

# OXFORD Study Buddy

## Revision and Exam Guide

# QCE PSYCHOLOGY

## UNITS 3 & 4

## VOLUME 1

WRITTEN BY  
**JOEY SAUNDERS**  
**AMRITA MOSS**

ILLUSTRATED BY  
**JOSHUA SCOTT**



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Illustrated by Joshua Scott  
Logo design by Tuumik Stuudio  
Typeset by Newgen KnowledgeWorks Pvt. Ltd., Chennai, India  
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YOU'RE SO LUCKY  
I'M HERE TO PROVIDE  
SUPPORT AND ADVICE DURING  
YOUR EXAM PREPARATION!  
NO ONE KNOWS THEIR WAY  
AROUND THE HUMAN BRAIN  
BETTER THAN ME ... I MEAN, YOU  
JUST GO UP THE SPINAL CORD,  
TAKE THE FIRST  
LEFT, DENDRITE!



## CHAPTER

# 1

# STUDYING FOR SUCCESS

Before you start studying for your QCE Psychology exams, it's important to set yourself up for success. That's exactly what this chapter is designed to do, so thanks for stopping by!

As soon as it's time to start studying for the external assessment, we recommend that you work through this whole chapter before doing anything else! You might do this at the start of the school year or at the start of your exam study period, but whatever you do, don't skip this chapter. It contains a bunch of really important information and tips that might just give you the edge you're looking for.

YOUR THIRST FOR  
KNOWLEDGE IS **CRYSTAL**  
**CLEAR!** COMPLETE  
THIS CHAPTER TO  
SCORE YOUR FIRST  
KNOWLEDGE CRYSTAL!  
GOOD LUCK!



# 1.1

## OVERVIEW OF QCE PSYCHOLOGY UNITS 3 & 4

In this section, we will:

- provide a brief overview of how the QCE Psychology Units 3 & 4 course is structured
- list all the concepts and topics that you will need to learn and understand
- explain how you will be assessed.



1.1.1

Resource:  
Psychology  
General Senior  
Syllabus

### Study tip

The QCE Psychology General Senior Syllabus sets out all the information you are expected to learn and also provides important information on how you will be assessed.

In this chapter, we have summarised all the key information you need to know about external assessment, but the QCAA may update the syllabus from time to time, so it's important that you make sure you are using the most current version!

Make sure you visit the QCAA website and download a copy of the Psychology General Senior Syllabus and read the key information carefully before you sit your external assessment. To save you time, we've also included a link to it on your ebook access!

## UNDERSTANDING THE QCE PSYCHOLOGY UNITS 3 & 4 COURSE STRUCTURE

The Psychology General Senior Syllabus is the most important document supporting the QCE Psychology course. It sets out all the content – known as subject matter – that you will be expected to learn and provides important information about how you will be assessed.

QCE Psychology is a course of study consisting of four units (i.e. Units 1 & 2 and Units 3 & 4) taught over two years, but in this revision and exam guide, we will only be focusing on information relating to Units 3 & 4 of the course. The topics you will be learning about in Units 3 & 4 are summarised in Table 1.



OK, SO MY LIFE HAS **DOLPHINITELY** TAKEN A TURN FOR THE WORSE IN THE LAST DAY OR SO. INITIALLY I **FLIPPERED** OUT, BUT NOW I CAN **SEA** THE **FINNY** SIDE OF IT. THANK **COD** BUD THINKS HE CAN TURN ME BACK!





## Course structure for QCE Psychology Units 3 & 4

Unit 3 Individual thinking	Unit 4 The influence of others
<b>Topic 1: Localisation of function in the brain</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Localisation of function in the brain [10 hours]</li> </ul> <b>Topic 2: Visual perception</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Visual perception [10 hours]</li> </ul> <b>Topic 3: Memory</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Memory [15 hours]</li> </ul> <b>Topic 4: Learning</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Learning [10 hours]</li> </ul>	<b>Topic 1: Social psychology</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Social psychology [10 hours]</li> </ul> <b>Topic 2: Interpersonal processes</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Interpersonal processes [15 hours]</li> </ul> <b>Topic 3: Attitudes</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Attitudes [10 hours]</li> </ul> <b>Topic 4: Cross-cultural psychology</b> <i>Subject matter:</i> <ul style="list-style-type: none"> <li>Cross-cultural psychology [10 hours]</li> </ul>

**Table 1** Each unit is developed to a notional (i.e. estimated) time of 55 hours of teaching and learning, including assessment. Notional times for each topic are also provided

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### Study tip

The notional hours shown in Table 1 are provided by the QCAA to help teachers with their planning and give them an estimate of how long to spend teaching the subject matter in each topic.

Notional hours can be a handy way to help you to structure and allocate your revision and preparation time for the external assessment because – as a general rule – there are likely to be more questions on subject matter with higher notional hours.

## UNDERSTANDING THE QCE PSYCHOLOGY UNITS 3 & 4 ASSESSMENT STRUCTURE


You will be expected to complete a total of four **summative assessments** in QCE Psychology Units 3 & 4. Summative assessments are designed to evaluate your understanding of the subject matter and compare your performance against the understanding of students from across the state.

Three of these assessments are **internal** and one is **external**, but all will contribute to your Australian Tertiary Admission Rank (ATAR) calculation and to your Queensland Certificate of Education (QCE).

### INTERNAL ASSESSMENTS

- Schools will develop **three internal assessments** for QCE Psychology based on the subject matter described in Units 3 & 4 of the syllabus.





PAVLOV'S HAIR WAS  
ALWAYS SILKY, LIKE  
MINE ... PROBABLY  
BECAUSE HE **CONDITIONED**  
IT! ANYWAY ... ENOUGH  
ABOUT ME, IT'S TIME TO  
START REVISING!





## CHAPTER

# 2

# REVISION

In this chapter, we provide a clear, concise summary of all examinable content from QCE Psychology Units 3 & 4 to help you revise and prepare for the external assessment.

Everything has been organised by unit, topic and sub-topic in the General Senior Syllabus to help you focus your time and attention where it is needed most.

The revision notes are not designed to replace your teacher or your textbook. Instead, they have been designed to help you gauge your level of understanding and confidence of the subject matter before the exam. You can use them to identify those topics you know inside out and those that still require some extra attention.

The revision notes are also supported by a bunch of handy features, tips and icons designed to help you get the very best result on the day.

WE'RE ON A QUEST  
FOR YOUR SECOND  
KNOWLEDGE CRYSTAL.  
DON'T DOUBT YOURSELF,  
OF QUARTZ YOU CAN  
DO IT!





# 2.1

## UNIT 3 TOPIC 1 – LOCALISATION OF FUNCTION IN THE BRAIN

### THE HUMAN NERVOUS SYSTEM



**More detail**  
on pages 44–7  
of *Psychology for*  
*Queensland*  
*Units 3 & 4*



**Questions**  
on pages 136–42

#### SUBJECT MATTER

Before the external assessment, you should be able to:

- recall the structure of the human nervous system, with reference to the central (i.e. brain and spinal cord) and peripheral (i.e. somatic and autonomic) nervous systems
- describe the role of the spinal cord in the human nervous system, with reference to the spinal reflex.

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### CENTRAL NERVOUS SYSTEM

#### KEY CONCEPT

The **central nervous system** contains the brain and **spinal cord**, and helps the brain communicate with the rest of the body. The brain is responsible for interpretation and thinking. The spinal cord connects the peripheral nervous system to the brain. It runs from the brain stem to the lower-middle section of the spine and is where **reflexes** occur. Spinal reflexes are reflexes controlled through the spine in response to sensations and stimuli.

#### central nervous system

comprises the brain and spinal cord; it controls the body by processing and responding to sensory input from the peripheral nervous system and is responsible for outgoing motor messages

#### spinal cord

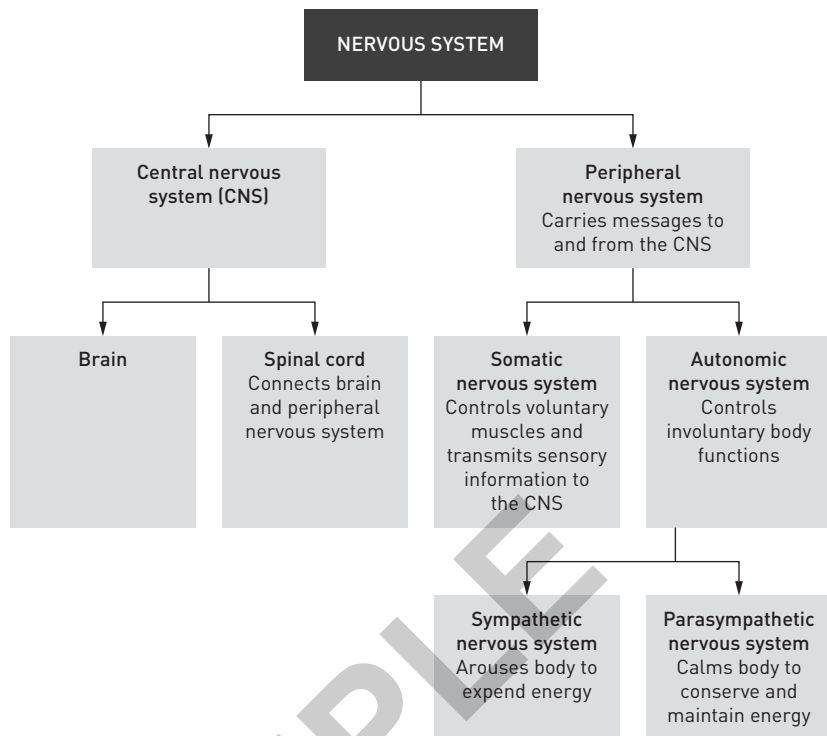
the bundle of nerve fibres connecting the brain with the peripheral nervous system

#### reflex

simple, automatic response to a sensory stimulus

The central nervous system controls the body by processing and responding to sensory input from the peripheral nervous system. It includes the brain and the spinal cord.





**Figure 1** Divisions of the nervous system

## THE BRAIN

The brain is the organ responsible for intelligence and interpretation of the world around us. It also controls muscles and behaviours, coordinates sensation and motor activity, and is the source of our personality.

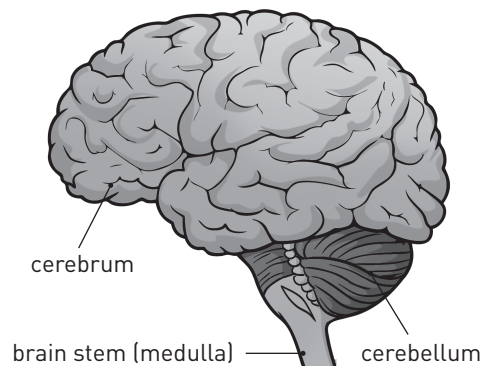
There are three key parts of the brain: the **cerebellum**, **cerebrum** and brain stem.

### cerebellum


the area of the brain responsible for coordinating and remembering smooth, well-sequenced movements and coordination

### cerebrum

the part of the brain most responsible for voluntary movement and complex thought processes such as perception, imagination, judgment and decision-making



**Figure 2** The three main areas of the brain



I'VE GOT THE MEMORY  
OF AN ELEPHANT!  
I DOLPHIN-ITELY REMEMBER  
GOING TO THE ZOO ONCE  
AND SEEING ONE!  
LET'S HOPE YOUR MEMORY  
IS JUST AS GOOD! YOU'LL  
NEED IT TO ANSWER  
THESE PRACTICE  
QUESTIONS.





## CHAPTER

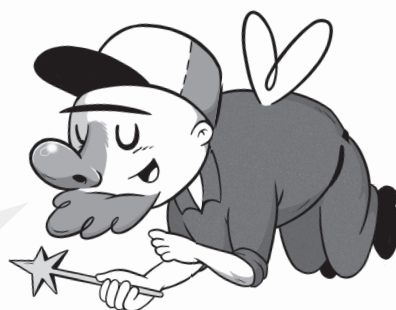
# 3

# PRACTICE QUESTIONS

In this chapter, we provide a range of practice questions for all the examinable content from QCE Psychology Units 3 & 4. What a surprise ... not! Did the title give it away?

No fancy tricks here, just heaps of questions organised by topic so you can move effortlessly between revision and practice as you study. We've also grouped the multiple choice and short response questions together so you can prepare for both papers and build your confidence.

COMPLETE THIS CHAPTER  
TO MINE YOUR THIRD  
KNOWLEDGE CRYSTAL!  
YOU (BIG SHINY) ROCK!



# 3.1

## UNIT 3 TOPIC 1 – LOCALISATION OF FUNCTION IN THE BRAIN

### MULTIPLE CHOICE QUESTIONS



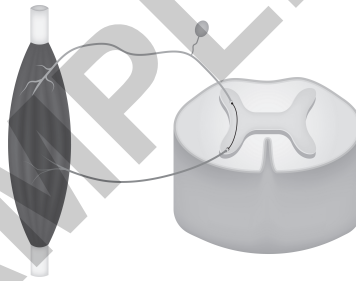
**Answers**  
on pages 224–5

#### QUESTION 1

The area of the brain responsible for the creation of meaningful sentences is called

- (A) Broca's area.
- (B) Wernicke's area.
- (C) Geschwind's territory.
- (D) the prefrontal cortex.

#### QUESTION 2



A monosynaptic spinal reflex involves

- (A) a single synaptic connection.
- (B) a single neuron.
- (C) numerous neurons.
- (D) the neurotransmitter acetylcholine.

#### QUESTION 3

The peripheral nervous system (PNS) is made up of the

- (A) brain and spinal cord.
- (B) somatic nervous system and brain.
- (C) somatic and autonomic nervous systems.
- (D) spinal cord and autonomic nervous system.

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**QUESTION 4**

The consolidation of short-term memory and long-term memory is localised to the

- (A) amygdala.
- (B) prefrontal cortex.
- (C) hippocampus.
- (D) temporal lobe.

**QUESTION 5**

An example of an inhibitory neurotransmitter is

- (A) glutamate.
- (B) gamma-amino butyric acid (GABA).
- (C) norepinephrine.
- (D) dopamine.

**QUESTION 6**

Mercury poisoning causes neurological damage, which leads to an inability to coordinate muscle movements. The region of the brain affected by this damage is the

- (A) cerebellum.
- (B) cerebrum.
- (C) hypothalamus.
- (D) medulla.

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**QUESTION 7**

The hand movements that musicians use when playing the piano are most likely coordinated by which brain region?

- (A) thalamus.
- (B) cerebellum.
- (C) prefrontal cortex.
- (D) primary motor cortex.

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**QUESTION 8**

The part of the brain responsible for vision is the

- (A) frontal lobe.
- (B) temporal lobe.
- (C) parietal lobe.
- (D) occipital lobe.



### QUESTION 18 (1 mark)

Define spinal reflex.

MY MARK

/1

### QUESTION 19 (2 marks)

Identify the neurotransmitter responsible for the development of Parkinson's disease, and explain how it occurs.

MY MARK

/2

### QUESTION 20 (2 marks)

Draw a diagram to show the process of neurotransmitter release within neurotransmission. Label the diagram with an X at the point where neurotransmitter release occurs.

MY MARK

/2

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### QUESTION 21 (1 mark)

Describe the appropriate treatment for Parkinson's disease.

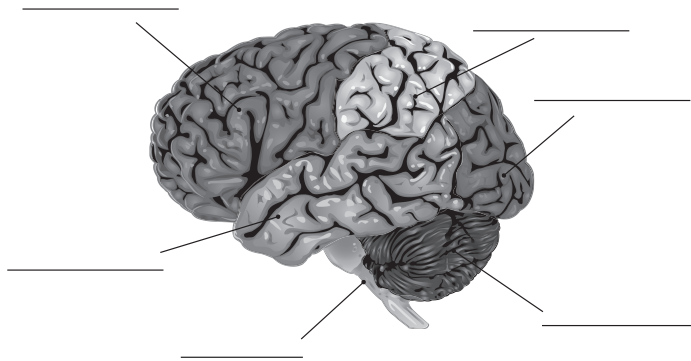
MY MARK

/1



**QUESTION 22 (5 marks)**

Label the following diagram of the brain.



MY MARK

/5

**QUESTION 23 (2 marks)**

Compare the function of norepinephrine and dopamine.

ANSWER AREA

MY MARK

/2

**QUESTION 24 (1 mark)**

Describe the function of Geschwind's territory.

ANSWER AREA

MY MARK

/1

**QUESTION 25 (1 mark)**

State the neurotransmitter responsible for Alzheimer's disease.

ANSWER AREA

MY MARK

/1



### QUESTION 26 (2 marks)

Describe the symptoms and treatment for Alzheimer's disease.

MY MARK

/2

### QUESTION 27 (3 marks)

Identify the areas of the brain that are responsible for processing emotion.

MY MARK

/3

### QUESTION 28 (1 mark)

The \_\_\_\_\_ lobe of the brain is responsible for the processing of sound. Identify the missing word.

MY MARK

/1

### QUESTION 29 (1 mark)

Distinguish between the role of glutamate (Glu) and gamma-amino butyric acid (GABA) in the brain.

MY MARK

/1

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### QUESTION 30 (2 marks)

Explain how the sympathetic nervous system can help an individual survive a potential threat.

MY MARK

/2







NOW IT'S TIME TO  
JUMP IN AND TRY SOME  
OFFICIAL PAST PAPERS.  
DON'T BE NERVOUS ...  
I'M HERE TO **LOBE** AND  
SUPPORT YOU!





## CHAPTER

# 4

# OFFICIAL PAST PAPERS

In this chapter, things get serious! It's now time for you to put your revision and practice to the test – literally – by completing the official QCE Psychology external assessment from 2020!

We recommend that you:

- don't look at this chapter until you've finished with your revision and completed all the practice questions in Chapter 3
- complete the papers in this chapter under exam conditions (i.e. follow the instructions regarding perusal time and working time, and don't refer to any notes or other materials that will not be allowed during the real exams)
- refer to the answers in Chapter 5 and use the marking advice to self-assess your responses once you've finished.

Remember ... these are the QCE Psychology papers from 2020, so if you complete them under exam conditions, they are arguably the best indicator of how well you're likely to perform on the day! Good luck!



**SHINE ON! ACE THESE  
EXAMS TO BAG YOUR  
FOURTH KNOWLEDGE  
CRYSTAL!**



# 4.1

## EXTERNAL ASSESSMENT 2020: PSYCHOLOGY PAPER 1

### Time allowed

- Perusal time — 10 minutes
- Working time — 90 minutes

### General instructions

- Answer all questions in this question and response book.
- QCAA-approved calculator permitted.
- Planning paper will not be marked.

### Section 1 (30 marks)

- 30 multiple choice questions

### Section 2 (25 marks)

- 11 short response questions

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## Section 1 (30 marks)



**Answers**  
on pages 253–6

### QUESTION 1

The structure of the central nervous system contains the

- (A) brain and spinal cord only.
- (B) somatic nervous system and brain only.
- (C) autonomic and somatic nervous systems only.
- (D) spinal cord and autonomic nervous system only.





**QUESTION 2**

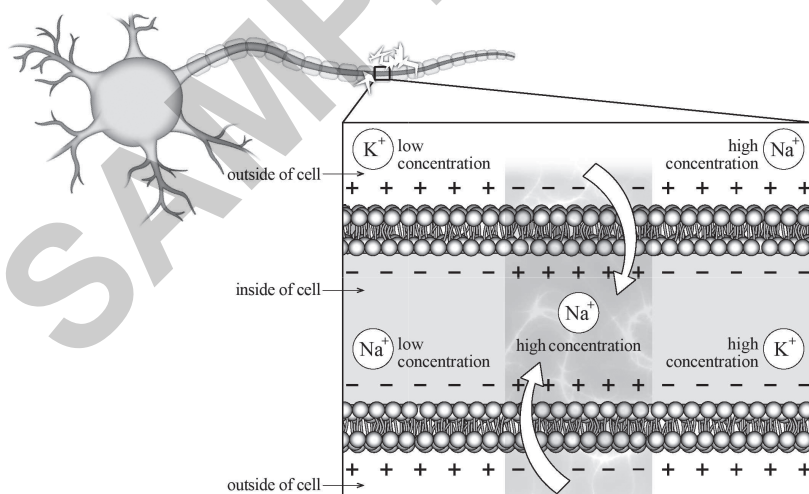
Which of the following is an inhibitory neurotransmitter located in the brain?

- (A) serotonin
- (B) dopamine
- (C) glutamate
- (D) gamma-aminobutyric acid

**QUESTION 3**

Explicit attitudes are

- (A) a person's conscious views towards people, objects or concepts.
- (B) learned ideas we hold about ourselves, others, objects and experiences.
- (C) positive and negative evaluations that are not accessible to our conscious awareness.
- (D) oversimplified images of people who belong to a particular group, causing them to appear more similar than they are.

**QUESTION 4**

Which process of neurotransmission is represented by this image?

- (A) action potential
- (B) graded potential
- (C) resting potential
- (D) event-related potential



I'M A-FREUD IT'S TIME  
TO JUMP IN AND CHECK  
YOUR ANSWERS ...  
LET'S HOPE YOU GOT  
THEM ALL RIGHT!





## CHAPTER

# 5

# ANSWERS

OMG, another cliffhanger ... what on Earth could be in this chapter I wonder?

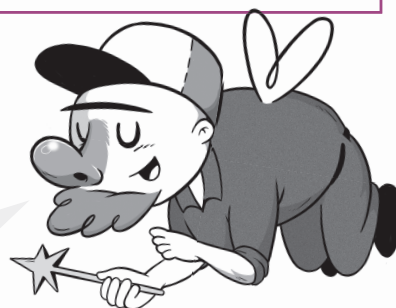
You guessed it: in this chapter, we provide the answers to absolutely everything! Sounds simple, I know, but to get the most out of this chapter, don't just cast an eye over the answers provided and move on.

If you really want to increase your chances of excelling on the exam, we recommend you carefully look over each of your answers in Chapters 3 and 4 and compare them with the answers in this chapter.

Use the 'My mark' box under each short response question to self-assess your answers. This will help to get you into the habit of structuring your responses in order to receive maximum marks and show you what the exam marker will be looking for.

### Notice to students

The answers and marking advice provided in this chapter are provided for practice purposes only. Unless specifically credited, the QCAA has not written this material and does not endorse the content.



A KNOWLEDGE CRYSTAL IS  
JUST A PIECE OF COAL THAT  
HANDLED PRESSURE REALLY  
WELL! COMPLETE THIS  
CHAPTER TO MINE YOUR FINAL  
ONE! YOU'VE GOT THIS!





## 5.1

# UNIT 3 TOPIC 1 – LOCALISATION OF FUNCTION IN THE BRAIN

## MULTIPLE CHOICE ANSWERS

Question	Correct answer	Explanation
QUESTION 1	B	B is correct because the question states meaningful sentences and Wernicke's area is responsible for comprehension and meaningful sentence creation.
QUESTION 2	A	A is correct because a monosynaptic spinal reflex involves two neurons and a single synaptic connection.
QUESTION 3	C	C is correct because the peripheral nervous system includes the somatic and autonomic nervous systems.
QUESTION 4	C	C is correct because the hippocampus is needed for the conversion of short-term memory to long-term memory.
QUESTION 5	B	B is correct because GABA is an inhibitory neurotransmitter; all the others are excitatory or have the potential to be excitatory.
QUESTION 6	A	A is correct because the cerebellum is in charge of storing and retrieving implicit memories such as coordinated muscle movements, whereas the other areas are responsible for other functions.
QUESTION 7	B	B is correct because the cerebellum is in charge of creating and storing implicit memories. Hand movements while playing piano are implicit memories and therefore the cerebellum would be in charge.
QUESTION 8	D	D is correct because the occipital lobe is responsible for vision.
QUESTION 9	A	A is correct because sensory neurons are situated in the body to receive information from the outside world.
QUESTION 10	C	C is correct because acetylcholine is reduced in Alzheimer's disease, possibly due to fibrillary tangles and plaques.
QUESTION 11	C	C is correct because Natasha had trouble forming sentences, which is the responsibility of Broca's area situated in the frontal lobe.
QUESTION 12	B	B is correct because serotonin is responsible for mood regulation.
QUESTION 13	A	A is correct because serotonin is responsible for mood and all the other answers relate to behaviour rather than mood.
QUESTION 14	A	A is correct because messages need to be passed from the top to the bottom of a neuron. The start of a neuron is the dendrite, and the message travels down across the synapse to the postsynaptic dendrites.



Question	Correct answer	Explanation
<b>QUESTION 15</b>	D	D is correct because the amygdala is responsible for emotional responses.

## SHORT RESPONSE ANSWERS

### QUESTION 16 (4 marks)

Nancy's sensory neurons in her legs sense the coldness of the seat and transmit this to the central nervous system (CNS) through the spinal cord. This information is then processed in the parietal lobe, which is responsible for sensory information. Through the somatosensory cortex, the information about the cold seat is transmitted to the motor cortex in the frontal lobe. The decision is made to stand up, and this message is sent back to the muscles in Nancy's legs via motor neurons.

- 1 mark for mentioning the sensory neurons transmitting to the CNS through the spinal cord.
- 1 mark for mentioning the parietal lobe and its function of processing sensory information.
- 1 mark for mentioning that information is transmitted through the somatosensory cortex in the frontal lobe.
- 1 mark for mentioning that the message is sent to the muscles in Nancy's legs through the motor neurons.

### QUESTION 17 (2 marks)

Excitatory neurotransmitters increase action potentials and therefore the number of messages being sent to neighbouring neurons, whereas inhibitory neurotransmitters decrease the number of messages being sent to neighbouring neurons.

- 1 mark for the definition of excitatory neurotransmitters, including reference to an increase in messages to neurons.
- 1 mark for the definition of inhibitory neurotransmitters, including reference to an increase in messages to neurons.

### QUESTION 18 (1 mark)

Spinal reflex is a quick, often monosynaptic connection that allows for instant decisions to be made in the spinal cord in response to stimuli without the brain having to process the information.

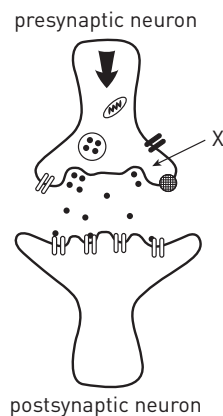
- 1 mark for the definition of spinal reflex, including reference to it occurring in the spinal cord as a quick response to stimuli.

### QUESTION 19 (2 marks)

Dopamine is responsible for the development of Parkinson's disease. A decrease in the natural production of dopamine in the body results in a lack of dopamine in the substantia nigra, which stops people from being able to control their movements.

- 1 mark for identifying that dopamine is responsible.
- 1 mark for explaining the link between a lack of dopamine and the result of movements not being able to be controlled.

### QUESTION 20 (2 marks)



- 1 mark for showing neurotransmitters being released from a presynaptic neuron into the synaptic gap and moving into the ion channels of a postsynaptic neuron, using an arrow to show direction.

