TASMANIAN ASSESSMENT, STANDARDS & CERTIFICATION

External Assessment 2025

Attach your candidate label here

PSYCHOLOGY

BHP315116

Pages: 16
Questions: 6
Answer Booklets: 3

Preparation time for this exam: 15 minutes

Suggested working time: 3 hours

Instructions:

- There are **three (3)** sections to this exam paper.
- You must answer **one (1)** question from each section:
  - Section A – answer **one (1)** question
  - Section B – answer **one (1)** question
  - Section C – answer **one (1)** question.
- Answer each section in a **separate answer booklet** and write the question number you are answering on the front cover of each answer booklet.
- The exam is **three (3) hours** in length. The suggested working time for each section is **approximately 60 minutes**.
- All answers must be written in **English**.
- You **must** make sure your answers address the listed criteria.

Guide to Exam Structure

	Questions available	Questions to answer	Suggested working time	Marks available
Section A	2	1	60 minutes	Assessed using extended ratings of A+ to z
Section B	2	1	60 minutes	
Section C	2	1	60 minutes	
Totals	**6**	**3**	**180 minutes (3 hours)**	

Criteria

You **must** make sure your answers address:

- Criterion 2 analyse perspectives about psychobiological processes
- Criterion 3 analyse theories about human learning
- Criterion 4 analyse theories about remembering
- Criterion 7 use evidence to support a psychological point of view.

Section A – Psychobiological Processes

- Answer **one (1)** question in this section in response to the stimuli provided.
- Attempt **all** items of the chosen question.
- Use a **separate answer booklet** for this section.
- The suggested working time for this section is **approximately 60 minutes**.
- This section assesses **Criteria 2** and **7**.

Question 1: Visual Perception

Examine the following stimulus items:

Stimulus 1 – Figure – ground relationships

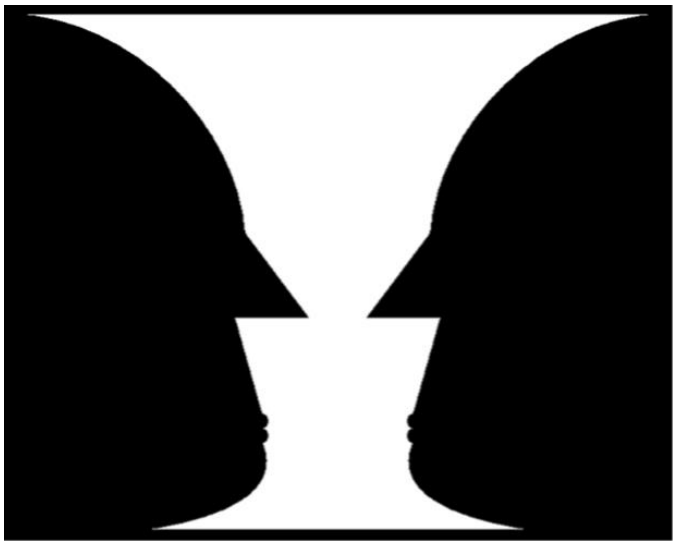

Figure 1: The concept of figure – ground relationships explains why this image can be perceived either as a vase or as a pair of faces.

According to Gestalt theorists, pattern perceptions occur by following a number of principles. One Gestalt principle is the figure – ground relationship. According to this principle, we tend to segment our visual world into figure and ground, whereby the object or person in focus is the figure, and the ground is the background. As Figure 1 shows, our perception can vary tremendously, depending on what is perceived as figure and what is perceived as ground. Presumably, our ability to interpret sensory information depends on what we label as figure and what we label as ground in any particular case, although this assumption has been called into question (Peterson & Gibson, 1994; Vecera & O'Reilly, 1998).

Source: Spielman, R. M., Jenkins, W. J., & Lovett, M. D. (2020, April 22). *5.6 Gestalt Principles of Perception – Psychology 2e | OpenStax*. Openstax.org. https://openstax.org/books/psychology-2e/pages/5-6-gestalt-principles-of-perception

Question 1 continues

Stimulus 2 – Perceptual Set

Our perception of the world around us is not as objective as we might think; it's filtered through the lens of our unique Perceptual Sets, shaping our understanding and behaviour in profound ways. This fascinating aspect of human cognition plays a crucial role in how we interpret and interact with our environment, often without us even realising it. At its core, a Perceptual Set is like a mental filter that colours our interpretation of sensory information. This cognitive mechanism is a powerhouse that influences everything from our daily interactions to our most significant life decisions. To truly grasp the concept of Perceptual Sets, we need to dive a little deeper into the components that make them tick. Expectation is the first piece of this perceptual puzzle. Our brains are constantly making predictions about what we are going to see, hear or experience next. These predictions are based on our past experiences and knowledge, and they significantly influence how we interpret new information. Motivation is another crucial factor in shaping our Perceptual Sets. Our desires, needs, and goals can dramatically affect what we perceive and how we interpret it. Cultural and personal experiences play a massive role in forming our Perceptual Sets, as our cultural background can influence everything from how we interpret facial expressions to how we understand social cues.

Source: NeuroLaunch. (2024, September 15). *Perceptual Set Psychology: Definition, Examples, and Impact on Cognitive Processes*. NeuroLaunch.com. https://neurolaunch.com/perceptual-set-psychology-definition/

Use the information presented in Stimulus 1 and Stimulus 2, as well as other relevant information from the course to:

a) Explain the following concepts in relation to Visual Perception:

- Top-Down and Bottom-Up Processing
- Perceptual Set
- Gestalt Principles.

b) Analyse and critically evaluate the explanations, theories and concepts used to explain Visual Perception.

Question 2: Consciousness

Examine the following stimulus items:

Stimulus 1 – Average Sleep Hours

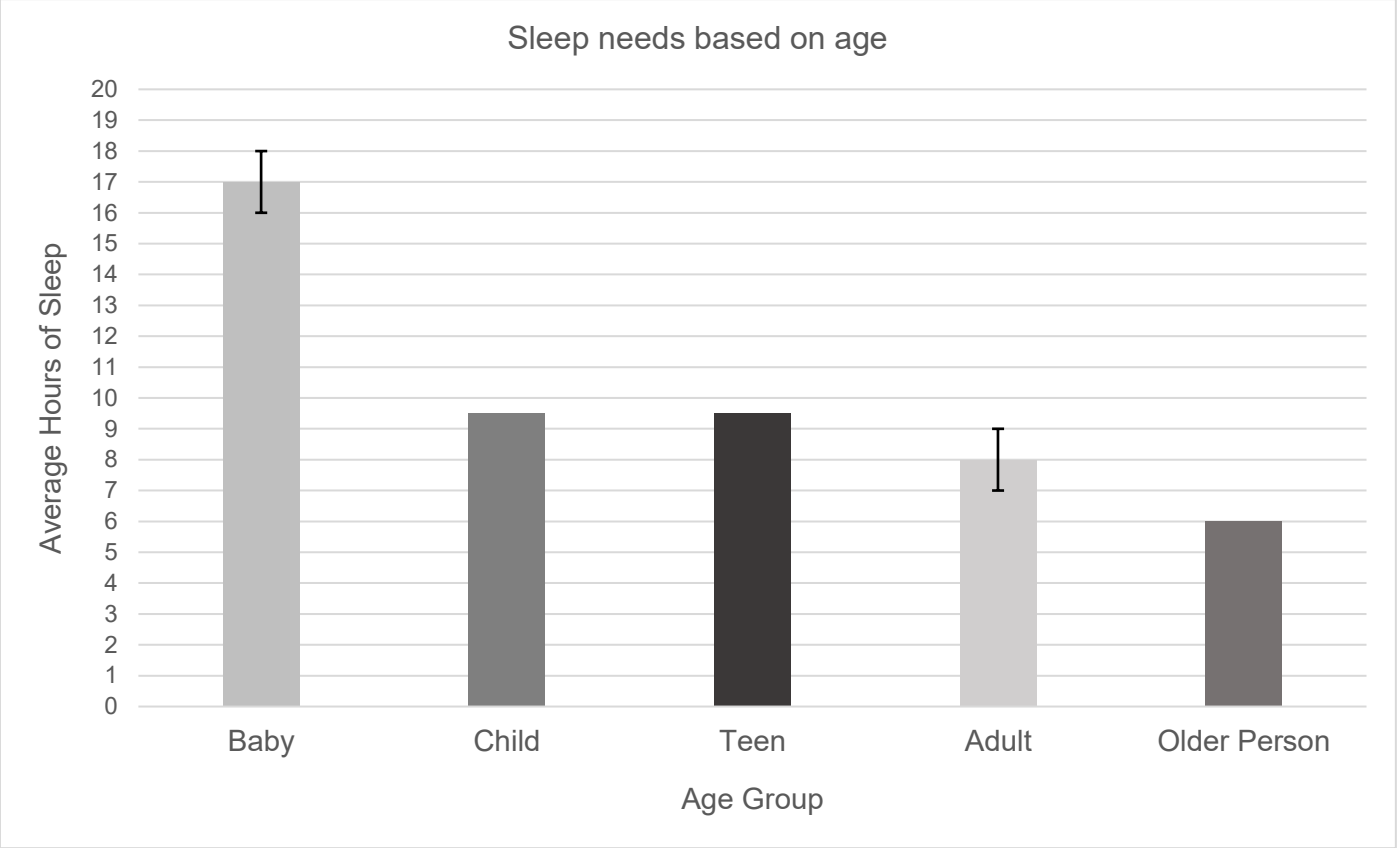

Figure 2: Change of sleep needs based on age.

Sleep needs change with age, as shown on Figure 2. Initially, babies sleep 16–18 hours a day. Most adults require 7–9 hours of sleep at night. Quality sleep – and getting enough of it at the right times – is as essential to survival as food and water. Without sleep, you cannot form or maintain the pathways in your brain that let you learn and create new memories. Lack of sleep makes it harder to concentrate and respond quickly.

Sleep is important to a number of brain functions, including how nerve cells (neurons) communicate with each other. In fact, your brain and body stay remarkably active while you sleep.

Source: National Institute of Neurological Disorders and Stroke. (n.d.). *Brain basics: Understanding sleep.* National Institute of Neurological Disorders and Stroke. https://www.ninds.nih.gov/health-information/public-education/brain-basics/brain-basics-understanding-sleep

Question 2 continues

Question 2 continued

Simulus 2 – REM Sleep

The research conducted by Dement and Kleitman in 1957 was a landmark study in sleep psychology, investigating the relationship between Rapid Eye Movement (REM) sleep and dreaming. The study involved monitoring participants' eye movements during sleep and correlating them with their reported dreams. Key findings indicated that participants were more likely to recall dreams when they were awakened during REM sleep compared to non-REM sleep, suggesting a strong link between REM sleep and vivid dreaming. The study utilised electronic recording and observation methods, contributing significantly to our understanding of sleep patterns and the biological processes underlying dreaming.

These results suggest that eye movements during REM sleep reflect the dreamer's gaze within the dream, supporting a direct link between physiological activity and subjective dream experiences. Vertical movements corresponded to vertical dream imagery. Dreams involved predominant action in the vertical plane: one participant reported seeing themselves throwing basketballs at a hoop. They saw themselves looking up at the hoop and then downwards to pick up another ball.

Source: Dement, W., & Kleitman, N. (1957). The relation of eye movements during sleep to dream activity: An objective method for the study of dreaming. *Journal of Experimental Psychology, 53*(5), 339-346. https://doi.org/10.1037/h0048189

Use the information presented in Stimulus 1 and Stimulus 2, as well as other relevant information from the course to:

a) Explain the following concepts in relation to Consciousness:

- NREM and REM Stages of Sleep
- Normal Waking Consciousness
- Sleep Deprivation.

b) Analyse and critically evaluate the explanations, theories and concepts used to explain the purpose of sleep **and/or** why we dream.

Section B – Human Learning

- Answer **one (1)** question in this section in response to the stimuli provided.
- Attempt **all** items of the chosen question.
- Use a **separate answer booklet** for this section.
- The suggested working time for this section is **approximately 60 minutes**.
- This section assesses **Criteria 3** and **7**.

Question 3: Conditioning

Examine the following stimulus items:

Stimulus 1 – Skinner's Operant Conditioning and Learning

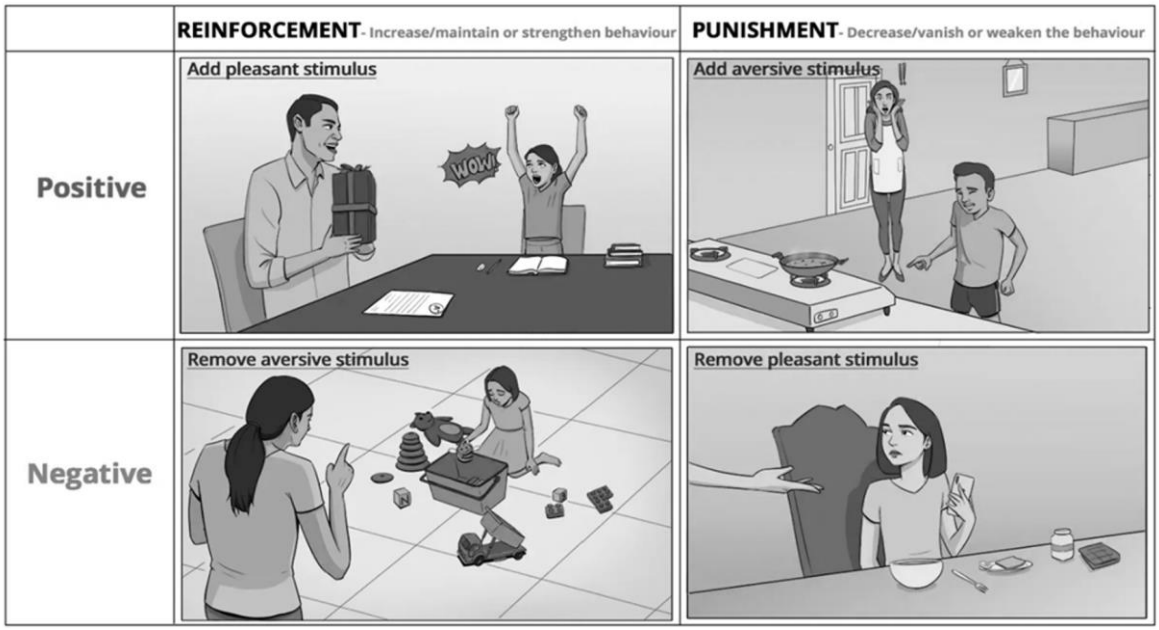

Figure 3: Positive and Negative Reinforcement.

Source: Communication Theory (2022, September 29). *B.F. Skinner's Theory of Operant Conditioning*. Communication Theory. https://www.communicationtheory.org/b-f-skinners-theory-of-operant-conditioning/

Positive reinforcement occurs when a response is followed by a positive event which increases the likelihood of the response occurring again. Negative reinforcement occurs when a response is followed by an end of discomfort, the removal of an unpleasant event or removing the threat of punishment. There is an increase in the likelihood of the desired behaviour being strengthened over time when reinforcement is used as a consequence.

Source: Milesi, P., & Vainer, L. (2005). *Psych Notes (2nd edition) Unit 4*. Nelson: Cengage Learning Australia.

Question 3 continues

Stimulus 2 – The Effects of Music in Advertising

The most common type of conditioning is Classical Conditioning, which is when we learn to associate events or stimuli that frequently happen; as a result of this, we learn to anticipate events. Companies who want you to feel something while you are watching or listening to an advertisement use this type of conditioning. This type of conditioning is used to make you have a specific feeling when you see their product. The advertised product is now a conditioned stimulus. The feeling you get when you see the product is the conditioned response. Some ways that companies use Classical Conditioning is by using the power of music. The results of an experiment done by Gerald J. Gorn from the University of British Columbia were that hearing liked or disliked music while being exposed to a product can directly affect product preferences.

Source: Gorn, G. J. (1982). The Effects of Music in Advertising on Choice Behavior: A Classical Conditioning Approach. *Journal of Marketing*, *46*(1), 94–101. https://doi.org/10.2307/1251163

Use the information presented in Stimulus 1 and Stimulus 2, as well as other relevant information from the course to:

a) Explain the following concepts in relation to Classical and Operant Conditioning:

- Negative Reinforcement
- Shaping
- Conditioned Emotional Response.

b) Analyse and critically evaluate the explanations, theories and concepts used to explain how humans learn through Conditioning.

Question 4: Observational/Cognitive Learning

Examine the following stimulus items:

Stimulus 1 – Consumer Behaviour

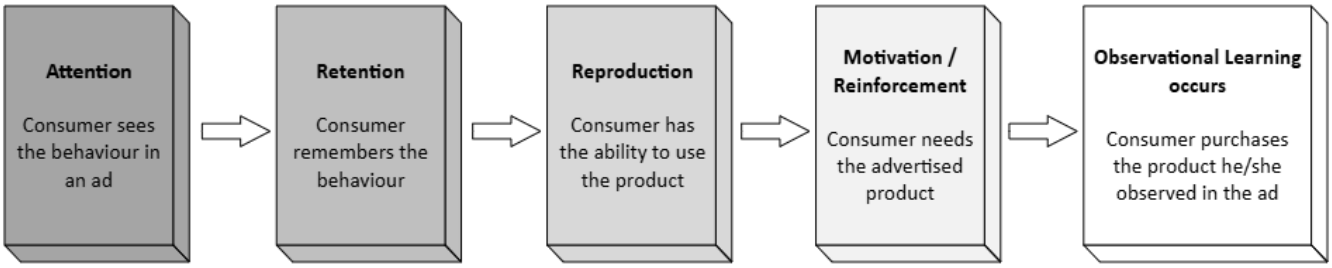

Figure 4: Stages of the effects of advertisements on behaviour.

Image adapted from: Solomon, M. R., Cornell, L. D., & Nizan, A. (2009). 4.5 Internal Influences on Consumers. In *Launch! Advertising and Promotion in Real Time*. FlatWorld. https://2012books.lardbucket.org/books/advertising-campaigns-start-to-finish/s07-05-internal-influences-on-consume.html

One important aspect of a cognitive learning perspective is observational learning. This occurs when people change their own attitudes or behaviours simply by watching the actions of others – learning occurs as a result of vicarious, rather than direct, experience. This type of learning is a complex process; people store these observations in memory as they accumulate knowledge, perhaps using this information at a later point to guide their own behaviour.

Modelling is the process of imitating the behaviour of others. For example, a woman who shops for a new kind of perfume may remember the reactions her friend received when she wore a certain brand several months earlier, and she will mimic her friend's behaviour with the hope of getting the same feedback.

Source: Robertson, K. (1987). Recall and Recognition Effects of Brand Name Imagery. *Psychology and Marketing, 4*(1), (Spring 1987): 3–15. https://doi.org/10.1002/mar.4220040103

Question 4 continues

Question 4 continued

Stimulus 2 – Latent Learning

The term latent learning was coined by Hugh Blodgett in 1929. In experiments that involved having groups of rats run a maze, rats that initially received no reward still learned the course, and demonstrated their learning only after a reward was presented.

Edward Tolman expanded on Blodgett's research and explained that the rats were able to draw upon their 'cognitive map' of the maze once rewards were introduced. This demonstrated that active learning could take place outside of the stimulus–response relationship, even though an organism does not display it right away. Tolman rejected the standard behaviorist theory of his day that indicated behaviour could only be learned by reinforcement. He suggested that we are always taking in facts and information around us, creating a framework of how everything is related to each other, and we can access it when we need it.

Consider your knowledge of various routes in your hometown. Every day you travel a variety of routes and learn the locations of different businesses in your town. However, this learning is latent because you are not using it most of the time. It is only when you need to find a specific location such as the nearest coffee shop or bus stop that you are required to draw on, and demonstrate, what you have learned.

Source: Behrens, T.E.J., Muller, T.H., & Whittington, J.C.R., et al. (2018). What Is a Cognitive Map? Organizing Knowledge for Flexible Behavior. *Neuron*, *100*(2), 490-509. https://doi.org/10.1016/j.neuron.2018.10.002

Use the information presented in Stimulus 1 and Stimulus 2, as well as other relevant information from the course to:

a) Explain the following concepts used in the psychological study of Human Learning:
   - Modelling
   - Observational Learning
   - Cognitive Maps.

b) Analyse and critically evaluate the explanations, theories and concepts used to explain how humans learn through Observational and Cognitive Learning.

Section C – Remembering

- Answer **one (1)** question in this section in response to the stimuli provided.
- Attempt **all** items of the chosen question.
- Use a **separate answer booklet** for this section.
- The suggested working time for this section is **approximately 60 minutes**.
- This section assesses **Criteria 4** and **7**.

Question 5: Memory

Examine the following stimulus items:

Stimulus 1 – Working Memory Model

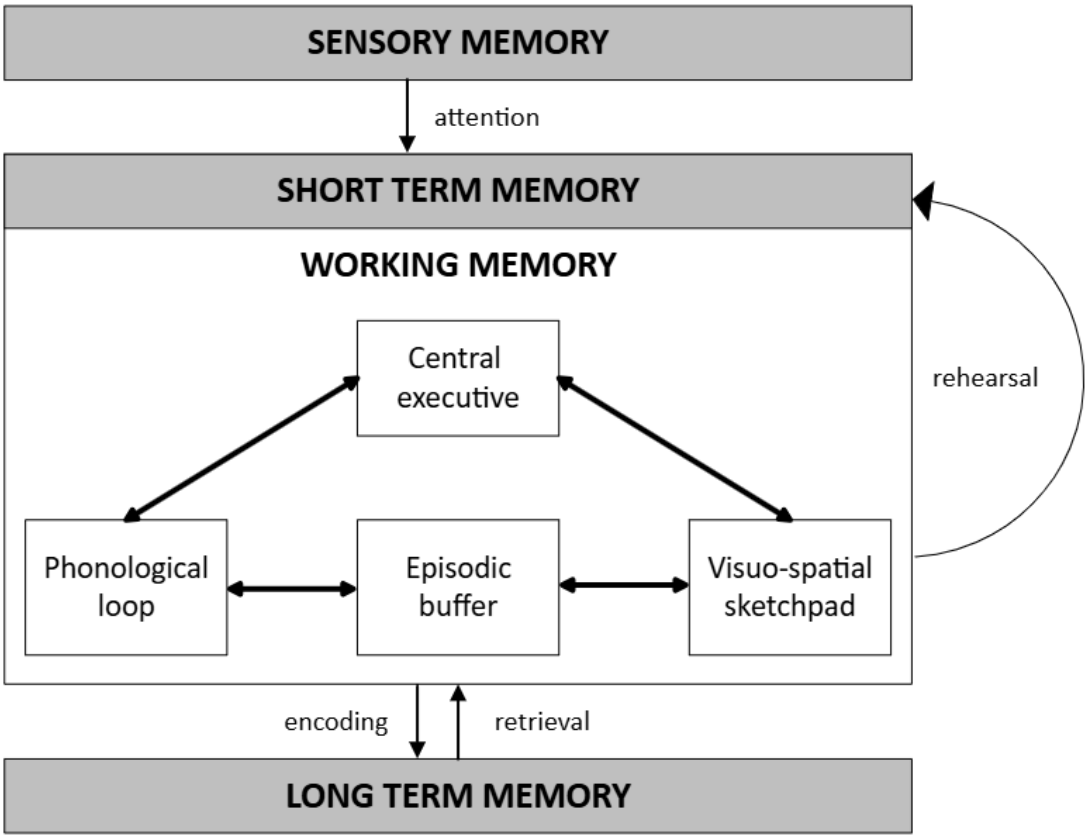

Figure 5: Working Memory Model diagram.

Source: Baddeley, A. (2003). Working memory: looking back and looking forward. *Nature Reviews Neuroscience*, *4*(10), 829–839. https://doi.org/10.1038/nrn1201

The Working Memory Model is a three-part system that allows us to perform cognitive tasks: a kind of mental workbench on which the brain manipulates and assembles information to help us to understand, to make decisions and to solve problems.

Question 5 continues

Question 5 continued

Stimulus 2 – Short-Term Memory

The Short-Term Memory is where all our mental processing and real-time thinking takes place. It is where we combine incoming information from the environment with retrieved information from our Long-Term Memory and then use both to make a decision or complete an action. The most prominent feature of the Short-Term Memory system is its limited capacity. We are able to handle only a small number of new items at any given moment. While it was originally thought that the normal range of items held in Short-Term Memory was five to nine items, research has shown that this capacity is actually lower and is closer to just four items. It also has a limited duration.

Overload in Short-Term Memory leads to information loss – either incoming information will not be processed, or an item 'in process' will be dropped for a new one.

Encoding in Short-Term Memory is essential for Long-Term storage and usually occurs through rehearsal – either maintenance or elaborative. Encoding is the information's 'entry ticket' to the Long-Term Memory storage: as Professor Daniel Willingham puts it, memory is the 'residue of thought'.

Source: Baddeley, A. (2003). Working memory: looking back and looking forward. *Nature Reviews Neuroscience*, *4*(10), 829–839. https://doi.org/10.1038/nrn1201

Use the information presented in Stimulus 1 and Stimulus 2, as well as other relevant information from the course to:

a) Explain the following concepts in relation to the psychological study of Memory:

- Rehearsal
- Encoding
- Working Memory.

b) Analyse and critically evaluate at least **two (2)** models **and/or** theories of Memory used to explain the process of encoding, storing and retrieving information.

Question 6: Forgetting

Examine the following stimulus items:

Stimulus 1 – Forgetting Curve

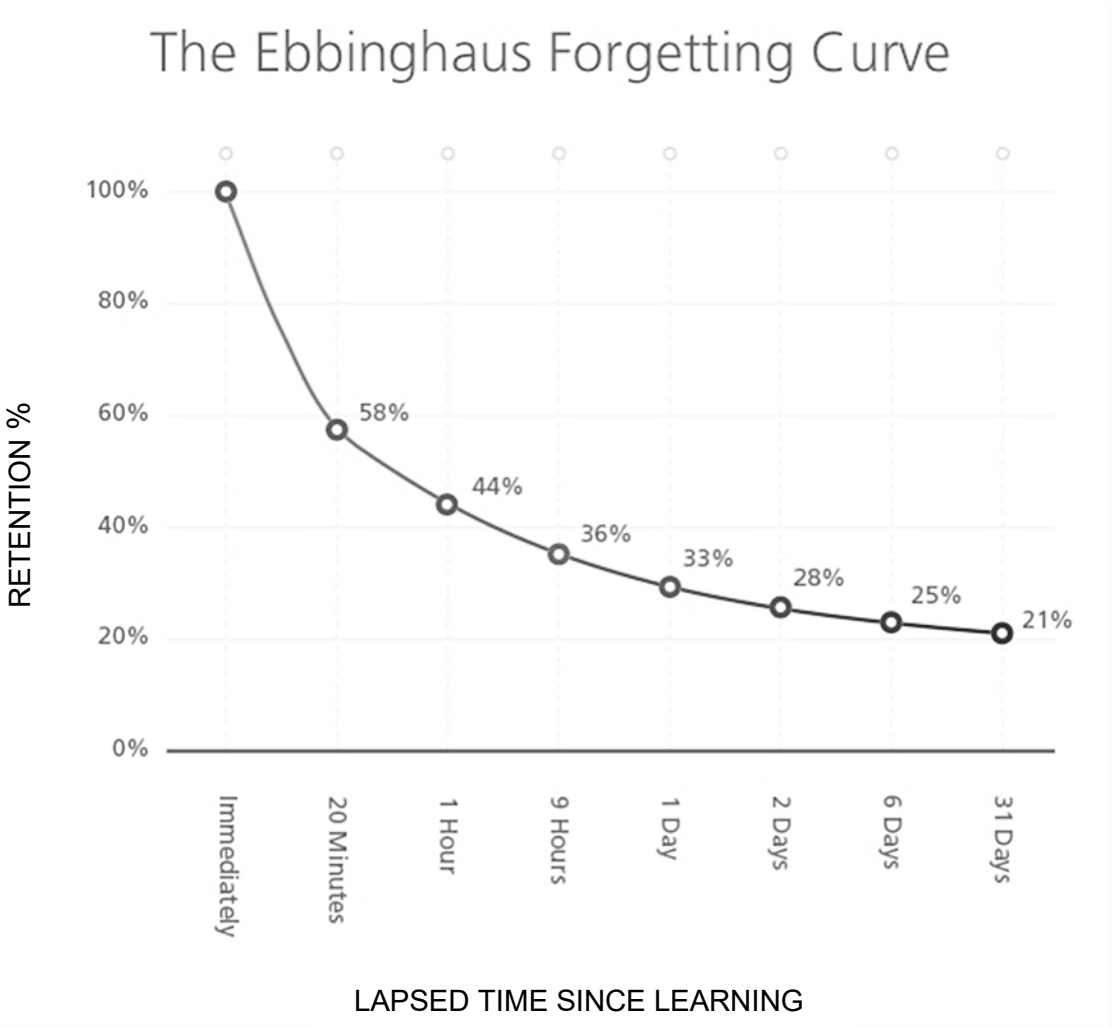

Figure 6: Forgetting Curve.

Source: Gkiokas, D. (2018, February). *Spaced Repetition: Learn Once, Remember Forever - The Metalearners*. The Metalearners. https://www.themetalearners.com/spaced-repetition-learn-once-remember-forever/

The Ebbinghaus Forgetting Curve shows the amount remembered (measured by relearning) after varying lengths of time. Figure 6 shows how rapidly forgetting occurs when the material learned was nonsense words. Forgetting curves for meaningful information also show early losses followed by a gradual decline. The curve demonstrates that what humans remember after a learning event drops steeply soon after completion of the event. In fact, within a month, they will forget almost 80% of what they have learned.

Source: Just, S. B. (2018, July 19). *Learning "Myth" #1: Ebbinghaus Forgetting Curve*. Intela. https://intelalearning.wordpress.com/2018/07/19/learning-myth-1-ebbinghaus-forgetting-curve/

Question 6 continues

Question 6 continued

Stimulus 2 – What Makes Us Forget?

Marketers obviously hope that consumers will not forget about their products. However, in a poll of over 13 000 adults, more than half were unable to remember any specific advertisement they had seen, heard, or read in the past thirty days (Burke & Srull, 1988).

Why do we forget? Some memories simply fade with the passage of time; they decay as the structural changes learning produces in the brain simply go away. Most forgetting is due to interference; as we learn additional information, it displaces the earlier information. As we store pieces of information in associative networks, we are more likely to retrieve a meaningful concept when it is connected by a larger number of links. As we integrate new concepts, a stimulus is no longer as effective at retrieving the old response. These interference effects help to explain why we have trouble remembering brand information from advertisements. Since we tend to organise information by brand, when we learn additional information about the brand or about similar brands, this limits our ability to activate the older information.

Source: Burke, R. R., & Srull, T. K. (1988). Competitive interference and consumer memory for advertising. *Journal of Consumer Research, 15*(1), 55. https://doi.org/10.1086/209145

Source: Solomon, M. R., Cornell, L. D., & Nizan, A. (2009). 4.5 Internal Influences on Consumers. In *Launch! Advertising and Promotion in Real Time*. FlatWorld. https://2012books.lardbucket.org/books/advertising-campaigns-start-to-finish/s07-05-internal-influences-on-consume.html

Source: Meyers-Levy, J. (1989). The Influence of a Brand Name's Association Set Size and Word Frequency on Brand Memory. *Journal of Consumer Research*, *16*(2), 197. https://doi.org/10.1086/209208

Use the information presented in Stimulus 1 and Stimulus 2, as well as other relevant information from the course to:

a) Explain the following concepts in relation to the psychological study of Forgetting:

- Proactive Interference and Retroactive Interference
- Failure to Encode
- Decay.

b) Critically evaluate at least **two (2)** theories of Forgetting that help explain the failure to retrieve information.

End of Exam

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