke's aphasia, which may result from damage to the left temporal lobe.
D is incorrect. The left frontal lobe contains Broca's area, not Wernicke's area.

Question 35

Answer: B

Explanatory notes

A is incorrect. Broca's aphasia is characterised by difficulty co-ordinating the muscles used to produce clearly enunciated speech.
B is correct. Wernicke's aphasia is characterised by fluent but largely meaningless speech and difficulty understanding the spoken word.
C is incorrect. Spatial neglect is characterised by an inability to recognise objects in the right visual field.
D is incorrect. The tip-of-the-tongue phenomenon is characterised by an inability to recall a piece of information while having access to some small piece of the information, such as the letter with which the word starts.

Question 36

Answer: C

Explanatory notes

A is incorrect. Counselling is a psychological intervention, not a biological intervention.
B is incorrect. The medication is not a psychological intervention.
C is correct. The counselling will boost Harley's capacity to cope psychologically, while the medication will boost his physiological state and is a biological intervention.
D is incorrect. Medication is not a social intervention.

Question 37

Answer: A

Explanatory notes

A is correct. When in the primary appraisal stage, Harley assessed his situation as a threat because he saw it resulting in future harm or loss because he could not imagine himself finding another girlfriend.
B is incorrect. Appraising the situation as a challenge would require Harley to see a positive outcome as a possibility, and this was not the case.
C is incorrect. Harley was clearly not coping in the secondary appraisal stage.
D is incorrect. Harley's negative interpretation of his situation meant it was not a benign assessment.

Question 38

Answer: B

Explanatory notes

A is incorrect. Before the counselling, Harley's load would have increased because his perception of his situation was very negative.
B is correct. Before the counselling, Harley's allostatic load would have been increasing in line with his increasingly negative assessment of the situation.
C is incorrect. See the response for B.
D is incorrect. It would be expected that the counselling would help Harley to gain a more positive perspective, thus decreasing his allostatic load.

Question 39

Answer: B

Explanatory notes

A is incorrect because dopamine is not released during times of extreme stress.
B is correct. The increased and prolonged secretion of these stress hormones would have ultimately lowered Harley's resistance to disease.
C is incorrect. The immune response would have been negative.
D is incorrect. The initial release of stress hormones aids the ability to cope. The longer the body is exposed to stress hormones, the more likely it is that the immune system will be compromised.

Question 40

Answer: D

Explanatory notes

A, B and C are all incorrect. These are experiences that would be expected in an altered state of consciousness.
D is correct. In normal waking consciousness, we are likely to have an accurate perception of the passing of time.

Question 41

Answer: D

Explanatory notes

A and B are incorrect. Matched participants (or matched pairs) is an experimental study design where each participant in the experimental group is matched with a participant from the control group who shares one or more key characteristics with the first participant.
C is incorrect. Independent groups design involves having two separate groups; one is exposed to the experimental condition and the other is the control group.
D is correct. Because the participants were used in both the control and the experimental conditions, this is a repeated measures design.

Question 42

Answer: C

Explanatory notes

A is incorrect. The type of shopping list was not varied so this cannot be the independent variable.
B is incorrect. The independent variable is the method of memorising, but the type of list was not measured and therefore cannot be the dependent variable.
C is correct. The method of memorising was varied and therefore is the independent variable. The number of items recalled was measured and therefore is the dependent variable.
D is incorrect. The type of items on the list was not measured. The method of memorising the items is the independent variable, not the dependent variable.

Tip

- *It may help to remember the difference between an independent variable and a dependent variable by reminding yourself that the dependent variable cannot change without manipulation of the independent variable.*

Question 43

Answer: A

Explanatory notes

A is correct. Because the same participants are used in both conditions, their performances may be improved by practice; therefore creating a possible extraneous variable.
B is incorrect. Counterbalancing is used to overcome the practice effects.
C is incorrect. There is no participant matching in this design.
D is incorrect. This design specifically controls for participant-related extraneous variables.

Question 44

Answer: C

Explanatory notes

A is incorrect. The recency effect is linked to testing for the serial position effect in a process where no time is allowed for elaboration.
B is incorrect. The primacy effect is linked to testing for the serial position effect in a process where no time is allowed for elaboration.
C is correct. By creating a narrative using the list of words, the words are given greater meaning and are therefore elaboratively rehearsed.
D is incorrect. Repetition occurs in maintenance rehearsal, not elaborative rehearsal.

Question 45

Answer: A

Explanatory notes

A is correct. Narrative chaining involves linking the words together in a narrative so that they are more easily remembered.
B is incorrect. The use of a mnemonic relies on elaboration, but elaboration itself does not describe a specific technique.
C is incorrect. An acronym is a pronounceable word created by using the first letters of the words to be remembered.
D is incorrect. An acrostic is a mnemonic device where a sentence is created and the initial letter and order of each word is the same as the initial letters and order of the words to be remembered.

Question 46

Answer: D

Explanatory notes

A is incorrect. Shaping is a procedure where a reinforcer is given for each response that is closer and closer to the desired response.
B is incorrect. Flooding is the exposure of a patient to a feared stimulus at a very high level.
C is incorrect. Graduated exposure removes a patient's fear by gradual exposure of the patient to the stimulus that creates the fear response.
D is correct. Dr Unley is creating an aversion to fatty foods by pairing them with a nauseous response.

Question 47

Answer: B

Explanatory notes

A is incorrect. The general nature of the instruction for Group A would most likely mean they would not refer to a wallet.
B is correct. Because it was explicitly suggested to Group 2 that a wallet was removed from the sports bag, it is likely that they would report seeing this, whereas Group, 1 who were not asked this question, would not.
C is incorrect. This is the reverse of what would most likely be reported.
D is incorrect. Group 2 would be more likely to report seeing the wallet removed from the sports bag than Group 1.

Question 48

Answer: D

Explanatory notes

A is incorrect. Loftus demonstrated that there is a strong likelihood of eyewitness testimony being incorrect if asked misleading questions, but it is not correct to say that this will always result in false testimony.
B is incorrect. Loftus showed a tendency to incorrectly recall, not a tendency to lie.
C is incorrect. Photographs may cause eyewitnesses to reconstruct their memories.
D is correct. Loftus showed that eyewitnesses may often give unreliable testimony and may reconstruct their recall of an event to fit with information implied by misleading questions.

Question 49

Answer: D

Explanatory notes

A is incorrect. This is not a case study because it does not examine an individual participant in detail. The sampling was not random because not all members of the population had an equal chance of being selected.
B is incorrect. This study did not follow a group of participants over an extended period of time, although it did use convenience sampling.
C is incorrect. There were two distinct groups and the sampling was not stratified.
D is correct. There were two independent groups of participants and the sampling method was convenience sampling.

Question 50

Answer: A

Explanatory notes

A is correct. Chunking involves grouping items together to improve short-term memory capacity.
B is incorrect. This describes maintenance rehearsal, which extends the duration of short-term memory.
C is incorrect. By creating a mnemonic to help remember the number, Helena would be using elaborative rehearsal by adding more meaning to the information so that it could be retained for longer in long-term memory.
D is incorrect. This is also an example of maintenance rehearsal.

Question 51

Answer: B

Explanatory notes

A is incorrect. Visual information is retained in iconic memory, not echoic memory.
B is correct. Iconic memory would hold the image for about 0.3 seconds.
C is incorrect. The visual-spatial sketchpad described by Baddeley and Hitch is a component of working memory, not long-term memory.
D is incorrect. Echoic memory holds information for three to four seconds.

Question 52

Answer: C

Explanatory notes

A is incorrect. Declarative memory includes episodic memory, which holds memories of events.
B is incorrect. Procedural memories are memories of how to perform an action while declarative memories are memories about facts, events and general, explicitly formed knowledge.
C is correct. Declarative memories are intentionally formed and are explicit; this is the responsibility of the hippocampus.
D is incorrect. Implicit memories are unintentionally formed and are therefore not declarative.

Question 53

Answer: A

Explanatory notes

A is correct. The central executive in this model is responsible for switching attention from task to task and deciding what information should be stored in long-term memory, among other higher-order tasks.
B is incorrect. This describes the role of the episodic buffer.
C is incorrect. This describes the role of the phonological loop.
D is incorrect. This is a general description of the role of working memory.

Question 54

Answer: D

Explanatory notes

A is incorrect. Amyloid plaques would be evident, but the hippocampal area would be decreased in size.
B is incorrect. Deterioration of the temporal lobes, particularly the hippocampal area, would be evident.
C is incorrect. The pre-frontal area is in the frontal lobes, not the temporal lobes.
D is correct. The hippocampus in the temporal lobes would be diminished and there would be evidence of neurofibrillary tangles in the affected areas.

Question 55

Answer: C

Explanatory notes

A is incorrect. The image presented to the left eye will be processed in both hemispheres.
B is incorrect. The image will be processed in the right occipital lobe as well as the left occipital lobe.
C is correct. The patient will be able to verbally name the image because it will be processed in both hemispheres.
D is incorrect. Processing will take place in both hemispheres and naming the image will be possible.

Question 56

Answer: B

Explanatory notes

A is incorrect. Free recall would require Matthew to simply recall information directly from long-term memory with no cues.
B is correct. The short-answer questions provided cues to aid recall.
C is incorrect. By choosing the correct answer from a list of alternative responses (multiple-choice), Matthew would be using recognition.
D is incorrect. Matthew had not reviewed the material before doing the task so it had not been relearned.

Question 57

Answer: D

Explanatory notes

A is incorrect. While it is possible that there was a practice effect, this does not explain the information in terms of the relative sensitivity of measures of retention.
B is incorrect. Multiple-choice questions rely on recognition.
C is incorrect. Both tasks used cues, but the relearning of the material would have been the most likely reason for his better score on the second test.
D is correct. Matthew relearned the material by reviewing it. This is a more sensitive measure of retention.

Question 58

Answer: B

Explanatory notes

A is incorrect. Recall is less sensitive than recognition.
B is correct. In order from most sensitive to least sensitive, the measures are relearning, recognition and recall.
C is incorrect. Relearning is the most sensitive, not the least.
D is incorrect. This is the order from least sensitive to most sensitive.

Question 59

Answer: C

Explanatory notes

A is incorrect. The *p* value is not an indicator of the placebo effect or of any other form of error in the study.
B is incorrect. The *p* value tells us whether or not the result is statistically significant.
C is correct. Because the result is less than the set *p* value of 0.05, the result can be considered statistically significant.
D is incorrect. The result is statistically significant.

Question 60

Answer: D

Explanatory notes

A is incorrect. A placebo does not have to be used to create the placebo effect.
B is incorrect. This describes the experimenter effect.
C is incorrect. The dependent variable is the result, not the variable that is manipulated to cause a result.
D is correct. The expectations of the participants can cause them to behave in a way that has an unwanted effect on the dependent variable.

Question 61

Answer: C

Explanatory notes

A is incorrect. The matched participants design controls for participant-related extraneous variables; it does not control for placebo or experimenter effects.
B is incorrect. The independent groups design will not control for the placebo or experimenter effects because it simply divides the participants into two groups.
C is correct. A double-blind design, where neither the participants nor the experimenter know which group the participants are assigned to, will control for both the placebo effect and the experimenter effect.
D is incorrect. The single-blind design can be used to control either the placebo effect or the experimenter effect, but not both.

Question 62

Answer: B

Explanatory notes

A is incorrect. This is operant conditioning. Jamahl has voluntarily changed his behaviour and is active in the process, whereas in classical conditioning Jamahl would be passive and his response would be involuntary.
B is correct. By rewarding Jamahl for good behaviour, the teacher is strengthening the likelihood of the good behaviour being repeated.
C is incorrect. Negative reinforcement strengthens a behaviour by removing a negative consequence.
D is incorrect. The elements of observational learning, attention, retention, motivation reinforcement and reproduction have not been applied here.

Question 63

Answer: D

Explanatory notes

A is incorrect. A response cost is a negative consequence or cost of an undesirable response or behaviour.
B is incorrect. The method of successive approximations is another term for shaping.
C is incorrect. While a token economy is employed as part of operant conditioning, this is not the *best* answer.
D is correct. A token economy is a form of behaviour modification where tokens (e.g. gold stars) are earned in return for the desired behaviour, and the tokens are then exchanged for a reward (e.g. extra playtime).

Question 64

Answer: B

Explanatory notes

A is incorrect. Structural encoding is less easily retrieved due to shallow processing.
B is correct. The deeper processing applied when meaning is added to words means that semantic encoding is more effective in aiding recall.
C is incorrect. Phonemic encoding relies on moderate processing.
D is incorrect. Phonemic encoding is less effective than semantic encoding in ease of recall because it relies on moderate processing.

Question 65

Answer: A

Explanatory notes

A is correct. Partial reinforcement involves reinforcing some correct responses but not all. This learning takes longer to be acquired but will be retained for longer.
B is incorrect. See explanation for A.
C is incorrect. This relates to continuous reinforcement where learning is quick but so is forgetting.
D is incorrect. This also relates to continuous reinforcement where both learning and extinction take a short amount of time.

SECTION B – Short-answer questions

Question 1a.

Sample response

1. suppression

Jacquie has consciously chosen to suppress or forget the uncomfortable memory of the accident.

2. repression

Jacquie has unconsciously repressed the memory of the accident because it is too distressing.

Mark allocation: 4 marks

- 1 mark for identifying suppression
- 1 mark for correctly explaining suppression and referring to Jacquie's experience as described in the scenario
- 1 mark for identifying repression
- 1 mark for correctly explaining repression and referring to the scenario

Question 1b.

Sample response

Retrieval failure theory
Jacquie has not used an appropriate memory cue to trigger the recall of the incident.

OR

Decay theory
Jacquie's memory of the incident has decayed or faded due to lack of use.

OR

Consolidation theory
A memory trace was not formed because there was an interruption to the consolidation process (Jacquie's head may have been bumped in the accident).

Mark allocation: 2 marks

- 1 mark for identifying a theory of forgetting
- 1 mark for correctly explaining the identified theory of forgetting

Question 2

Sample response

Attention: Madu would need to watch the players carefully to note how they demonstrated the skills of the game.
Retention: Madu would need to mentally retain the information about how the professionals played for later use.
Reproduction: Madu would need the physical ability to practise the specific skills demonstrated by the professional players, such as being able to copy their serve.
Motivation: Madu would need to want to practise so that he could play more like the professionals.
Reinforcement: Madu would need to experience some reward for playing well, such as a feeling of satisfaction with his game.

Mark allocation: 5 marks

- 1 mark for correctly applying the scenario to each of the elements of observational learning listed

Tip

- *In questions such as this, you must apply the scenario to the theory to gain the marks. Simply explaining what each of the five terms mean is not sufficient.*

Question 3

Sample response

1. slower physical reflexes

2. hand tremors

Also, droopy eyelids, difficulty focusing the eyes, a heightened sensitivity to pain, headaches or reduced energy

Mark allocation: 2 marks

- 1 mark each for any two of the physiological effects identified

Tip

- *It is easy to confuse physiological with psychological in questions such as this, especially when under pressure. Take care and read the question carefully to avoid these mistakes.*

Question 4a.

Sample response

1. k-complexes
2. sleep spindles

Mark allocation: 2 marks

- 1 mark for correctly naming k-complexes
- 1 mark for correctly naming sleep spindles

Question 4b.

Sample response

electroencephalograph or EEG

Mark allocation: 1 mark

- 1 mark for correctly identifying the electroencephalograph or EEG

Question 4c.

Sample response

Slow wave sleep pattern shown by delta waves.

Mark allocation: 1 mark

- 1 mark for correctly identifying delta waves

Tip

- *Slow waves alone is not sufficient; delta waves must be named.*

Question 4d.

Sample response

Any two of the following responses:

- a very low level of conscious awareness
- a very slow and regular heart rate
- very slow and regular respiratory rates
- little to no eye movement
- muscles completely relaxed
- very little body movement
- difficult to wake

Mark allocation: 2 marks

- 1 mark each for two of the characteristics identified.

Question 5

Sample response

A visually impaired child is likely to use the sense of touch to explore the environment. This will result in alternative neural pathways forming to extend the part of the somatosensory cortex allocated to touch.

Mark allocation: 2 marks

- 1 mark for reference to the heightened use of touch
- 1 mark for reference to the alternative or extended neural connections in the somatosensory cortex

Question 6a.

Sample response

No. By just posting an advertisement in the café, not all members of the population (first-year university students) under study were given an equal chance of being selected for the study.

Mark allocation: 3 marks

- 1 mark for correctly stating that it is not random
- 1 mark for direct reference to the scenario (by posting the advertisement in the café)
- 1 mark for explaining that not all members of the population under study were given an equal chance of being selected for the study

Question 6b.

Sample response

The pre-testing provided a baseline of data against which to measure the effect of the independent variable in Condition 2.

Mark allocation: 1 mark

- 1 mark for fully explaining the purpose of the control condition

Question 6c.

Sample response

Any two of the following responses:

- difficulty responding to a number of stimuli at once
- difficulty in judging distances
- a tendency to take more risks
- difficulty co-ordinating and controlling movement
- slower reaction time
- dulled eyesight and hearing, making them less likely to perceive incoming information
- difficulty maintaining concentration

Mark allocation: 2 marks

- 1 mark for each correctly identified expected change

Question 6d.

Sample response

This study is an experiment because it is designed to identify a cause-and-effect relationship between the variables of changed blood alcohol level and driving ability.

Mark allocation: 2 marks

- 1 mark for stating it is aimed at identifying a cause-and-effect relationship
- 1 mark for describing the relationship between the variables of blood alcohol level and driving ability

Question 7

Sample response

tip-of-the-tongue

Mark allocation: 1 mark

- 1 mark for correctly naming the tip-of-the-tongue phenomenon; 'TOT' is not acceptable

Question 8

Sample response

Structural encoding uses the physical features of words in learning, for example, upper case vs. lower case, or long vs. short.
Phonemic encoding relies on the sound of the word, for example, *bank* rhymes with *tank*.

Mark allocation: 4 marks

- 1 mark for correctly describing that structural encoding relies on the physical features of words
- 1 mark for an acceptable example
- 1 mark for correctly describing that phonemic encoding relies on the sound of the word
- 1 mark for an acceptable example

Question 9a.

Sample response

When Benjamin initially evaluated his ATAR and saw this as a threat or a challenge, he would have been applying primary appraisal.
Secondary appraisal occurred when Benjamin consciously began an analysis of strategies to get into medicine by a different pathway.

Mark allocation: 4 marks

- 1 mark for correctly identifying the initial response to the stressor of not qualifying for medicine as a threat or a challenge
- 1 mark for stating this was the primary appraisal
- 1 mark for correctly identifying that the secondary appraisal occurred
- 1 mark for stating that this involves an evaluation of strategies (alternative pathways into medicine) to respond to the stressor

Question 9b.

Sample response

problem-focused coping

Mark allocation: 1 mark

- 1 mark for correctly stating 'problem-focused coping'. No other response is acceptable.

Question 9c.

Sample response

Benjamin was experiencing distress because his stress was a negative experience.
Georgina was experiencing eustress because she was excited and nervous about a positive experience.

Mark allocation: 2 marks

- 1 mark for identifying the term distress as negative stress for Benjamin
- 1 mark for identifying the term eustress as positive stress for Georgina

Question 10

Sample response

By applying a dimensional approach, mental-health professionals can assess the presence of symptoms as well as the extent of symptoms for an individual to determine if they are of sufficient severity to require treatment.

Mark allocation: 2 marks

- 1 mark for indicating that a dimensional approach identifies the extent or severity of symptoms
- 1 mark for indicating that these may or may not be severe enough to warrant treatment (or that this information informs treatment in some way)

Question 11a.

Sample response

corpus callosum

The role is to allow the passage of neural information between the right and left hemispheres of the brain (at the upper cortical level).

Mark allocation: 2 marks

- 1 mark for identifying the corpus callosum
- 1 mark for stating that this allows the transfer of information between the hemispheres (at the upper cortical level)

Question 11b.

Sample response

Because the information was received in the left side of the retina, it was processed in the right hemisphere and could not travel to the left side of the brain (where the language centres are located) to be named.

Mark allocation: 2 marks

- 1 mark for stating the information was processed in the right hemisphere
- 1 mark for stating that the information could not cross over to the left side of the brain (where the language centres are located) to be named

Tip

- *This response is a good example of answering a question without restating the question. Restating the question wastes time and space, and earns no marks. Do not do it!*

Question 11c.

Sample solution

These studies concluded that, in most people, the left hemisphere is dominant for language and the right hemisphere is dominant for recognition of a visual image.

Mark allocation: 2 marks

- 1 mark for stating that the left hemisphere is dominant for language in most people (or that the left hemisphere can identify objects and name them)
- 1 mark for stating that the right is dominant for recognition

Question 11d.

Sample response

The patients all suffered from severe epilepsy, which may have affected their ability to perform in the tests.

OR

The patients studied were all on medications, which may have had cognitive side effects affecting their responses.

OR

The patients were all right-handed males and were more likely to have language centres in the left hemisphere.

OR

The work was compiled from a series of case studies using individual patients who may not have been representative of the general population because they were severe epileptics.

Mark allocation: 1 mark

- 1 mark for reference to the limiting factor of severe epilepsy

  OR

- 1 mark for reference to the limiting factor of medication

  OR

- 1 mark for reference to the limiting factor of a case study

Question 12a.

Sample response

Neurotransmitters are chemicals that transmit neural information across synapses.

Mark allocation: 1 mark

- 1 mark for correctly defining a neurotransmitter with reference to its role in chemically transmitting a message

Question 12b.

Sample response

Neurotransmitters are secreted by the terminal buttons or axon terminals of the pre-synaptic neuron across the synaptic gap (cleft) to excite or inhibit the post-synaptic neuron on the dendrite of the receiving neuron.

Mark allocation: 4 marks

- 1 mark for stating that the pre-synaptic neuron emits the neurotransmitter
- 1 mark for stating that this passes across the synaptic gap
- 2 marks for stating that the dendrites (1) of the post-synaptic (receptor) neuron (1) then receive the neural information

Question 13a.

Sample response

The aim was to determine if a fear response could be conditioned.

Mark allocation: 1 mark

- 1 mark for correctly identifying the aim of Watson's experiment

Question 13b.

Sample response

Any two of the following responses:

- This experiment breached the first ethical principal of doing no psychological or physical harm to a participant. Little Albert was harmed through the experience of the acquisition of the fear response (he became very anxious).
- Debriefing. Because Little Albert was removed from the experiment, he was not debriefed and the fear response was not extinguished.
- Informed consent. Little Albert's mother was not provided with full information about either the rights and role of Little Albert or the risks of the experiment. She therefore could not give fully informed consent.
- Confidentiality. Although Little Albert was not properly named, his photo was published, which breached confidentiality.

Mark allocation: 4 marks

- 2 marks each for any two of the sample responses shown (1 mark for correctly identifying the principle and 1 mark for an accurate explanation of how it was unethical in the study)

Tip

- *In questions where you are asked to identify and then explain something, clearly identify the term first and then explain it separately. Do not blend the term into the explanation.*

SECTION C – Research scenario

Question 1

Sample response

It is expected that fourth-year Victorian medical students who have been trained in the use of biofeedback techniques to recognise and reduce their stress symptoms will experience a reduction in the average number of stress symptoms, while those who do not receive biofeedback training will not.

Mark allocation: 3 marks

- 1 mark for identifying the population of fourth-year Victorian medical students
- 1 mark for identifying the independent variable as the provision of biofeedback training and the dependent variable as the number of stress symptoms
- 1 mark for predicting that the direction of the results was an expected reduction in the number of stress-related symptoms post-training

Question 2

Sample response

By interpreting the probability level, the researchers were able to infer that the difference between the groups after biofeedback training compared with their results pre-training showed that the reduction in stress symptoms was a result of the biofeedback training and not due to chance.

Mark allocation: 2 marks

- 1 mark for reference to the calculation of the probability level and what this means
- 1 mark for reference to the inference or conclusion that this allowed

Question 3

Sample response

The aim of this experiment was to determine if the use of biofeedback would help participants to reduce their stress responses.
This involved taking baseline physiological readings while the participants were attached to various biofeedback instruments and also assessing their stress perceptions using a questionnaire.
The results showed that before training the participants reported an average of seven stress symptoms per person (baseline reading). After receiving biofeedback training the experimental group (Group 1) reported an average of three symptoms per participant, while the control group (Group 2) reported an average of six symptoms per participant (reported no change).

Biofeedback provides information about the person's heart rate, respiration rate, galvanic skin response and other physiological indicators of arousal. This allows the researchers to infer that the biofeedback training (where participants were taught techniques to recognise and then reduce their physiological arousal while imagining stressful situations) was successful at the statistical significance level of $p \leq 0.05$.

The study sample was recruited from the population of all fourth-year medical students so that all members of the population had an equal opportunity to participate. This result can therefore be generalised to the population of fourth-year medical students.

There were several problems with this study that could be corrected to improve further research.
The sampling method, while random, could have controlled for a spread of participant characteristics in relation to stress if stratified random sampling had been implemented. For example, the researcher could have analysed the cultural and gender mix of the population and participants could then have been selected based on these proportions.
The study used an independent-groups design where the sample was divided into a control and an experimental group. The independent-groups research design was not the most effective design because the sample was not large enough to allow a spread of potential participant-related extraneous variables.
A repeated-measures design would have provided a more reliable result because this would have used the same participants in the pre-training and post-training conditions. This would have eliminated any potential participant-related extraneous variables.
A matched-participants design may have been more effective because after pre-testing to determine individual perceptions of stress, participants could be ranked according to their tendency to appraise situations as stressful or not and then allocated to ensure that the groups were even in terms of this variable.
A future study may be improved by introducing another form of stress reduction, such as relaxation techniques or physical exercise, to allow a comparison of biofeedback against other measures.

Mark allocation: 10 marks

Marks should be awarded for a combination of some of the above points. Students are required to demonstrate critical analysis in their responses by referring directly to the research scenario and explaining how this relates to the application of biofeedback. Students should also comment on the appropriateness or otherwise of the experimental design. Marks should be awarded for the strength of the evaluation of issues and the extent to which the proposed solutions demonstrate an understanding of biofeedback. Students must address all parts of the question to achieve a score above six marks, and full marks can only be awarded if the response shows adequate analysis as described.

Teachers should take into consideration the assessment criteria shown below:

- identify and describe the key terms, theories and issues
- explain the relevant terms, theories and issues and make connections between psychological concepts and theories, and data and research
- use appropriate examples, evidence and data to support the response
- interpret and analyse the issues, data and information
- evaluate the issues, data and information to draw appropriate conclusions.

Tip

- *When identifying potential problems with the research, always outline a solution for inclusion in future research.*

END OF SAMPLE RESPONSES