



ATAR course examination, 2024

Question/Answer booklet

PSYCHOLOGY

Place one of your candidate identification labels in this box.
Ensure the label is straight and within the lines of this box.

WA student number: In figures

--	--	--	--	--	--	--	--	--

In words

Time allowed for this paper

Reading time before commencing work: ten minutes
Working time: three hours

Number of additional
answer booklets used
(if applicable):

Materials required/recommended for this paper

To be provided by the supervisor

This Question/Answer booklet

To be provided by the candidate

Standard items: pens (blue/black preferred), pencils (including coloured), sharpener, correction fluid/tape, eraser, ruler, highlighters

Special items: up to three calculators, which do not have the capacity to create or store programmes or text, are permitted in this ATAR course examination

Important note to candidates

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised material. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.



Structure of this paper

Section	Number of questions available	Number of questions to be answered	Suggested working time (minutes)	Marks available	Percentage of examination
Section One Short answer	6	6	120	136	70
Section Two Extended answer					
Part A	1	1	60	26	10
Part B	2	1		34	20
Total					100

Instructions to candidates

- The rules for the conduct of the Western Australian external examinations are detailed in the *Year 12 Information Handbook 2024: Part II Examinations*. Sitting this examination implies that you agree to abide by these rules.
- Answer the questions according to the following instructions.

Sections One and Two Part A: Write your answers in this Question/Answer booklet preferably using a blue/black pen. Do not use erasable or gel pens. Wherever possible, confine your answer to the line spaces provided.

Section Two Part B: Consists of two questions. You must answer one question. Write your answer in this Question/Answer booklet preferably using a blue/black pen. Do not use erasable or gel pens.
- You must be careful to confine your answers to the specific questions asked and to follow any instructions that are specific to a particular question.
- Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

See next page

Section One: Short answer**70% (136 Marks)**

This section has **six** questions. Answer **all** questions. Write your answers in the spaces provided.

Supplementary pages for planning/continuing your answers to questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued, i.e. give the page number.

Suggested working time: 120 minutes.

Question 1**(20 marks)**

- (a) Distinguish between the terms 'sensation' and 'perception'. (2 marks)

- (b) Name and outline **three** processes of sensation. (6 marks)

One: _____

Two: _____

Three: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

See next page

Question 1 (continued)

Numerous researchers have studied sensation and perception through the use of ambiguous images. Figure 1 shows an example of an ambiguous image that could be perceived as a horse or a seal.



Figure 1: Ambiguous horse-seal figure

- (c) With reference to Figure 1, explain how the processes of organisation and interpretation impact our perception of the image. (4 marks)

- (d) Provide a psychological definition for the term 'divided attention'. (3 marks)

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

A key study of attention is commonly referred to as the Cocktail party effect.

- (e) Name the researcher and state the year in which this study was conducted. (2 marks)

- (f) Explain how the Cocktail party effect findings relate to selective attention. (3 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

See next page

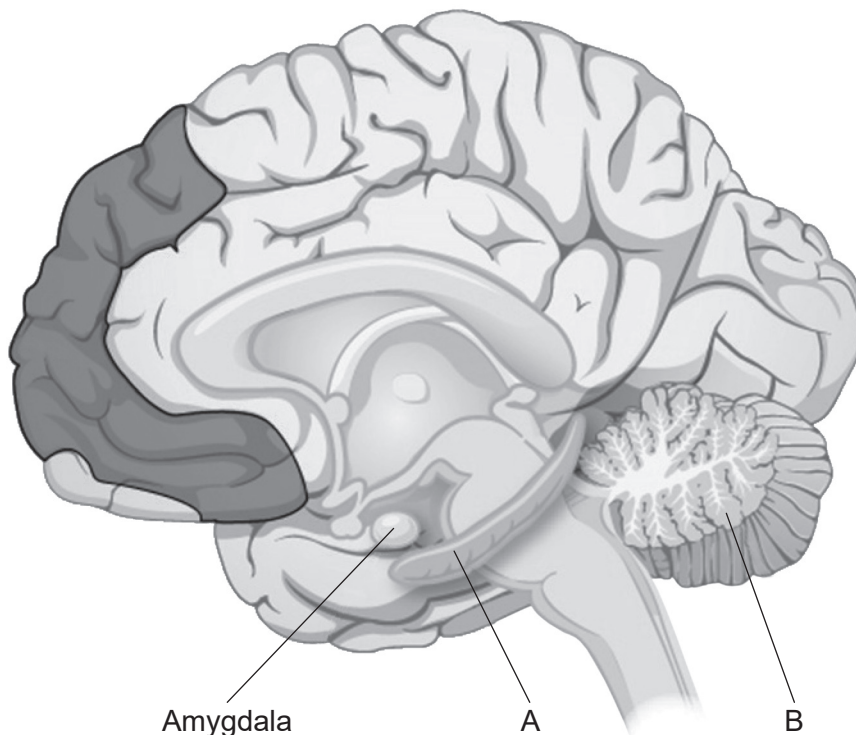
Question 2

(21 marks)

(a) Define the psychological term 'memory'.

(1 mark)

Three structures of the brain associated with memory formation are labelled in the midsagittal diagram of the brain below.



(b) Name structures A and B in the table below.

(2 marks)

Structure	Name
A	
B	

The amygdala forms part of the limbic system and is also involved in the formation of memory.

- (c) State **three** roles of the amygdala. (3 marks)

One: _____

Two: _____

Three: _____

- (d) Explain the amygdala's potential role in the process of classical conditioning. (5 marks)

- (e) Outline **two** possible changes in a person's ability to form memories resulting from damage to the amygdala. (2 marks)

One: _____

Two: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 2 (continued)

Chronic Traumatic Encephalopathy (CTE) is a condition associated with memory loss.

- (f) Name and outline **two** other conditions associated with memory loss. Identify **two** main features of each. (8 marks)

One: _____

Two: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

This page has been left blank intentionally

See next page

Question 3

(24 marks)

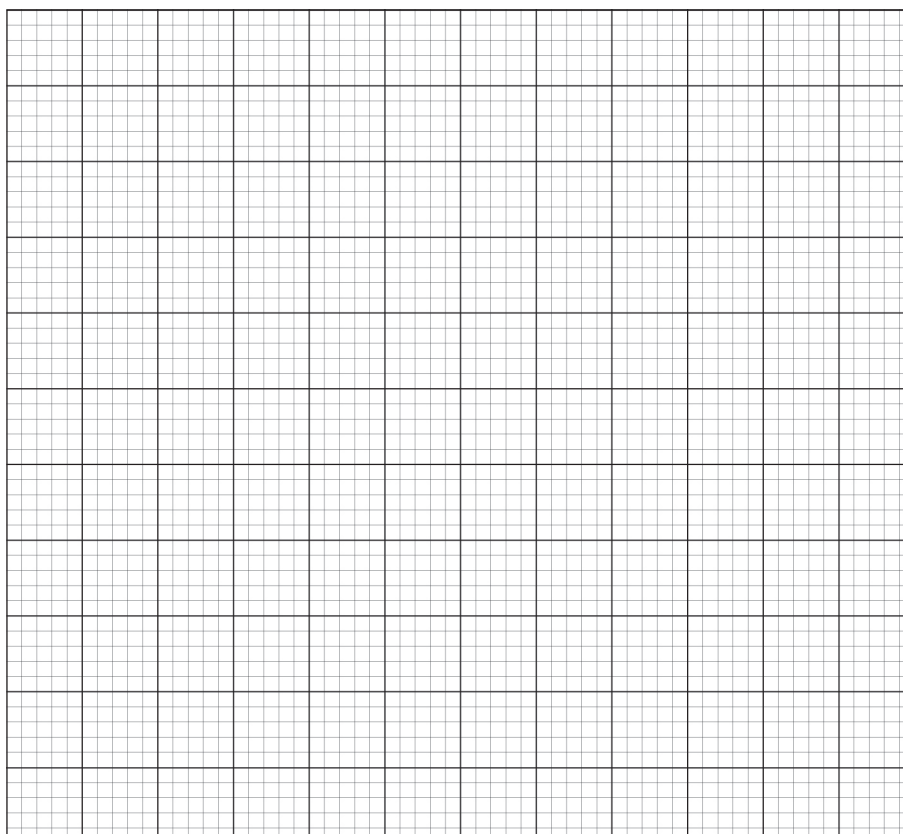
Esme is leading a research project examining memory retention patterns in adolescents during a critical period of academic learning. As a part of the research, her team collected data on memory retention over time from a group of adolescents undergoing intensive examination preparation for their final year of secondary schooling.

The data in the table below shows the percentage of information remembered at different time intervals following the presentation of memory stimuli.

Time (day)	Percentage of information remembered
0	100
1	70
2	50
3	38
4	30

(a) Construct a line graph from the data shown above.

(5 marks)



A spare grid is provided at the end of this Question/Answer booklet. If you need to use it, cross out this attempt and indicate that you have redrawn it on the spare page.

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

- (b) Describe the pattern of memory retention as displayed in the graph. (2 marks)

The graph created on page 10 has a specific name, according to a researcher who investigated how much information we retain over time.

- (c) Identify the concept associated with this type of graph. (1 mark)

- (d) Name the researcher associated with the concept identified in part (c). (1 mark)

- (e) Explain how the researcher named in part (d) proposed how to improve memory retention over time. (3 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 3 (continued)

Part of Esme’s research was to consider what secondary school students could do in their study habits to improve their examination results. An experiment with two groups was set up. Each group investigated a different form of rehearsal. The participants were given the same set of information to learn, and were instructed to use their assigned rehearsal strategy. They then had to recall the information, and the data was collected and analysed.

- (f) Identify and outline **two** different rehearsal strategies and propose an example for each. (6 marks)

One: _____

Two: _____

Data from this part of the research is presented in the table below.

Time (in days)	Group one (% of information retained)	Group two (% of information retained)
0	100	100
1	85	90
2	70	80
3	58	72
4	59	65

- (g) Deduce which rehearsal strategy from part (f) on page 12 was used by Group two and justify your answer. (3 marks)

Strategy: _____

Justification: _____

Esme wanted to publish her findings and create a resource to share with secondary schools to help the students.

- (h) State the psychological term for applying the findings of a sample to a population. (1 mark)

- (i) List **two** factors that can affect how well findings can be applied to a population. (2 marks)

One: _____

Two: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 4

(17 marks)

- (a) Contrast Selye's (1983) constructs of distress and eustress. (4 marks)

- (b) List **four** types of stressors. (4 marks)

One: _____

Two: _____

Three: _____

Four: _____

Holmes and Rahe (1967) proposed a model of stress and its impact on health.

- (c) Name the tool that Holmes and Rahe developed. (1 mark)

In developing their tool, they asked participants to complete a questionnaire, ranking stressful life events.

- (d) Identify the type of data that was produced by this questionnaire. (2 marks)

- (e) Deduce **one** common theme identified by Holmes and Rahe in the life events used in their tool. (2 marks)

In evaluating their research, Holmes and Rahe identified a correlation coefficient above 0.9 between groups contained in the sample, apart from the correlation between white and African American participants, which was 0.82.

- (f) Interpret the correlation coefficient between white and African American participants. (4 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 5

(26 marks)

- (a) Provide a psychological definition for the term 'sleep'. (1 mark)

Several approaches seek to explain the purpose of sleep, including evolutionary and restorative theories.

- (b) State **one** purpose of sleep according to each of these perspectives.

- (i) Evolutionary (1 mark)

- (ii) Restorative (1 mark)

- (c) Identify the stage of the sleep-wake cycle that is thought to be responsible for the majority of dreaming and state **four** characteristics of the stage. (5 marks)

Stage: _____

Characteristics

One: _____

Two: _____

Three: _____

Four: _____

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Ernest is launching a new mattress company called Suite Dreams, and he is claiming that his mattresses provide a greater percentage of time dreaming than either of his two main competitors. To support his claim, he wishes to undertake a sleep study that he can use as evidence.

Ernest wants objective physiological measures to be used for the study.

- (d) Identify **two** objective physiological measures that could be used to study sleep. (2 marks)

One: _____

Two: _____

- (e) Identify whether a directional or non-directional hypothesis would be more appropriate for this study and justify your choice. (3 marks)

Type of hypothesis: _____

Justification: _____

Ernest decides to use random sampling for the study.

- (f) Outline the method of random sampling and state **one** strength and **one** limitation of this sampling method. (3 marks)

Method: _____

Strength: _____

Limitation: _____

Question 5 (continued)

Ernest wants to develop an appropriate method for his study.

- (g) Name a measurement tool that could be used in his method. Justify why you have selected it. (2 marks)

- (h) Name **three** types of variables and state an example of each relevant to Ernest's study. (6 marks)

One: _____

Two: _____

Three: _____

- (i) Propose how this sleep study could support Ernest's claim. (2 marks)

Question 6 (continued)

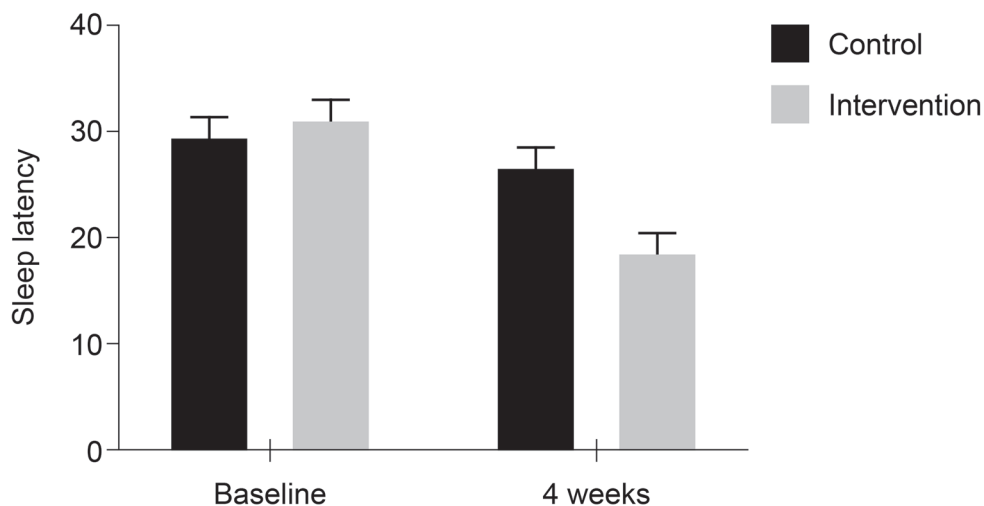
He et al. used a number of measures to collect data.

- (e) Identify the type of data collected by the Pittsburgh Sleep Quality Index. (1 mark)

Working memory was assessed using a computerised *n*-back task, which measured reaction time and accuracy.

- (f) State whether this method of data collection was objective or subjective. (1 mark)

The graph below shows measures of sleep latency at the baseline and after four weeks.



- (g) Define the term 'sleep latency'. (1 mark)

- (h) Deduce from the graph above, the impact of the intervention on sleep latency. (1 mark)

(i) State the key finding of the study by He et al. (1 mark)

(j) Suggest **three** benefits of the key finding stated in part (i). (3 marks)

One: _____

Two: _____

Three: _____

(k) Explain **one** limitation of the study. (3 marks)

(l) Propose **one** change that could be made to improve the study. (2 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Question 6 (continued)

A social media influencer has recently read a study by He et al. and has started a campaign claiming all mobile phone use is 'bad'.

- (m) Present an argument based on psychological research principles that disagrees with the influencer's argument. (4 marks)

End of Section One

See next page

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Section Two: Extended answer**30% (60 Marks)**

This section has **two** parts.

Part A

This part has **one** compulsory question. Write your answer in the space provided.

Part B

Answer **one** question from a choice of **two**. Write your answer in the space provided.

Supplementary pages for planning/continuing your answers to the questions are provided at the end of this Question/Answer booklet. If you use these pages to continue an answer, indicate at the original answer where the answer is continued i.e. give the page number.

Suggested working time: 60 minutes.

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

See next page

Part A

10% (26 Marks)

This part has **one** compulsory question.

Write your answer to Part A on pages 25–29. When you have answered this question turn to pages 30–31 to select either Question 8 or Question 9.

Question 7

(26 marks)

Gladys is studying psychology at a university, and, as part of her course, she is required to recreate a famous psychological study of her choice.

She decides upon Pavlov's (1902) famous study of classical conditioning involving dogs.

As she does her own research into the study, she becomes concerned to learn that the experiment involved numerous dogs being surgically operated on and realises that she will not be able to replicate the study today and will need to make some adjustments to follow the ethical guidelines for the use of animals in research.

Write an extended answer that demonstrates Science inquiry and Psychological knowledge and understanding in relation to the scenario above.

In your answer you must:

- define the term 'classical conditioning' (3 marks)
- describe the method of Pavlov's study and outline the aim and findings (5 marks)
- explain how Pavlov's study has contributed to the psychological understanding of learning (4 marks)
- state **three** ethical guidelines for the use of animals in research (3 marks)
- propose how Gladys could adapt the study with reference to each of these guidelines to improve the animal ethics within the study (6 marks)
- use appropriate psychological terminology (3 marks)
- acknowledge sources of information using appropriate referencing. (2 marks)

Part B

20% (34 Marks)

Answer **one** question from a choice of **two**.

Indicate the question you will answer by ticking the box next to the question.

Write your answer on the pages provided following Question 9.

Question 8

(34 marks)

Phyllis is the manager of a business and is interested in exploring ways of improving the motivation of her employees to perform well in their work. She hires an organisational psychologist, Beverley, who explains to Phyllis that she can consider the productivity of her employees through the application of Maslow's Hierarchy of Needs. Beverley investigates Phyllis' workforce by conducting a survey on the factors that are most important to the employees in the workplace.

The table below shows the results of Beverley's survey, ranking the top 10 most important workplace characteristics for Phyllis' employees.

Rank	Characteristics
1	Company stability
2	Good workplace discipline
3	On-time payments
4	Workplace environment
5	Freedom to carry out the job
6	Path for career development
7	Friendly management
8	Feedback/say well done
9	Good salary
10	Promotion

Beverley makes suggestions on changes to the psychological environment within the business. Beverley's colleague, Marge, who is also a psychologist, suggests that Phyllis encourage her employees to focus on beautiful and creative approaches to the business. She also suggests implementing a volunteering program for employees to engage with disadvantaged communities to help them to improve.

Write an extended response that demonstrates Science inquiry and Psychological knowledge and understanding in relation to the scenario above.

In your answer you must:

- summarise Maslow's theory on motivation (5 marks)
- describe each element of Maslow's (1954) Hierarchy of Needs (10 marks)
- recommend **two** strategies that Beverley might give to Phyllis for improving productivity in her company (6 marks)
- explain the factors from Maslow's (1970) modification that Marge is addressing in her suggestions (4 marks)
- evaluate the research design used by Beverley (4 marks)
- use appropriate psychological terminology (3 marks)
- acknowledge sources of information using appropriate referencing. (2 marks)

See next page

**Question 9****(34 marks)**

Cecil is a 25-year-old who has recently completed his apprenticeship and started his first job in a busy workshop. Despite completing his apprenticeship and getting a job in the industry, he finds himself struggling with feelings of emptiness and dissatisfaction in various aspects of his life. He often feels overwhelmed by work pressure, has trouble maintaining meaningful relationships with colleagues, and lacks a sense of purpose and direction in his personal life. Cecil also finds it challenging to balance his professional responsibilities with his own needs for personal growth and self-care.

Cecil has been referred to a psychologist for help by his supervisor at work. To collect data on Cecil's wellbeing, the psychologist has conducted both an interview and administered a self-report survey. The interview was open-ended, and the survey was composed of a variety of Likert and rating scales. The information from these measures was applied to a psychological and a subjective model of wellbeing to better help Cecil understand his current situation.

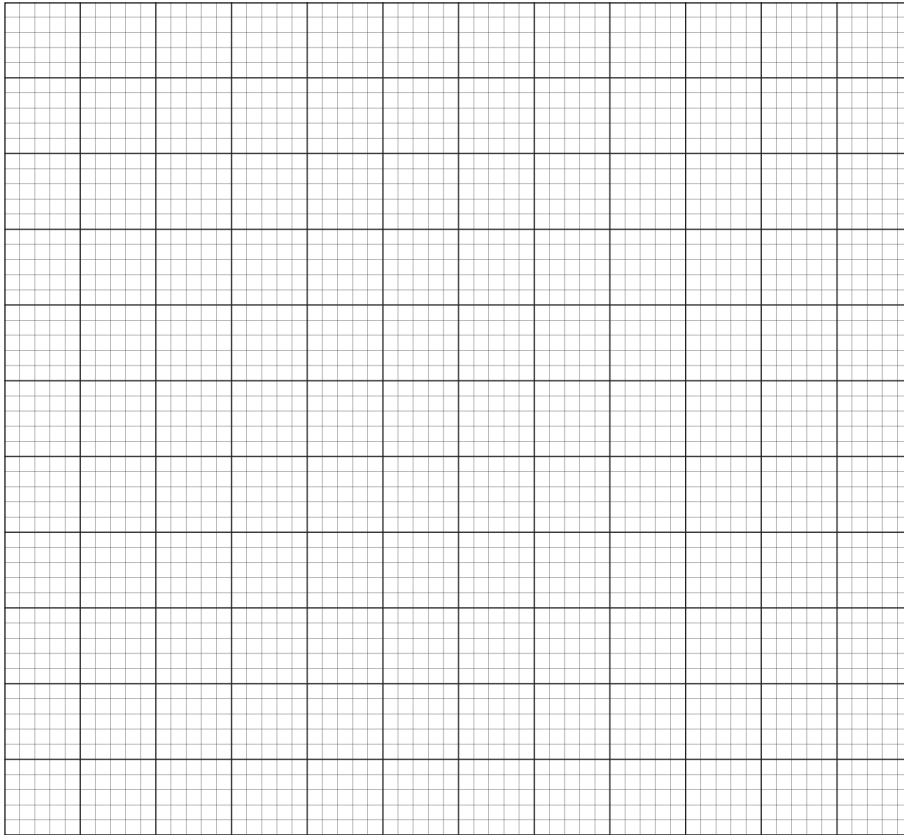
Write an extended answer that demonstrates Science inquiry and Psychological knowledge and understanding in relation to the scenario above.

In your answer you must:

- define wellbeing (2 marks)
- distinguish between subjective and psychological wellbeing (4 marks)
- summarise Diener's (1984) model of subjective wellbeing (4 marks)
- explain how **four** components of Ryff's (1989) psychological wellbeing model contribute to an overall sense of wellbeing (12 marks)
- explain **one** specific challenge Cecil is facing related to his wellbeing (3 marks)
- assess the benefit of using both the interview and the survey to collect and interpret data (4 marks)
- use appropriate psychological terminology (3 marks)
- acknowledge sources of information using appropriate referencing. (2 marks)

DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

Spare grid for Question 3(a)



DO NOT WRITE IN THIS AREA AS IT WILL BE CUT OFF

ACKNOWLEDGEMENTS

- Question 1(c)** Adapted from: Fisher, G. H. (1968). Newly-devised Ambiguous Figures (Fig 3) [Diagram]. *Ambiguity of Form: old and new. Perception & Psychophysics*, 4(3), p. 191. Retrieved April, 2024, from <https://link.springer.com/article/10.3758/BF03210466>
Used under a Creative Commons 4.0 International licence.
- Question 2(b)** Adapted from: Spielman, R. Jenkins, W. Lovett, M. (2020). *Psychology* (2nd ed.). OpenStax, Figure 8.8. Retrieved April, 2024, from <https://openstax.org/books/psychology-2e/pages/8-2-parts-of-the-brain-involved-with-memory>
Used under a Creative Commons 4.0 International licence.
- Question 6(g)** Information from: He, J. W., Tu, Z. H., Xiao, L., & et al. (2020, February). Effect of Restricting Bedtime Mobile Phone use on Sleep, Arousal, Mood, and Working Memory: A Randomized Pilot Trial. *PLoS One*, 15(2). Retrieved April, 2024, from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0228756>
- Question 8** Information from: Sugathadasa, P. T. R. S., Lakshitha, M., Thibbotuwawa, A., & et al. (2021, February). Motivation Factors of Engineers in Private Sector Construction Industry. *Journal of Applied Engineering Science*, 19(3), p. 801. Retrieved April, 2024, from <https://www.engineeringscience.rs/images/pdf/29201.pdf>
Used under a Creative Commons 4.0 International licence.

Copyright

© School Curriculum and Standards Authority, 2024

This document – apart from any third-party copyright material contained in it – may be freely copied, or communicated on an intranet, for non-commercial purposes in educational institutions, provided that it is not changed and that the School Curriculum and Standards Authority (the Authority) is acknowledged as the copyright owner, and that the Authority's moral rights are not infringed.

Copying or communication for any other purpose can be done only within the terms of the *Copyright Act 1968* or with prior written permission of the Authority. Copying or communication of any third-party copyright material can be done only within the terms of the *Copyright Act 1968* or with permission of the copyright owners.

Any content in this document that has been derived from the Australian Curriculum may be used under the terms of the Creative Commons [Attribution 4.0 International \(CC BY\)](https://creativecommons.org/licenses/by/4.0/) licence.