



YEAR 12 *Trial Exam Paper*

2014

PSYCHOLOGY

Written examination

Sample answers

This book presents:

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

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Section A – Multiple-choice questions

Question 1

Answer is B

Explanatory notes

A is incorrect. When using selective attention, controlled processes are in use also.

B is correct. When focusing solely on the work she was using selective attention and was using divided attention for the rest of the time.

C is incorrect. She would remain in normal waking consciousness throughout.

D is incorrect. There is no evidence of daydreaming in the question scenario.

Question 2

Answer is C

Explanatory notes

A is incorrect. Watching television is not a controlled process.

B is incorrect. Daydreaming is not the same as divided attention as daydreaming occurs in an ASC.

C is correct as she is shifting from NWC when watching TV to an ASC when daydreaming.

D is incorrect. Divided attention may occur when watching television, and may involve an activity using automatic processes, but this is not always the case.

Question 3

Answer is A

Explanatory notes

A is correct as organised and logical thought processes are a feature of NWC.

B is incorrect as this more correctly applies to an ASC. In NWC we normally have a clear awareness of the passage of time.

C is incorrect. Perceptual distortions are related to an ASC.

D is incorrect. Attention can be divided during NWC so thinking may not always be focused on just one task.

Question 4

Answer is C

Explanatory notes

A is incorrect as this measures electrical activity of the muscles, not brain waves.

B is incorrect as this measures electrical activity of the muscles that move the eyes, not brain waves.

C is correct. The EEG measures, amplifies and records the electrical activity of the brain, which is depicted as brain waves on a graph.

D is incorrect. The fMRI records areas of brain activity but not brain waves.

Question 5

Answer is B

Explanatory notes

A is incorrect as the beta brain wave pattern occurs in an alert state, or in REM sleep. Sleep spindles are not associated with beta waves.

B is correct. Stage 2 sleep is characterised by theta waves with short bursts of rapid activity known as sleep spindles.

C is incorrect as alpha applies to Stage 1 and does not include K-complexes.

D is incorrect as delta waves occur in Stages 3 and 4.

Question 6

Answer is A

Explanatory notes

A is correct. The Galvanic Skin Response is the degree to which the surface of the skin resists an electrical current – the level of electrical conductivity of the skin.

B is incorrect. This is measured with an EOG using electrodes placed around the eyes.

C is incorrect. The skin's temperature will affect the GSR but this is not a correct description.

D is incorrect. The level of perspiration will affect the GSR but this is also not a correct description.

Question 7***Answer is B*****Explanatory notes**

A is incorrect. The EOG will measure eye activity but cannot conclusively show if a person is awake or asleep.

B is correct. In REM sleep the EOG will detect the rapid eye movement. This is absent during NREM where movement is much slower.

C is incorrect. The EOG will only measure eye movement not the content of the mind.

D is incorrect. An EMG will be used for this purpose.

Question 8***Answer is D*****Explanatory notes**

A is incorrect. Observation does not involve questionnaires given to the participant.

B is incorrect. Video monitoring is used in a sleep laboratory so that the researcher or nurse can see the patient while they sleep.

C is incorrect. While psychometric testing can use questionnaires, there is no evidence in the scenario that the result would be psychometrically analysed.

D is correct. By completing a questionnaire Lachlan was reporting on his own perceptions of how he slept.

Question 9***Answer is D*****Explanatory notes**

A is incorrect. REM is a separate stage of sleep, not a part of Stage 3 sleep.

B is incorrect. Night terrors occur during stages 3 and 4 NREM sleep. They are an unusual event and would not be expected in each person observed in a sleep laboratory.

C is incorrect; as the night progresses, the amount of time spent in REM sleep increases.

D is correct; as the night progresses, the amount of time spent in REM sleep increases.

Question 10**Answer is C****Explanatory notes**

A is incorrect as this is also the role of the primary motor cortex.

B is incorrect as the spinal cord transmits messages to the lower body via the PNS.

C is correct. The somatosensory cortex receives and processes sensory information from the various sensory receptors contained within the body.

D is incorrect as the primary visual cortex processes visual information.

Question 11**Answer is D****Explanatory notes**

A is incorrect. Neural messages from the left side of the body are processed in the right hemisphere.

B is incorrect. The message will be processed in the right somatosensory cortex, which will send a new message to the right primary motor cortex for a response (raising his foot) to be generated.

C is incorrect. See the response for B.

D is correct. The sensory receptors in the foot will send a sensory message of pain to the right somatosensory cortex.

Question 12**Answer is B****Explanatory notes**

A is incorrect as this is a feature of Wernicke's aphasia not Broca's aphasia.

B is correct. Broca's aphasia is associated with damage to the left frontal lobe.

A common symptom of Broca's aphasia is the inability to produce clear, well-constructed sentences that are complex and grammatically correct.

C is incorrect. This is an example of retrograde amnesia not Broca's aphasia; retrograde amnesia is not specific to the left frontal lobe.

D is incorrect. This would apply to Wernicke's aphasia.

Question 13**Answer is A****Explanatory notes**

A is correct. Adaptive plasticity would allow undamaged areas of the brain in the immediate vicinity of the damage to take up some of the activity previously performed by the damaged area.

B is incorrect as it is Broca's area that is damaged not Wernicke's area.

C is incorrect as the damaged section will not be reactivated; such damage is deemed irreversible.

D is incorrect. See the responses for B and C.

Question 14**Answer is D****Explanatory notes**

A is incorrect. The damaged section will not be reactivated as such damage in an adult is deemed irreversible, and the partial recovery is a result of adaptive plasticity.

B is incorrect. Developmental plasticity occurs in early childhood, not adulthood.

C is incorrect as the damaged section will not be reactivated; damage within Broca's area in an adult is deemed irreversible so the neurons will not regenerate.

D is correct. Adaptive plasticity would allow a reorganisation of neural pathways in the association areas in the immediate vicinity of the damage with new synapses developing as a result of the new learning.

**Tip**

- *This question is an example of how two or more different points may be covered in the one possible multiple-choice answer. It is important that you understand how the various points are related, in order to decide which possible answer is the most accurate.*

Question 15**Answer is C****Explanatory notes**

A is incorrect as this theory explains the way memories are organised in LTM (long-term memory).

B is incorrect as this theory explains the pattern of recall when we hear lists of items.

C is correct. The consolidation theory states that physical changes must occur in the brain to record new memories, and that these changes take around 30 minutes to consolidate or set. As Dearne had just arrived at the party this memory had not had time to be processed and permanently stored in LTM.

D is incorrect. While it could be argued that she unconsciously repressed this unhappy memory, consolidation theory is a better explanation given the information provided in the scenario.

**Tip**

- *If a question asks for the best response, it is important to think very carefully before responding as there are usually two possible answers, with one being better than the other.*

Question 16

Answer is A

Explanatory notes

A is correct. The primary motor cortex in the frontal lobes stimulates activity in the somatic nervous system to control skeletal muscles.

B is incorrect as the autonomic nervous system is responsible for control of visceral muscles, organs and glands.

C and D are incorrect as the parietal lobes do not play a direct role in stimulation of the skeletal muscles.

Question 17

Answer is D

Explanatory notes

A and B are incorrect as these are incomplete responses.

C is incorrect as more cortical area is needed for more dexterity.

D is correct as the greater the need for fine motor movement, and the greater the sensitivity of an area of the body, the greater the need for cortical area. Fingers are more sensitive, and require more capacity for fine motor movement than knees.

**Tip**

- *This demonstrates why it is so important to read the complete question and not select a response too quickly.*

Question 18**Answer is B****Explanatory notes**

A is incorrect as the spinal cord is part of the CNS.

B is correct as the spinal cord is the means of communication between the brain and the rest of the body. Sensory and motor messages are transmitted via the spinal cord.

C is incorrect as the spinal cord allows communication between the brain and all parts of the body.

D is incorrect as this is a role of the somatosensory cortex.

Question 19**Answer is D****Explanatory notes**

A is incorrect. Visual information is sent to the brain via the optic nerve, not the corpus callosum.

B is incorrect. The two hemispheres are limited in how they work together following this procedure but not completely isolated.

C is incorrect. The two hemispheres are still connected at the subcortical level.

D is correct. The corpus callosum joins the cerebral cortex and when this is severed communication from one hemisphere to the other is cut off.

**Tip**

- *This question is another example of multiple points being examined together, and also of how you need to be able to apply your knowledge, not just recall facts.*

Question 20**Answer is D****Explanatory notes**

A and B are incorrect as the information could not cross to the left hemisphere to be named.
 C is incorrect. The patient could not identify the word by touch with the right hand as this would be processed in the left hemisphere.

D is correct. Touching the corresponding object with the left hand allowed identification as the information was processed in the right hemisphere.

Question 21**Answer is A****Explanatory notes**

A is correct. Sperry and Gazzaniga were able to add to the findings of Broca and Wernicke on language centres by showing that the left hemisphere can identify and name items verbally, while the right cannot.

B is incorrect. The left hemisphere is the dominant hemisphere for language in the majority of people.

C is incorrect. The opposite is true. The left hemisphere will not know what the right is doing and cannot name an object shown to the left visual field because this will be processed in the right hemisphere and in split-brain patients the information cannot cross to the left.

D is incorrect. It is very rare for people to have their language centres in the right hemisphere (although if this is the case, it is true that the person will be left-handed).

Question 22**Answer is B****Explanatory notes**

A is incorrect. Facial recognition is a function of the left temporal lobe.

B is correct. Analytical and abstract thinking and planning are frontal lobe functions.

C is incorrect. Perceiving three-dimensional objects is a function of the right parietal lobe.

D is incorrect. Understanding human speech is a function of the left temporal lobe.

Question 23**Answer is A****Explanatory notes**

A is correct. Irina would be unaware of the food on the left side of her plate.

B is incorrect. Spatial neglect means a loss of awareness of the left side of the body not the right.

C is incorrect. Spatial neglect is not due to eye damage.

D is incorrect. Spatial neglect is due to damage to the posterior region of the right parietal lobe, not the occipital lobe.

Question 24**Answer is B****Explanatory notes**

A is incorrect. The limit of STM is 5–9 bits of information so the mobile number would not be retained easily without some technique to expand the capacity being used.

B is correct. Chunking would enable her to break the number into larger bits to help her hold it in STM long enough to transfer it to LTM.

C is incorrect. This term refers to the Baddeley and Hitch model not the Atkinson–Shiffrin model.

D is incorrect. The iconic sensory store is for visual information not auditory.

**Tip**

- *Ensure that you are very familiar with the key features of each of the models. The language for each is quite specific.*

Question 25**Answer is C****Explanatory notes**

A is incorrect. Francesca would likely forget the middle section of the number before the beginning or the end.

B is incorrect. She would be likely to recall more of the beginning than the middle and the end.

C is correct. Francesca would have time to transfer the first few digits to her LTM, and it is likely that some digits from the end would remain in STM but these would have pushed the middle digits out of STM unless maintenance rehearsal was used.

D is incorrect. See the explanation for C.

Question 26**Answer is A****Explanatory notes**

A is correct as relearning is the most sensitive measure of recall. Hearing the number again would act as a cue which would assist her to recall the information more readily.

B is incorrect. Simple recall is a less sensitive measure than relearning and is not described here.

C is incorrect. Recognition is a less sensitive measure of recall, and involves selecting information from a range of alternatives.

D is incorrect. The recency effect refers to the ability to recall recent material as it is still held in STM.

Question 27**Answer is C****Explanatory notes**

A is incorrect as C is a better answer. The movie theatre acts as a context-dependent cue which causes him to recall the emotional response.

B is incorrect. It is the context of the theatre not the emotional state that is creating the recalled emotion. If the question stated that whenever he felt sad he recalled breaking up with his girlfriend, this would be a state-dependent cue.

C is correct. The movie theatre acts as a context-dependent cue which causes him to recall the emotional response.

D is incorrect. A mnemonic is a deliberate device to help improve recall.

Question 28**Answer is B****Explanatory notes**

A is incorrect as Loftus studied the unreliability of testimony and did not conclude that in the absence of misleading information testimony will always be reliable.

B is correct. Loftus found that if the questioning is misleading, eyewitnesses can believe that they saw something that was not present at the scene.

C is incorrect. This is too absolute. Misleading information may lead to false memories but this is not guaranteed.

D is incorrect as this was clearly not the finding of this research.

Question 29***Answer is B*****Explanatory notes**

A is incorrect as this is the memory for specific events.

B is correct. In operating the car correctly Margot is using her procedural memory, which is generally resistant to decay.

C is incorrect. Declarative memory is the umbrella term for episodic and semantic memory.

D is incorrect. Semantic memory is the memory for facts.

Question 30***Answer is D*****Explanatory notes**

A is incorrect. Retrograde amnesia is the result of a brain injury and is the inability to recall previously learned material.

B is incorrect. Anterograde amnesia is the result of brain injury and is the inability to form new memories.

C is incorrect. Retroactive interference occurs when newly learned material interferes with the ability to recall previously learned material.

D is correct. Proactive interference occurs when previously learned information interferes with the ability to recall new information.

Question 31***Answer is C*****Explanatory notes**

A is incorrect as her ability to drive well is an example of how procedural memories are resistant to decay.

B is incorrect. This statement is correct but it does not relate to a criticism of decay theory.

C is correct. A major criticism of decay theory is that it does not account for the ability of older people to vividly recall information from a long time ago, even if it hasn't been recalled recently.

D is incorrect. Repression is related to motivated forgetting, which is a part of Freudian theory. There is no reference to this theory in the scenario described.

Question 32**Answer is B****Explanatory notes**

A is incorrect as neurotransmitters send a chemical message across the synaptic gap, not an electrical message.

B is correct. If the neurotransmitters are not released at the end of the synapse of the initiating neuron, or pre-synaptic neuron, the post-synaptic neuron (the neuron receiving the message) will not be activated.

C is incorrect as dendrites receive messages, they do not transmit them.

D is incorrect. The post-synaptic neuron would not be activated. The electrical impulse sent down the pre-synaptic neuron would be halted at the synapse.

Question 33**Answer is A****Explanatory notes**

A is correct. Developmental plasticity results in changes at the neuronal level in very young children when learning takes place.

B is incorrect. Adaptive plasticity refers to neural changes in older people, not very young children.

C is incorrect. Max has learned as a result of observation but this does not explain the neurological changes.

D is incorrect. The behaviour described in the question relates to observational learning not operant conditioning. There is no evidence of Max's behaviour being reinforced. Note though that the use of the word 'neurologically' will exclude both of these options.

Question 34**Answer is D****Explanatory notes**

A is incorrect as this is the role of Broca's area in the left frontal lobe.

B is incorrect as this is the role of the primary visual cortex in the occipital lobes.

C is incorrect as this is a task carried out by the frontal lobes.

D is correct. The hippocampus will help Tayla to draw on her declarative memory so that she can integrate this new information into the previously stored memories.

Question 35**Answer is B****Explanatory notes**

A is incorrect. The amygdala is important in the formation of emotional memories. An event with a strong emotional impact will be consolidated more effectively within the hippocampus.

B is correct. The hippocampus is responsible for the consolidation of declarative memories.

C is incorrect. The ANS is responsible for the functioning of the visceral muscles, organs and glands within the body.

D is incorrect. The synapse is the gap between neurons across which neurotransmitters travel to take a message from one neuron to another.

Question 36**Answer is D****Explanatory notes**

A is incorrect as state-dependent cues refer to memories that are triggered by emotional responses similar to those experienced when the memory was formed.

B is incorrect. Narrative chaining is a mnemonic that involves creating a story or narrative out of information that one wants to remember.

C is incorrect. Flooding is a means of treating phobias during which the patient is exposed to high levels of whatever it is they fear while at the same time being taught to relax.

D is correct. The semantic network theory proposes that information is organised in LTM in networks, with similar memories being stored in a hierarchical pattern and linked by nodes which, when activated, trigger memories in linked nodes.

Question 37**Answer is A****Explanatory notes**

A is correct. Alzheimer's patients have plaques consisting of insoluble proteins that build up within the brain causing degeneration.

B is incorrect. Alzheimer's patients do experience shrinkage in the hippocampus but this is not the same as neurofibrillary tangles.

C is incorrect. Retrograde amnesia is a symptom not a physical change.

D is incorrect. Anterograde amnesia is a symptom not a physical change.

Question 38***Answer is D*****Explanatory notes**

A is incorrect. The independent groups design requires two separate groups: a control and an experimental group.

B is incorrect. Between participants is another name for independent groups.

C is incorrect. In the matched participants design participants are firstly tested on variables relevant to the design and then placed into the E or C group in pairs, matched according to results of the testing.

D is correct. The repeated measures design requires that participants are used in both the experimental and the control condition.

Question 39***Answer is C*****Explanatory notes**

A, B and D are incorrect as phonemic methods were found by Craik and Lockhart to be less effective for retaining the information than semantic.

C is correct. Craik and Lockhart found that phonemic methods (learning words by sounds) allow a lower level of processing than semantic (learning words according to their meaning) so it would be expected that those in Condition 2 would perform better than those in Condition 1 when tested on recall.

Question 40***Answer is C*****Explanatory notes**

A is incorrect as maintenance rehearsal was not used.

B is incorrect as C is a better response.

C is correct. In applying a rhyming word, and in creating a story, participants were required to match the information with information they already held in LTM, so both of these methods employed elaborative rehearsal. The second method, however, required a greater level of elaboration than the first, thus improving recall.

D is incorrect. See the explanation for A.

Question 41**Answer is A****Explanatory notes**

A is correct. The method of putting the words to be learned into a story or narrative is known as narrative chaining.

B is incorrect. An acrostic uses the first letters of the words to be remembered to create a poem to aid recall.

C is incorrect. An acronym puts the first letters of the words to be remembered into a pronounceable word to aid recall.

D is incorrect. Primacy is a feature of the serial position effect, which is a pattern seen when testing recall of a list of words. It is not a device used to improve memory of the words.

Question 42**Answer is B****Explanatory notes**

A is incorrect as not all members of the population (first-year Psychology students) had an equal opportunity to be selected for the sample.

B is correct. The researchers drew on the members of the population that were readily available so convenience sampling is the best term for this.

C is incorrect. The sample was not stratified.

D is incorrect. The sample was non-random and because it is a repeated measures design there is no random allocation to groups.

Question 43**Answer is A****Explanatory notes**

A is the only correct response as the participants were not advised that they could leave the study at any time.

B, C and D are incorrect as each of these considerations were outlined in the scenario.

Question 44**Answer is D****Explanatory notes**

A is incorrect. Statistical significance refers to the probability that the result is due to the IV and not due to chance. A strong positive correlation doesn't signify this.

B is incorrect. The 0.05 level refers to probability that the IV impacted upon the DV, not a definite impact.

C is incorrect. There is a 95% probability that the result is due to the manipulation of the IV, not chance.

D is correct. The 0.05 level means that there is probability that the result is due to chance in just 5% of cases or less.

Question 45**Answer is B****Explanatory notes**

- A is incorrect. This behaviour is not voluntary.
- B is correct. The gripping reflex is automatic and involuntary.
- C is incorrect. This behaviour is not learned.
- D is incorrect. This is a simple reflex not an FAP.

Question 46**Answer is C****Explanatory notes**

- A, B and D are incorrect: although each of these structures plays some part in learning and the creation of neural connections, connection between the hemispheres occurs in the corpus callosum.
- C is correct. The corpus callosum is the structure that allows connection between the hemispheres. New learning involves the creation of new connections.

Question 47**Answer is B****Explanatory notes**

- A is incorrect as aversion therapy involves exposing the patient to an unpleasant stimulus in order to reduce an unwanted behaviour.
- B is correct. Flooding is a technique where the patient is exposed to a high level of the actual object that is feared, usually while being exposed to relaxation techniques. This is a form of classical conditioning where the pairing of the feared stimulus with the relaxation creates a new conditioned response to the previously feared stimulus.
- C is incorrect because, although flooding uses classical techniques, B is a much better response.
- D is incorrect. In graduated exposure the patient is exposed very slowly to the feared stimulus while learning to relax.

Question 48**Answer is A****Explanatory notes**

- A is correct. In terms of the Transactional Model of Stress and Coping, a situation that is perceived as threatening will lead to anxiety and/or stress.
- B is incorrect. This describes a situation that leads to a positive psychological response or neutral response.
- C is incorrect. The fight-flight response may have been triggered by the distress, but fight-flight is not a term used to describe stress in the transactional model.
- D is incorrect. Anita did experience extreme stress according to the scenario, but this is not a term applied in the transactional model.

Question 49**Answer is C****Explanatory notes**

A is incorrect as this is using the language of classical conditioning not the transactional model.

B and D are incorrect as these are using the language of operant conditioning not the transactional model.

C is correct. In their transactional model, Lazarus and Folkman used the term 'cognitive appraisal' to describe the way we perceive a situation. By choosing to work with dogs it can be assumed that the workers applied a positive cognitive appraisal to this work.

Question 50**Answer is B****Explanatory notes**

A is incorrect as initially Little Albert had not been conditioned to fear the rat so it was not yet the conditioned stimulus.

B is correct. The rat was a neutral stimulus at first as it brought forth no fear response.

C is incorrect. The conditioned response was the fear of the rat after conditioning.

D is incorrect. The unconditioned response was the fear response shown to the loud noise.

Question 51**Answer is C****Explanatory notes**

A is incorrect. The CS (rat) must occur with, or be immediately followed by, the UCS (loud noise) for conditioning to occur.

B is incorrect as this uses terms of operant conditioning.

C is correct. The CS (rat) must occur with, or be immediately followed by, the UCS (loud noise) for conditioning to occur.

D is incorrect. See the explanations for A and C.

Question 52**Answer is B****Explanatory notes**

A is incorrect as, although there is no evidence that debriefing was applied, this was not the most harmful breach.

B is correct. The most important ethical consideration is that no psychological or physical harm should be experienced by the participant as a result of the experiment.

C is incorrect. Although informed consent was not provided this is not the most important breach.

D is incorrect. Little Albert's mother was allowed to withdraw him from the experiment.

Question 53**Answer is D****Explanatory notes**

A is incorrect. If Little Albert had feared only the rat and no other white fluffy objects he would have demonstrated discrimination between stimuli.

B is incorrect. Spontaneous recovery is the expression of the CR after an apparent period of extinction.

C is incorrect. Acquisition occurs in the initial stages when the subject is acquiring or learning the CR.

D is correct. By showing fear of other similar objects, e.g. a fluffy mask and a white rabbit, Little Albert was showing stimulus generalisation.

Question 54**Answer is B****Explanatory notes**

A is incorrect as there is no evidence of Marina watching someone in order to learn the process of knitting.

B is correct. Trial and error learning involves repeated attempts, making mistakes and eventually mastering the skill.

C is incorrect. Operant conditioning involves responding to consequences in order to learn. The elements of operant conditioning are not described in this scenario.

D is incorrect. Classical conditioning involves pairing two or more stimuli to learn an association between the two, thus creating a conditioned response.

Question 55**Answer is A****Explanatory notes**

A is correct. In operant conditioning a response cost is a form of punishment that involves something positive being removed in response to the unwanted behaviour.

B is incorrect. In operant conditioning negative reinforcement strengthens a behaviour by removing a negative consequence of that behaviour.

C is incorrect. In operant conditioning positive reinforcement strengthens a behaviour by providing a positive consequence of that behaviour.

D is incorrect. In operant conditioning punishment involves a negative experience applied as a direct result of the behaviour. However, response cost is a better answer because it specifically refers to the removal of something, which is the cost of the behaviour (response).

Question 56**Answer is D****Explanatory notes**

A, B and C are all incorrect because Nathan's father is not reinforcing the behaviour. D is correct. Nathan's father is endeavouring to extinguish the behaviour, not strengthen it.

Question 57**Answer is C****Explanatory notes**

A is incorrect (meaning the statement is *correct*), as both DSM-V and ICD-10 describe symptoms not causes.

B is incorrect (meaning the statement is *correct*), as both instruments are used for diagnosis of mental illness.

C is the correct response (meaning the statement is *incorrect*), as neither DSM-V nor ICD-10 can detect causes.

D is incorrect (meaning the statement is *correct*), as ICD-10 covers mental and physical disease whereas DSM-V covers just mental disorder.

**Tip**

- Sometimes you will be asked to identify which of the responses is incorrect rather than correct. Be on the lookout for these questions.

Question 58**Answer is B****Explanatory notes**

A, C and D are all assessments that may be used during a clinical interview.

B is the correct response as level of intelligence is not an indicator of mental illness, so intelligence assessment is not used in a clinical interview when the clinician is assessing mental health.

Question 59***Answer is D*****Explanatory notes**

A is incorrect. Although biological factors include physiology, physiology is not directly addressed in the biopsychosocial model.

B is incorrect. The sadness and disconnection are psychological in nature but the basis is in the social situation.

C is incorrect. There is no reference to a biological contributor to Davina's condition in this scenario.

D is correct. The bullying incidents and the relationship break-up have both occurred in a social setting and have contributed to the psychological issues, so the basis is social.

Question 60***Answer is A*****Explanatory notes**

A is correct. The use of medication is a biological response while the counselling is a psychological response.

B is incorrect as there is no social intervention described.

C and D are incorrect. See the explanations for A and B.

Question 61***Answer is D*****Explanatory notes**

A is incorrect. The fight-flight response is the arousal experienced when a stressor is perceived.

B is incorrect. Homeostasis is achieved when the body is returned to a calm state following the removal of the stressor.

C is incorrect. Sympathetic arousal does occur when a stressor is perceived but this is not the same as adapting to the stressor.

D is correct. Allostasis is the process of adapting to the stressor as the body tries to return to homeostasis.

Question 62***Answer is B*****Explanatory notes**

A is incorrect. The cumulative effect of the body's attempts to deal with the stressors was the allostatic load.

B is correct. By succumbing to depression Davina had demonstrated that her body could no longer cope and had reached allostatic overload.

C is incorrect. The activation of the fight-flight response leads to allostasis before the body succumbs to overload.

D is incorrect. Homeostasis has not been achieved.

Question 63**Answer is A****Explanatory notes**

A is correct. Biofeedback involves measuring biological responses and giving the client feedback as the responses are changed, for example, relaxing to a lower heart rate will show a lower reading on a cardiograph.

B is incorrect. Biofeedback involves measuring physiological responses that might indicate anxiety, but cannot measure anxiety levels directly.

C is incorrect. The biofeedback process would help her to learn how her body responded to stress, but A is a much more comprehensive response. Also, C does not describe the interaction between the measuring devices and the individual's actions to alter the measurements.

D is incorrect as this does not describe biofeedback.

Question 64**Answer is B****Explanatory notes**

A is incorrect as this has been identified as a weakness of the transactional model, not a strength.

B is correct. This model includes an examination of the way in which we cognitively appraise a stressful situation and how this impacts upon our perception of stressors.

C is incorrect. The transactional model examines physiological, cognitive and emotional reactions to stress.

D is incorrect. The transactional model uses human subjects.

Question 65**Answer is C****Explanatory notes**

A is incorrect as a primary appraisal involves the initial determination of the situation; the scenario describes finding a possible solution to the problem.

B is incorrect as an emotional forecast involves assessing the emotional impact of a course of action or a situation.

C is correct. By determining a positive course of action and taking control of the situation Alleah has used a problem-focused coping strategy.

D is incorrect. An emotion-focused response involves attempting to reduce the negative emotions associated with the event.

END OF SECTION A

Section B – Short-answer questions

Question 1

Sample answer

Any reference to impaired sensory reception and responses such as:

- Alcohol would depress Jacob's sensory receptors such as vision, making it more difficult to gauge distances in a car.
- Alcohol would impair Jacob's auditory perception thus inhibiting the ability to hear sirens.

Mark allocation: 2 marks

- 1 mark per valid point.

Question 2a.

Sample answer

The performance on complex tasks would be better than the performance on simple tasks.

Mark allocation: 2 marks

- 1 mark for indicating that complex tasks would be performed well.
- 1 mark for indicating that performance on simple tasks would be compromised.

Question 2b.

Sample answer

The participants would be likely to experience REM rebound, spending longer in REM sleep than usual.

Mark allocation: 1 mark

- 1 mark for identifying that REM rebound would occur.

Question 2c.

Sample answer

To act as the control group. This group would provide a baseline of data against which the results of the experimental group could be measured.

Mark allocation: 2 marks

- 1 mark for stating that it is the control group.
- 1 mark for explaining that this group provides the baseline data with which the results of the experimental group are compared.

Question 2d.**Sample answer**

This design eliminates order effects.

Mark allocation: 1 mark

- 1 mark for identifying the elimination of order effects as the main advantage.

Question 3a.**Sample answer**

Gianna's auditory working memory, the phonological loop, was unable to store two sources of auditory information at the same time.

Mark allocation: 2 marks

- 1 mark for identifying the phonological loop.
- 1 mark for explaining that two forms of auditory information could not be stored at once.

Question 3b.**Sample answer**

If her sister wrote down her story (or drew a picture, or used sign language) and showed it to Gianna, she could store this visual information in her visuospatial sketchpad.

Mark allocation: 2 marks

- 1 mark for identifying that a visual method could be used.
- 1 mark for use of the term 'visuospatial sketchpad'.

**Tip**

- *When a question says 'in terms of', you must use the specific terminology associated with that topic or theory. So in this case it would not be appropriate to refer to echoic and iconic sensory stores as these relate to the Atkinson–Shiffrin model, not Baddeley and Hitch. You must use the terms phonological loop and visuospatial sketchpad.*

Question 4**Sample answer**

Adolescent sleep onset is delayed compared to adults so even if Brianna went to bed earlier she would still go to sleep later than her mother.

Adolescents need more sleep (9–10 hours per night) than adults (6–8 hours) so Brianna would struggle to be able to wake earlier.

Mark allocation: 2 marks

- 1 mark for identifying delayed sleep onset.
- 1 mark for identifying a greater amount of sleep needed.
- The answer must clearly show the difference between adults and adolescents.

Question 5**Sample answer**

Attention – Freya would carefully watch how the coach played.

Retention – she would need to retain a mental representation of the actions the coach demonstrated.

Reproduction – she would need to have the capacity to physically reproduce/imitate the behaviour of the coach.

Motivation – wanting to join the club would motivate her to reproduce the behaviour of the coach.

Reinforcement – achieving the goal of being able to join the club would reinforce her desire to learn and copy the movements modelled by the coach.

Mark allocation: 5 marks

- 1 mark for each of the five processes correctly identified and described.

Question 6a.**Sample answer**

Any two of the following:

- pupil dilation
- accelerated heart rate
- constricted arterioles
- dilated bronchial tubes
- inhibited stomach and pancreatic processes
- stimulation of intestinal tracts
- reduced salivation
- relaxed bladder
- suppression of sexual drive
- increase in glucose secretion
- redistribution of blood supply to muscles.

Mark allocation: 2 marks

- 1 mark for each correctly identified function as listed above (to a maximum of 2).

Question 6b.**Sample answer**

Sympathetic nervous system.

Mark allocation: 1 mark

- 1 mark for the correct identification of the sympathetic nervous system.

Question 6c.**Sample answer**

The brain will stimulate the hypothalamus and release hormones (epinephrine and norepinephrine) from the pituitary gland and cortisol from the adrenal cortex, stimulating various bodily organs to a higher rate of activity. Long-term arousal may result in muscle damage, increased blood pressure and a reduced immune function, leaving the body open to infection and other illness.

Mark allocation: 3 marks

Any three of the following

- 1 mark for reference to the hypothalamus and pituitary gland.
- 1 mark for reference to the adrenals and cortisol.
- 1 mark for describing the role of the adrenals in stimulating arousal.
- 1 mark for reference to the reduced immune function and greater susceptibility to illness.

The response could also include reference to any of the following: dizziness, heart palpitations, skin rashes, fatigue, slowing of the digestive system.

**Tip**

- *This question is an example of how you may need to demonstrate a deeper understanding of a topic, i.e. you need to discuss not just a result but how and why this result occurs.*

Question 7**Sample answer**

Any two of the following:

- impaired hearing
- inability to recognise faces
- inability to encode new memories into long-term memory
- inability to locate a sound in space
- inability to link emotions to memory
- inability to identify objects
- problems comprehending speech.

Mark allocation: 2 marks

- 1 mark each for any two of the above.

Question 8a.**Sample answer**

Any two of the following:

- musical appreciation
- art appreciation
- creativity
- spatial awareness and visualisation
- face recognition
- pattern recognition
- tune recognition
- recognising emotions.

Mark allocation: 2 marks

- 1 mark each for any two of the above.

Question 8b.**Sample answer**

Although the two hemispheres have specialised abilities they do not work in isolation. To accomplish most tasks involves a complex interaction between the two sides of the brain.

Mark allocation: 2 marks

- 1 mark for stating that the two hemispheres do not work alone.
- 1 mark for stating that specialised activities require interaction of the two sides.

Question 9**Sample answer**

Neurons in the primary cortices receive and process sensory or motor information. Association areas are important for integrating information from the primary cortices and other brain areas or structures allowing higher order cognitive activities.

Mark allocation: 2 marks

- 1 mark for reference to the specific motor or sensory roles of the primary cortices.
- 1 mark for reference to the role of integration played by the association areas.

Question 10**Sample answer**

Echoic memory can store auditory sensory information for 3 to 4 seconds while iconic stores visual information for 0.3 seconds.

The capacity of each is unlimited.

Mark allocation: 3 marks

- 1 mark for identifying the duration of iconic memory.
- 1 mark for identifying the duration of echoic memory.
- 1 mark for stating that they each have unlimited capacity.
- Note: if the student indicates there is a different capacity for each then they lose one mark.

Question 11**Sample answer**

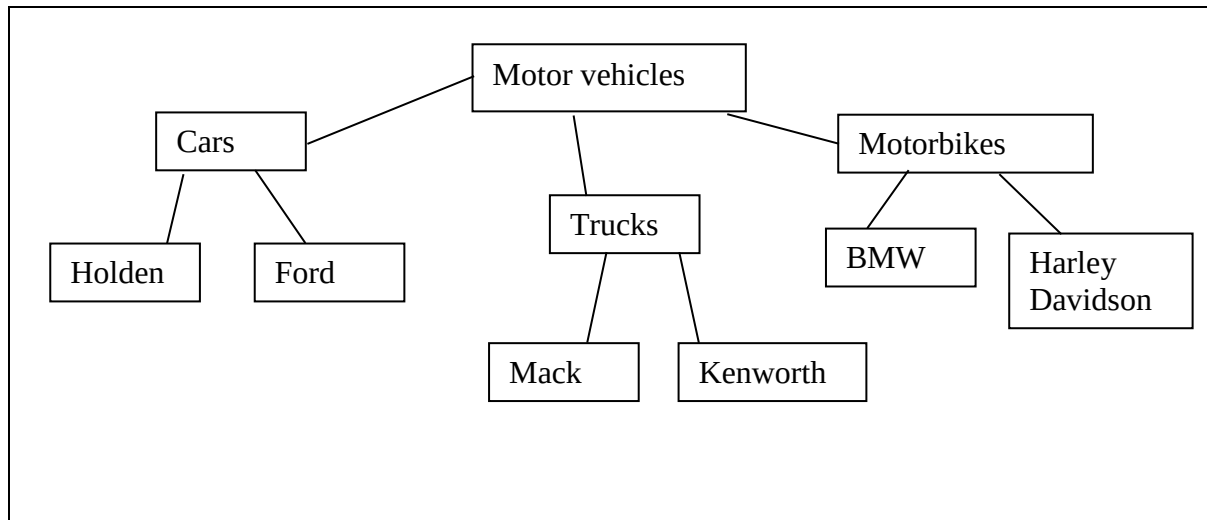
The forgetting curve shows the rate of forgetting over a period of time, and the amount of forgetting over time.

Mark allocation: 2 marks

- 1 mark for stating that the rate of forgetting (or how quickly information is lost) is shown.
- 1 mark for stating that the amount of forgetting (or how much information is lost) is shown.

**Tip**

- *For this question it is important to refer to the passage of time.*

Question 12a.**Sample answer****Mark allocation: 2 marks**

- 1 mark for indicating that information is formed in a hierarchical structure.
- 1 mark for drawing lines that depict the links between nodes.

**Tip**

- Any appropriate diagram will suffice provided it shows a hierarchical structure that depicts the links between nodes.

Question 12b.**Sample answer**

Activation of one node excites pathways linking to other nodes containing similar or related information. The more nodes activated the greater the likelihood of recall (this is known as spreading activation).

Mark allocation: 2 marks

- 1 mark for explaining the links between nodes containing similar or related information.
- 1 mark for stating that activation of one node leads to the activation of another.

Question 13**Sample answer**

Positive reinforcement involves providing a positive consequence, when a desired behaviour is performed, to strengthen the behaviour. For example, providing a bird with a food pellet when it presses a button with its beak will strengthen the button-pressing behaviour.

Negative reinforcement involves removing a negative stimulus when a behaviour is performed, thus strengthening the behaviour. For example, a bird feels an electric shock when standing in a cage, but pressing a button removes the electric shock.

Mark allocation: 4 marks

- 1 mark for correctly describing positive reinforcement.
- 1 mark for providing an example that correctly demonstrates positive reinforcement.
- 1 mark for correctly describing negative reinforcement.
- 1 mark for providing an example that correctly demonstrates negative reinforcement.
- Reference to increasing the likelihood of the behaviour being repeated is necessary.

Question 14**Sample answer**

Poker machines use a form of partial reinforcement known as a variable ratio schedule of reinforcement. This means that Alessio is rewarded/reinforced on a set average number of times that he plays and, because the reward/reinforcement is relatively unpredictable, he is resistant to extinction of the behaviour.

Mark allocation: 3 marks

- 1 mark for identifying variable ratio schedule.
- 1 mark for noting that the reinforcer is given after an unpredictable number of responses (there is a set average number of times).
- 1 mark for indicating that this makes a response very resistant to extinction.

Question 15**Sample answer**

The method of successive approximations.

Mark allocation: 1 mark

- 1 mark for naming the method of successive approximations.
- No other response is acceptable.

Question 16a.**Sample answer**

Michael's family situation (separation of parents, loss of mother's job) is a social factor which, combined with his psychological tendency to place a lot of pressure on himself, created the psychological stress that he is feeling, leading to the biological response of physical illness (hives, nausea).

Mark allocation: 3 marks

- 1 mark for correctly identifying that there were social factors contributing to his illness.
- 1 mark for correctly identifying that there were also psychological factors contributing.
- 1 mark for correctly identifying that the physical illness that he developed was a biological response.

Question 16b.**Sample answer**

Any one of the following:

- relaxation techniques
- meditation
- counselling.

Mark allocation: 1 mark

- 1 mark for any one of the above.

**Tip**

- *When responding to questions that ask for one piece of information, it is best to provide just that. Providing multiple alternatives may run the risk of including a wrong answer thus causing you to lose the mark.*

Question 16c.**Sample answer**

Michael could be prescribed medication by his doctor.

Mark allocation: 1 mark

- 1 mark for correctly describing a biological intervention.

Question 16d.**Sample answer**

Extra assistance at university to help him cope with his workload.

OR

Job-search assistance for Michael's mother.

The answer may refer to any type of:

- appraisal support
- tangible assistance
- information support
- emotional support.

Any response that identifies a social intervention is appropriate.

Mark allocation: 1 mark

- 1 mark for any appropriate social intervention.

Question 17**Sample answer**

Eustress is a positive psychological response to a perceived stressor.

Mark allocation: 1 mark

- 1 mark for correctly describing the concept of eustress.

Question 18**Sample answer**

When we encounter challenges in life we may interpret them as negative and stressful if we perceive them as especially difficult. Stress results in heightened autonomic arousal which, if prolonged and repeated, can inhibit the body's ability to achieve allostasis; this can lead to overload.

Mark allocation: 3 marks

- 1 mark for reference to the interpretation of an event causing stress.
- 1 mark for reference to the autonomic arousal created by stress.
- 1 mark for explaining that the strain this places on the body creates difficulty in achieving allostasis, thus leading to overload.

END OF SECTION B

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Section C – Research scenario

Question 1

Sample answer

Each student could be assigned a number then all numbers would be placed in a box. The teacher could then select the numbers one at a time, placing one in Group 1 and one in Group 2 until all numbers are allocated.

OR

A table of random numbers could be used; each participant is randomly assigned a number between 1 and 120, then groups are assigned by the table of random numbers.

Mark allocation: 1 mark

- 1 mark for describing an appropriate method that would remove bias from the allocation process.

Question 2

Sample answer

The researcher manipulated the independent variable (teaching method) to determine if there was any change in the dependent variable (test results).

Mark allocation: 2 marks

- 1 mark for indicating that the IV was manipulated.
- 1 mark for indicating that this was to determine if the manipulation of the IV contributed to a change in the DV.
- Note: the terms independent and dependent variable must be used to gain the marks.

Question 3

Sample answer

The ethical consideration of informed consent requires that participants, or their legal guardians if they are under 18, must provide written consent after being fully informed of their roles in the research, their rights and any possible risks that may exist.

Mark allocation: 2 marks

- 1 mark for identifying the term informed consent and that it involves written approval.
- 1 mark for describing the process in terms of what informed consent actually means.
- While rights, roles and risks do not all need to be identified, a better answer will do so.

Question 4 (10 marks)

Sample answer

Introduction

The ability to learn complex concepts is enhanced when the learning involves a deeper analysis of the material to be learned. Applying deep analysis using the process of elaborative rehearsal allows a learner to link material to be learned with information already stored in long-term memory. Rote learning, otherwise known as maintenance rehearsal, however, simply encourages the student to keep the information in short-term memory for a longer period. While it is possible that some of the material may be transferred to long-term memory this is a less effective method.

In a study designed to test the relative effectiveness of these two methods the researcher hypothesised that 60 secondary students required to learn complex material via the use of elaborative rehearsal techniques (analysing the material in depth and creating concept maps linking the information to previously learned information) would demonstrate higher scores when tested on the material than 60 students who used maintenance rehearsal (learning the material by rote) prior to being tested.

Discussion

The result of this experiment showed some support for the hypothesis but did not conclusively find that the difference in test scores was due to the method of learning used, making generalisation difficult. The experimental design used (independent groups) did not rely on any pre-testing of the students so it was unclear what prior knowledge, or what level of intelligence, individual students had. Had the researcher used the matched pairs design, pairing students who were similar in terms of intelligence and prior knowledge and allocating one of each pair to each of the two groups, the result may have been more useful as these participant-related extraneous variables would have been controlled for. The findings that the difference between the groups' scores was due to the manipulation of the IV in just 94% of cases prevents a conclusion supporting the hypothesis. The change in the IV cannot be attributed to the manipulation of the IV, therefore the result cannot be generalised to a wider population of students.

Mark allocation: 10 marks

Up to 10 marks may be allocated for answers that include the points shown below.

- 1 mark for reference to maintenance rehearsal/structural processing.
- 1 mark for reference to elaborative rehearsal/semantic processing.
- 1 mark for demonstrating an understanding of the relative merits of each of these in long-term memory formation.
- 2 marks for an appropriate hypothesis that provides explanations of the IV and the DV in operationalised terms.
- 1 mark for identifying an alternative design to independent groups. (A better answer will identify independent groups as the design used.)
- 1 mark for describing the alternative design.
- 1 mark for identifying an extraneous variable.
- 1 mark for explaining how this design would improve the study by controlling for the extraneous variable/s.
- 1 mark for describing why this result could not be generalised.
- 1 mark for stating that there could be no conclusion reached as the result was not significant.

END OF SAMPLE ANSWERS BOOK