

CA2



## AI TONG SCHOOL

### 2005 CONTINUAL ASSESSMENT 2 PRIMARY 4 SCIENCE

**DURATION : 1hr 20min**

**DATE: 25/8/2005**

#### INSTRUCTIONS

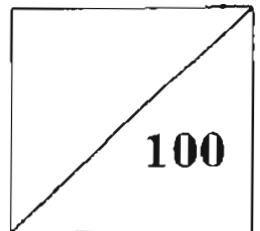
**Do not open the booklet until you are told to do so.**

**Follow all instructions.**

**Answer all questions.**

Name : \_\_\_\_\_ ( : )

Marks :



Class : Primary \_\_\_\_\_

Parent's Signature : \_\_\_\_\_

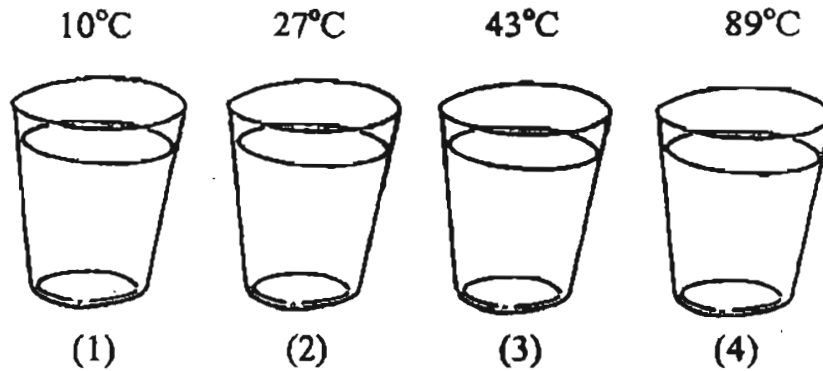
Date : \_\_\_\_\_

**Section A (60 marks)**

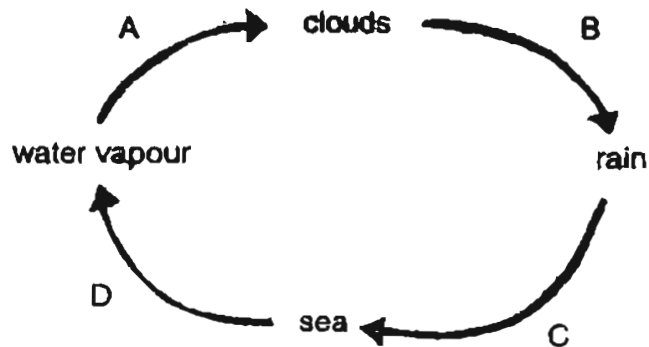
**Questions 1 to 30 carry 2 marks each. For each question, four options are given. Shade the correct oval, (1, 2, 3 or 4) on the Optical Answer Sheet.**

1. Which group of things includes all three states of matter?
  - 1) Milk, glass bottle, honey.
  - 2) Tin can, syrup, carbon dioxide.
  - 3) Ice cream, metal spoon, oil.
  - 4) Water vapour, coffee powder, paper
  
2. Which of the following is/are water in the solid form?
  - A. Ice
  - B. Mist
  - C. Rain
  - D. Snow
  - 1) A and D
  - 2) C and D
  - 3) B and C
  - 4) A, B and C
  
3. What is the process which changes water from a liquid state to a solid state?
  - 1) Boiling
  - 2) Freezing
  - 3) Evaporation
  - 4) Condensation

4. Four glasses filled with water of various temperatures are placed in the same room. Which one of the glasses will have water droplets forming on the outside of the glass?



5. Which of the following requires the process of condensation to take place?
- 1) Rain falling on the earth.
  - 2) Clouds being formed in the sky.
  - 3) Sea water changing to water vapour.
  - 4) The surface of the pond turning into ice.
6. Study the diagram of the water cycle shown below.



At which stage is heat taken in?

- 1) A
- 2) B
- 3) C
- 4) D

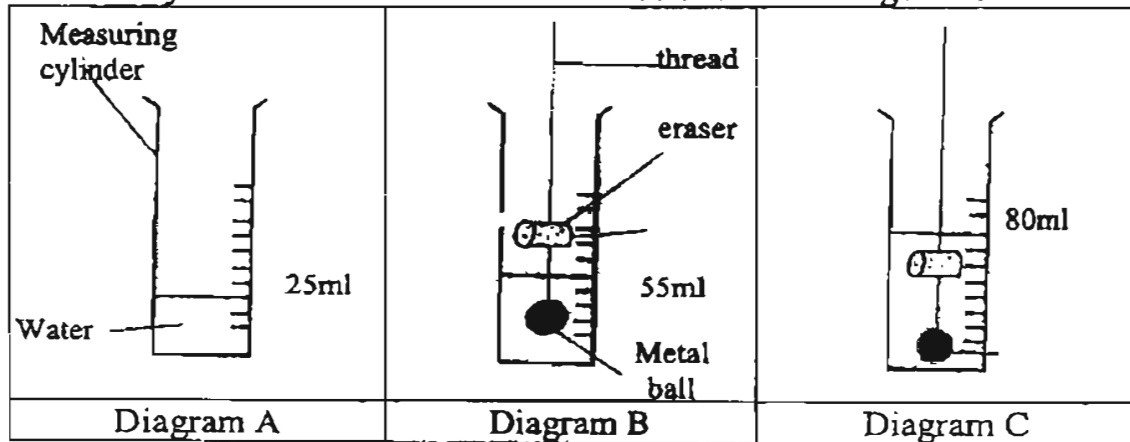
7. Rainwater collected in the reservoirs can only be safe for drinking if it goes through the process of \_\_\_\_\_ at the water treatment plant.

- 1) recycling
- 2) desalination
- 3) purification
- 4) conservation

8. Which one of the following activities does **not** save water?

- 1) Repair leaking taps quickly.
- 2) Wash dishes under a running tap.
- 3) Using a pail of water to wash a bicycle.
- 4) Watering plants by with recycled water.

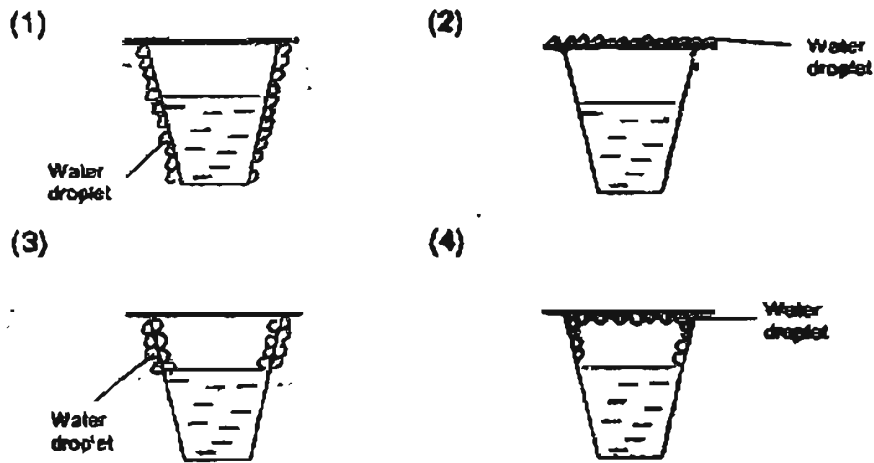
9. A measuring cylinder was filled with water as shown in diagram A. A metal ball was then lowered into the cylinder. The water level rises as shown in diagram B. Finally a metal ball and an eraser were lowered into the cylinder. The final water level was shown in Diagram C.



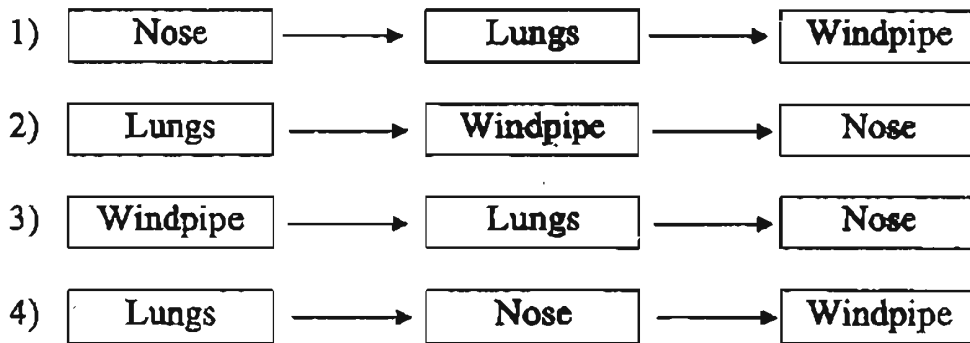
Which one of the following sets of readings **correctly** shows the volumes of the metal ball and eraser?

	Volume of metal ball in $\text{cm}^3$	Volume of eraser in $\text{cm}^3$
1)	25	55
2)	30	55
3)	30	25
4)	55	80

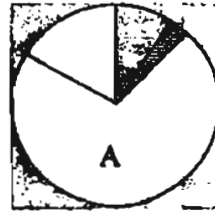
10. Alice filled a glass with hot water. Then she covered it with a glass lid. After a while she noticed water droplets forming. Which one of the following diagrams correctly shows what she saw?



11. Which one of the following shows the correct path when we exhale?



12. The diagram below shows different gases which are present in the air.



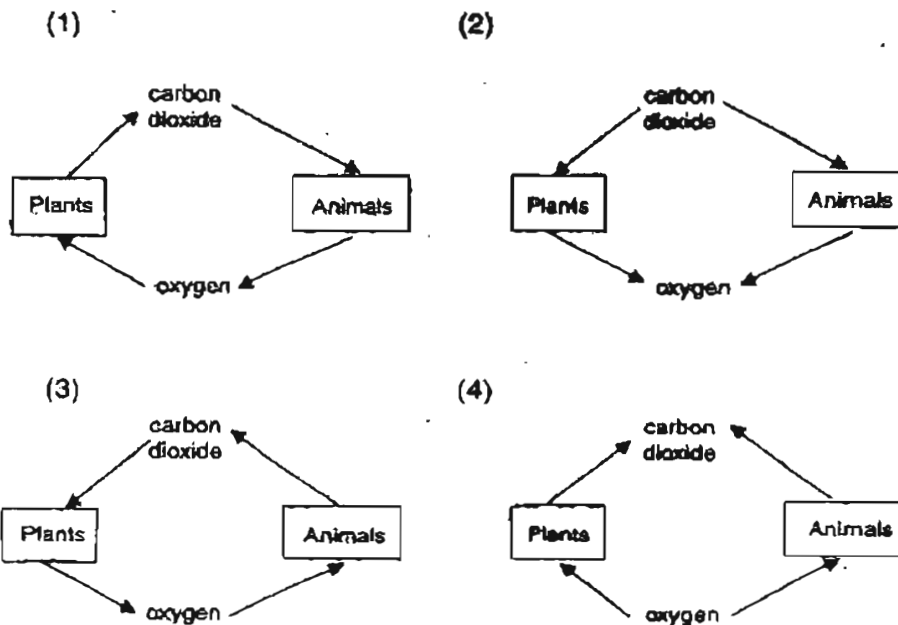
What is gas A?

- 1) Oxygen
- 2) Nitrogen
- 3) Water Vapour
- 4) Carbon dioxide

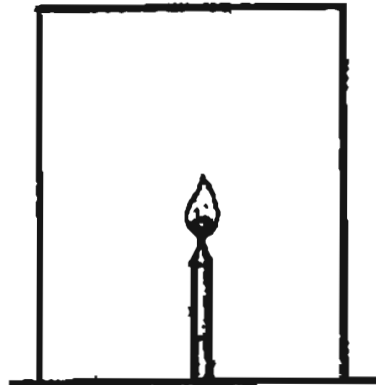
13. Exhaled air contains more \_\_\_\_\_ than inhaled air.

- 1) Oxygen
- 2) Nitrogen
- 3) Water vapour
- 4) Carbon dioxide

14. Plants and animals exchange gases every time. Which one of the following diagrams shows the correct gas exchange during respiration?

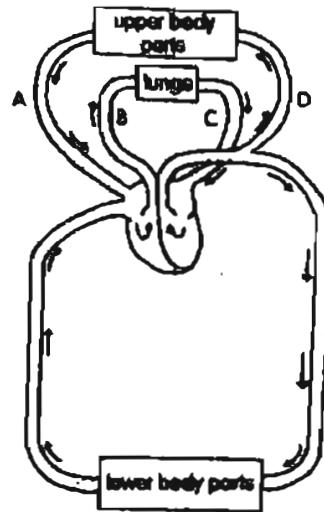


15. Ali lighted a candle and placed a glass jar over it. After a while the lighted candle died out. What could be a possible explanation?

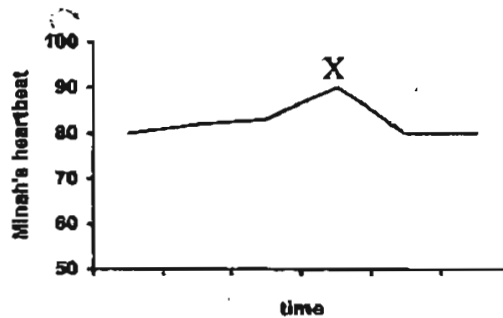


- 1) There was no more air in the jar.  
 2) The candle has completely burned out.  
 3) The amount of nitrogen gas has increased.  
 4) The oxygen gas in the container has been used up.
16. Which one of the following statements is true?
- 1) Our cells need carbon dioxide to function.
  - 2) Capillaries are bigger than arteries and veins.
  - 3) The arteries carry blood that is rich in oxygen.
  - 4) The heart only pumps blood to the hands and legs.
17. Which of the following organs listed below makes up the circulatory system?
- A. Veins
  - B. Heart
  - C. Arteries
  - D. Gullet
- 1) A and B only
  - 2) B and C only
  - 3) A, B and C only.
  - 4) A, B, C and D

18. The diagram below represents our circulatory system. Which pair of blood vessels always carries blood that is rich in carbon dioxide?



- 1) A and B  
2) B and C  
3) C and D  
4) A and D
19. The graph below shows Minah's heartbeat over a period of time.

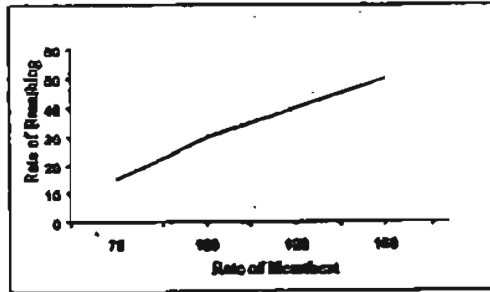


What could Minah be doing at the point marked X?

- 1) Sleeping  
2) Reading a book.  
3) Watching television  
4) Running around the house.



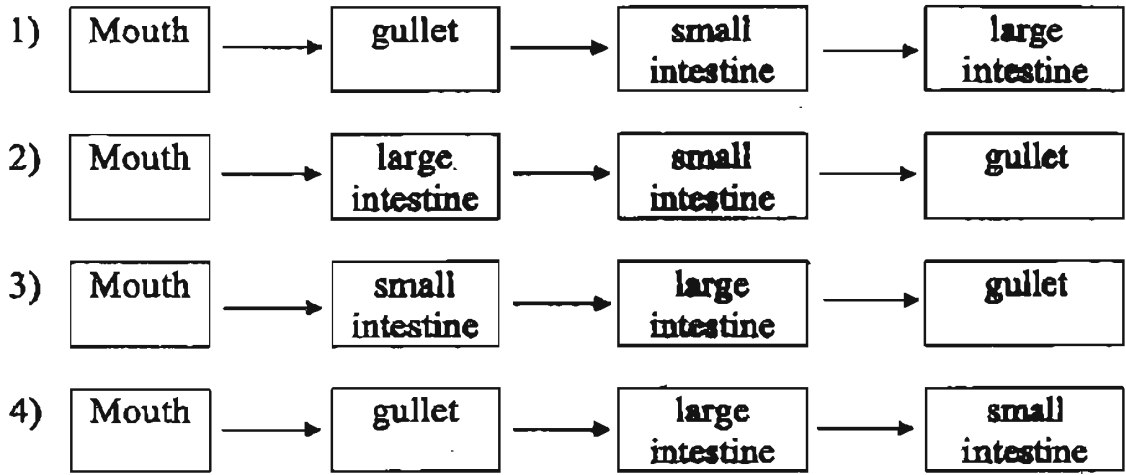
20. Alex measured the rate of **heartbeat and breathing** of Simon while Simon was exercising. The results are **shown in the graph below**.



Based on the graph, what pattern can be observed between the rate of heartbeat and breathing?

- 1) As his rate of heartbeat **increases**, his breathing rate also increases.
  - 2) As his rate of heartbeat **decreases**, his breathing rate also increases.
  - 3) As his rate of heartbeat **increases**, his breathing rate also decreases.
  - 4) As his rate of heartbeat **decreases**, his breathing rate also decreases.
21. When we feel the heat from the **flame** of a candle, we are using our sense of \_\_\_\_\_.
- 1) sight
  - 2) smell
  - 3) touch
  - 4) hearing
22. Which system in our body helps our limbs to move?
- 1) Digestive
  - 2) Muscular
  - 3) Circulatory
  - 4) Respiratory

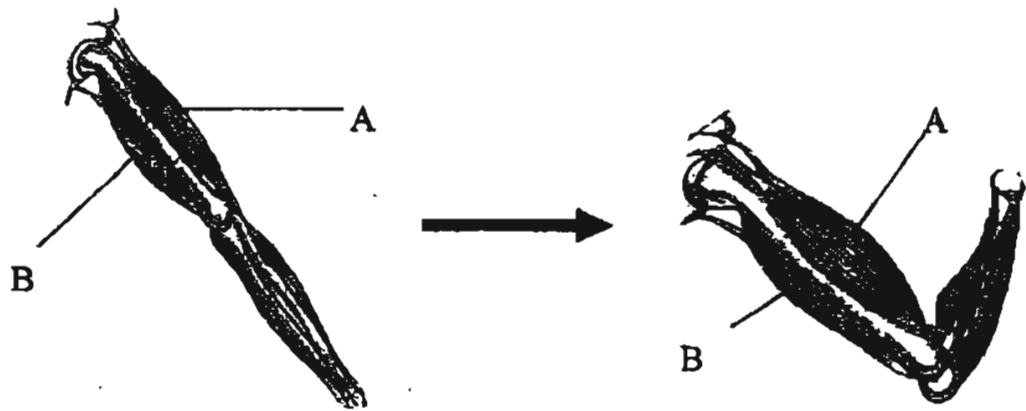
23. Which of the following below shows the correct order in which food is digested in our body?



24. Which part of the body is a “hinge joint”?

- 1) knee
- 2) wrist
- 3) ankle
- 4) shoulder

25. The diagram below shows a human arm.



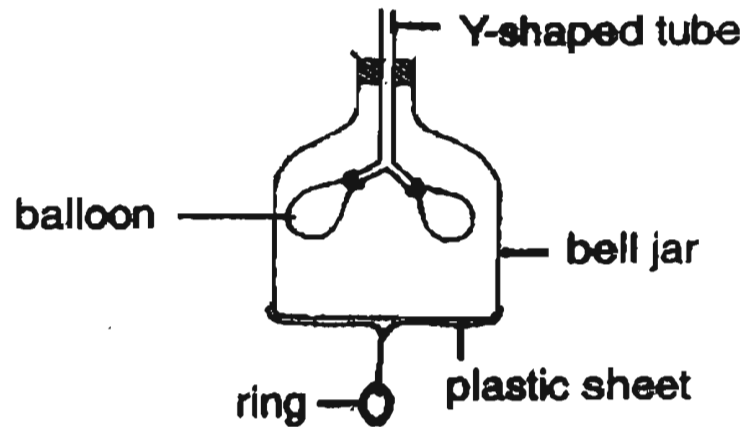
Which of the following below shows the positions of muscle A and B after the arm has been flexed?

	A	B
<del>1)</del>	Relaxes	Contracts
<del>2)</del>	Relaxes	Relaxes
<del>3)</del>	Contracts	Contracts
4)	Contracts	Relaxes

26. Which of the following statements about the heart is true?

- ~~1)~~ It is a muscular organ.
- ~~2)~~ It is protected by the skull.
- ~~3)~~ It is found below the lungs.
- 4) It only pumps blood rich in oxygen.

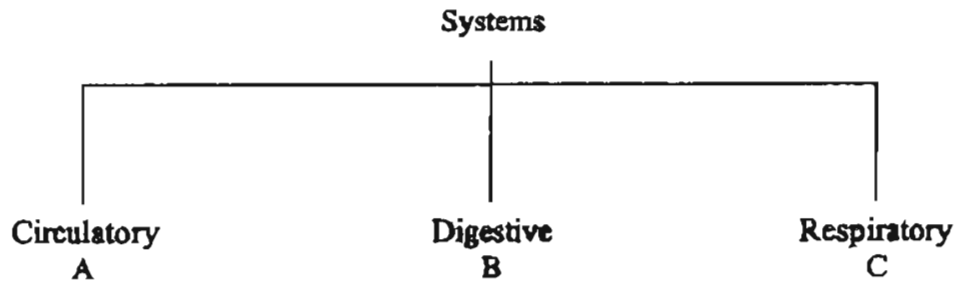
27. The diagram below represents the human respiratory system.



What does the balloon in the model represent?

- 1) Lungs
  - 2) Ribcage
  - 3) Windpipe
  - 4) Diaphragm
28. Kelly was doing her homework when she suddenly heard an object falling onto the floor in the living room. She went to the living room and realised that a vase had dropped onto the floor. Which one of the following senses did she use to make that observation?
- 1) Smell
  - 2) Sight
  - 3) Touch
  - 4) Hearing

29. The classification table below shows 3 systems in the human body.



Which of the following correctly lists the parts of the systems shown above?

	A	B	C
1)	Liver	Windpipe	Heart
2)	Kidneys	Nose	Gullet
3)	Ribs	Stomach	Arteries
4)	Heart	Small intestine	lungs

30. The white blood cells in our body \_\_\_\_\_.

- 1) protect our body from germs
- 2) are part of the respiratory system
- 3) carry carbon dioxide to the lungs
- 4) carry oxygen to all parts of our body

End of Booklet A

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: \_\_\_\_\_

**Section B (10 x 2 marks)**

**Complete Questions 31 to 40 with the correct answers.**

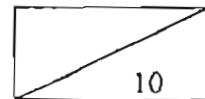
31. \_\_\_\_\_ and \_\_\_\_\_ are sources of water.

32. A liquid has definite \_\_\_\_\_ thus it cannot be

33. Two factors that affect the rate of evaporation are \_\_\_\_\_ and \_\_\_\_\_

34. The boiling point of water is \_\_\_\_\_ °C and the freezing point of water is \_\_\_\_\_ °C.

35. Rainwater can be used to \_\_\_\_\_ and \_\_\_\_\_



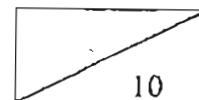
36. Desalination is the process of removing \_\_\_\_\_ from seawater to get \_\_\_\_\_ water.

37. During respiration \_\_\_\_\_ is taken in and \_\_\_\_\_ is given out.

38. When you exercise, your heart pumps faster because it needs to supply more \_\_\_\_\_ and \_\_\_\_\_ to other parts of the body.

39. We are able to move our limbs because our muscles can \_\_\_\_\_ and \_\_\_\_\_.

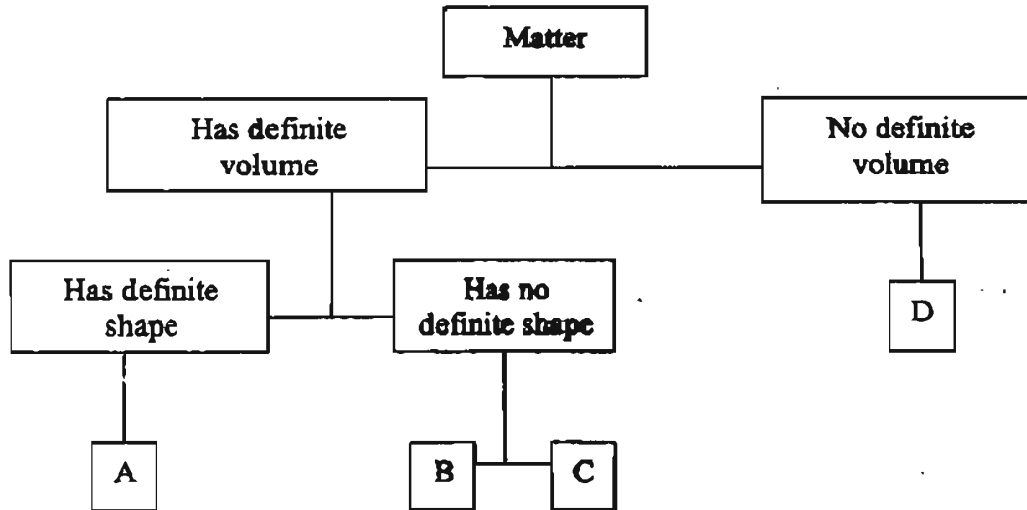
40. The skull protects our \_\_\_\_\_ and the ribcage protects our \_\_\_\_\_.



**Section C (20 marks)**

Answer all the questions in this section. Marks for each question are stated in the brackets.

41. The classification table below shows four different things A, B, C and D.

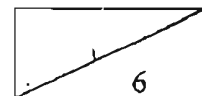


Identify the things.

- A \_\_\_\_\_ [1]  
 B \_\_\_\_\_ [1]  
 C \_\_\_\_\_ [1]  
 D \_\_\_\_\_ [1]

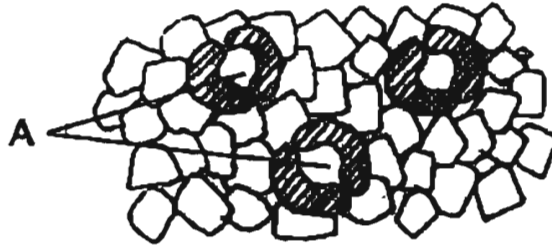
42. In the table below put a (✓) in the correct column to show whether heat is gained or lost. [2]

	Heat Gain	Heat lost
Water changes to steam		
Steam changes to water		
Ice changes to water		
Water changes to ice		





43. Shu Ping looked at a leaf through a microscope. She saw some openings (labelled A) as shown in the diagram below.



- a) What do A represent? [1]

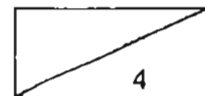
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- b) On which part of the leaf are these openings mostly found? [1]

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- c) State 1 way they help the plant. [2]

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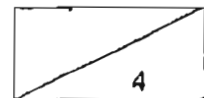
44. The table below shows the breathing rates of different people when they are resting.

People	Breathing Rates (Average number of times per minute)
Babies	27-35
Students	21-23
Adults	18-20
Senior citizens	16-17

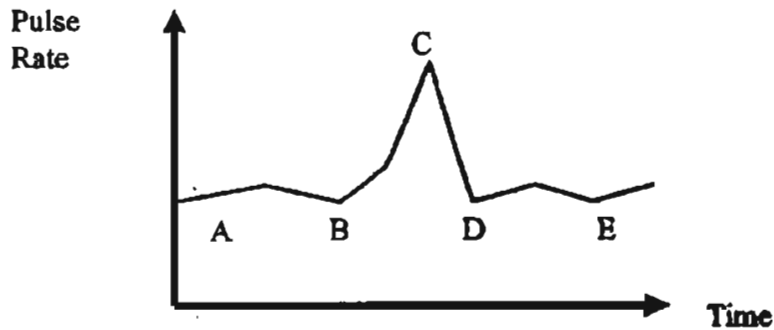
- a) How does the breathing rate vary according to age? [1]
- 

- b) Jayu, a 15 year old boy, checked his breathing rate one day while he was resting. What would his breathing rate be? [1]
- 

- c) After playing soccer with his friends he checked his breathing rate again. He found out that his breathing rate was 30 breaths per minute. Why was his breathing rate higher? [2]
- 
- 



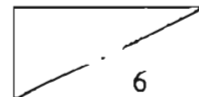
45. The graph below shows the changes in the pulse rate of a girl. She ran around a track for a few minutes and stopped after some time.



- a) At which point did she start running? [1]
- \_\_\_\_\_
- b) What happened to her pulse rate when she was exercising? [1]
- \_\_\_\_\_
- c) Why do you think this happen? [2]
- \_\_\_\_\_
46. Ramu came home one day. He knew that his mother was cooking even though he had not stepped into the house.

- a) What sense did he use to come up with that conclusion? [1]
- \_\_\_\_\_
- b) How would Ramu know that the food his mother cooked was sweet? [1]
- \_\_\_\_\_

End of Paper



AI TONG SCHOOL  
CONTINUAL ASSESSMENT 2 - 2005  
PRIMARY FOUR  
SCIENCE

- 1) 2            29) 4            31) rivers        seas
- 2) 1            30) 1            32) volume        compressed
- 3) 2            33) humidity     area of exposed surface
- 4) 1            34) 100         0
- 5) 2            35) water points    mop the car porch
- 6) 4            36) salt         clean
- 7) 3            37) oxygen        carbon dioxide
- 8) 2            38) oxygen        food
- 9) 3            39) contract     relax
- 10) 4           40) brain         lungs
- 11) 2           41) A : bottle    B : water        C : oil        D : oxygen
- 12) 2           42) 

✓	
	✓
✓	
	✓
- 13) 4
- 14) 4
- 15) 4           43) a) stomata
- 16) 3                b) On the underside of the leaf.
- 17) 3                c) Exchange of gases takes place there
- 18) 1           44) a) When you grow older, your breathing rate decreases. When you are younger, your breathing rate increases.
- 19) 4                b) 21 - 23
- 20) 1                c) His heart beat faster for more oxygen and food to supply more energy
- 21) 3
- 22) 2           45) a) B
- 23) 1                b) It increased
- 24) 1                c) Her heart beat faster for more oxygen and food to supply more energy.
- 25) 4           46) a) He used the sense of smell.
- 26) 1                b) He tasted it.
- 27) 1
- 28) 2