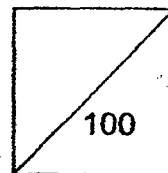




HENRY PARK PRIMARY SCHOOL
2015 SEMESTRAL EXAMINATION 1
SCIENCE
PRIMARY 4

Duration of Paper: 1 h 45 min



Name: _____

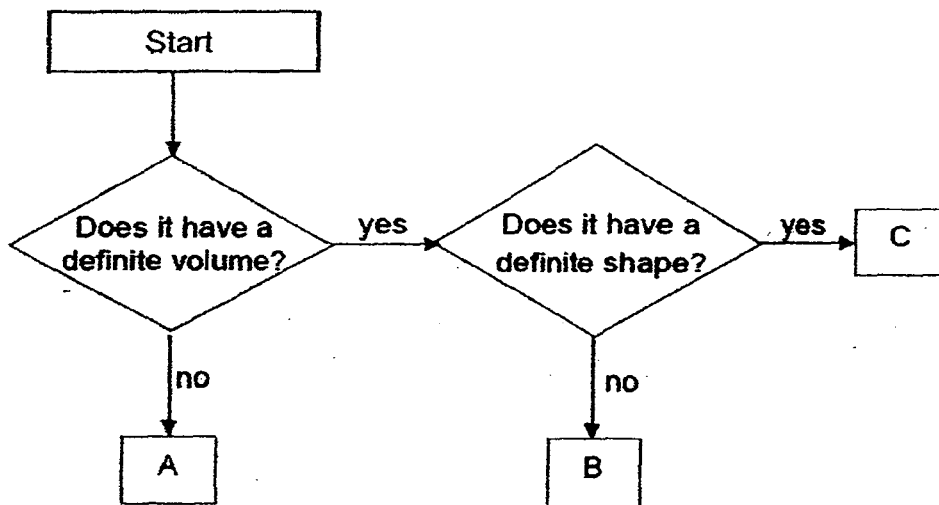
Parent's Signature _____

Class: Pr 4 _____

Part A (60 marks)

For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

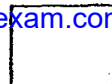
1. The flow chart below shows how some substances are classified.



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

	A	B	C
(1)	air	ruler	oil
(2)	oil	ruler	air
(3)	oil	air	ruler
(4)	air	oil	ruler

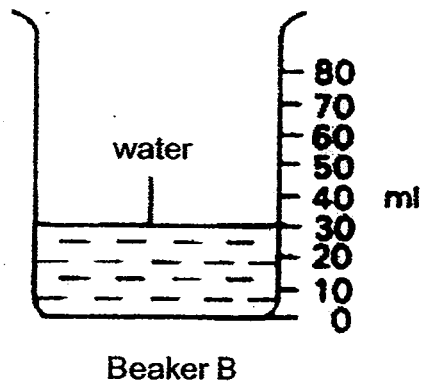
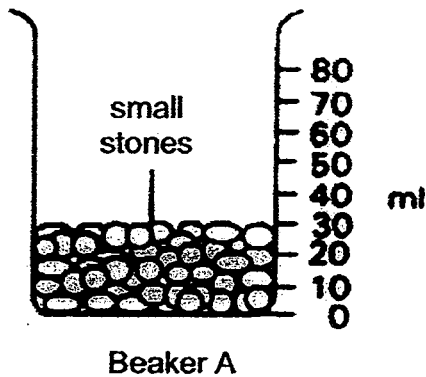
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2. Which one of the following statements is not correct?

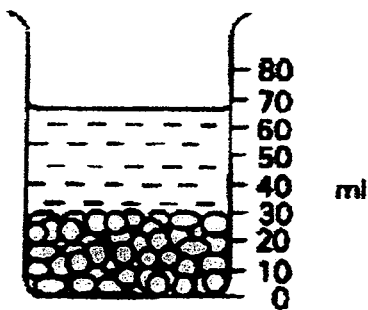
- (1) Liquids have mass.
- (2) Liquids occupy space.
- (3) Liquids can be compressed.
- (4) Liquids take on the shape of their container.

3. Jovan filled beaker A with small stones and beaker B with 30 ml of water. ()

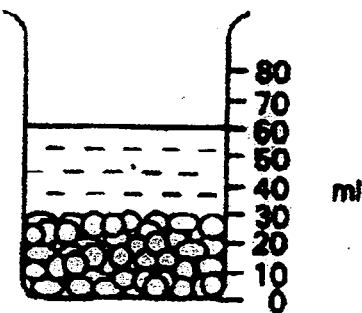


Which one of the following diagrams most likely shows the water level in Beaker A after the water from Beaker B has been poured into it?

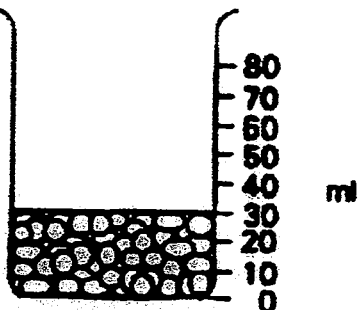
(1)



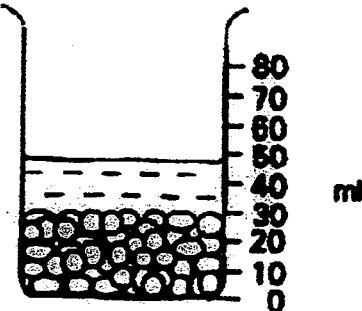
(2)



(3)

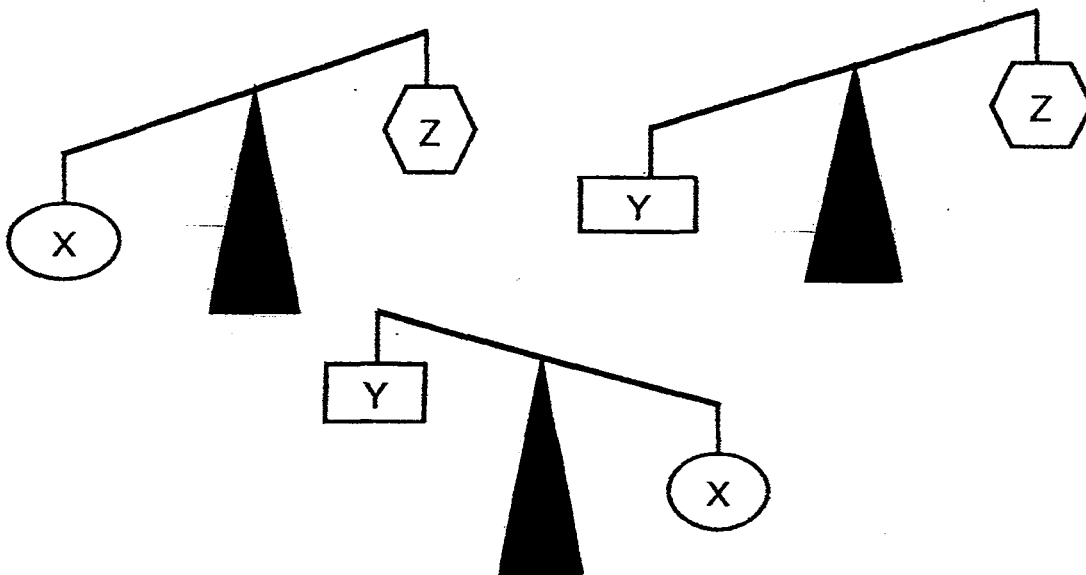


(4)



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4. Objects X, Y and Z are placed on a balance at different times as shown in the diagrams below.



Arrange the objects, X, Y and Z, beginning with the least mass to the greatest mass.

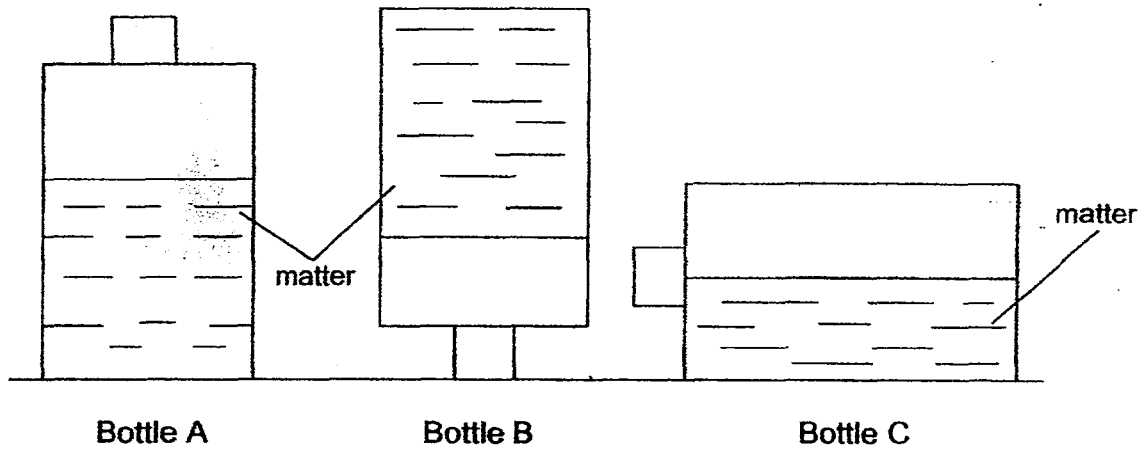
Least Mass $\longrightarrow$ Greatest Mass

- | | | | |
|-----|----|----|---|
| (1) | X, | Y, | Z |
| (2) | Z, | Y, | X |
| (3) | Y, | X, | Z |
| (4) | Z, | X, | Y |

()



5. Jeremy, Bernard, Henry and Nelson each made a statement about the matter in the three identical bottles, A, B and C as shown below.



- Jeremy : The matter in Bottle A and B are liquid.
 Bernard : The matter in Bottle A, B and C are solid.
 Henry : The matter in Bottle A and C are liquid.
 Nelson : The matter in Bottle B is solid.

Whose statement(s) is/are **definitely** true?

- (1) Nelson only
 (2) Bernard only
 (3) Nelson and Henry only
 (4) Bernard and Jeremy only

()

6. Which one of the following has a definite shape?

- (1) Air
 (2) Water
 (3) Marble
 (4) Orange juice

()

7. Janet rolls a lump of plasticine into a cylindrical shape as shown in Diagram A below.
She then cuts the plasticine into five equal pieces as shown in Diagram B.



Diagram A

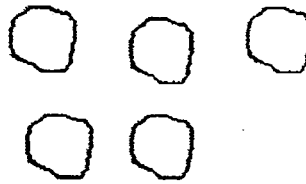


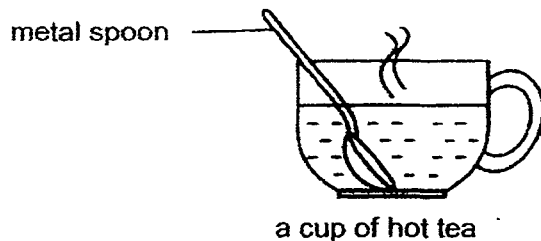
Diagram B

Which of the following shows correctly the **total mass** and **volume** of the five pieces of plasticine after Janet has cut it up?

	Total Mass	Total Volume
(1)	Increases	Decreases
(2)	Decreases	Remain the same
(3)	Remain the same	Increases
(4)	Remain the same	Remain the same

()

8. Gary places a metal spoon in a cup of hot tea.



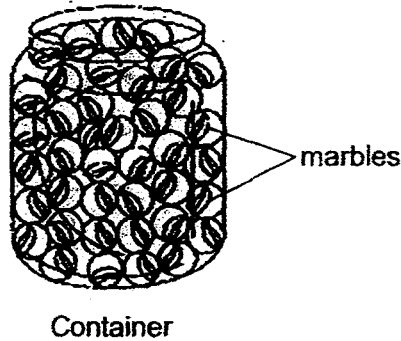
The metal spoon becomes hot after a while.

Which one of the following explains this correctly?

- (1) The cup loses heat to the hot tea.
- (2) The spoon loses heat to the hot tea.
- (3) The hot tea gains heat from the spoon.
- (4) The spoon gains heat from the hot tea.

()

9. In an experiment, Jane filled a container with marbles until she could not put any more marbles into it.



She said that there was no more space in the container for her to put anything into it.

However, her friend, Serene said that she was wrong.

Which of the following actions should Serene take to prove that Jane was wrong?

- A: Pour rice into the container of marbles.
- B: Heat the container of marbles with a flame.
- C: Pour water into the container of marbles.

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

()

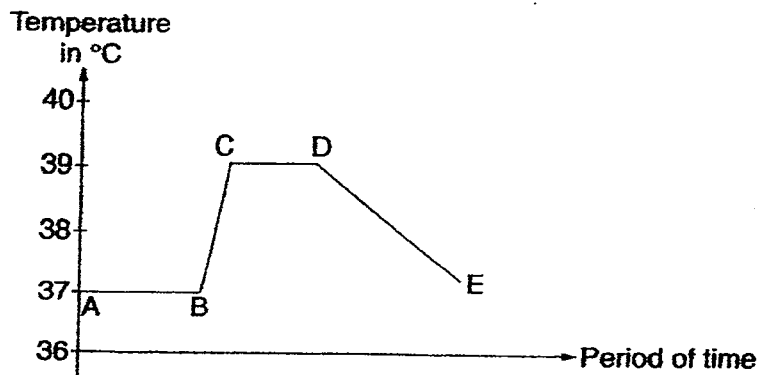
10. Which of the following statements about heat are true?

- A: Heat is matter.
- B: Heat is a form of energy.
- C: Our main source of heat is from the lamps.
- D: Heat moves from a hotter place to a cooler place.

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

()

11. Raju's normal body temperature is 37°C .
The graph below shows the changes in the body temperature of Raju when he was having a fever.

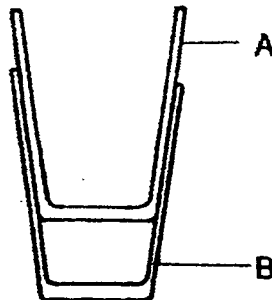


Which section of the graph shows that Raju is recovering from the fever?

- (1) AB
- (2) BC
- (3) CD
- (4) DE

()

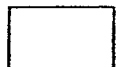
12. Janet wants to separate the two glasses, A and B, which are stuck together as shown below.



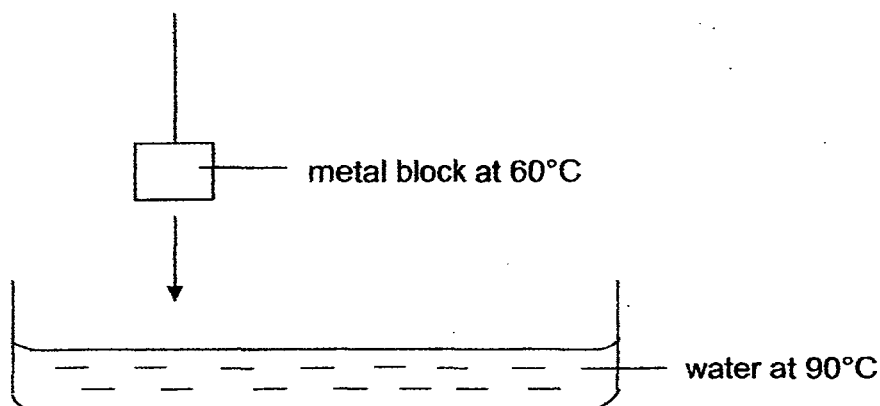
What should Janet do to separate the two glasses?

- A: Pour hot water in A
- B: Pour cold water in A
- C: Place B in hot water
- D: Place B in cold water

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



13. Alex lowered a metal block at 60°C into a container of water at 90°C as shown below.

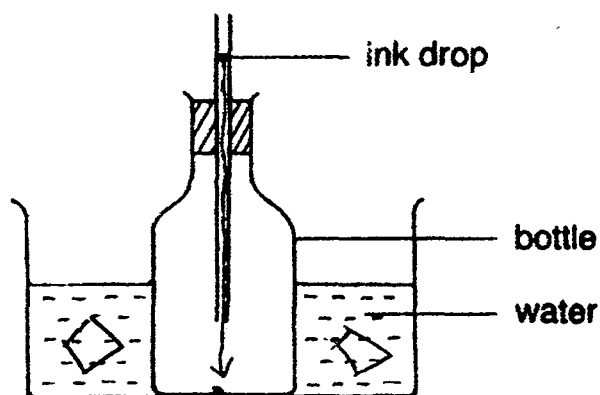


Which of the following statements shows correctly what Alex would observe?

- (1) The temperature of water decreased.
- (2) The temperature of water increased.
- (3) There was no change in the temperature of water.
- (4) The temperature of water increased, then decreased.

()

14. Ahmad set up an experiment as shown below.

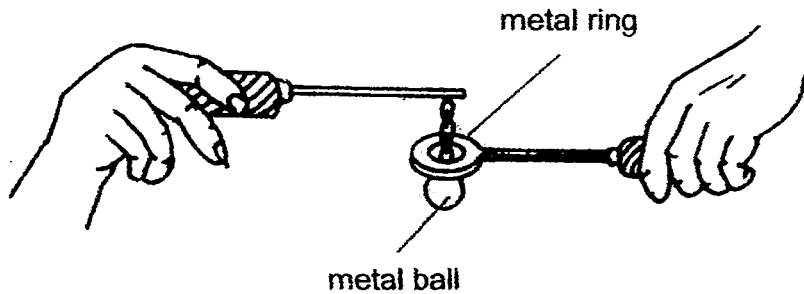


If Ahmad puts ice-cubes into the water, which of the following would Ahmad observe?

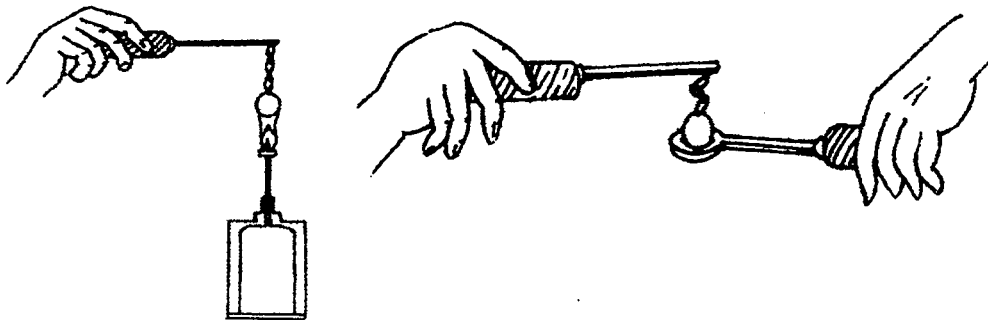
- (1) The ink drop moved up the tube.
- (2) The ink drop moved down the tube.
- (3) The ink drop moved up and down the tube.
- (4) The ink drop remained in the same position.

()

15. The diagram below shows Mrs Tan putting a metal ball through a metal ring.



After Mrs Tan had heated the metal ball for 5 minutes, she found that she was not able to put the ball through the ring as shown below.



The ball is heated

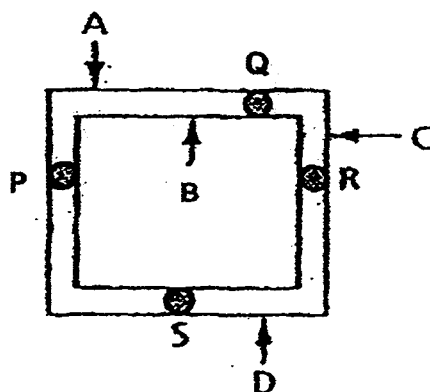
The ball after being heated

Which of the following statements explains correctly why the ball was not able to go through the ring?

- (1) The ball had expanded.
- (2) The ring had contracted.
- (3) The ball had expanded but the ring had contracted.
- (4) The ring had expanded but the ball had contracted.

()

16. Siti had a square metal frame with four similar drops of wax attached at P, Q, R and S as shown below.



Siti heated the metal frame at one of the points, A, B, C or D and observed the order in which the wax melted completely.

She recorded her observation in the table shown below.

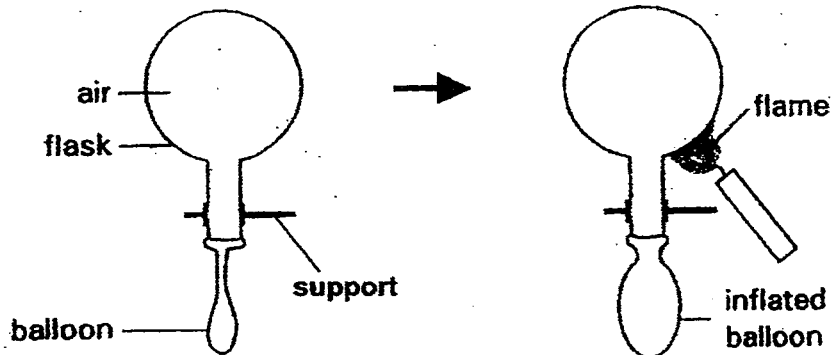
Order of wax completely melted	Wax at position
1 st	S
2 nd	R
3 rd	Q
4 th	P

At which point, A, B, C or D did Siti heat the metal frame?

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

()

17. Study the experiment shown in the diagram below.

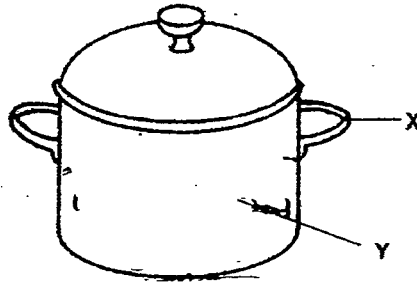


What does this experiment show us about the property of air?

- (1) Air has mass.
- (2) Air can be compressed.
- (3) Air expands when heated.
- (4) Air has no definite volume.

()

18. The diagram below shows a cooking pot.



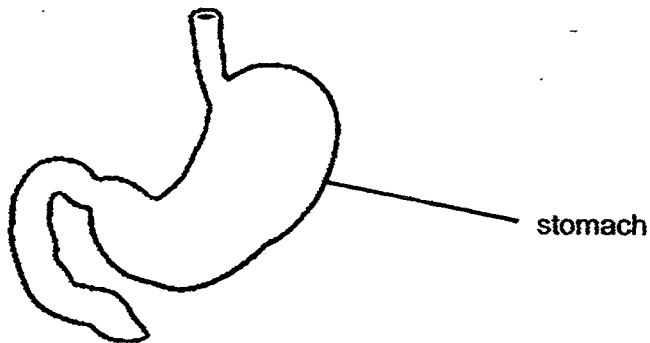
Which of the following shows correctly the materials for making parts X and Y of the pot as well as the reasons for their choices?

	Part	Material	Reason
A:	X	metal	It is shiny, making it attractive to hold.
B:	X	wood	It is a poor conductor of heat. Fingers will not be burnt.
C:	Y	wood	It is a good conductor of heat. Food gets cooked quickly.
D:	Y	metal	It is a good conductor of heat. Food gets cooked quickly.

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

()

19. The diagram below shows the stomach in the human digestive system.

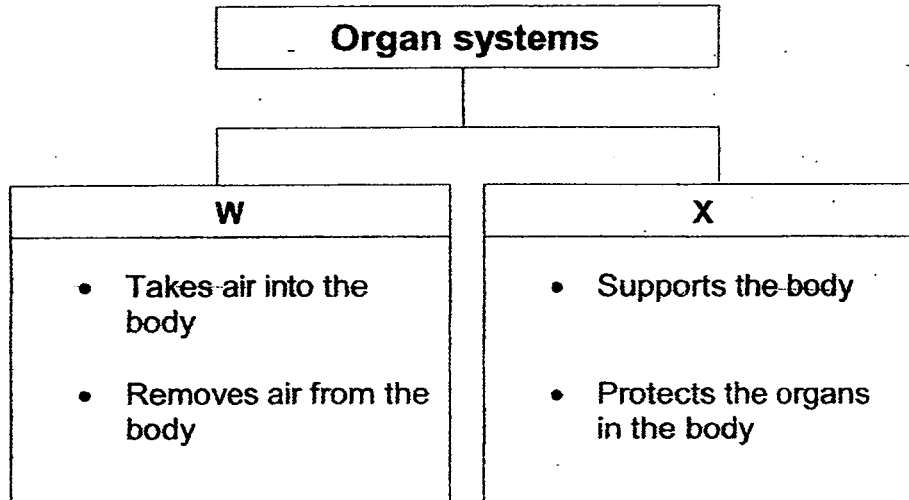


What is the function of the stomach?

- (1) It absorbs water from the food.
- (2) It rolls the food into small pieces to swallow.
- (3) It breaks down the food with digestive juices.
- (4) It makes the food soft and cut it into smaller chunks.

()

20. The classification chart below shows the functions of some organ systems.

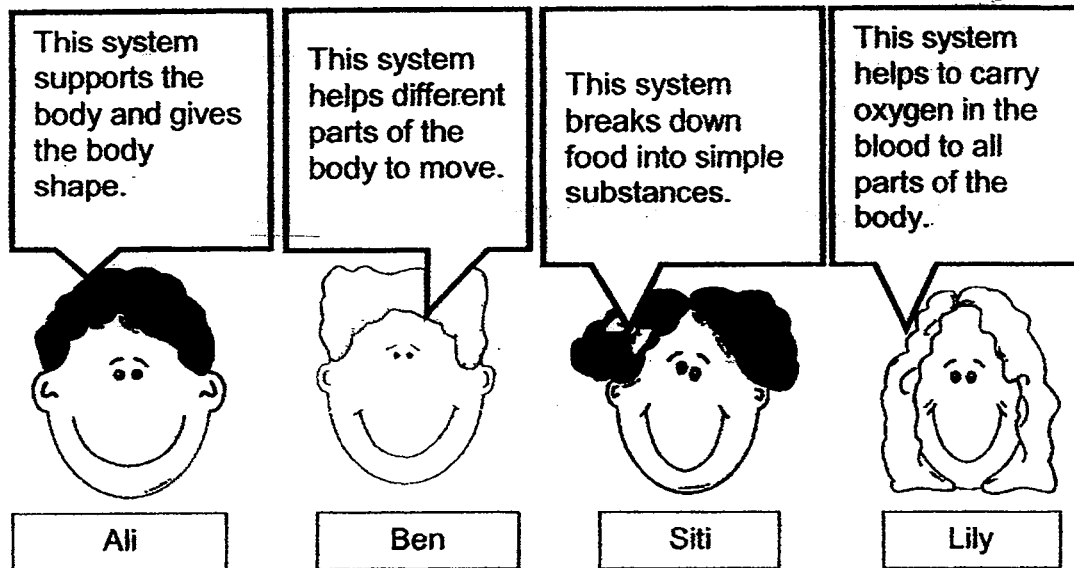


Which one of the followings correctly represents **W** and **X**?

	W	X
(1)	Circulatory System	Muscular System
(2)	Respiratory System	Skeletal System
(3)	Respiratory System	Muscular System
(4)	Muscular System	Circulatory System

()

21. Four students, Ali, Ben, Siti and Lily shared what they have learnt about the organ system in the diagram below.



Whose statement describes the circulatory system?

- (1) Ali
- (2) Ben
- (3) Siti
- (4) Lily

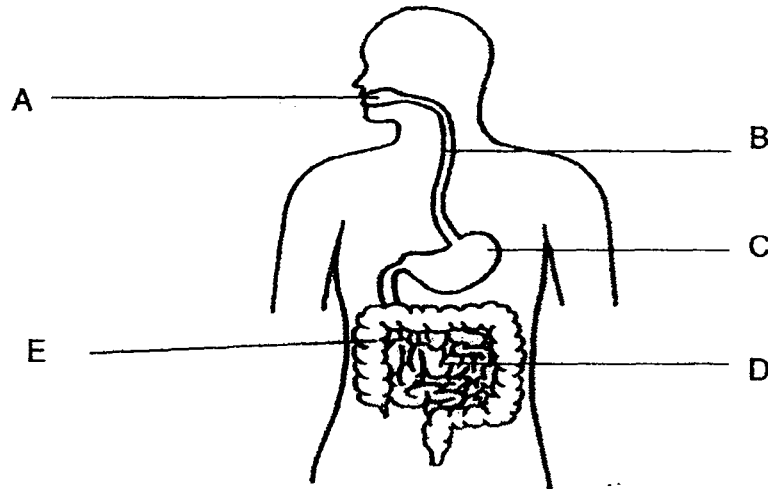
()

22. Which one of the organs is **NOT** part of the digestive system?

- (1) heart
- (2) gullet
- (3) mouth
- (4) stomach

()

23. A, B, C, D and E in the diagram below are parts of the digestive system.



Identify the parts where digestive juices are **not** present.

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

()

24. Which one of the following **pairs of the organ systems** work together to help us bend, stretch and move?

- (1) circulatory system and muscular system
- (2) muscular system and skeletal system
- (3) respiratory system and circulatory system
- (4) respiratory system and digestive system

()

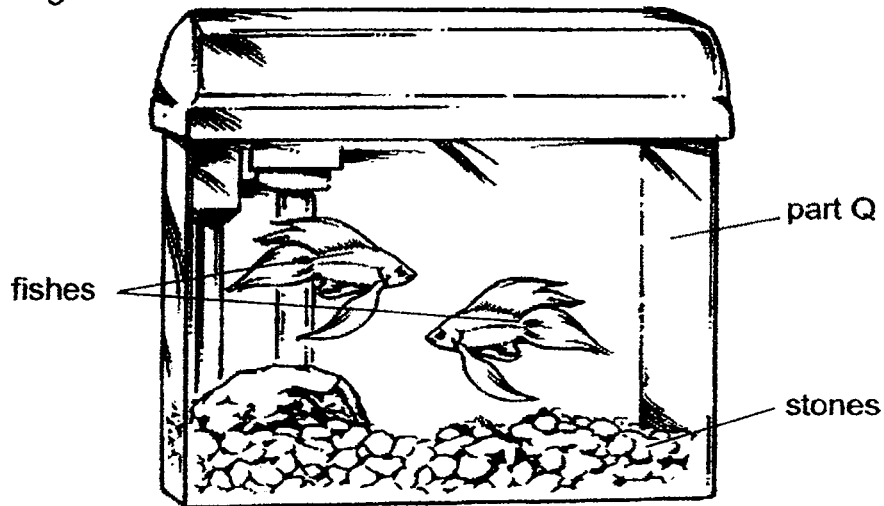
25. Which of the following characteristics do insects have in common?

- A. They have six legs.
- B. They have feelers.
- C. They have three body parts.

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

()

26. Observe the diagram of a fish tank below. Part Q is usually made of thick pieces of glass.

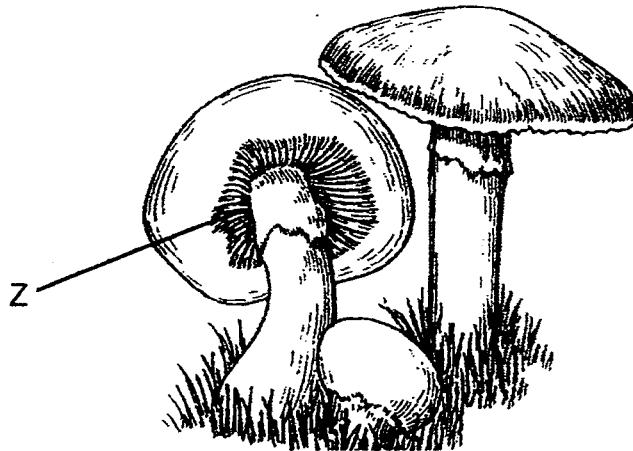


Which one of the following is the most likely reason for choosing glass to make part Q?

- (1) It is heavy.
- (2) It breaks easily.
- (3) It sinks in water.
- (4) It allows light to pass through it.

()

27. The diagram below shows some mushrooms.



What can be found in the part labelled 'Z'?

- (1) Food
- (2) Seeds
- (3) Spores
- (4) Bacteria

()

28. Study the table below.

Organism	Reproduces by spores	Makes its own food
A		✓
B	✓	
C	✓	✓

Which organism is likely to be a flowering plant?

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

()

29. Diagram 1 below shows a plastic beam balance with Object A and B hanging from it. Object A and B are equally balanced.

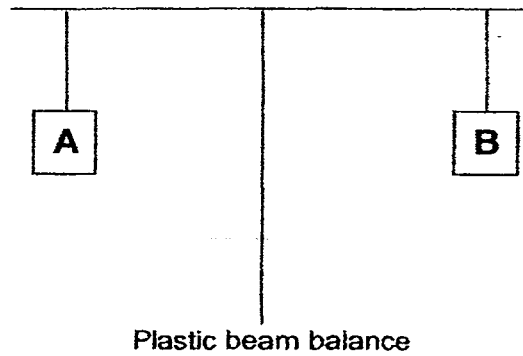


Diagram 1

When Object X is placed directly under Object B, the balance tilted as shown below in Diagram 2.

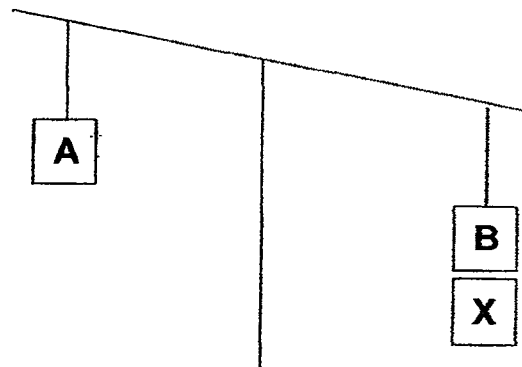


Diagram 2

Based on the observation in Diagram 2, what could object B and X be?

	Object B	Object X	
(1)	Wooden block	Magnet	
(2)	Steel Block	Magnet	
(3)	Steel Block	Wooden block	
(4)	Magnet	Wooden block	()

30. Which of the following are uses of magnets?

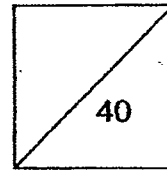
- A : Magnets keep refrigerator doors tightly shut.
- B : Magnets are used in compasses to tell directions.
- C : Magnets are used in doorstoppers to keep doors open.

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

(.)

End of Booklet A

**HENRY PARK PRIMARY SCHOOL
2015 SEMESTRAL EXAMINATION 1
SCIENCE
PRIMARY 4**



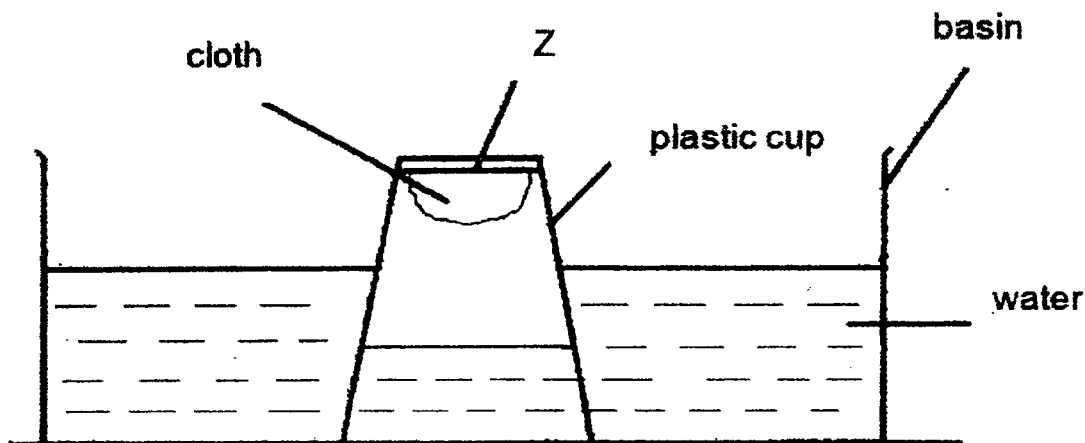
Name: _____

Class: Pr 4 _____

Part B (40 marks)

Write your answers to questions 31 to 44 in the spaces given.

31. A piece of cloth is stuck at the bottom of a plastic cup.
The plastic cup is then inverted into a basin of water as shown in the diagram below.



- a) What will happen to the piece of cloth?

(1m)

Tick (✓) the correct answer below.

The piece of cloth will remain dry

☐

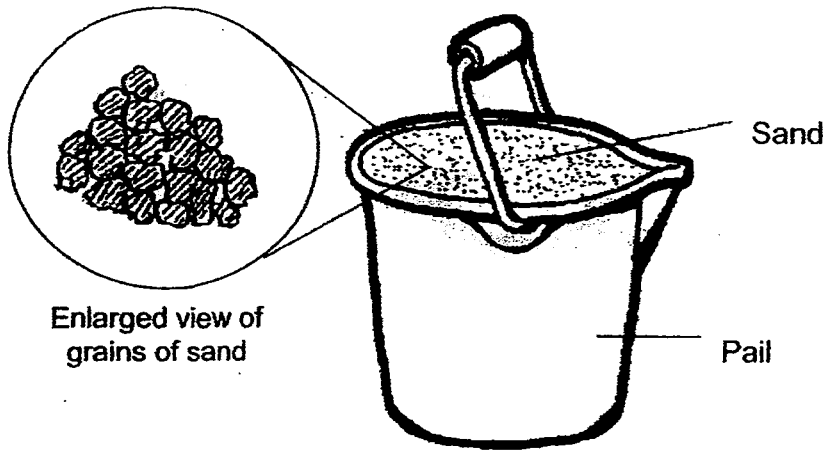
The piece of cloth will become wet

☐

- b) If a hole is made in the plastic cup at the part marked Z, what will happen to the piece of cloth? (1m)

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

32. Colin was at the beach. He poured sand into a pail till it was full. He continued to force more sand into it but observed that the sand flowed out from the pail.



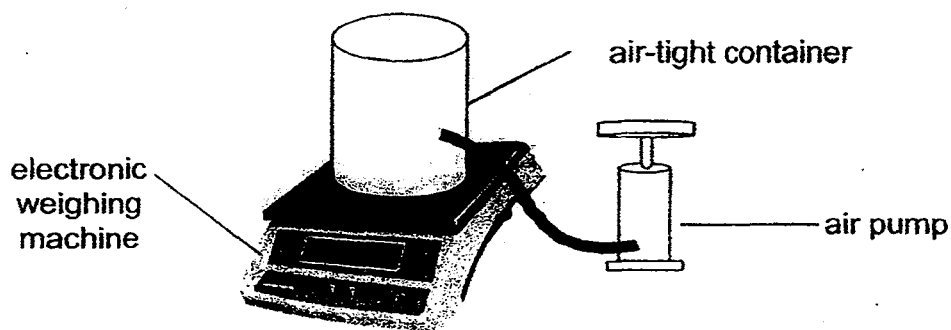
- a) What can Colin conclude from his observation? (1m)

- b) Colin tells his friend that sand is a liquid as it takes the shape of the pail when it is poured into the pail. Do you agree with Colin? Give a reason for your answer. (1m)

- c) Put a tick (✓) in the box that shows the correct statement. (1m)

a	Air has a definite volume.	
b	A fork has a definite shape.	
c	Chair has a definite volume.	
d	Oil has a definite shape.	

33. Richard filled up a 500 cm^3 air-tight container with air and placed it on an electronic weighing machine as shown in the diagram below.



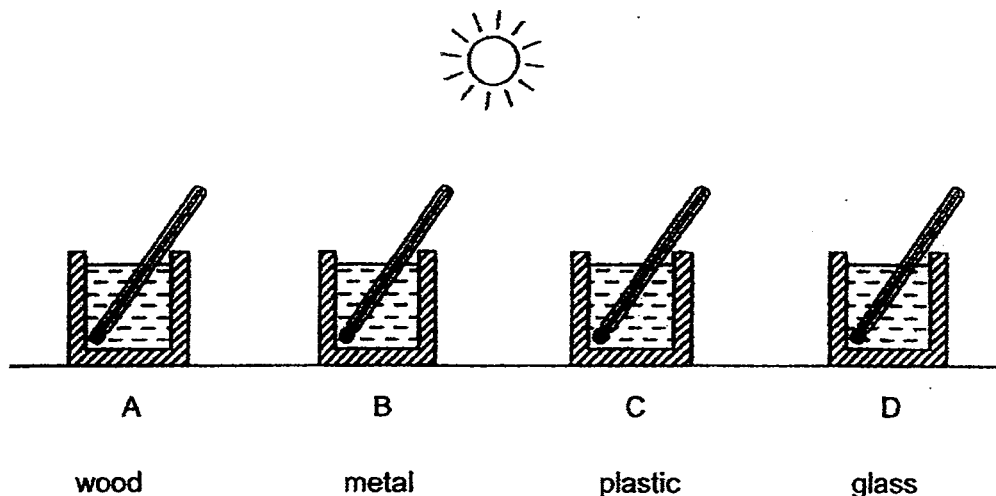
Mass of the air-tight container with 500 cm^3 of air = 100.8 g

- a) Would the **mass** of the air in the container **increase, decrease** or **remain the same** if ~~Theresa~~ Richard pumped in another 100 cm^3 of air into the air-tight container? (1m)

- b) Would the **volume** of air in the container **increase, decrease** or **remain the same** after ~~Theresa~~ Richard had pumped in the 100 cm^3 of air into the air-tight container in? (1m)

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

34. John conducted an experiment by placing four containers of water under the sun as shown below.



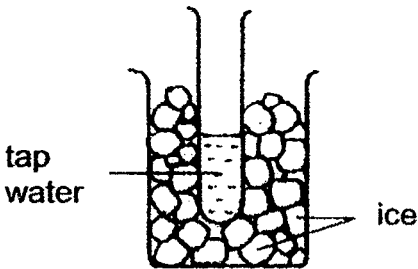
The containers are made of different materials but are of the same size and thickness. Each container has equal amount of water at 30°C .

- (a) In which of the containers, A, B, C or D, will the thermometer show the highest temperature after 30 minutes? (1m)

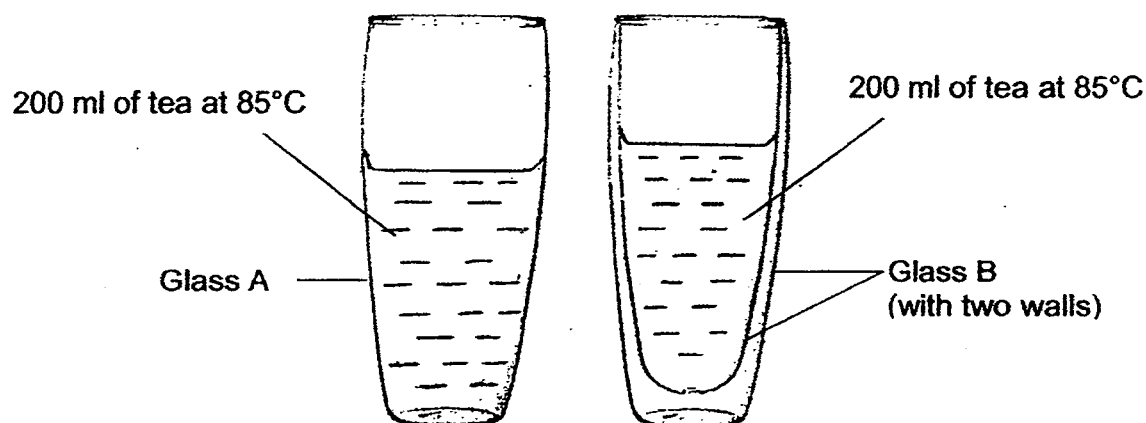
- (b) Explain your answer in (a). (2m)



35. For each set-up shown below, write the name of the labelled item(s) that will gain heat or lose heat in the correct boxes. (2m)

Set-up	Item(s) that gain(s) heat	Item(s) that lose(s) heat
		
		

36. Ken poured the same amount of hot tea into two different glasses, A and B as shown in the diagram below and placed them at a room temperature of 30°C .



Glass B has two walls, with a layer of air in between.

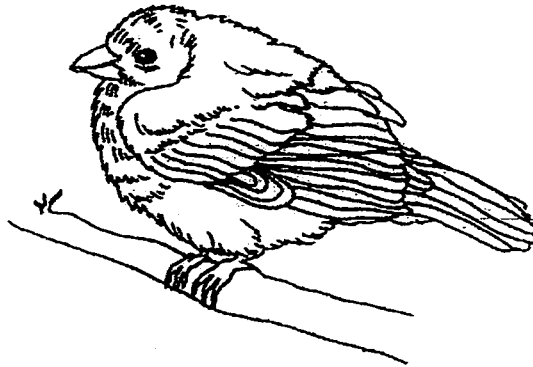
He recorded the temperature of the tea after 20 minutes and recorded the results in the table below.

Glass	Temperature of tea ($^{\circ}\text{C}$)	
	At the start of experiment	After 20 minutes
A	85°C	50°C
B	85°C	60°C

- (a) Why did the temperature of the hot tea in both glasses decrease? (1m)

- (b) Study the table above carefully.
What effect does the layer of air in glass B have on the decrease in the temperature of the hot tea? (1m)

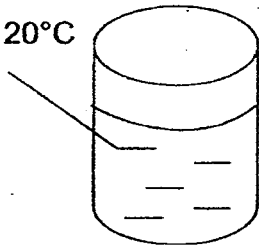
When birds feel cold, they fluff up their feathers as shown in the diagram below. This will trap a layer of air between the feathers to keep them warm.



(c) How does trapping a layer of air between the feathers keep the bird warm? (2m)

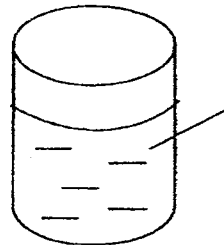
37. Ken filled two similar containers with equal amount of water but at different temperatures as shown below.

Water at 20°C



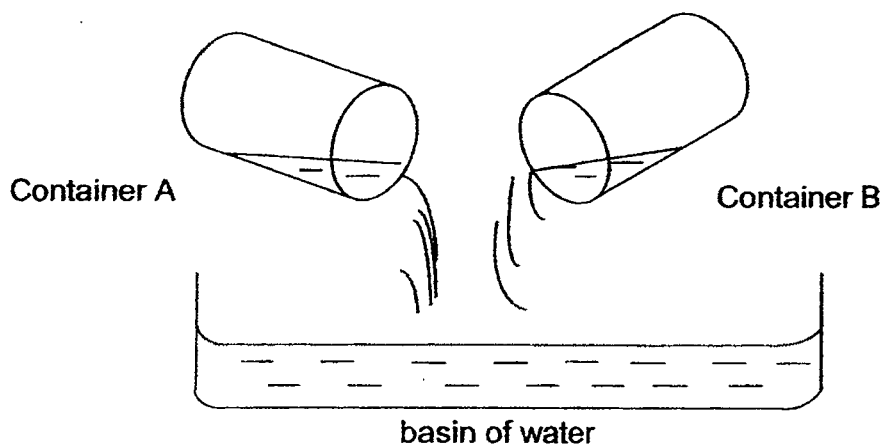
Container A

Water at 80°C



Container B

Ken then poured the water from both containers into a basin as shown below.



- (a) What would the temperature of the water in the basin likely to be? (1m)
Circle the correct answer below.

25°C

55°C

85°C

- (b) Name an instrument that would enable Ken to measure the temperature of water in the basin accurately. (1m)

- (c) If Ken left the basin of water in the science room of temperature 29°C, **predict** what the temperature of the water will be after six hours. (1m)

38. Match the four diagrams shown below to the correct organs system.

(2m)

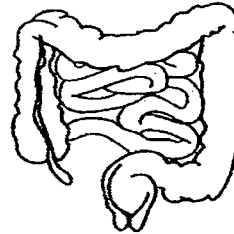
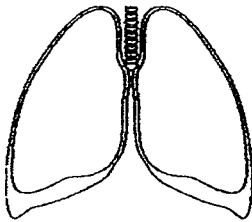
respiratory
system

muscular
system

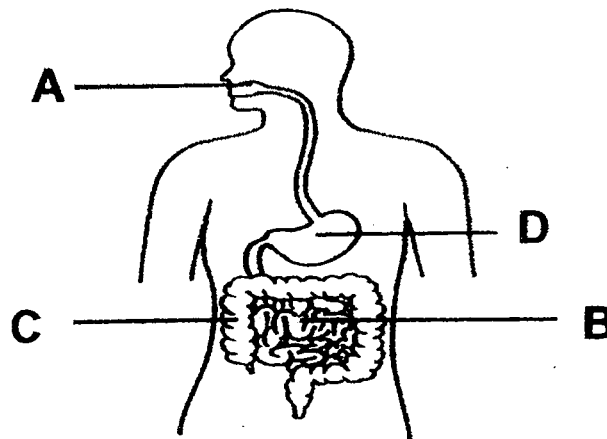
digestive
system

circulatory
system

skeletal
system



39. Study the diagram of the digestive system below.



(a) Name organ C.

(1m)

(b) State **one** function of organ C.

(1m)

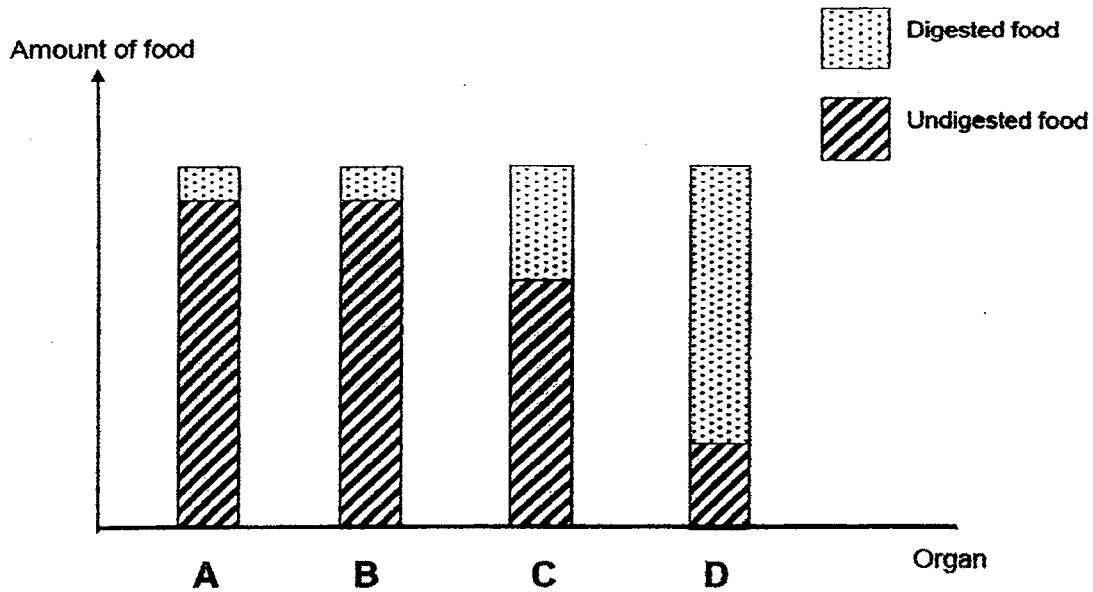
(c) State **two** functions of Organ B.

(2m)

(i) _____
(ii) _____

40. The graph below shows the amount of digested and undigested food at four different organs (A, B, C and D) of the human digestive system.

The digestion process begins with Organ A and ends at Organ D.



- (a) As the food travels from Organ C to D, what happens to the amount of **digested** food? (1m)

- (b) Identify Organs A and Organ D. (1m)

Organ A: _____

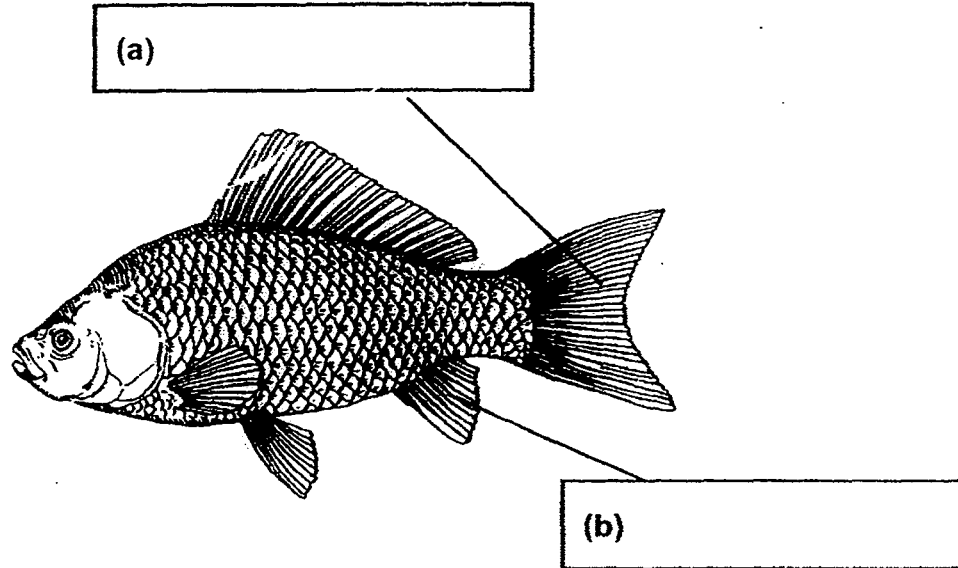
Organ D: _____

- (c) Why is the amount of **undigested** food in Organ C different from that in Organ B? (1m)

41. Study the animal show below.
Using the helping words given below, label parts (a) and (b) correctly.

(2m)

fin scale gill cover tail



42. Jacob saw the advertisement, shown below, that described a table cloth.

The Last Table Runner You'll Ever Need!

No Staining! Easy to Clean! Just Wipe It Off!

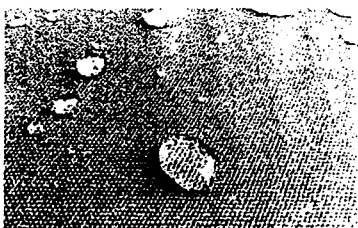
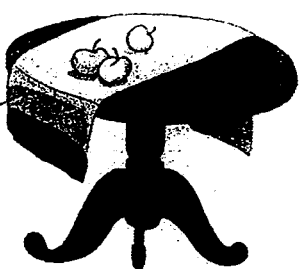


table
runner



- a) Tick (✓) the correct property of the table runner that is shown in the advertisement above.

(1m)

☐

Waterproof

☐

Sinks in water

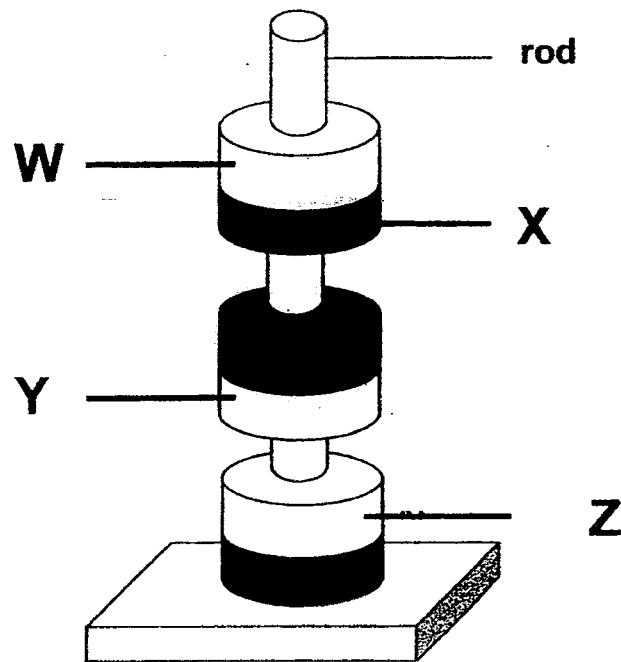
☐

Allows light to pass through

- b) Name a material that the table runner could possibly be made of.

(1m)

43. Study the diagram which shows three magnets on a rod.



(a) Identify the poles of the magnets with either 'North' or 'South'.

(2m)

W: _____

X: _____

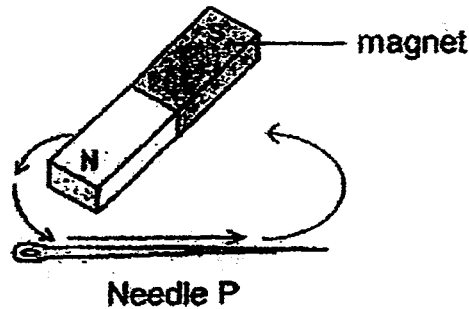
Y: _____

Z: _____

(b) The above set-up is made possible because of a property of magnets.
From the diagram above, which property of magnet is observed?

(1m)

44. Jamilah used the stroking method to make a temporary magnet. She tested the temporary magnet. It attracted only one paperclip.



- (a) What should Jamilah do to increase the strength of the temporary magnet ? (2m)

(i) _____

(ii) _____

- (b) Jamilah increased the strength of the temporary magnet through one of the ways she knew.

What can Jamilah do to find out if the strength of the temporary magnet is stronger than before? (1m)

End of Booklet B

Setters:

Ms Evelyn Tan

Mr Yuan Kee King

Mdm Nadia Abu Bakar

EXAM PAPER 2015

LEVEL : PRIMARY 4

SCHOOL : HENRY PARK PRIMARY SCHOOL

SUBJECT : SCIENCE

TERM : SA1

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10
4	3	4	2	2	3	3	4	2	2
Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20
4	3	1	2	1	4	3	4	3	2
Q 21	Q 22	Q 23	Q 24	Q 25	Q 26	Q 27	Q 28	Q 29	Q 30
4	1	2	2	4	4	3	1	2	1

Q31a. The piece of cloth will remain dry ☒

Q31b. The cloth will be wet.

Q31c. The air can escape through the hole therefore the water can occupy the previously occupied space.

Q32a. Matter occupies space.

Q32b. No. A grain of sand has definite shape but liquids do not have definite shape.

Q32c. b) A fork has a definite shape ☒ c) Chair has a definite volume ☒

Q33a. It will increase

Q33b. It will remain the same

Q33c. Air can be compressed and it has no definite volume.

Q34a. B

Q34b. Metal is the best conductor of heat among all these containers , it conducts heat to water the fastest.

Q35.

Aluminum spoon	Hot coffee
ice	Tap water

Q36a. The hot tea losses heat to the surroundings

Q36b. The air prevents the heat to decrease in the temperature faster.

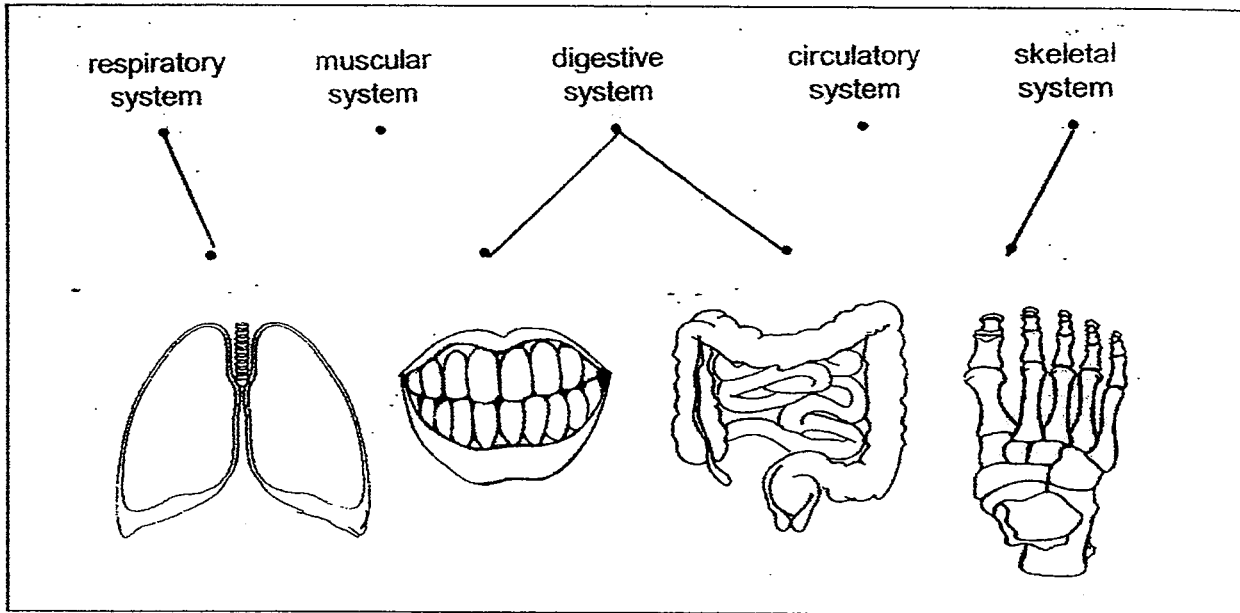
Q36c. Air is a poor conductor heat. It reduces heat loss.

Q37a. 55°C

Q37b. A data logger / thermometer

Q37c. The water would be 29°C, the room temperature..

Q38. SEE PICTURE



Q39a. The large intestine

Q39b. It absorbs water and minerals from the undigested food into solid waste.

Q39c. i) It breaks down the food into simpler substances.

ii) Brings the digested food into the blood to be used by the body.

Q40a. It increases.

Q40b. Organ A: mouth Organ D : small intestine

Q40c. More digestion has taken place and food has been digested.

Q41. A: tail Q41 B : fin

Q42a. ☒ waterproof

Q42b. Plastic

Q43a. W: north X : south Y : north Z: north

Q43b. Like poles repel , unlike poles attract.

Q44a i) Stroke it more times ii) use a stronger magnet

Q44b. Place the temporary magnet near some paper clips.

THE END