TOPICAL TEST 6A:

30

Section A (10 x 2 marks)

For each question from 1 to 10, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write the answers in the brackets provided.

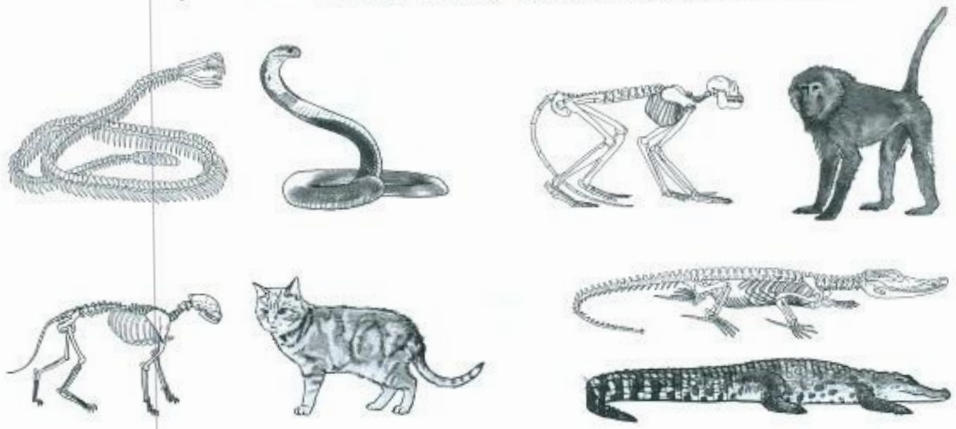
1. Natalie is playing netball as shown below.

Which body systems listed below help her to play netball?

A: Skeletal system
B: Muscular system
C: Circulatory system
D: Respiratory system

(1) A and B only
(2) C and D only
(3) A, B and D only
(4) A, B, C and D ( )

2. Jerome compared the animals to their skeletons as shown below.



From his comparison, he can conclude that the skeleton _____.

(1) protects the vital organs.
(2) moves with the help of muscles.
(3) gives the animals their body shape.
(4) in all animals consists of the same number of bones. ( )

3. The picture below shows a man with hearing impairment using sign language to communicate with another person.

Which sense(s) help(s) the man to communicate?

A: Sight
B: Smell
C: Hearing
D: Taste

(1) A only
(2) C only
(3) B and C only
(4) A, B and D only ( )

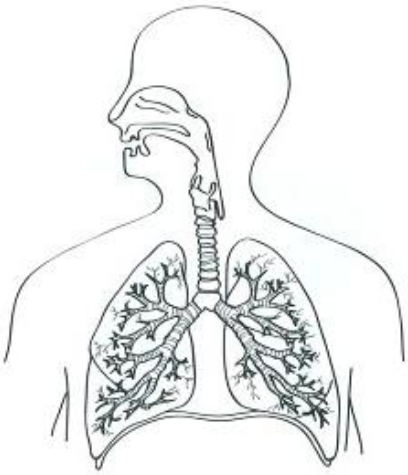
4. Mr Tan was hammering a nail when he accidently hit his finger.

He felt the pain as his sense organs sent a message to his brain through the _____.

(1) veins
(2) muscles
(3) nerves
(4) blood

( )

5. The diagram below shows a human system.



Which of the following statements is true about the system shown above?

(1) It enables our body to move.
(2) It enables gaseous exchange to take place.
(3) It breaks down food into simpler substances.
(4) It transports oxygenated blood to other parts of the body.

( )

6. Which 2 body systems below work together to transport digested food to all our body parts?

A: Circulatory system

B: Digestive system

C: Respiratory system

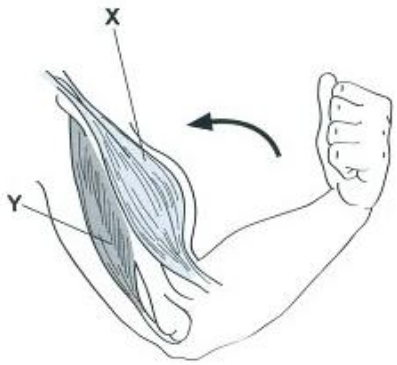
D: Muscular system

(1) A and B only
(2) A and C only
(3) B and D only
(4) C and D only ( )

7. Which part of the digestive system **does not** require digestive juices to break food down?

(1) Mouth
(2) Stomach
(3) Small intestine
(4) Large intestine ( )

8. The diagram below shows a movement in our arm. Identify the correct activity that each muscle is carrying out.



	X	Y
(1)	Relaxing	Contracting
(2)	Relaxing	Relaxing
(3)	Contracting	Contracting
(4)	Contracting	Relaxing

( )

9. Due to cancer, Elva underwent a surgery to remove her stomach. Which statement explains how her body gets food for energy?

(1) She can only take liquid food because she cannot digest food anymore.
(2) She can still eat solid food because digestion can take place in her mouth only.
(3) Food is injected directly into her veins because she cannot digest food anymore.
(4) She can still eat solid food because digestion can take place in her mouth and small intestine. ( )

10. As a food substance travels through the digestive system, its water content changes. At which part of the digestive system does the food substance contain the least amount of water?

(1) Mouth (2) Small intestine
(3) Stomach (4) Large intestine ( )

Section B (10 marks)

Read each question carefully and write the answers in the space provided.

11. Lionel is having a bad diarrhoea. He notices that he is passing out very watery waste.

(a) Which part of his digestive system is most likely malfunctioning? (1m)

_____

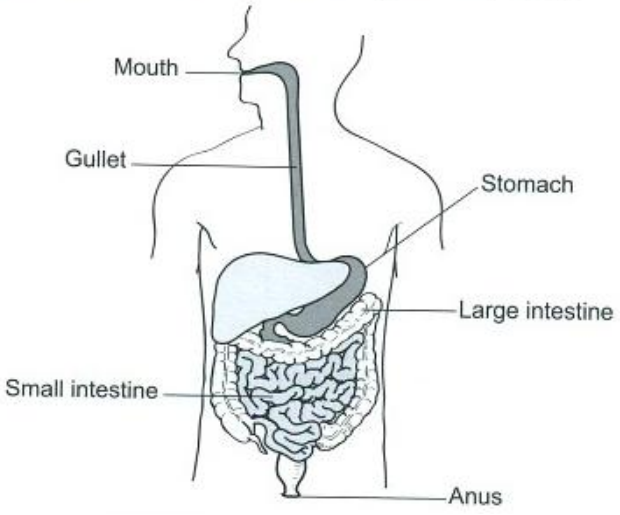
_____

(b) Explain your answer in (a). (2m)

_____

_____

12. The diagram below shows the human digestive system.



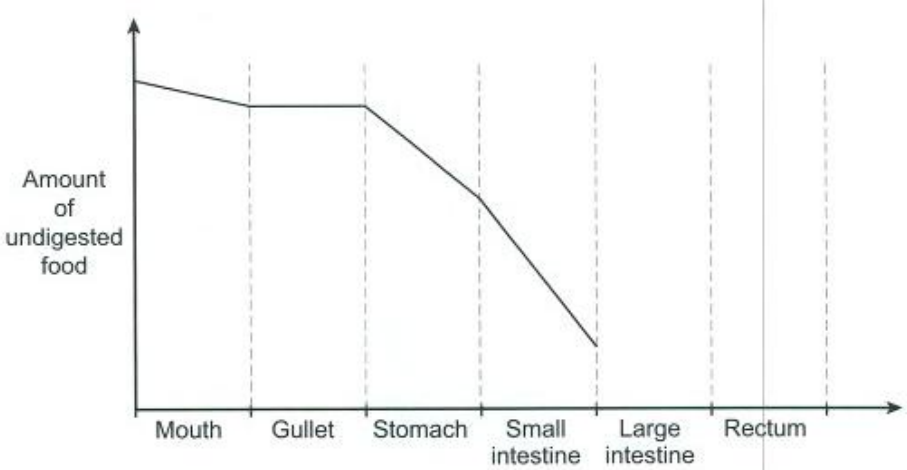
(a) At which part of the digestive system does digestion begin? (1m)

(b) Muscles line the walls of the gullet and stomach. What are the functions of these muscles? (2m)

Muscles in the gullet:

Muscles in the stomach:

13. Desmond ate a cheese burger for dinner. The graph below shows how the amount of undigested food in the cheese burger changes as it passes through his digestive system.



(a) **Complete** the graph above to show what happens to the amount of undigested food at the large intestine and the rectum. (1m)

(b) Based on the graph, at which part of the digestive system is the greatest amount of food digested? (1m)

_____

_____

14. Kayla was working out when she felt a cramp in her leg.

(a) Which system of hers is affected? (1m)

_____

_____

(b) Name the other system that works closely with the system mentioned in (a) to enable us to move. (1m)

_____

_____

TOPICAL TEST 6B:

30

Section A (10 x 2 marks)

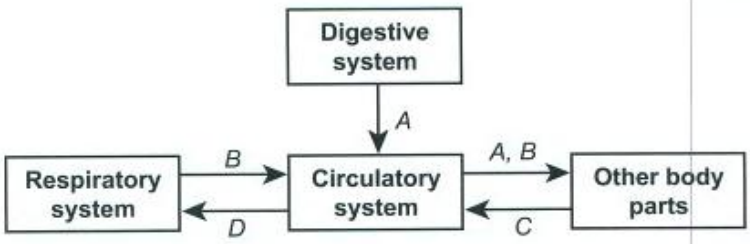
For each question from 1 to 10, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write the answers in the brackets provided.

1. Which of the following organs is **wrongly** matched to its function?

	Organ	Function
(1)	Lung	It transports oxygen around our body.
(2)	Heart	It pumps blood to all parts of our body.
(3)	Small intestine	It absorbs digested food into the blood.
(4)	Large intestine	It absorbs water from the undigested food.

( )

2. The diagram below shows how the circulatory, digestive and respiratory systems in our body work together.



Which one of the following correctly represents substances A, B, C and D?

	A	B	C	D
(1)	Oxygen	Digested food	Oxygen	Carbon dioxide
(2)	Digested food	Oxygen	Carbon dioxide	Carbon dioxide
(3)	Digested food	Oxygen	Digested food	Oxygen
(4)	Carbon dioxide	Oxygen	Oxygen	Carbon dioxide

( )

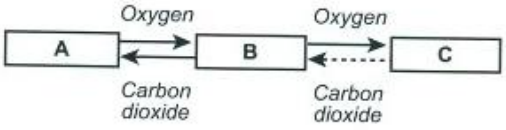
3. Marine mammals breathe through blowholes. When they dive underwater, they need to hold their breath by closing their blowholes. The table below shows the heart rate of different types of marine mammals and the average time taken they stay underwater.

Animal	Time spent underwater (minutes)	Heart rate/minute (underwater)	Heart rate/minute (above water)
A	5	62	120
B	10	36	100
C	20	7	80

Based on the information from the table, which of the following conclusions is correct?

(1) The heart rate of the marine mammals increases as they dive deeper into the water.
(2) The heart rate of the marine mammals decreases as they dive deeper into the water.
(3) The marine mammals store oxygen in their lungs when they dive deeper into the water.
(4) The marine mammals store oxygen in their heart when they dive deeper into the water. ( )

4. The diagram below shows how some of our body systems work together when we exercise.

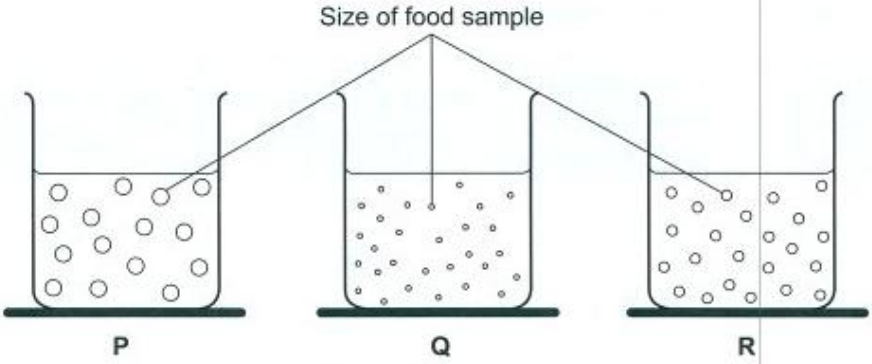


Which of the following correctly shows the body systems represented by A, B and C?

	A	B	C
(1)	Respiratory	Muscular	Circulatory
(2)	Circulatory	Muscular	Respiratory
(3)	Muscular	Circulatory	Respiratory
(4)	Respiratory	Circulatory	Muscular

( )

5. Bao Shan ate a slice of papaya, and three samples of the partially digested papaya were taken from three different parts of her digestive system.

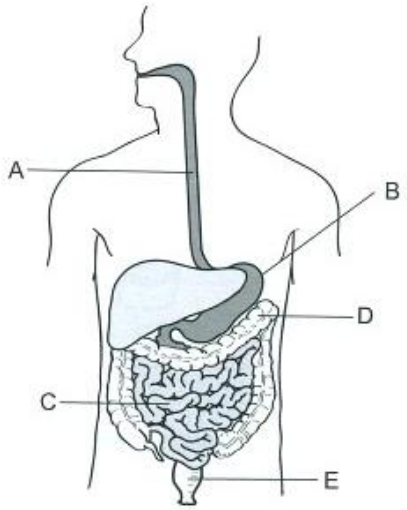


If Sample R was taken from her stomach, which part of the digestive system could Samples P and Q be taken from respectively?

	Sample P	Sample Q
(1)	Gullet	Mouth
(2)	Small intestine	Large intestine
(3)	Mouth	Small intestine
(4)	Rectum	Large intestine

( )

6. The diagram below shows a human digestive system with labelled parts A, B, C, D and E.



Jenny, Harry, Kai and Felix each made a statement about the digestive system.

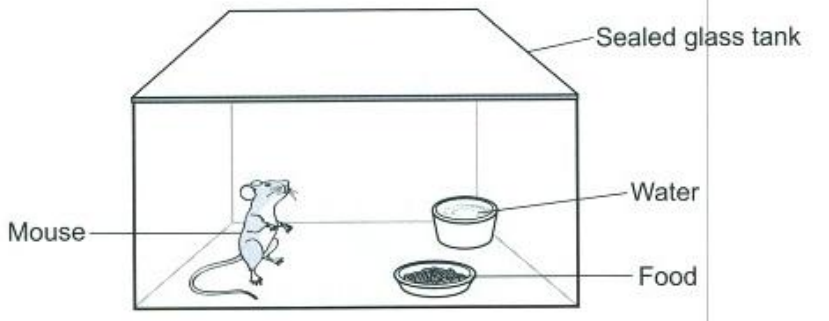
Jenny : Solid waste is found here.
Harry : Digestion is completed here.
Kai : Digestive juices are added here.
Felix : Water is absorbed from the undigested food here.

Which statement made by Jenny, Harry, Kai and Felix best identifies the function of the labelled parts A, B, C, D and E?

	Jenny	Harry	Kai	Felix
(1)	A	B	D	C
(2)	C	E	D	A
(3)	E	C	B	D
(4)	D	B	C	E

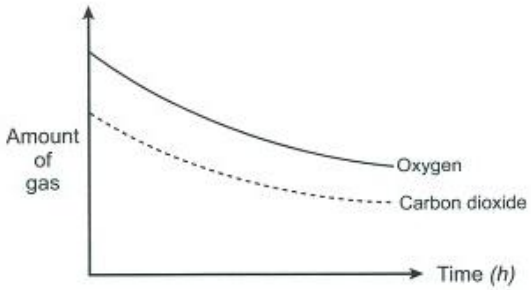
( )

7. Vanessa sets up the experiment below to find out how the mouse affects the amount of oxygen and carbon dioxide in a sealed glass tank over a period of time.

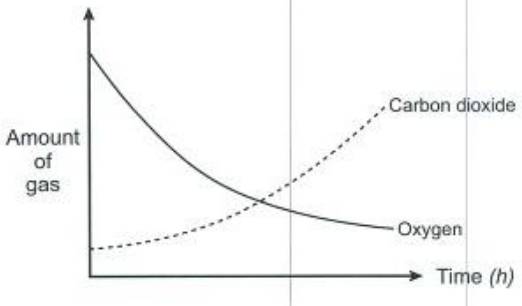


Which one of the following line graphs best illustrates the changes in the amount of oxygen and carbon dioxide in the sealed box over a period of 6 hours?

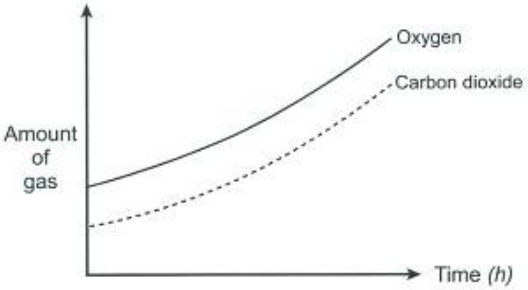
(1)



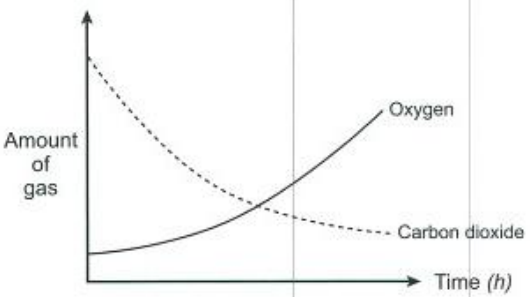
(2)



(3)



(4)

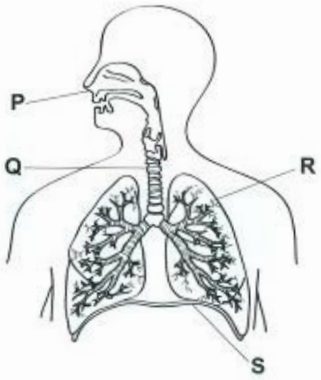


( )

8. Compared to the mouth, the nose is better equipped for breathing because _____.

(1) it is easier to breathe through the nose
(2) more oxygen can be inhaled through the nose
(3) the fine hair and mucus in the nose trap dirt and dust in the air
(4) the passage from the nose to the windpipe is wider ( )

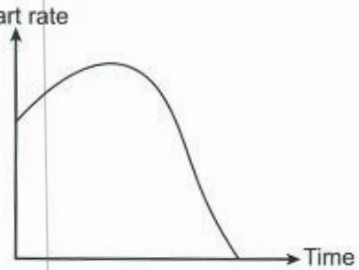
9. The diagram below shows the human respiratory system. Where does gaseous exchange take place?

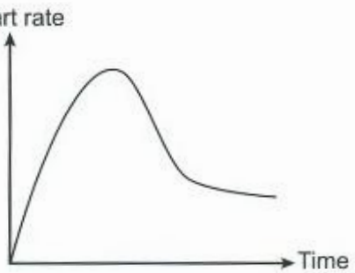


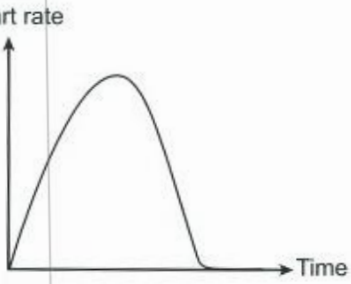
(1) P
(2) Q
(3) R
(4) S

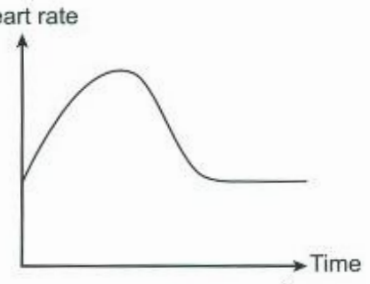
( )

10. Which of the following graphs shows the heart rate of a person from the time he begins running to the time he stops to take a rest?

(1)


(2)


(3)


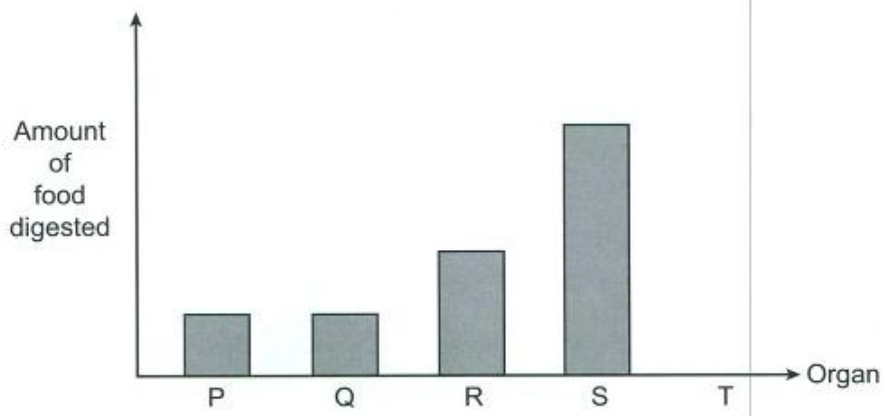
(4)


( )

Section B (10 marks)

Read each question carefully and write the answers in the space provided.

11. Susan ate a sandwich during lunch. The graph below shows the amount of food digested as it moved through Organs P, Q, R, S and T, of Susan's digestive system.



(a) Suggest a reason why the amount of food digested in Q remained the same as in P. (1m)

_____

_____

(b) Which organ, P, Q, R, S or T is the small intestine? Give a reason for your answer. (1m)

_____

_____

12. Davi conducted an experiment to find out if the amount of Digestive Juice X used would affect the size of the bread. She placed 3 similar pieces of bread into 3 similar beakers and added different amounts of Digestive Juice X. She observed the size of the 3 pieces of bread after 10 hours. The results are shown in the table below.

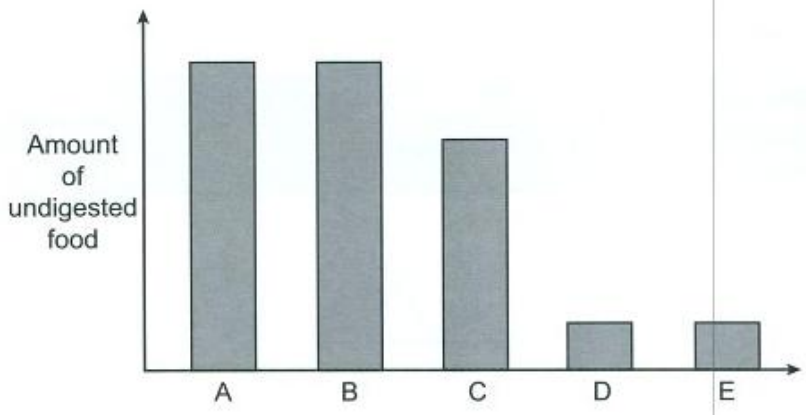
Amount of Digestive Juice X (ml)	Size of bread	
	Before	After
200		
400		
600		

(a) Based on the table above, state the relationship between the amount of Digestive Juice X and the size of the bread. (1m)

(b) Using only 200 ml of Digestive Juice X, what can Davi do to shorten the time needed to break down the same piece of bread? (1m)

(c) Explain your answer in (b). (1m)

13. The graph below shows the amount of undigested food as it leaves each part of the human digestive system.



(a) Identify Parts C and D. (1m)

C: _____

D: _____

(b) What happens to the digested food in Part D? (1m)

_____

_____

(c) What is found in Part C that reduces the amount of undigested food? (1m)

_____

_____

14. The diagram below shows a shadow puppet which is supported and controlled by sticks attached to its body, legs and feet.

Which two human body systems work in the same way to enable movement as in the shadow puppet? (2m)