

Victorian Certificate of Education  
2021

SUPERVISOR TO ATTACH PROCESSING LABEL HERE

STUDENT NUMBER           Letter

**VCE VET HEALTH**  
**Written examination**

Tuesday 16 November 2021

Reading time: 9.00 am to 9.15 am (15 minutes)

Writing time: 9.15 am to 10.45 am (1 hour 30 minutes)

**QUESTION AND ANSWER BOOK**

**Structure of book**

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	20	20	20
B	15	15	50
C	11	11	30
			Total 100

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.

**Materials supplied**

- Question and answer book of 19 pages
- Answer sheet for multiple-choice questions

**Instructions**

- Write your **student number** in the space provided above on this page.
- Check that your **name** and **student number** as printed on your answer sheet for multiple-choice questions are correct, **and** sign your name in the space provided to verify this.
- Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.
- All written responses must be in English.

**At the end of the examination**

- Place the answer sheet for multiple-choice questions inside the front cover of this book.

**Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.**

**SECTION A – Multiple-choice questions****Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1; an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

**Question 1**

The two upper chambers of the heart include the

- A. right and left ventricles.
- B. right and left atria.
- C. septum.
- D. aorta.

**Question 2**

An example of a cell involved in reproduction is the

- A. epithelial cell.
- B. erythrocyte.
- C. neuron.
- D. ovum.

**Question 3**

Where in the bone does blood cell formation occur?

- A. epiphyses
- B. lacunae
- C. marrow
- D. osteons

**Question 4**

The function of the valves in the heart is to

- A. control the electrical current within the heart.
- B. separate the left and right sides of the heart.
- C. prevent the backflow of blood.
- D. oxygenate the blood.

**Question 5**

Which group of root words is associated with the urinary system?

- A. vesicul/, ureter/ and thym/
- B. ven/, pulmon/ and phleb/
- C. retin/, somat/ and vas/
- D. nephr/, ren/ and uria/

**Question 6**

Which of the following shows the correct order in which food moves through the digestive system?

- A. mouth → stomach → ileum → oesophagus → large intestine → duodenum → anus
- B. mouth → oesophagus → duodenum → stomach → ileum → large intestine → anus
- C. mouth → oesophagus → stomach → large intestine → ileum → duodenum → anus
- D. mouth → oesophagus → stomach → duodenum → ileum → large intestine → anus

**Question 7**

Jean recently had a stroke. A range of passive exercises has been prescribed as part of her recovery plan.

Which one of the following is a form of passive exercise?

- A. A therapist moves Jean's shoulder joint through its full range of motions.
- B. Jean holds weights in both hands and lifts her arms up in front of her.
- C. Jean does her own exercise program using weights.
- D. Jean walks for 30 minutes each day.

**Question 8**

Which one of the following is the suffix that means 'recording instrument'?

- A. -opsy
- B. -scope
- C. -graph
- D. -ray

**Question 9**

Which part of the brain is made up of two hemispheres?

- A. medulla oblongata
- B. frontal lobe
- C. brain stem
- D. cerebrum

**Question 10**

Which division of the peripheral nervous system is responsible for the fight-or-flight response?

- A. parasympathetic division
- B. sympathetic division
- C. somatic division
- D. central division

**Question 11**

Which part of the brain is responsible for balance and equilibrium?

- A. cerebellum
- B. brain stem
- C. cerebrum
- D. pons

**Question 12**

When 'a-' is used to mean 'without', it is being used as a

- A. suffix.
- B. prefix.
- C. root word.
- D. combining vowel.

**Question 13**

Which one of the following gives the meaning of '-logy'?

- A. condition of pain
- B. tumour/swelling
- C. inflammation of
- D. study of

**Question 14**

Which one of the following receptors senses light?

- A. mechanoreceptor
- B. thermoreceptor
- C. chemoreceptor
- D. photoreceptor

**Question 15**

The specialised cells that are stimulated when we smell a flower are called

- A. olfactory cells.
- B. auditory cells.
- C. melanocytes.
- D. leukocytes.

**Question 16**

Which one of the following is a correct statement about lymphatic capillaries?

- A. Lymphatic capillaries collect fluid from tissues.
- B. Lymphatic capillaries contain haemoglobin.
- C. Lymphatic capillaries have thick walls.
- D. Lymphatic capillaries have valves.

**Question 17**

The primary function of veins is to carry blood from the

- A. lungs to the rest of the body.
- B. heart to the rest of the body.
- C. body back to the heart.
- D. body to the lungs.

**Question 18**

The heart is enclosed in a double-walled sac called the

- A. endocardium.
- B. pericardium.
- C. myocardium.
- D. epicardium.

**Question 19**

Which one of the following medical terms best describes rapid shallow breathing?

- A. orthopnoea
- B. tachypnoea
- C. bradypnoea
- D. apnoea

**Question 20**

Which one of the following is classified as a long bone?

- A. vertebra
- B. sternum
- C. humerus
- D. talus

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**END OF SECTION A  
TURN OVER**

**SECTION B**

**Instructions for Section B**

Answer **all** questions in the spaces provided.

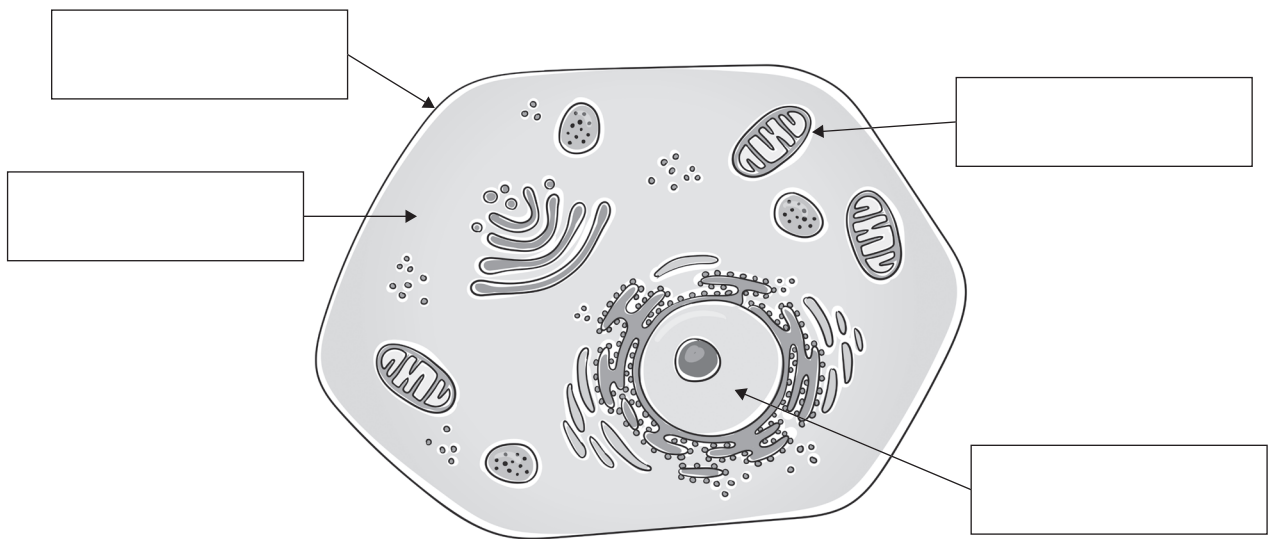
Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

**Question 1** (4 marks)

The diagram below shows a human cell.

In each box provided, state the name of the part indicated, using the following list:

- cytoplasm
- cell membrane
- ribosome
- nucleus
- lysosome
- mitochondrion



Source: Daniela Barreto/Shutterstock.com

**Question 2** (2 marks)

The pituitary gland is part of the endocrine system.

Identify two functions of the hormones released by the pituitary gland.

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

**Question 3** (4 marks)

Use the following list of body organs to complete the table below:

- liver
- sphincter
- oesophagus
- rectum
- colon
- pancreas

Function	Body organ
holds waste matter prior to defaecation	
secretes a substance called bile that breaks down fats	
absorbs water from faeces	
closes off the stomach after a meal	

**Question 4** (4 marks)

The kidneys are one of the main organs responsible for homeostasis.

Describe two functions of the kidneys in relation to homeostasis.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

**Question 5** (4 marks)

Complete the medical terms in the table below. The first medical term has been completed as an example.

Meaning	Medical term
lower than normal number of red blood cells	an/ <i>aemia</i>
the health specialist who diagnoses and treats disorders of the immune system	immuno/
inflammation of the liver	hepat/
inside or within the tooth	endo/
accumulation of fluid causing swelling in an area of the body	lymph/

**Question 6** (4 marks)

The body has three lines of defence against infection.

Identify and describe two examples of the body's second line of defence.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
2. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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**Question 7** (6 marks)

Complete the table below by identifying the word parts and providing the definition of each medical term listed.

Medical term	Word part				Definition of medical term
	Prefix	Root word	Combining vowel	Suffix	
hysterectomy					
hyperthyroidism					
septoplasty					

**Question 8** (2 marks)

Other than tonsils and lymph nodes, name two components that are part of the lymphatic system.

1. \_\_\_\_\_
2. \_\_\_\_\_

**Question 9** (3 marks)

Read the following sentences carefully and identify the correct spelling of the medical term in **bold type**.

- One of the three groups of bones in the foot is known as the **tarsals** / **tarcells**.

\_\_\_\_\_

- The largest bone in the leg is called the **femer** / **femur**.

\_\_\_\_\_

- The process of breathing in is called **inspiration** / **insporation**.

\_\_\_\_\_

**Question 10** (3 marks)

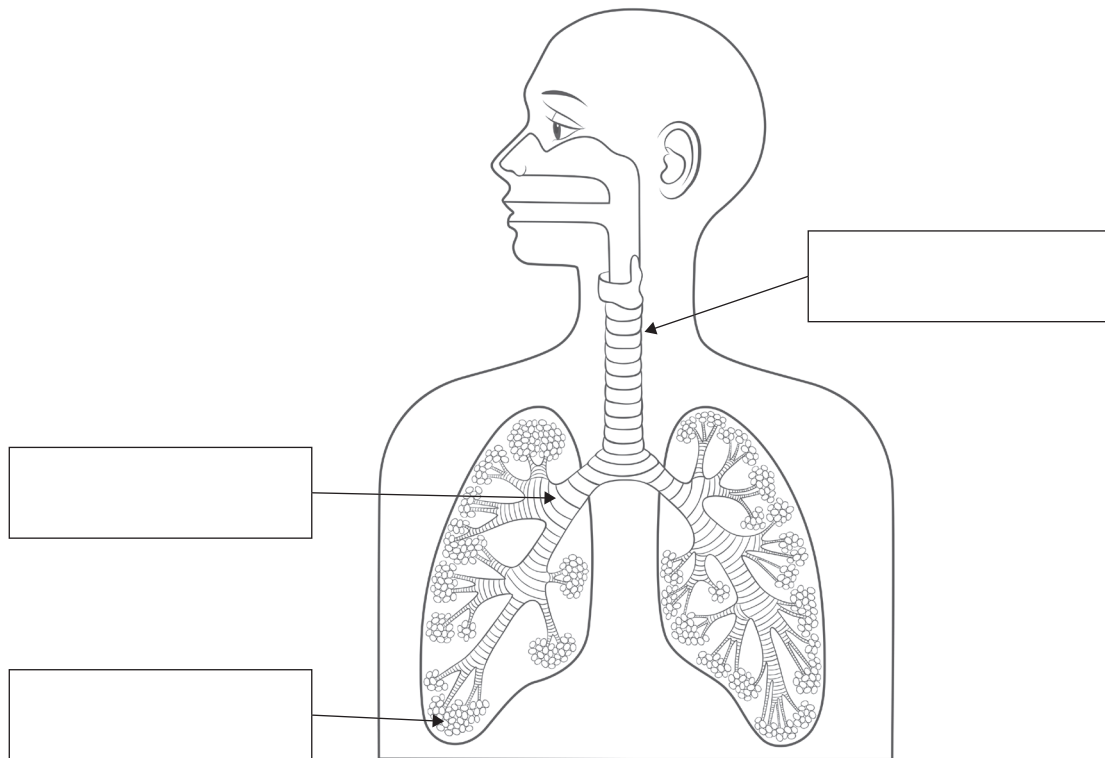
Complete the table below by providing the meaning of each combining form listed.

Combining form	Meaning
orth/o	
cyst/o	
my/o	

**Question 11** (3 marks)

The diagram below shows the respiratory system.

In each box provided, state the name of the part indicated.



Source: Fnina/Shutterstock.com

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**Question 12** (2 marks)

Colin is an allied health assistant who works in the dementia wing of a residential aged-care facility. He has been asked to assist clients with attending a music therapy session. The nurses have provided the following attendance list for him.

Name	Room number	Special instructions
Agnes	45	R/ and L/ hearing aid
Keith	16	R/CVA L/hemiplegia
Selena	2	behaviour alert – wanders

Colin cannot understand the abbreviations on the attendance list.

What two actions could Colin take?

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_

**Question 13** (3 marks)

Richard is brought to the Emergency Department complaining of intense chest pain. The doctors suspect he is experiencing a heart attack. The medical team orders that Richard undergoes an RIB, ECG and FBE.

What do the three medical abbreviations mentioned above stand for?

- RIB \_\_\_\_\_
- ECG \_\_\_\_\_
- FBE \_\_\_\_\_

**Question 14** (3 marks)

The table below describes three positional terms.

For each description provided, name the positional term.

Description	Positional term
referring to the midline of the body	
referring to above	
referring to a structure towards the front	

**Question 15** (3 marks)

Use the following list of medical terms to complete the table below:

- hyperplasia
- metaplasia
- aplasia
- hypoplasia
- dysplasia

Explanation	Medical term
the abnormal development of cells	
a low number of cells in an organ or a tissue	
congenital absence or incomplete development of an organ or a tissue	

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**SECTION C – Case study****Instructions for Section C**

Answer **all** questions in the spaces provided.

Unless otherwise indicated, the diagrams in this book are **not** drawn to scale.

*Use the following information to answer Questions 1–5.*

**Case study 1**

Jaida, a 31-year-old female, is 29 weeks pregnant. Jaida has gestational diabetes mellitus. Gestational diabetes mellitus is a condition in which some pregnant women develop abnormal insulin levels.

Below are the results of Jaida’s review with her midwife Tahlia.

<b>Date</b>	13/05/2021
<b>Comments</b>	<ul style="list-style-type: none"> <li>• on examination patient was feeling well</li> <li>• patient does not smoke and does not drink alcohol</li> <li>• patient’s stress levels are low and she is sleeping well</li> <li>• diet consists of takeaway and pre-packaged food</li> <li>• patient referred to physiotherapist because exercise levels are low</li> </ul>
<b>Blood pressure</b>	145/90 mmHg
<b>Blood tests</b>	<ul style="list-style-type: none"> <li>• oestrogen – no abnormalities detected</li> <li>• progesterone – no abnormalities detected</li> <li>• insulin – 8 mmol/L (hyperglycaemia)</li> </ul>

**Question 1 (4 marks)**

The medical terms listed in the table below can be found in Case study 1.

Provide the correct abbreviation for each medical term.

<b>Medical term</b>	<b>Abbreviation</b>
29 weeks	
review	
patient	
no abnormalities detected	

**Question 2** (2 marks)

In Jaida's case, the reproductive system and endocrine system are affected.

Describe the relationship between these two systems.

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**Question 3** (3 marks)

- a. An allied health assistant works through an exercise program with Jaida.

Identify **one** way in which the allied health assistant can ensure Jaida understands how to complete the exercises.

1 mark

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- b. Other than exercise, identify two strategies that Jaida can specifically implement to help improve her own health.

2 marks

1. \_\_\_\_\_

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2. \_\_\_\_\_

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**Question 4** (4 marks)

Jaida's blood tests revealed the presence of the hormones insulin and oestrogen.

Identify the organ that produces each hormone and the action of each hormone.

Organ that produces insulin \_\_\_\_\_

Action of insulin \_\_\_\_\_

Organ that produces oestrogen \_\_\_\_\_

Action of oestrogen \_\_\_\_\_

**Question 5** (4 marks)

Below is a list of structures that are found within the female or male reproductive system:

- seminal vesicles
- epididymis
- sperm
- vas deferens
- testes
- fallopian tubes

Correctly identify the structure that matches each function listed in the table below.

Function	Structure found within reproductive system
storage and maturation of sperm cells	
carries sperm away from the testes	
production of sperm	
carry DNA and fertilise an egg	



Use the following information to answer Questions 6–11.

### Case study 2

Leanne works in a multidisciplinary amputee clinic as an allied health assistant. The clinic supports clients experiencing skin issues or a deterioration in mobility. Leanne's first client today is new and she has just received the referral below from his general practitioner (GP).

Mr Lucas Costa UR: 2467987/2 DOB: 23/12/45
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Many thanks for seeing Mr Costa, who requires a review from your physiotherapist and dietician. His BMI is 34. Mr Costa is a heavy smoker and has not been attending rehabilitation exercise classes.

#### Health issues

- peripheral neuropathy
- chronic dermatitis
- partial amputation of R/ great toe and R/ second toe – 1/12
- anxiety

#### Current medication

- vitamin D supplement daily
- paracetamol 1000 mg 4/24 or PRN

With thanks

### Question 6 (4 marks)

Complete the table below by providing the definition or the full medical term for each word/abbreviation listed.

Word/Abbreviation	Definition/Full medical term
BMI	
neuropathy	
dermatitis	
4/24	

**Question 7** (2 marks)

Leanne is required to conduct an interview with all new patients.

Outline actions that Leanne can take to ensure that the interview process is confidential and to minimise stress for Mr Costa.

Action to ensure confidentiality \_\_\_\_\_

\_\_\_\_\_

Action to minimise stress \_\_\_\_\_

\_\_\_\_\_

**Question 8** (2 marks)

Referring to the case study, identify two ways in which Mr Costa can improve the health of his integumentary system.

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 9** (2 marks)

Mr Costa has just finished his rehabilitation session at the gym and his face is flushed.

- a. With reference to Mr Costa's flushed face, briefly explain how the blood vessels that supply the skin regulate homeostasis. 1 mark

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- b. Which layer of the skin contains the blood vessels? 1 mark

\_\_\_\_\_

**Question 10** (2 marks)

Describe how the skin contributes to a healthy musculoskeletal system.

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**Question 11** (1 mark)

According to the procedure list below, Leanne is required to clean the treatment room.

<b>Procedure list</b>
1. Sanitise hands.
2. Apply PPE.
3. Place disposable examination equipment in the biohazard container.
4. Wipe examination equipment and examination table with disinfectant wipes. Place used wipes in appropriate container.
5. Prepare the examination table for the next patient by placing a clean paper cover on the table and pillow.

What should Leanne do according to step 2 of the procedure list?

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