

STUDENT NUMBER Letter

VCE VET HEALTH

Written examination

Monday 18 November 2019

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

Section	Number of questions	Number of questions to be answered	Number of marks
A	20	20	20
B	14	14	50
C	10	10	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 20 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

A patient is being transferred to the CCU.

The unit the patient is being transferred to is the

- A. Chest Care Unit.
- B. Cancer Care Unit.
- C. Cardiac Care Unit.
- D. Coronary Care Unit.

Question 2

Which type of tissue covers the internal and external surfaces of the body?

- A. adipose
- B. epithelial
- C. cytoplasm
- D. connective

Question 3

Where is the humerus located in relation to the elbow?

- A. distal
- B. lateral
- C. medial
- D. proximal

Question 4

Which medical term refers to the abnormal narrowing of an artery or arteries?

- A. atherostenosis
- B. arteriostenosis
- C. atherosclerosis
- D. arteriosclerosis

Question 5

What is the name of the shaft of a long bone?

- A. diaphysis
- B. epiphysis
- C. endosteum
- D. metaphysis

Question 6

Muscles under voluntary control are known as

- A. cardiac.
- B. skeletal.
- C. visceral.
- D. nonstriated.

Question 7

Leukocytes are

- A. haemoglobin carriers.
- B. destroyed in the spleen.
- C. important clotting factors.
- D. important in fighting disease in the body.

Question 8

What is the medical abbreviation for 'three times a day'?

- A. D
- B. BD
- C. q3h
- D. TDS

Question 9

Which area of the body is covered by the parietal pleura?

- A. inside the lungs
- B. outer layers of the lungs
- C. inside the thoracic cavity
- D. outside the thoracic cavity

Question 10

Which combining form means 'liver'?

- A. hydr/o
- B. histol/o
- C. hepat/o
- D. haemat/o

Question 11

Which salivary glands are located in front of and slightly lower than each ear?

- A. parotid
- B. maxillary
- C. sublingual
- D. submandibular

Question 12

Which root word means 'tongue'?

- A. rhin/
- B. palat/
- C. gloss/
- D. odont/

Question 13

Where are the axillary lymph nodes found?

- A. neck
- B. groin
- C. armpit
- D. mediastinum

Question 14

The term 'olfactory' refers to the sense of

- A. taste.
- B. sight.
- C. smell.
- D. touch.

Question 15

The part of the eye that controls the amount of light that enters the eye is called the

- A. iris.
- B. lens.
- C. sclera.
- D. cornea.

Question 16

Which one of the following is the most potent of all mechanisms and substances that the body uses to regulate blood pH?

- A. the kidneys
- B. the hormones
- C. the buffer system
- D. the respiratory system controls

Question 17

The bladder is able to expand as urine accumulates within it due to the presence of

- A. orifices.
- B. sphincters.
- C. segmentation.
- D. transitional epithelium.

Question 18

Which one of the following means 'located between the ribs'?

- A. intercostal
- B. intracostal
- C. mediastinal
- D. costochondral

Question 19

The function of the epididymis is to

- A. thicken semen.
- B. store and mature sperm.
- C. produce the fluid for semen.
- D. carry sperm to the ejaculatory duct.

Question 20

Which one of the following prefixes means 'around'?

- A. epi-
- B. peri-
- C. hypo-
- D. hyper-

SECTION B

Instructions for Section B

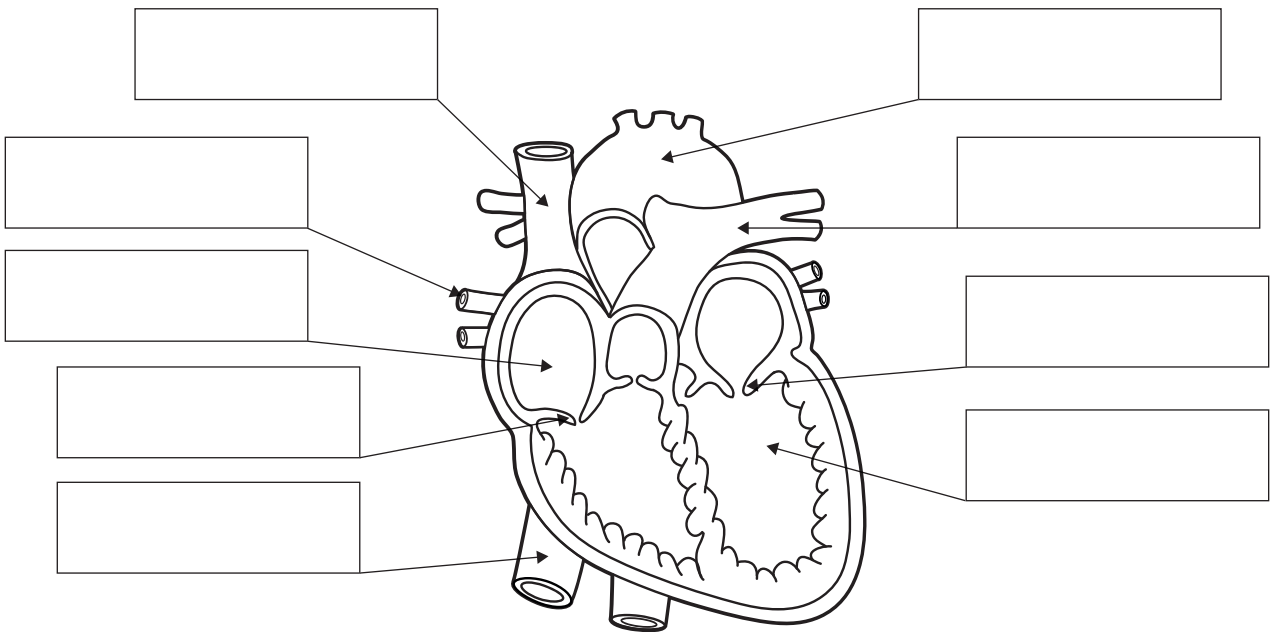
Answer **all** questions in the spaces provided.

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

Question 1 (3 marks)

The diagram below shows the human heart.

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



Source: okili77/Shutterstock.com

Question 2 (2 marks)

Outline the two main divisions of the nervous system and the structures that make up each division.

Question 3 (4 marks)

Provide the singular or plural form of each medical term listed in the table below.

Medical term	Singular form	Plural form
thorax		
diagnosis		
phalanges		
thrombi		

Question 4 (6 marks)

Use the following list to complete the table below with the correct medical term for each explanation given:

- pneumothorax • enteritis • pulmonary embolism • gastritis
- hysterectomy • retinopathy • sarcoma • oophorectomy
- glioma • thrombosis • adenopathy • aneurysm

Explanation	Medical term
inflammation of the small intestine	
abnormal swelling in the wall of a blood vessel	
collection of air in the pleural cavity	
disease of the retina	
cancer of the connective tissue	
surgical removal of an ovary	

Question 5 (6 marks)

In the table below, outline the structure and one function of arteries, veins and capillaries.

	Arteries	Veins	Capillaries
Structure			
Function			

Question 6 (3 marks)

Michael is a 60-year-old male who has a family history of heart disease. Michael is a heavy smoker and, although he tries to maintain a healthy diet, he does not exercise. On Michael's last visit to the doctor, he was told he had hypertension. He was prescribed medication and told to make some lifestyle changes.

- a. Define blood pressure. 1 mark

- b. Explain how the cardiovascular and urinary systems work together to maintain blood pressure in the case of hypertension. 2 marks

Question 7 (3 marks)

Identify three systems involved in the elimination of waste from the body and state the waste product(s) each system eliminates.

	System	Waste product(s)
1.		
2.		
3.		

Question 8 (6 marks)

Read the following medical report.

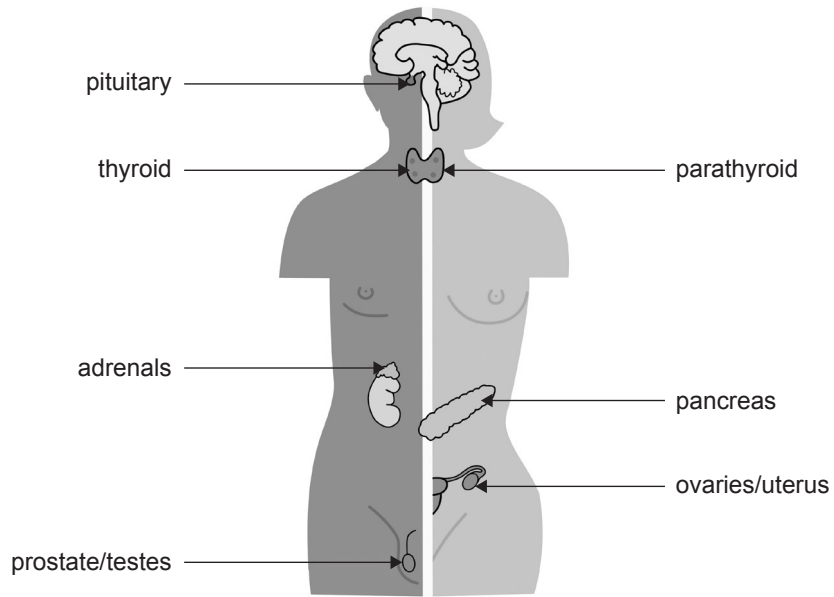
Fatima is a 43-year-old female who has been on a diet for 3½ months for weight reduction. She has been feeling tired and weak for the past 4 weeks. She has shortness of breath with light activity and was treated for pneumonea 8 months ago. She is pale but does not have any signs of bleeding, rashes or jorndis. Her doctor ordered a gastroscopce, blood tests, urine test and fekal occult blood test. Fatima was diagnosed with anaemia. Her blood test showed low iron levels and a low red blood cell count. Her doctor ordered iron injections, vitamin and mineral supplements, and a follow-up in one week.

- a. Provide the correct spelling for each incorrectly spelt medical term in the table below. 4 marks

Incorrectly spelt medical term	Correctly spelt medical term
pnumonea	
jordis	
gastroscopce	
fekal	

- b. Explain the function of haemoglobin. 2 marks

Question 9 (4 marks)



Source: Well of Life Center for Natural Health, <<https://welloflifecenter.com/>>

Select two glands from the labelled diagram of the endocrine system above (excluding the ovaries/uterus and prostate/testes). For each gland, identify one hormone that is secreted and the function of the hormone.

Gland	Hormone	Function of hormone

Question 10 (3 marks)

Read the following scenario.

O/A, Edith presented with flank pain and a burning sensation when voiding. Her vital signs were T – 38.5 °C, P – 84, Resp – 18, BP – 120/80 mmHg. She had a urinalysis and blood tests, and was diagnosed with a UTI. The pt was prescribed antibiotics 500 mg, O, QID for 7/7, paracetamol 1 gm, O, PRN and placed on an FBC and 4/24 observations.

Complete the table below by providing the full medical term for each abbreviation listed.

Abbreviation	Full medical term
O/A	
UTI	
pt	
mg	
O	
QID	
gm	
PRN	
FBC	

Question 11 (3 marks)

Compare **three** differences between the female and male secondary sexual characteristics.

Question 12 (2 marks)

Name the three structures that make up the ossicles of the middle ear and state their overall function.

Structures

1. _____

2. _____

3. _____

Function

Question 13 (4 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	
hypoglycaemia					
polyneuropathy					
nephritis					
craniotomy					

Question 14 (1 mark)

Explain what is meant by homeostasis.

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 1–6.

Case study 1

Samir, a 59-year-old concreter who lives with his wife and teenage son, has a PMHx of R) knee pain and back pain. Samir was referred to an orthopaedic surgeon c/o pain and stiffness in his R) knee with movement, especially after resting and when it is cold. Samir had an MRI that indicated osteoarthritis. This resulted in Samir having an arthroscopy on his R) knee. He has been referred by the orthopaedic surgeon for physiotherapy.

Kylie is an allied health assistant who works in outpatient rehabilitation at a local hospital. The physiotherapist has asked Kylie to take Samir through his physiotherapy session. Prior to the physiotherapy session, Samir tells Kylie his pain is 8/10 with movement and he has stiffness in his R) knee, especially in the morning and when sitting for long periods of time.

Kylie's observations of Samir during physiotherapy session

- walking with a limp, favouring left side
- walks unaided
- R) knee flexion 110 degrees
- R) knee extension 5 degrees
- R) knee strength 3/5
- moderate oedema R) knee
- decreased balance with R) single leg stance

Home exercise program for Samir

- five knee extensions with towel stretch, holding each for 30 seconds
- 10 squats
- 10 hamstring curls

Instructions for Samir

- Complete the home exercise program daily for 6/52.
- Attend physiotherapy session 2/7 for 6/52.
- Attend hydrotherapy 1/7 for 6/52.
- Have a review with orthopaedic surgeon in 3/12.

Question 1 (2 marks)

From the case study, identify one active exercise and one passive exercise that is part of Samir's home exercise program.

Active exercise _____

Passive exercise _____

Question 2 (2 marks)

Provide the full medical term and abbreviation for two ligaments in the knee that connect the femur to the tibia.

	Full medical term	Abbreviation
Ligament 1		
Ligament 2		

Question 3 (2 marks)

Explain the relationship between the muscular and skeletal systems of the human body.

Question 4 (3 marks)

As an allied health assistant, Kylie has a number of work tasks that need to be completed before, during and after the physiotherapy session.

Below is a checklist of work tasks that Kylie needs to complete.

Use a tick (✓) to show if Kylie should complete the task **before** the session, **during** the session or **after** the session. Note: Each work task can be completed only once.

Work task	Before the session	During the session	After the session
Clean equipment.			
Gather equipment.			
Read patient file.			
Document session in patient file.			
Store equipment.			
Give instructions.			
Demonstrate exercise.			
Prepare environment.			
Monitor patient progress.			

Question 5 (4 marks)

Explain **two** ways in which Kylie can adhere to privacy and confidentiality policies when handling Samir’s medical record.

Question 6 (2 marks)

Kylie cannot understand the medical terms and abbreviations written in Samir's medical record.

Provide two ways in which Kylie can find out what they mean.

1. _____

2. _____

Use the following information to answer Questions 7–10.

Case study 2

Sarah is an 18-year-old female who has just graduated from Year 12. Sarah is currently in northern NSW having a well-deserved holiday with her friends.

Today, it is 38 °C and Sarah and her friends head to the beach. They all apply sunscreen when they arrive and then settle down for a day of sunbaking and swimming. Throughout the day, Sarah and her friends drink pre-mixed alcoholic drinks and snack on potato chips. Sarah, unlike her friends, does not have any water; she has left her water bottle at their holiday rental.

Sarah has been at the beach for 5/24 and is c/o a throbbing headache, dizziness and nausea. Two of her friends take her back to their holiday rental and Sarah goes to bed.

Sarah wakes up two hours later with nausea and starts vomiting. She is in pain and experiencing muscle cramps. Her friends notice that she is badly sunburnt and is staggering.

Her friends are concerned and take her to the emergency department of the local hospital. O/E, the doctor notes the following.

Vital signs	Sarah’s signs	Sarah’s symptoms
<ul style="list-style-type: none"> • T – 39.2 °C • BP – 90/46 mmHg • HR – 112 bpm • RR – 24 with shallow breathing 	<ul style="list-style-type: none"> • skin is red, hot and dry • a number of small fluid-filled blisters on her shoulders • disoriented • no urine output since morning 	<ul style="list-style-type: none"> • painful to touch • throbbing headache • nausea • muscle cramps • dizziness • dry mouth • extreme thirst

The Dx is second-degree sunburn, dehydration and heat stroke.

Question 7 (6 marks)

a. Describe the role of the cardiovascular and integumentary systems in the regulation of Sarah’s high body temperature.

4 marks

- b. Other than temperature regulation and waste elimination, identify **two** functions of the integumentary system.

2 marks

Question 8 (3 marks)

Sarah is dehydrated.

Explain how water balance is regulated in the body to increase her blood volume.

Question 9 (2 marks)

Complete the table below by providing the full medical term for each abbreviation listed.

Abbreviation	Full medical term
5/24	
c/o	
O/E	
Dx	

Question 10 (4 marks)

Outline two interventions for each body system listed below that would help Sarah maintain healthy functioning of her body to prevent a recurrence.

Integumentary

1. _____

2. _____

Cardiovascular

1. _____

2. _____