



2023 PSYCHOLOGY UNIT 3/4 Exam ANSWER GUIDE

SECTION A - MULTIPLE CHOICE

ANSWER	SUCCESS CRITERIA	ANSWER	SUCCESS CRITERIA
1.D	The brain and spinal cord are part of the central nervous system.	2.A	Maisie's parasympathetic nervous system will decrease her respiratory rate while she is cooling down. Koby's sympathetic nervous system will dilate his pupils while he is sprinting.
3.A	Glutamate is an excitatory neurotransmitter that makes the postsynaptic neuron more likely to fire a message.	4.D	Negative reinforcement involves the removal of a negative stimulus, such as less muscle pain, resulting in an increase in likelihood of repeating the behaviour of a cool down routine.
5.B	The basal ganglia is involved in the formation of implicit procedural memory, specifically habits such as Koby's race starting routine.	6.A	Explicit memory is memory that can be consciously retrieved, such as the semantic memory of the starting gun sound.
7.B	Autobiographical memory includes semantic and episodic memory, not implicit memory such as opening a school locker.	8.C	Aphantasia involves inability of visualising images in one's mind, such as visualising the colours of a birthday party decorations.
9.A	The findings of the study explain that forcing a smile may protect against poor mental wellbeing.	10.B	The ability to form positive relationships with others is a characteristic of good social wellbeing.
11.A	External validity refers to the results of the research being applied to similar individuals in a different setting, such as different countries and cultures.	12.D	A limitation of the conclusions takes into consideration design flaws in the experiment that may have affected the results and conclusions, such as being unable to relate these findings to people with mental health disorders.
13.A	A full night of sleep deprivation results in similar impairments in affective functioning, as a person with a BAC of 0.10	14.C	The gut-brain axis is an area of emerging research highlighting the bidirectional relationship between the gastrointestinal tract and the brain.

15.B	Gut microbiota are the microbe populations that live in the gastrointestinal tract.	16.C	Fieldwork studies collect information through observation and interaction with a selected environment, such as noting the imbalance of gut microbiota in Parkinson's disease patients.
17.B	Non-maleficence involves doing no harm to human participants, such as causing them to develop Parkinson's disease, so instead animals such as mice may be used.	18.A	One role of dopamine is to carry motor messages to the motor cortex in the brain. In Parkinson's disease, there is a decline in the production of dopamine, resulting in uncontrolled movements.
19.D	The experimental group of mice would be injected with the substance, while a second group of mice act as the control condition forming a baseline of results for comparison.	20.A	During REM sleep there is a high level of brain activity, while during N3 sleep there is a low level of brain activity.
21.B	During REM sleep there is fast darting eye movement, while during N3 sleep there is slow rolling eye movement.	22.C	Secondary appraisal involves the evaluation of coping resources, and Quinn might determine they were inadequate which results in the experience of stress.
23.D	The amygdala encodes the emotional component of memory, such as Quinn's fear.	24.A	A classically conditioned fear would be stored in implicit long-term memory.
25.B	Systematic desensitisation is an evidence-based intervention for phobia that involves pairing relaxation technique with a fear hierarchy of the phobic stimulus.	26.B	A dysfunctional GABA system can promote anxiety, leading to developing a phobia.
27.D	Emotional wellbeing involves the ability to regulate emotions appropriately according to the situation.	28.A	Alzheimer's disease involves degeneration of neurons, beginning in the hippocampus.
29.C	The domain called 'connection to culture' discusses the importance of maintaining identity and a sense of continuity with the past.	30.A	The 'body' domain emphasises the importance of eating good healthy food and exercising for mental wellbeing.
31.D	A feature of REM sleep is 'paralysed' muscles, so it would be irregular for Jonah to be moving during REM sleep.	32.D	An EMG detects, amplifies and records the electrical activity of the muscles, and video monitoring will be able to show which movements are occurring.
33.B	A sleep cycle lasts approximately 90 minutes, after falling asleep at 11.00pm, Jonah might experience his first period of REM around 12.20am.	34.A	Being an adult, Jonah's expected pattern would be 80% of NREM sleep and 20% REM sleep.
35.B	The percentage change will show the increase in REM sleep over the night.	36.C	A strong positive correlation involves one variable increasing (such as use of context-specific effect strategies) as the other variable also increases (such as age).

37.D	The researchers would tell all participants the true nature of the study at the end of the study, not just those who were deceived.	38.B	Reproducibility refers to how close measurements of the same quantity are when carried out under different conditions, such as the use of a different questionnaire.
39.D	An outlier is a value that lies far away from the other values.	40.D	An acrostic involves a poem such as 'Never Eat Soggy Weetbix', whereas an acronym involves a pronounceable word such as 'NEWS'

SECTION B - SHORT ANSWER

Q1

- a. To achieve full marks, students need to identify which investigation methodology this researcher was using for their study.

EXAMPLE RESPONSE:

The methodology would be product, process or system development.

Success Criteria	Mark Allocation
Identify product, process or system development.	1 mark

- b. To achieve full marks, students need to identify whether this investigation would be using and analysing primary or secondary data.

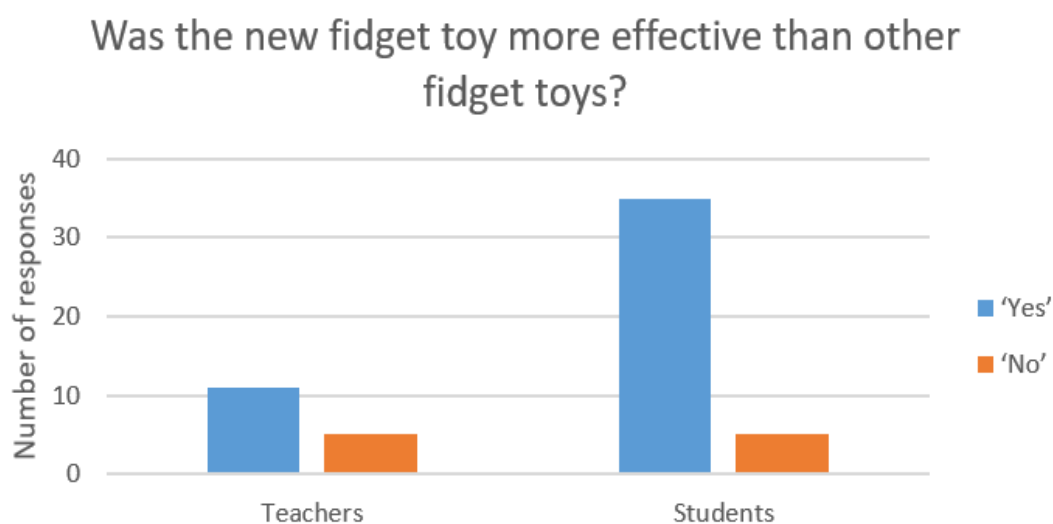
EXAMPLE RESPONSE:

This investigation is analysing primary data.

Success Criteria	Mark Allocation
Identify the data type as primary data.	1 mark

- c. To achieve full marks, students need to represent the results of the investigation using a correctly labelled graphical representation on the grid provided.

EXAMPLE RESPONSE:



Success Criteria	Mark Allocation
Selection of a bar chart to display the results.	1 mark
Accurate plotting of all values.	1 mark
Correct labelling of the horizontal x-axis.	1 mark
Correct labelling of the vertical y-axis.	1 mark

Q2

- a. To achieve full marks, students need to explain why the ways of knowing framework is considered a multimodal system of knowledge.

EXAMPLE RESPONSE:

According to the 8 ways framework, there are 8 distinct ways of knowing, which are interconnected into a system that describes transmission of knowledge.

Success Criteria	Mark Allocation
Describe the ways of knowing framework as consisting of eight distinct ways of knowing.	1 mark
Describe the ways of knowing framework as involving a system that describes the transmission of knowledge.	1 mark

- b. To achieve full marks, students need to refer to the 'story sharing' and 'learning maps' ways of knowing processes to describe how you might tell a new student at school how to catch the school bus home.

EXAMPLE RESPONSE:

Story sharing: You could connect with the student through a shared personal story of the past, such as telling a story about your own first time catching the school bus home.

Learning maps: You could explicitly map and visualise the process of catching the bus, creating a visual plan for the student to follow.

Success Criteria	Mark Allocation
Describe how the story sharing way of knowing could be used to tell a student how to catch the bus, by sharing a personal story with them.	1 mark
Describe how the learning maps ways of knowing could be used to tell a student how to catch the bus, by visualising and creating a visual plan of the process.	1 mark

Q3

- a. To achieve full marks, students need to identify the stage of the General Adaptation Syndrome that Kate would be in, in the moment the meal was ruined.

EXAMPLE RESPONSE:

Kate would be in the alarm reaction stage of the GAS.

Success Criteria	Mark Allocation
Identify alarm reaction as the relevant stage of GAS.	1 mark

- b. To achieve full marks, students need to explain what would have been required for Kate to move into the third stage of the General Adaptation Syndrome.

EXAMPLE RESPONSE:

To move into the exhaustion stage of GAS, Kate would need to experience multiple/ongoing stressors over a prolonged time that used up her resources and caused ongoing release of cortisol.

Success Criteria	Mark Allocation
Identify the third stage of GAS as the exhaustion stage.	1 mark
Explain that Kate would move into the exhaustion stage if she experienced multiple or prolonged stressors which she can no longer cope with.	1 mark
Explain that the ongoing stressors would result in Kate's resources being used up / an ongoing release of cortisol moved her into the exhaustion stage.	1 mark

- c. To achieve full marks, students need to name the response that would have occurred for Kate when the meal was ruined.

EXAMPLE RESPONSE:

When the meal was ruined Kate would have experienced a fight-flight-freeze response.

Success Criteria	Mark Allocation
Identify the fight-flight-freeze response.	1 mark

- d. To achieve full marks, students need to justify whether Kate experienced an internal or an external stressor.

EXAMPLE RESPONSE:

Kate would have experienced an external stressor, because the meal being ruined is a source originating outside of her. It would not be an internal stressor as that would have originated from within Kate's body.

Success Criteria	Mark Allocation
Identify that Kate would experience an external stressor.	1 mark
Define external stressors as originating outside of the individual, such as the meal being ruined.	1 mark
Explain that it wouldn't be classified as an internal stressor as those originate from within the body.	1 mark

- e. To achieve full marks, students need to use the Transactional Model of Stress and Coping to explain what Kate's primary appraisal might have involved when the meal was ruined.

EXAMPLE RESPONSE:

Kate would have evaluated the significance of the event of the meal being ruined as stressful, and a threat as she may not be able to re-make the meal adequately enough.

Success Criteria	Mark Allocation
Define primary appraisal as an evaluation of the significance of the stressor	1 mark
Identify that Kate would have evaluated the event as 'stressful'.	1 mark
Identify that Kate would have further evaluated the event as harm/loss/threat, with reference to the scenario.	1 mark

- f. To achieve full marks, students need to provide an example of an avoidance strategy that Kate could have used when faced with the stressor of the meal being ruined, and explain why it would not have been a helpful strategy.

EXAMPLE RESPONSE:

Any example that demonstrates dealing indirectly with the stressor, such as leaving the kitchen to go watch TV. This would have reduced her stress in the short term, however it would not resolve the problem and she would have longer-term stress.

Success Criteria	Mark Allocation
Outline an example of an avoidance strategy relevant to Kate's meal being ruined.	1 mark
Explain a limitation of an avoidance strategy, such as being inappropriate for dealing with the stressor in the long-term.	1 mark

Q4

- a. To achieve full marks, students need to list two observable symptoms that Juan might display that may indicate he has developed a phobia.

EXAMPLE RESPONSE:

Juan might show an avoidance of the garden pathway and sweating while near the pathway.

Success Criteria	Mark Allocation
Identify one observable symptom of a phobia, such as avoidance of the phobic stimulus, increased sweating, physical agitation, etc.	1 mark
Identify a second observable symptom of phobia.	1 mark

- b. To achieve full marks, students need to describe two differences between stress and phobia.

EXAMPLE RESPONSE:

Stress is adaptive, while phobias are not adaptive.

Stress is not a diagnosable mental health disorder, whereas phobias are diagnosable.

Success Criteria	Mark Allocation
Identify one feature of stress, such as it being adaptive, not a mental disorder, experienced by most people, may impact day-to-day functioning, etc.	1 mark
Directly compare this feature to phobia, such as it being not adaptive, a diagnosable mental disorder, not experienced by most people, significantly impacting day-to-day functioning.	1 mark
Identify a second feature of stress.	1 mark
Directly compare this feature to phobia.	1 mark

- c. To achieve full marks, students need to use the language of classical conditioning, explain how Juan has developed a phobia of the garden pathway.

EXAMPLE RESPONSE:

Before conditioning, the garden pathway was a neutral stimulus that produces no particular response. Spiders were an unconditioned stimulus that produced an unconditioned response of fear for Juan.

During conditioning, the garden pathway (NS) was presented before the spider (UCS) which produced fear for Juan (UCR). In this case, repeated pairing of the stimuli was not experienced.

Now, the garden pathway is a conditioned stimulus (CS) that produces a conditioned response (CR) of fear for Juan.

Success Criteria	Mark Allocation
Identify the neutral stimulus (NS) as the garden pathway, which originally produced no response.	1 mark
Explain that the garden pathway (NS) was presented before the unconditioned stimulus (UCS) of the spider, leading to the unconditioned response (UCR) of fear.	1 mark
Explain that the garden pathway (NS) is now the conditioned stimulus (CS) that leads to the conditioned response (CR) of fear.	1 mark

- d. To achieve full marks, students need to refer to operant conditioning to explain why Juan should try not to avoid the garden pathway in order to overcome his fear.

EXAMPLE RESPONSE:

Avoiding the phobic stimulus acts as a negative reinforcement, as the unpleasant stimulus of the garden path is removed. However, this acts to increase Juan's likelihood of avoiding the pathway in the future, thus perpetuating his phobia and not resolving it.

Success Criteria	Mark Allocation
Identify the avoidance behaviour as a negative reinforcement.	1 mark
Define negative reinforcement as the removal of an unpleasant stimulus.	1 mark
Explain that negative reinforcement of a phobic stimulus leads to an increased likelihood of avoidance behaviour, perpetuating the phobia.	1 mark

- e. To achieve full marks, students need to determine which social evidence-based intervention would most effectively help Juan stop avoiding the garden pathway, and explain how this intervention could be used.

EXAMPLE RESPONSE:

Psychoeducation would involve Juan's family/supporters not encouraging Juan to avoid the pathway. His family could suggest that he walks down the pathway during the day so that he can better see that there are no more spider webs there.

Success Criteria	Mark Allocation
Identify the evidence-based intervention as psychoeducation.	1 mark
Define psychoeducation as involving Juan's family not encouraging Juan to avoid the garden pathway.	1 mark
Explain how Juan's family could do this, such as suggesting he walk down the pathway during the day, or encouraging him to try the pathway when he goes to avoid it, etc.	1 mark

- f. To achieve full marks, students need to explain whether Juan eating well and having a good diet will help him overcome his phobia.

EXAMPLE RESPONSE:

This information is not necessarily correct.

While eating a healthy diet can help maintain mental wellbeing, Juan is currently experiencing a mental health disorder which requires an evidence-based intervention to treat his phobia.

Success Criteria	Mark Allocation
Identify that it is not correct that eating well and having a good diet will help him overcome his phobia.	1 mark
Explain the benefit of eating a healthy diet on mental wellbeing.	1 mark
Explain that Juan is experiencing a mental health disorder which requires an evidence-based intervention / Juan is not experiencing current good wellbeing which could be promoted by protective factors such as healthy diet.	1 mark

Q5

- a. To achieve full marks, students need to refer to the age of the participants to identify the number of hours of sleep that is recommended for this age group, and justify whether students in any of the schools were meeting the recommended hours of sleep at the baseline measurement.

EXAMPLE RESPONSE:

The participants are adolescents in grade 9 – 11, and they are recommended to receive around 9 hours of sleep a night.

The schools in this study reported students were not receiving the recommended hours, as they were receiving between 7:40 to 8 hours of sleep.

Success Criteria	Mark Allocation
Identify the age of the participants as mean 15.2 years / Years 9-11 at school / 15-17 years old.	1 mark
Identify that this age group is recommended to receive around 8-10 hours of sleep each night.	1 mark
Identify that the schools/some of the schools in this study reported that students were not receiving the recommended 8-10 hours of sleep.	1 mark
Identify that the schools in this study reported that students were receiving around 7:40 – 8 hours of sleep.	1 mark

- b. To achieve full marks, students need to interpret the results displayed in Figure 1 and provide an appropriate conclusion for this investigation.

EXAMPLE RESPONSE:

For this sample, delayed starts at school resulted in greater total sleep time on school nights.

Success Criteria	Mark Allocation
Identify the IV as the delayed start schools, and the DV total sleep time (on school nights).	1 mark
Identify the direction of the results, as total sleep time increased as a result of the delayed start time.	1 mark

- c. To achieve full marks, students need to predict what the likely results would be if the researchers completed a 'Follow-up 3' the following year, assuming the schools maintained their schedules.

EXAMPLE RESPONSE:

It is likely that the results would continue in the same pattern, showing a higher total sleep time on school nights for the delayed-starts schools (around 8 hours 5 minutes on average) compared to the comparison schools (around 7 hours 40 minutes on average).

Success Criteria	Mark Allocation
Identify that it is likely the delayed-start schools' results would remain slightly above 8 hours total sleep time.	1 mark
Identify that it is likely the comparison schools' results would remain around the 7 hours 40 minutes (approximately).	1 mark

- d. To achieve full marks, students need to justify whether Figure 1 is displaying quantitative data.

EXAMPLE RESPONSE:

Figure 1 is displaying quantitative, because total sleep time on school nights is numerical data.

Success Criteria	Mark Allocation
Identify that quantitative data is being displayed in Figure 1.	1 mark
Explain that total sleep time is numerical data.	1 mark

- e. To achieve full marks, students need to use a school-related example to compare the affective functioning of a student in one of the 'comparison' schools and a student in one of the 'delayed-start' schools.

EXAMPLE RESPONSE:

A student in one of the 'comparison' schools may have more trouble regulating their emotions, compared to a student in one of the 'delayed-start' schools.

For example, a 'comparison' school student may be irritated by a teacher setting homework, whereas a 'delayed-start' school student may not be irritated.

Success Criteria	Mark Allocation
Identify that the affective functioning of a student from a 'comparison' school will be impaired.	1 mark
Identify that the affective functioning of a student from a 'delayed-start' school will not be impaired.	1 mark
Describe a school-related example that shows impaired affective functioning, such as an increased irritability to teacher's instructions, difficulty regulating emotions while working in a group, more aggressive behaviour during lunchtime activities, etc.	1 mark

- f. To achieve full marks, students need to refer to a relevant hormone to explain why a teacher may not understand the need for students to have a delayed-start to the school day.

EXAMPLE RESPONSE:

The hormone melatonin induces sleepiness. In adults (such as teachers), melatonin is released earlier in the evening, resulting in them feeling sleepy earlier in the evening and enabling them to receive an adequate amount of sleep before school the next day.

Teachers may not be aware that adolescents have a delayed melatonin release that makes them feel sleepy later in the evening, resulting in them benefitting from a delayed-start to the school day.

Success Criteria	Mark Allocation
Identify melatonin as the relevant hormone.	1 mark
Describe the role of melatonin in inducing sleepiness.	1 mark
Explain the difference between the release of melatonin in adults (earlier in the evening) compared to the release of melatonin in adolescents (later in the evening), resulting in adults having a lack of understanding about students' sleep.	1 mark

Q6

To achieve full marks, students need to use an example of a learned skill to explain the relationship between motivation in observational learning and long-term potentiation.

EXAMPLE RESPONSE:

The motivation stage of observational learning involves having the desire to learn and replicate the observed behaviour, such as wanting to learn to ride an e-scooter in order to get to work more quickly.

Long-term potentiation involves the relatively permanent strengthening of synaptic connections as a result of repeated activation, such as repeatedly practicing how to ride an e-scooter.

These concepts are linked, as we need to have the desire to replicate the skill multiple times in order for the long lasting strengthening of the relative synaptic connections to occur.

Success Criteria	Mark Allocation
Define motivation in observational learning as involving a desire to want to learn the skill being observed.	1 mark
Define long-term potentiation as the relatively permanent strengthening of synaptic connections as a result of repeated activation.	1 mark
Explain that motivation is required if for the repeated practice of the skill that results in long-term potentiation.	1 mark
Identify and apply an example of a skill to learn, such as riding an e-scooter, kicking a football, learning a language, driving a car, etc.	1 mark

Q7

- a. To achieve full marks, students need to explain why Zoe choosing to go bungee jumping be considered a conscious response.

EXAMPLE RESPONSE:

Zoe choosing to bungee jump is a conscious response as it was a decision made with awareness.

Success Criteria	Mark Allocation
Explain that conscious responses are made with awareness.	1 mark

- b. To achieve full marks, students need to identify the cognitive bias that Zoe is experiencing when she believes their bus will fall off the cliff on the way to the town.

EXAMPLE RESPONSE:

Zoe is experiencing catastrophic thinking when believing the bus will definitely fall off the cliff.

Success Criteria	Mark Allocation
Identify catastrophic thinking as the relevant type of cognitive bias.	1 mark

- c. To achieve full marks, students need to explain how Zoe used semantic memory to construct an imagined future of her next trip to Italy.

EXAMPLE RESPONSE:

Zoe's semantic memory of the cliffside road into the town is a fact or piece of knowledge of the world that she gained through her research. Zoe used this fact to imagine how scary it would be driving along the narrow road in a large bus in their future trip to Italy.

Success Criteria	Mark Allocation
Identify Zoe's semantic memory as the knowledge of the cliffside road entry into the town.	1 mark
Explain how Zoe uses the semantic memory to imagine her future event of driving along the road herself.	1 mark

- d. To achieve full marks, students need to provide an example of an approach strategy that Zoe could use to reduce her stress levels around her fear of heights.

EXAMPLE RESPONSE:

Zoe could learn breathing retraining to help reduce her stress levels when near heights.

Success Criteria	Mark Allocation
Describe any example of a strategy that deals directly with the stressor of her fear of heights.	1 mark

e.

- i. To achieve full marks, students need to describe what would need to occur during the 'attention' process if the observational learning idea were to work in helping reduce Zoe's fear of the bus drive.

EXAMPLE RESPONSE:

Zoe would need to closely observe a bus safely making this drive along the cliffside road.

Success Criteria	Mark Allocation
Describe what Zoe would need to actively/closely/carefully observe in relation to the bus drive, such as the bus safely and slowly driving along the cliffside road.	1 mark

- ii. To achieve full marks, students need to justify whether this idea involving observational learning may actually help treat Zoe's phobia of heights.

EXAMPLE RESPONSE:

This idea may help Zoe learn that the bus drive is safe, but it would not completely resolve her fear of heights in general or in other situations such as bungee jumping.

Success Criteria	Mark Allocation
Identify that the observational learning idea may not resolve Zoe's phobia of heights.	1 mark
Provide a reason why it may not resolve her phobia, such as that it may help her learn that this particular drive is safe, however will not completely resolve her phobia of heights in general.	1 mark

- iii. To achieve full marks, students need to explain why taking an anti-anxiety benzodiazepine agent before the bus drive along the cliffside might be effective at helping Zoe's fear of the drive.

EXAMPLE RESPONSE:

Anti-anxiety benzodiazepine agents mimic the effects of GABA, slowing down activity in the central nervous system, reducing physiological arousal and promoting relaxation. Zoe taking this medication before the scary bus drive may help reduce her high levels of anxiety she experiences when confronted with heights, resulting in her feeling calmer and less fearful during the drive.

Success Criteria	Mark Allocation
Explain the effect of anti-anxiety benzodiazepine agents in promoting relaxation.	1 mark
Explain that benzodiazepines may reduce Zoe's anxiety and help to calm her before the scary bus drive.	1 mark

To achieve full marks, students need to critically evaluate the sleep-related claims made in the article, and provide evidence-based suggestions for improving sleep that have not been addressed in the article.

EXAMPLE RESPONSE POINTS:

The response must address the two main parts of the question as numbered below, and may include some of the following specific concepts and example scenario links:

1. The evaluation of the sleep-related claims made in the article
 - a. Circadian rhythms
 - i. Eg. Gradually shifting bedtime earlier is an effective method
 - b. Circadian rhythm sleep disorders
 - i. Shift work
 1. Eg. Requires a lot of adjustments to daily life.
 - ii. Delayed sleep phase syndrome
 1. Eg. Adjusting life such as work to their natural pattern of sleep reduced their symptoms
 - c. Recommended total hours of sleep for an adult
 - i. Eg. Creating timed to-do lists helps to calculate when to set alarms to achieve the most sleep.
 - d. Sleep deprivation
 - i. Effects to behavioural and cognitive functioning
 1. Eg. Starting the morning with a to-do list will help cognitive impairment due to sleep deprivation
 2. Eg. Making all decisions the night before to reduce morning impairments due to sleep deprivation, such as previously experienced brain fog
 - e. Zeitgebers
 - i. Light and blue light
 1. Eg. Reading before bed instead of using devices
 2. Eg. Use of 'night shift' mode on devices to reduce blue light
 - ii. Eating and drinking patterns
 1. Eg. Filling up water bottle in preparation for next day will help drinking patterns are adequate.
 2. Eg. Packing leftovers for lunch the next day, ensuring they eat during daylight hours.
2. Further evidence-based suggestions for improving sleep not mentioned in the article
 - a. Bright light therapy for treating shift work sleep disorder.
 - b. Use of temperature as a zeitgeber for sleep
 - c. Sleep hygiene

EXAMPLE RESPONSE:

This article made several correct claims regarding sleep.

The article was set around the challenges facing a person who has begun working night shift. Night shift can result in a circadian rhythm sleep disorder; a persistent pattern of sleep disruption due to a misalignment between the circadian rhythm and the sleep–wake schedule required by a person due to work. Shift work sleep disorder can occur when a person works at night or the very early morning, such as the person in the article starting a new media job requiring consistent 4.30am starts. Their new sleep–wake schedule is now in opposition to the regular day–night environmental hours. The author claims that attempting to gradually shift their bedtime earlier has been helpful, which would be an effective method to shift a circadian rhythm to the desired timing.

As an adult, the author should be receiving around 8 hours of sleep each night. The author claims setting specific timed morning to-do lists may help her achieve adequate sleep through using their morning time most effectively.

If a person is not receiving the recommended hours of sleep, they may be experiencing partial sleep deprivation. Sleep deprivation can have many negative effects on a person's affective, behavioural and cognitive functioning. The author reported experiencing brain fog, which is indicating an impaired cognitive functioning. The author claims that they try to make all decisions the night before, which may help bypass the cognitive impairments due to sleep deprivation. They also claim that starting the morning with a to-do list will help, and this may also be a helpful step to bypass the behavioural impairment due to sleep deprivation.

The author refers to two known zeitgebers that influence sleep, including light and eating and drinking patterns. The author correctly recommends activities such as reading before bed instead of using devices, and the use of 'night shift' mode on devices to reduce blue light. Blue light is a specific wavelength of light that has a particularly strong waking influence on the brain, promoting wakefulness. So limiting device use is a helpful suggestion.

Finally, the author recommends some suggestions that will help keep eating and drinking patterns during the daylight hours, which is beneficial for sleep, including the night before filling up water bottles and packing leftovers for lunch the next day.

The author did not make any incorrect claims, however two evidence-based suggestions that were not addressed in the article include bright light therapy and use of the zeitgeber of temperature.

The circadian rhythm sleep disorder of shift work can be treated with the use of bright light therapy, which involves exposing a person to light for a specific amount of time to reset the sleep–wake cycle. This author should utilise bright light therapy in the morning upon awakening, which will delay the release of melatonin and promote wakefulness as they are getting ready for morning work. Given the early timing of their wake-up, the light source would be a safe but artificial source, such as a specifically designed light box.

The zeitgeber of temperature can also be used effectively to promote sleep, by ensuring their bedroom is kept at a temperature around 19-21 degrees overnight. They can use fans or open windows to help cool the room if needed, and they should also use warm bedding. These things may help ensure the sleep that they do get is of good quality, minimising their sleep deprivation.

MARKING CRITERIA

This question is worth 10 marks and is marked holistically against the following criteria:

- identification and explanation of appropriate psychological terminology in novel and unfamiliar contexts
- analysis and discussion of relevant psychological information, ideas and/or concepts and the connections between them
- analysis and evaluation of data, and/or scientific methodologies and methods, and/or models, and/or theories
- construction of evidence-based arguments and/or drawing of conclusions and/or discussion of implications and findings

Success Criteria	Mark Allocation
<u>Very high level response</u> A highly detailed explanation of the two main parts of the question, including: • Multiple concepts that correctly address each part of the question, including detailed features of shift work and its treatment with bright light therapy, sleep deprivation effects to behavioural and cognitive functioning, and zeitgebers of light and eating patterns. • Multiple, strong scenario links to justify each concept in relation to the scenario. • Accurate and comprehensive use of key terminology.	9-10 marks
<u>High level response</u> A thorough explanation of the two main parts of the question, including: • Multiple concepts that correctly address each part of the question. One part (such as the evaluation of claims) may be explained in more detail than the other part. • Strong scenario links to justify each concept in relation to the scenario. • Accurate use of key terminology.	7-8 marks
<u>Average level response</u> A satisfactory and basic explanation of the two main parts of the question, including: • At least one concept that addresses each main part of the question. • Basic scenario links to justify each concept in relation to the scenario. • Mostly correct use of key terminology.	5-6 marks
<u>Low level response</u> A basic response where: • Several concepts relating to the question were addressed correctly to varying degrees, such as a basic explanation of shift work (perhaps with some errors) • One main part of the question was not addressed at all or was incorrect, such as the evidence-based suggestions for improving sleep.	3-4 marks

• There was no or very minimal reference to the scenario and it was a completely generic response, or the response included re-stating of information from the scenario with little application of key concepts. • Some correct use of key terminology.	
<u>Very low level response</u> A very minimal response where: • Only minimal concepts were addressed correctly across one or both parts of the question, to a basic degree, such as a weak definition only or general explanation only. • There was no reference to the scenario and it was a completely generic response, or the response included re-stating of information from the scenario with little application of key concepts. • Little or inaccurate use of key terminology.	1-2 marks



2023 PSYCHOLOGY UNIT 3/4 EXAM MARKING GUIDE

STUDENT NAME: _____

Question	Marks available	Marks awarded	Comments
Section A: Multiple Choice	40		
Section B: Short Answer	80		
1a.	1		
1b.	1		
1c.	4		
2a.	2		
2b.	2		
3a.	1		
3b.	3		
3c.	1		
3d.	3		
3e.	3		
3f.	2		
4a.	2		
4b.	4		
4c.	3		
4d.	3		
4e.	3		

4f.	3		
5a.	4		
5b.	2		
5c.	2		
5d.	2		
5e.	2		
5f.	3		
6.	4		
7.	10		
8.	10		

OVERALL MARK_____/120