



Anglo-Chinese School (Primary)

END-OF-YEAR EXAMINATION 2008
SCIENCE PAPER
PRIMARY FIVE

BOOKLET A

Name: _____ () Class: Primary 5 _____

Date: 23 October 2008

Duration of paper: 1 h 45 min

**THIS BOOKLET CONTAINS 22 PAGES.
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FOLLOW ALL INSTRUCTIONS CAREFULLY.**

PART I

For each of the following questions 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.

(30 x 2 marks)

1 Study the table below carefully.

Group	Living things
X	Chicken, cockroach, parrot
Y	Beetle, housefly, moth

These living things are grouped according to _____.

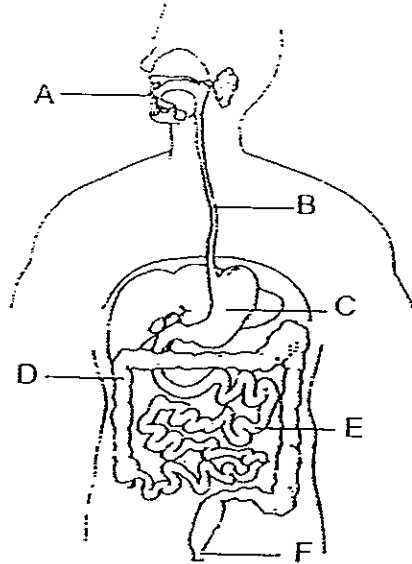
- (1) where they live
- (2) how they reproduce
- (3) how they move about
- (4) the number of stages in their life cycle

2 In a plant system, the function(s) of the roots is/are to _____.

- A hold the plant firmly in the ground
- B absorb water and minerals
- C transport food made by the leaves to other plant parts

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

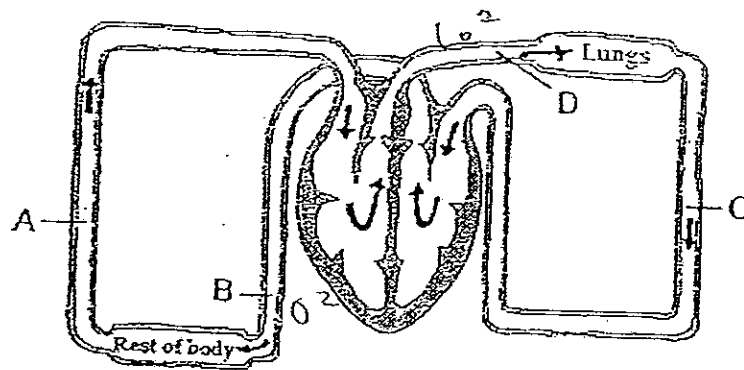
3 The diagram below shows the human digestive system.



In which of the following parts, A, B, C, D, E and F are digestive juices added?

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

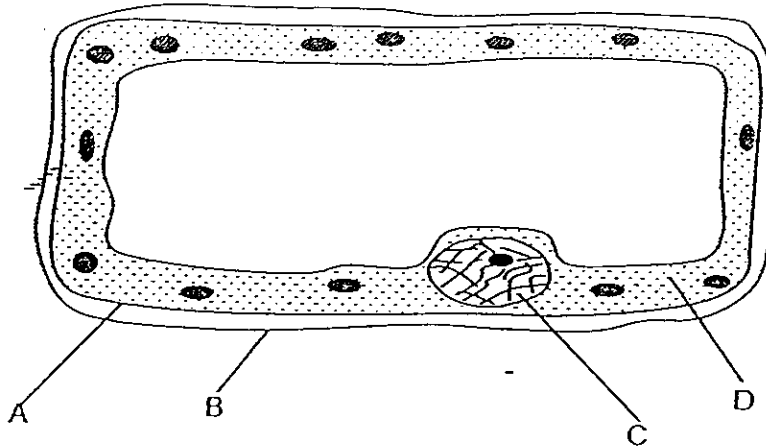
4 The diagram below shows the human circulatory system. A, B, C and D represent blood vessels. The arrows show the direction in which blood flows.



Which blood vessels, A, B, C or D, carry blood rich in oxygen?

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

- 5 The diagram below shows a plant cell. Four of the cell parts have been labelled A, B, C and D.



Which one of the following statements is an **incorrect** comparison between plant cells and animal cells?

- (1) A is essential to both plant and animal cells as it controls the movement of materials in and out of the cells.
- (2) B, which supports the cell, is present in both animal-cells and plant cells.
- (3) C contains genetic information, and can be found in both plant and animal cells.
- (4) D, a jelly-like substance, is present in both plant and animal cells.

- 6 Diagram 1 and Diagram 2 below show the reproductive parts of a male human and a flowering plant respectively.

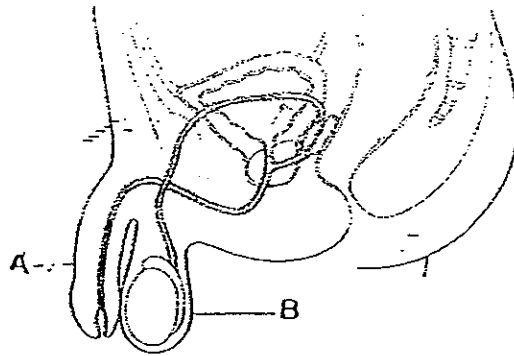


Diagram 1

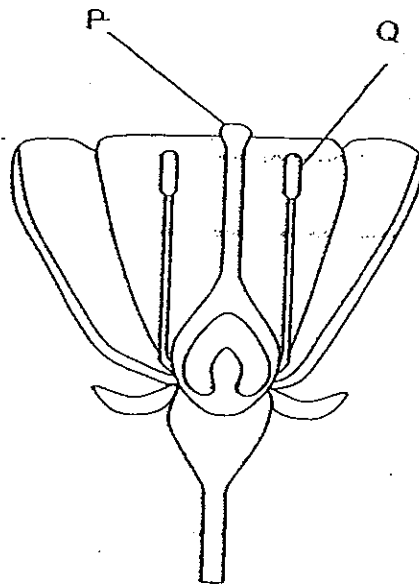
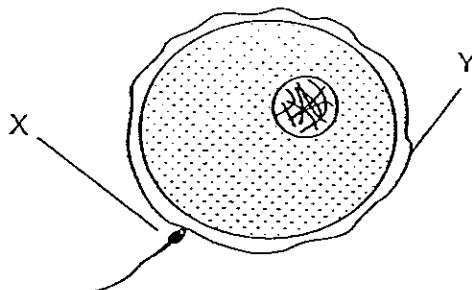


Diagram 2

Which two reproductive parts have similar functions?

- (1) A and P
- (2) A and Q
- (3) B and P
- (4) B and Q

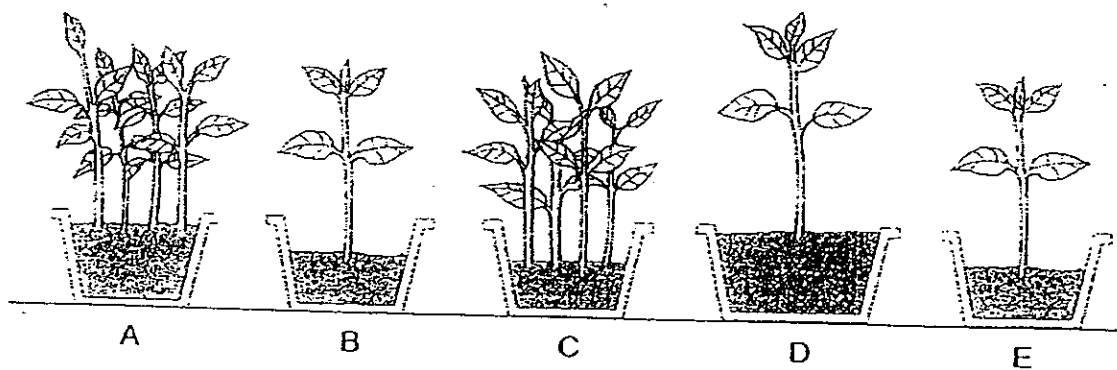
7 The diagram below shows the process of fertilisation involving cell X and cell Y.



Which of the following correctly shows a difference between cell X and cell Y?

	X	Y
(1)	Produced by the testes	Produced by the ovaries
(2)	Produced by the penis	Produced by the ovaries
(3)	Produced by the testes	Produced by the womb
(4)	Produced by the penis	Produced by the womb

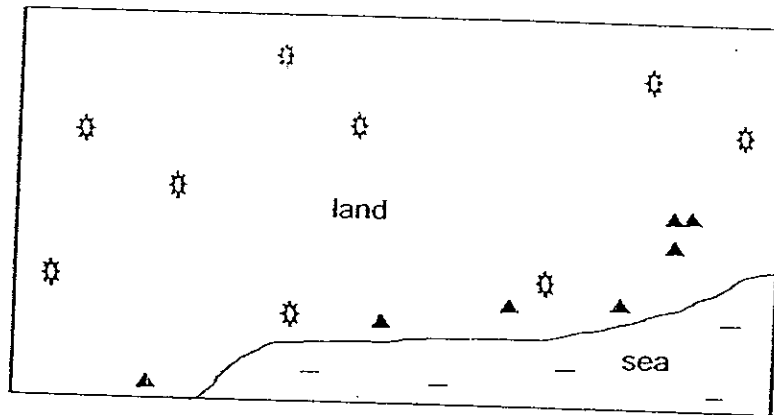
8 Jack wanted to investigate the effect of overcrowding on plants. He set up 5 pots of plants and allowed them to grow for 4 weeks under the same conditions. The results are as shown below.



Which two pots should he compare?

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

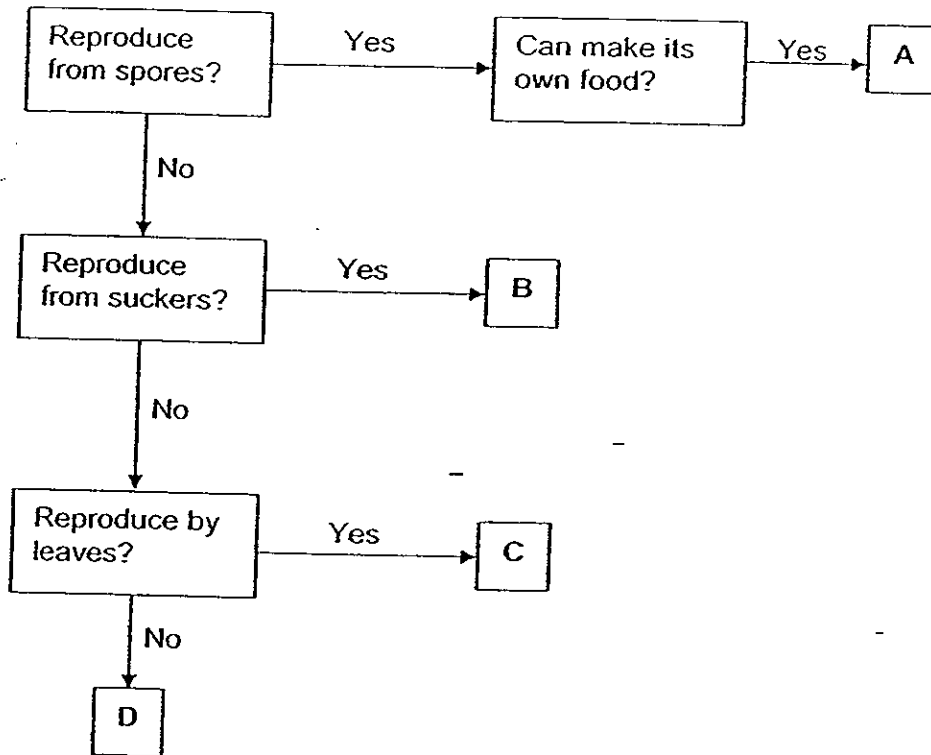
9 The diagram below shows where two types of plants (▲ and ⚙) are found.



How are the seeds of these plants most likely dispersed?

	▲	⚙
(1)	wind	water
(2)	animals	water
(3)	water	water
(4)	water	wind

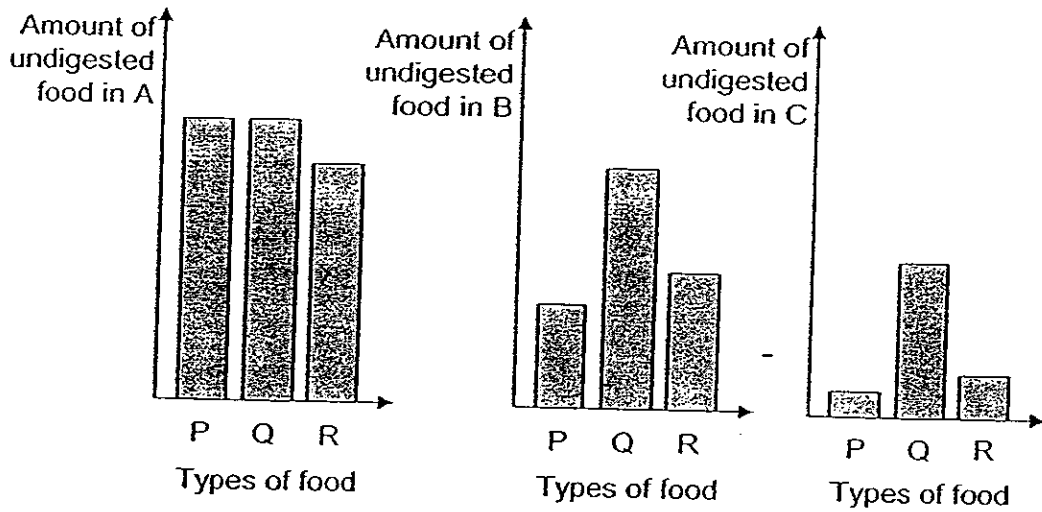
10 Refer to the flowchart below to answer the question.



What could organisms A, B, C and D be?

	A	B	C	D
(1)	Bird's Nest Fern	Banana	African Tulip	African Violet
(2)	Bird's Nest Fern	Pineapple	African Violet	African Tulip
(3)	Mushroom	Banana	African Violet	African Tulip
(4)	Mushroom	Pineapple	African Tulip	African Violet

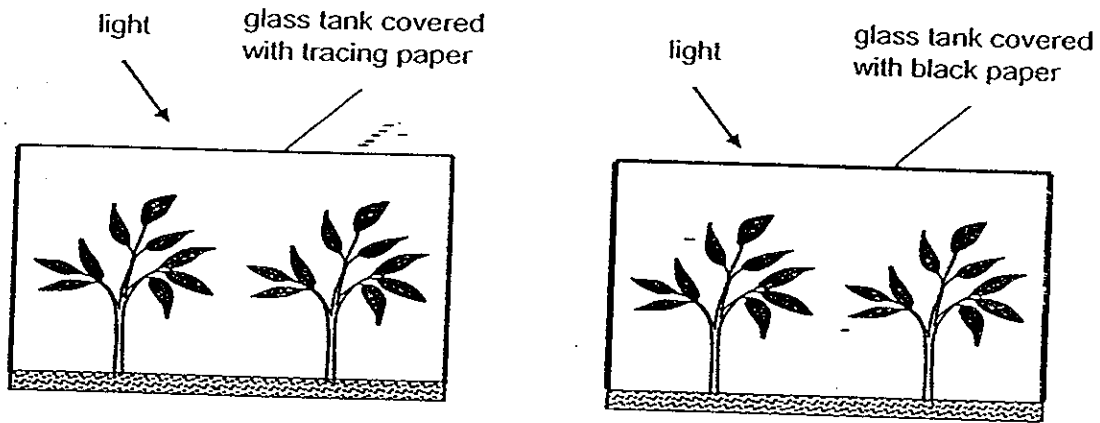
- 11 The graphs below show the amount of undigested food in organs A, B and C of the human digestive system.



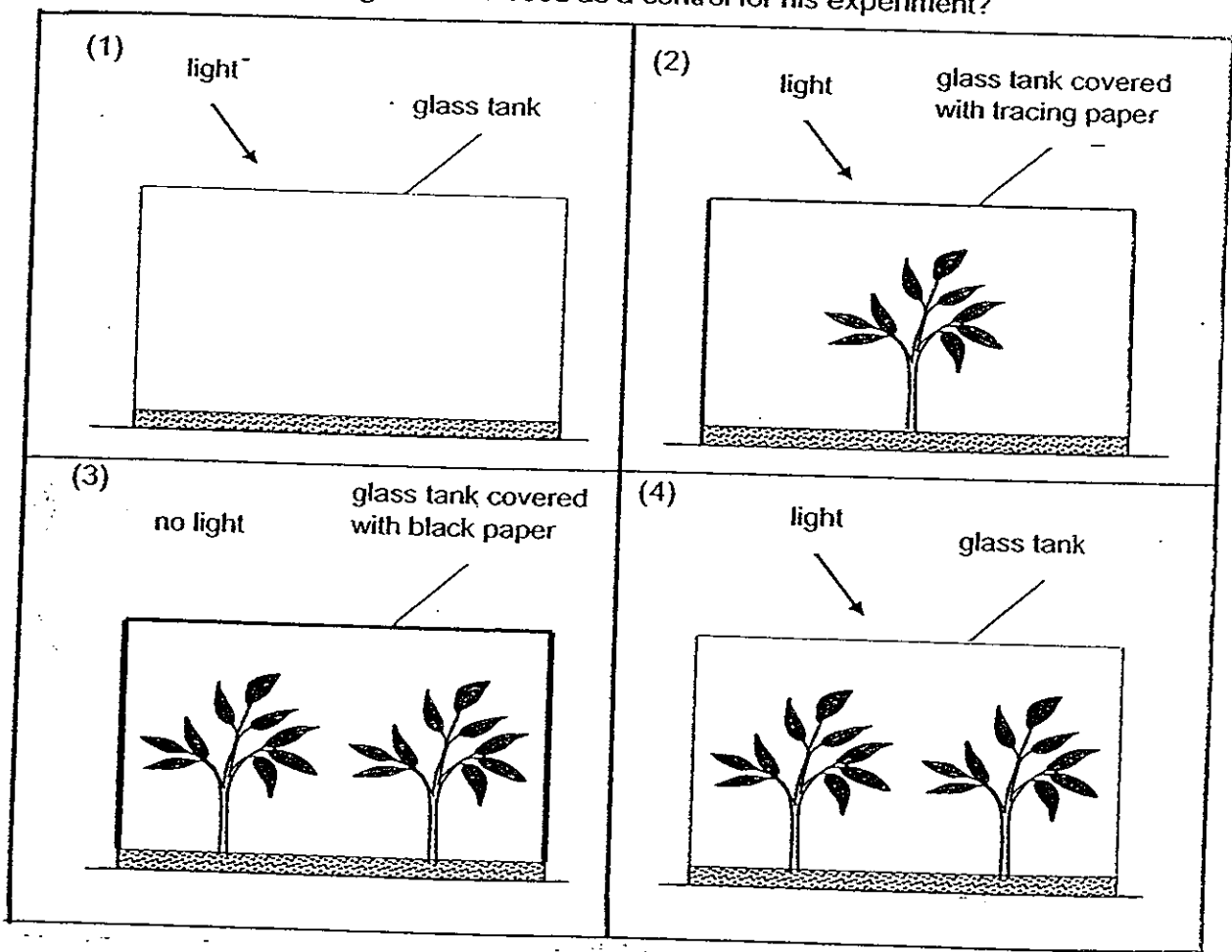
What could organs A and B be if organ C is the small intestine?

	A	B
(1)	Mouth	Large intestine
(2)	Gullet	Mouth
(3)	Gullet	Stomach
(4)	Stomach	Gullet

12 Harry wanted to investigate how the amount of light affects the growth of a type of plant. The diagram below shows two of his setups.



Which of the following could be used as a control for his experiment?



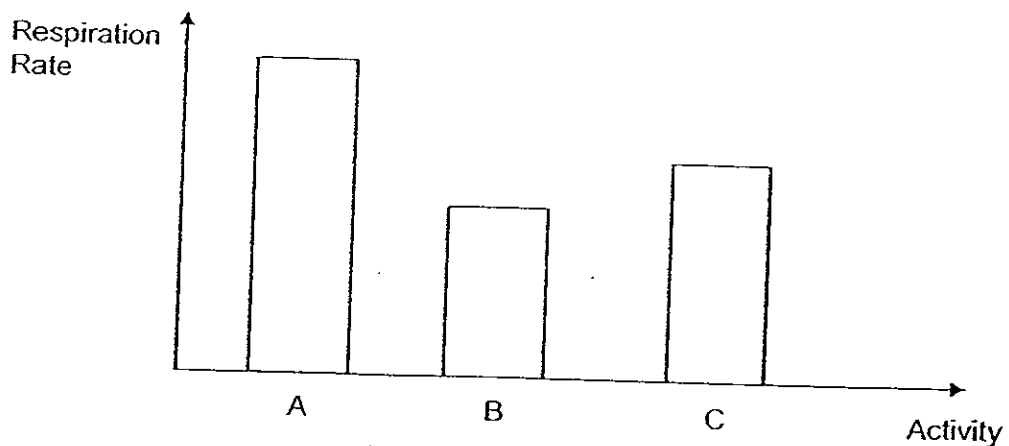
- 13 Vinod wanted to find out how the amount of light affects the rate of photosynthesis of a money plant. Study the table below carefully.

Pot	Amount of fertiliser used	Location	Type of soil
A	0g	on an open field	garden soil
B	5g	in the house	garden soil
C	10g	on a window ledge	garden soil
D	10g	on an open field	loamy soil
E	10g	in the house	loamy soil
F	10g	on a window ledge	loamy soil

Which three pots should Vinod set up to conduct a fair test?

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

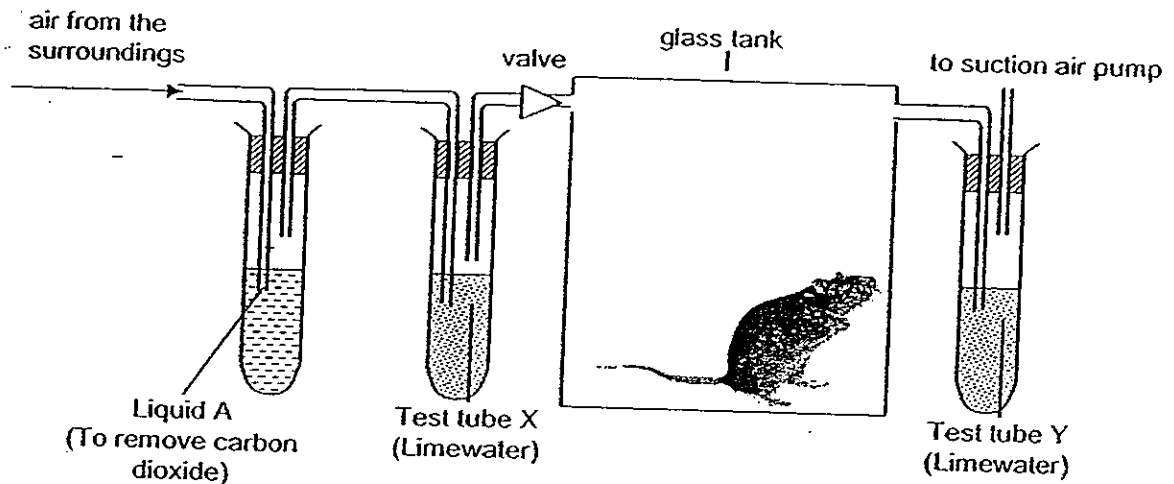
- 14 The bar graphs below show Rahman's respiration rates when he is engaged in three different activities A, B and C. Activity C is walking.



What are the two activities, A and B, most likely to be?

	Activity A	Activity B
(1)	Jogging	Reading a book
(2)	Jogging	Skipping rope
(3)	Skipping rope	Jogging
(4)	Reading a book	Skipping rope

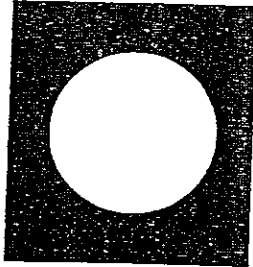
- 15 Xinyi sets up an experiment involving a live mouse in a glass tank as shown below. Test tubes X and Y contain limewater. Air from the surroundings is passed through liquid A and limewater in test tube X before it reaches the tank. The valve stops air in the tank from flowing backwards into test tube X. Xinyi gets the experimental results by observing the appearance of limewater in test tube Y.



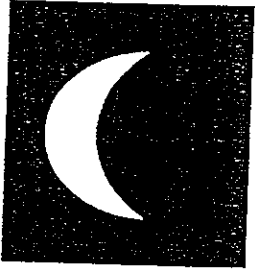
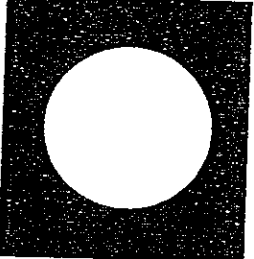
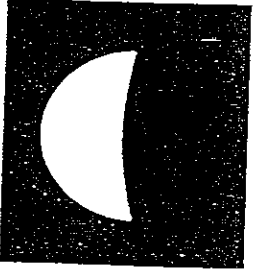
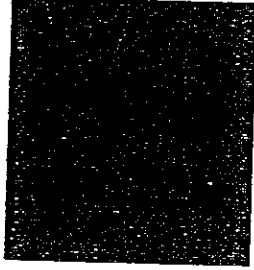
Which one of the following shows the correct experimental aim and the purpose of test tube X?

	Experimental aim	Purpose of test tube X
(1)	To find out if the mouse produces carbon dioxide during respiration.	Test for carbon dioxide produced by the mouse.
(2)	To find out if the mouse produces carbon dioxide during respiration.	Test for carbon dioxide in the air going to the tank.
(3)	To find out the amount of carbon dioxide present in surrounding air.	Test for carbon dioxide produced by the mouse.
(4)	To find out the amount of carbon dioxide present in surrounding air.	Test for carbon dioxide in the air going to the tank.

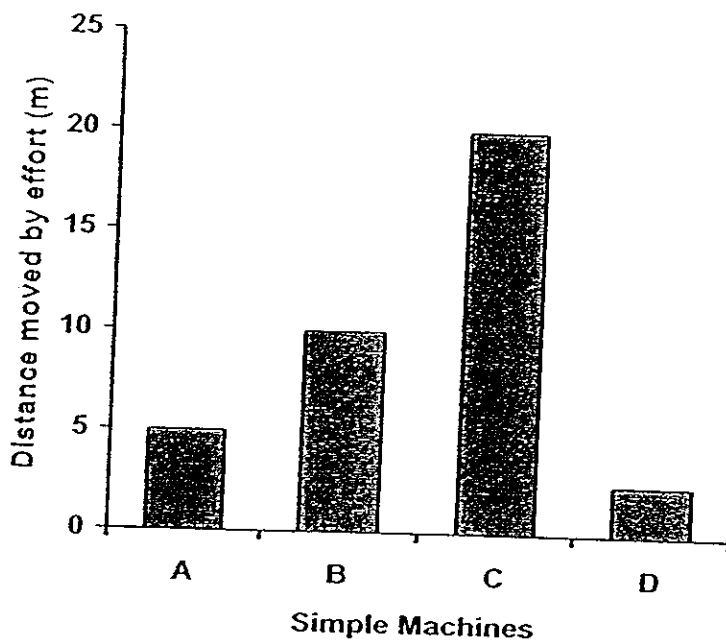
16 The diagram below shows one of the phases of the Moon.



Which one of the following phases appears 14 days after the above phase?

(1) 	(2) 
(3) 	(4) 

- 17 Four simple machines, A, B, C and D, were used to lift a load. The graph below shows the distances the effort had to move in order to lift the load up 10 m.



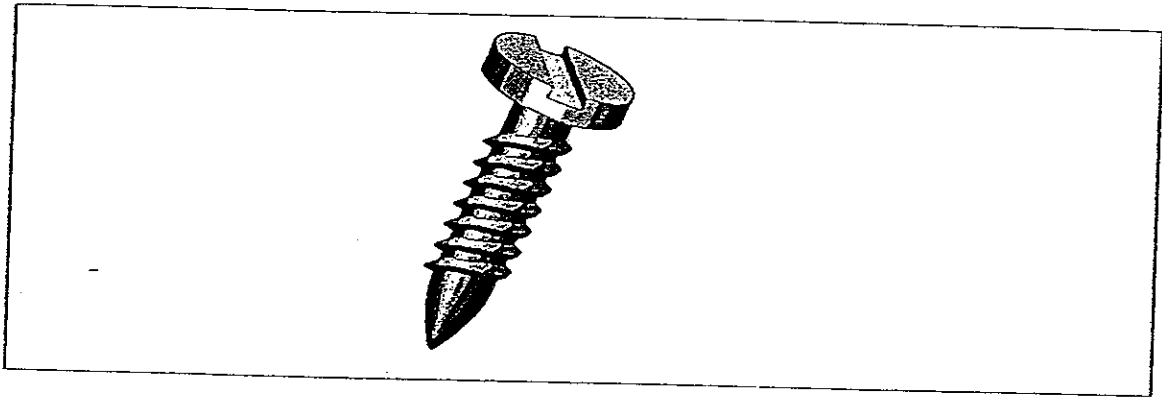
The simple machine that is most likely to be a single movable pulley is _____.

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

- 18 A and B are two interlocking gears. When gear A turns 2 rounds, gear B turns 3 rounds. Which one of the following shows the correct number of teeth for the gears?

Number of teeth	
Gear A	Gear B
(1) 10	5
(2) 10	15
(3) 12	8
(4) 12	18

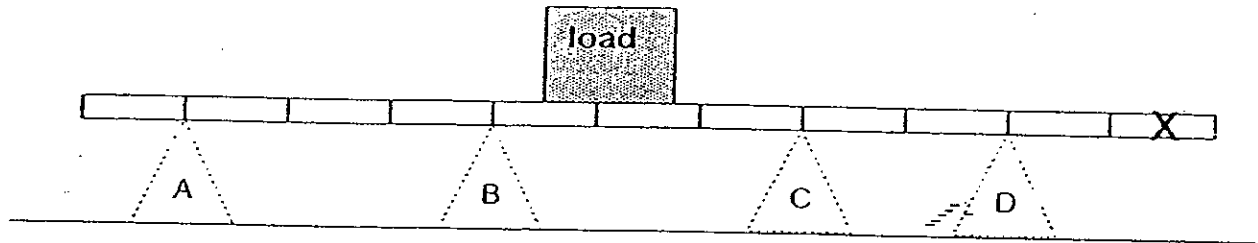
- 19 The diagram below shows a screw.



Which of the following simple machines does the screw consist of?

- A Lever
 - B Gears
 - C Inclined plane
 - D Wheel and axle
- (1) D only
(2) A and C only
(3) C and D only
(4) A, B, and D only

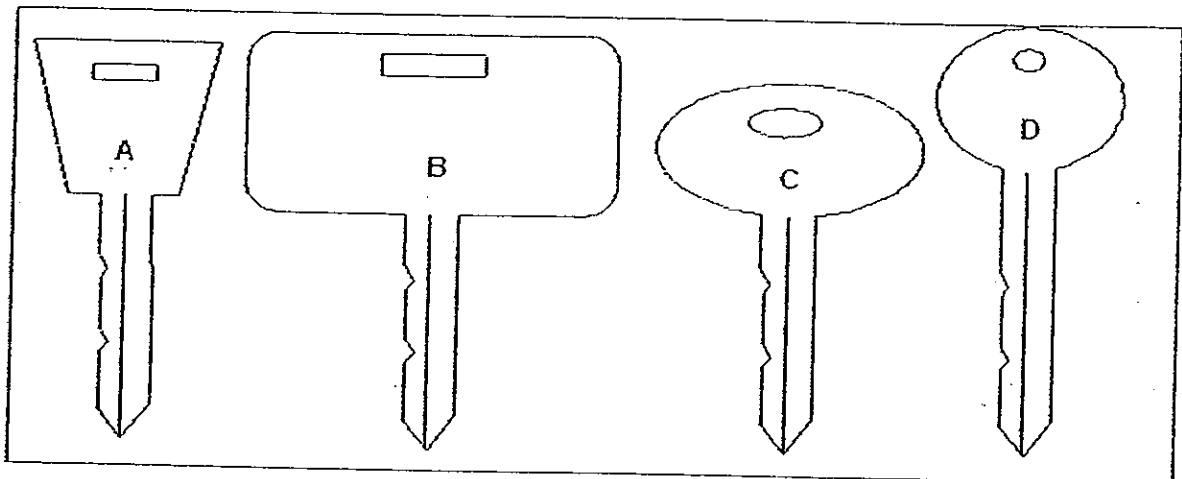
20 In the lever shown below, an effort is applied at X to lift the load.



The effort needed will be the least if a fulcrum is placed at position _____.

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

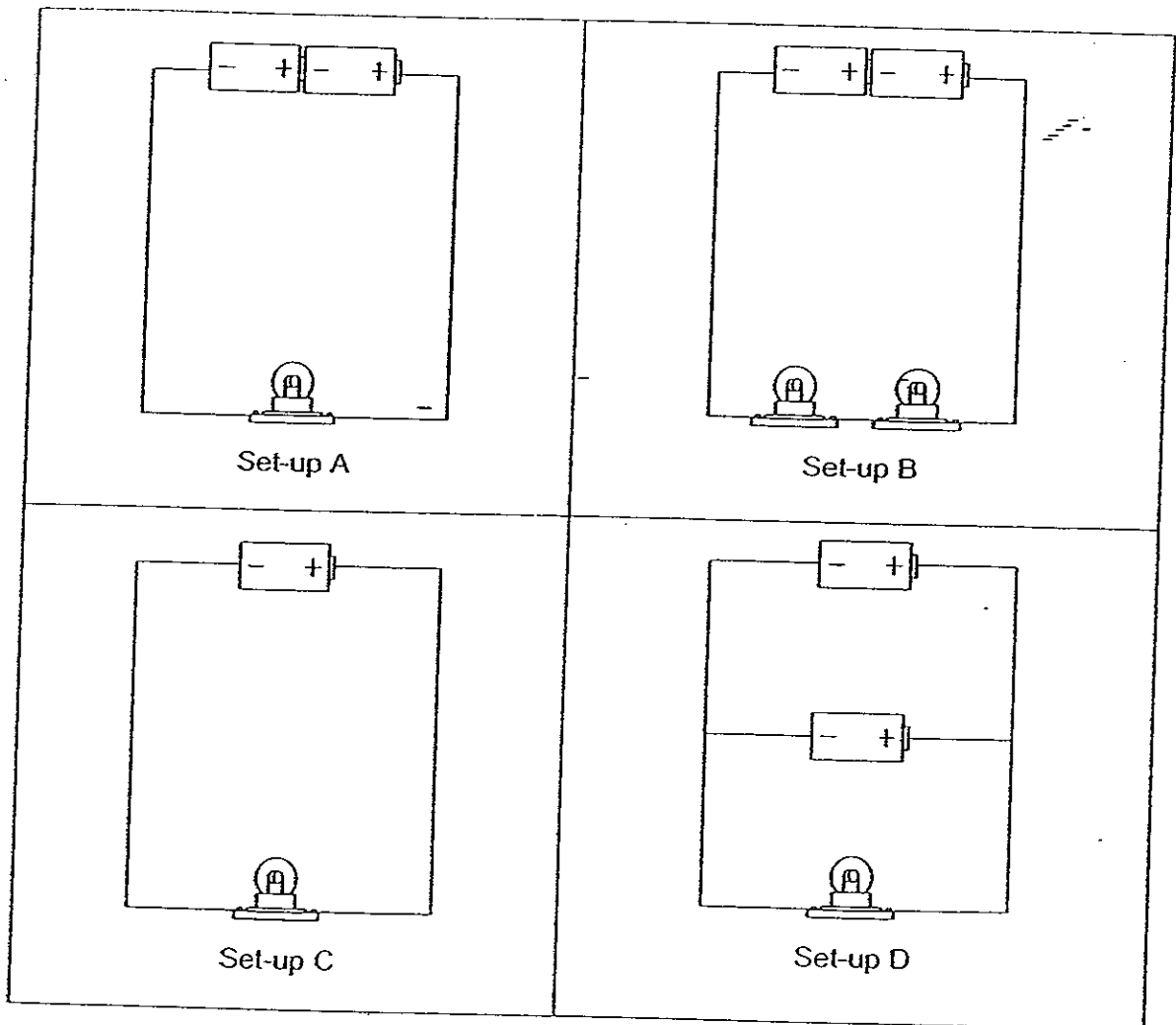
21 The diagram below shows 4 keys — A, B, C and D.



Which one of the keys would help you open a lock with the least amount of effort?

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

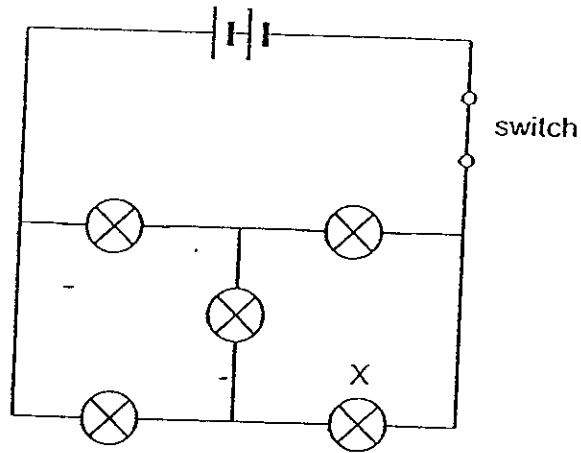
- 22 Jimmy wants to find out if the number of dry cells connected in series will affect the brightness of a bulb. Which of the following set-ups should he use in-order to conduct a fair test?



He should use set-ups _____

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

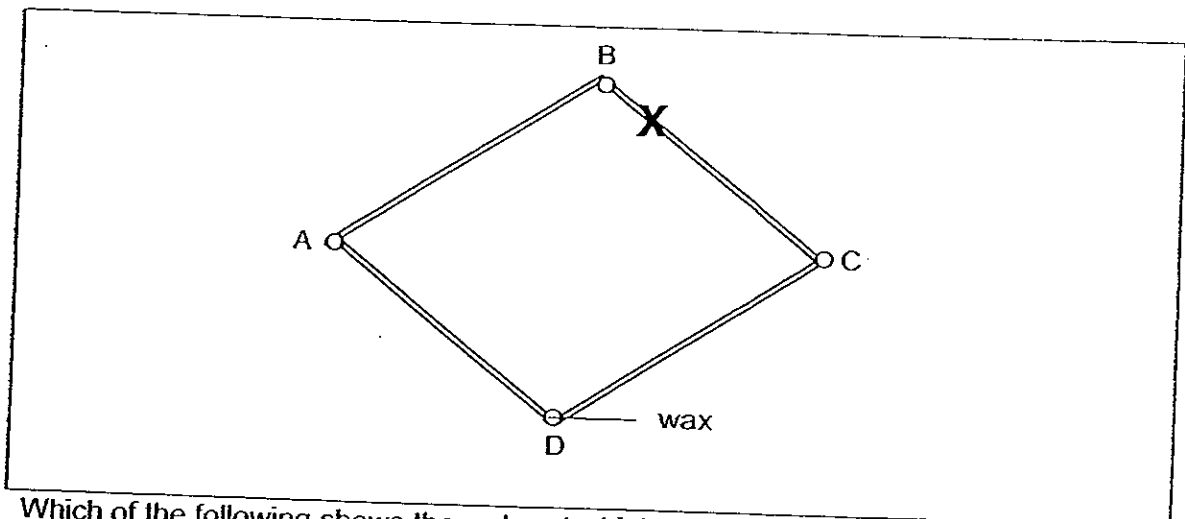
- 23 The diagram below shows five bulbs connected to some batteries in a circuit. When the switch is closed, all the bulbs lights up.



If bulb X fuses, how many bulbs will remain lit?

- (1) 1
- (2) 2
- (3) 3
- (4) 4

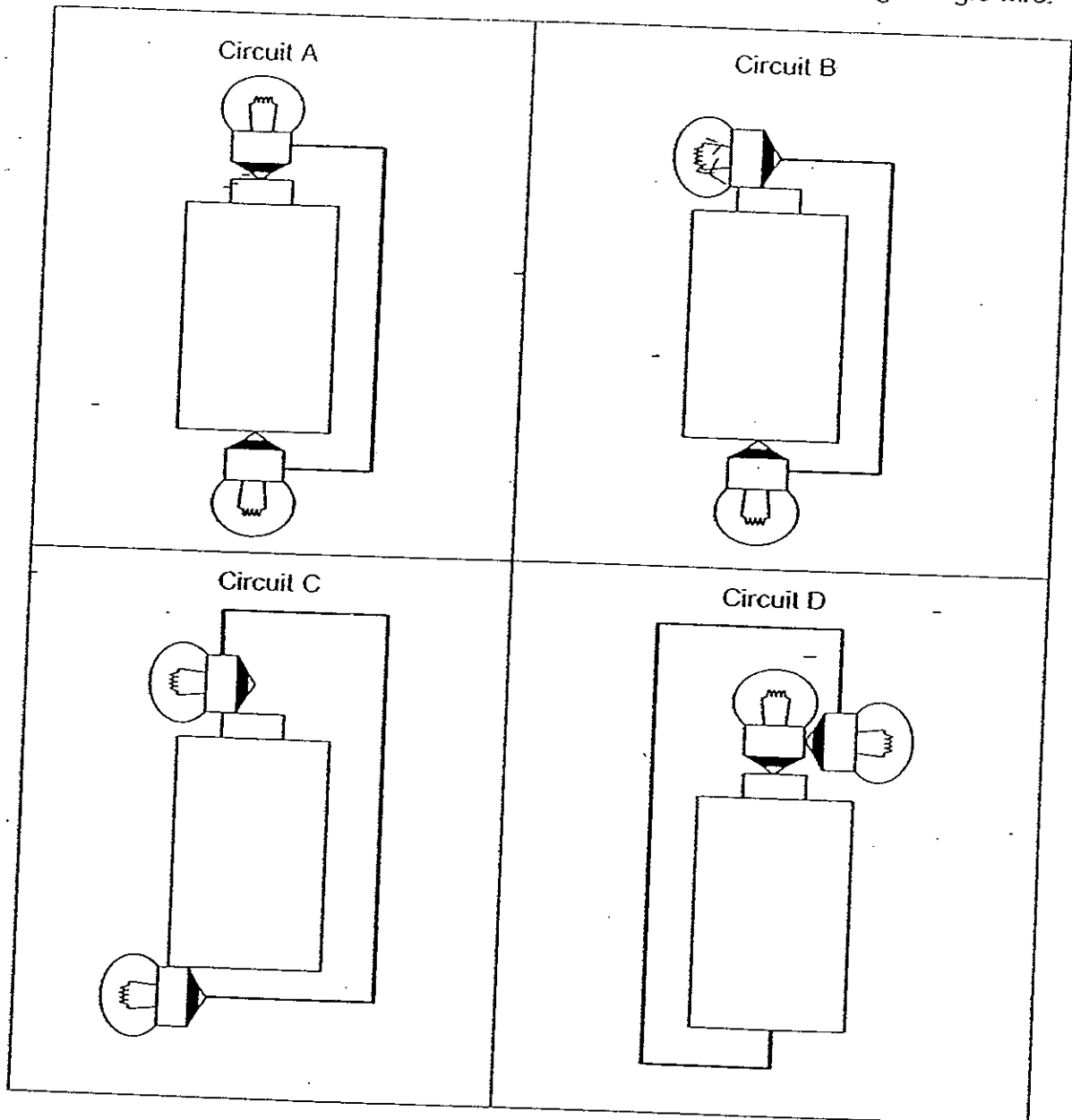
- 24 The diagram below shows a square metal frame with a drop of wax placed at each of the comers, A, B, C and D.



Which of the following shows the order at which the drops of wax melted when heat was applied at Point X?

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

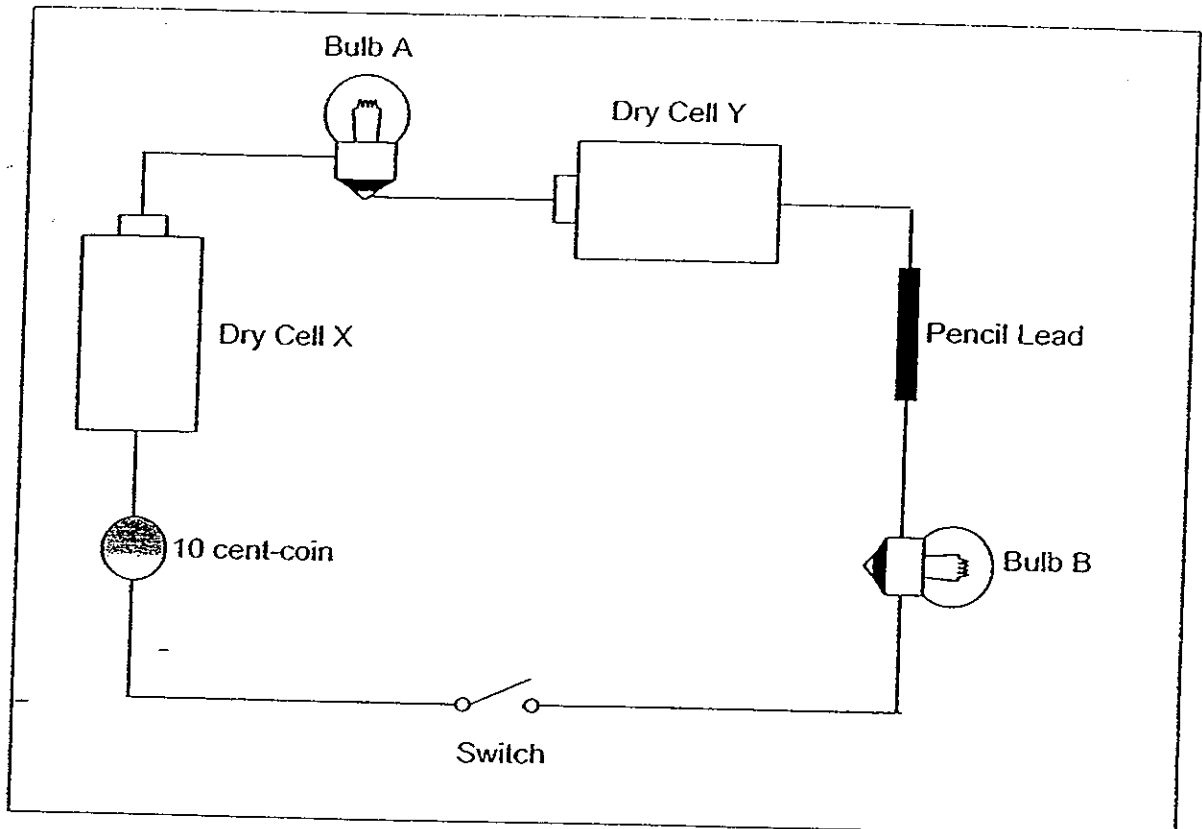
25 In each of the circuits below, 2 bulbs are connected to 1 dry cell using a single wire.



In which of the circuits will both bulbs light up?

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

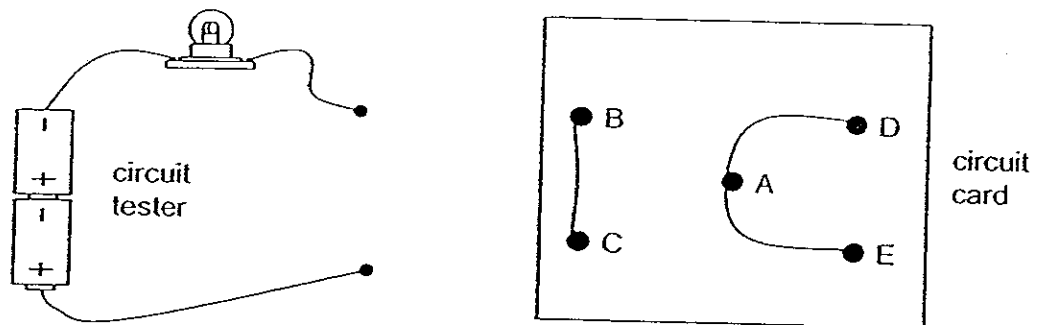
- 26 The diagram below shows two bulbs, A and B, connected to two dry cells, X and Y, a ten cent-coin and a piece of pencil lead.



When the switch was closed, bulb A did not light up. Which one of the following is the most likely reason why it did not light up?

- (1) Bulb B is connected wrongly to the circuit.
- (2) Dry cell X is connected wrongly to the circuit.
- (3) Pencil lead is a poor conductor of electricity
- (4) The 10 cent-coin is a poor conductor of electricity.

- 27 The diagram below shows a circuit tester and a circuit card consisting of 5 metal thumbtacks, A, B, C, D and E, connected by wires.



The ends of the circuit tester are connected to two thumbtacks at a time. Which one of the following tables shows the correct results of the connections?

(1)

Thumbtacks connected	Does the bulb in the circuit tester light up?
A and C	no
A and B	yes
D and E	yes
C and D	no

(2)

Thumbtacks connected	Does the bulb in the circuit tester light up?
A and C	no
A and B	yes
D and E	no
C and D	no

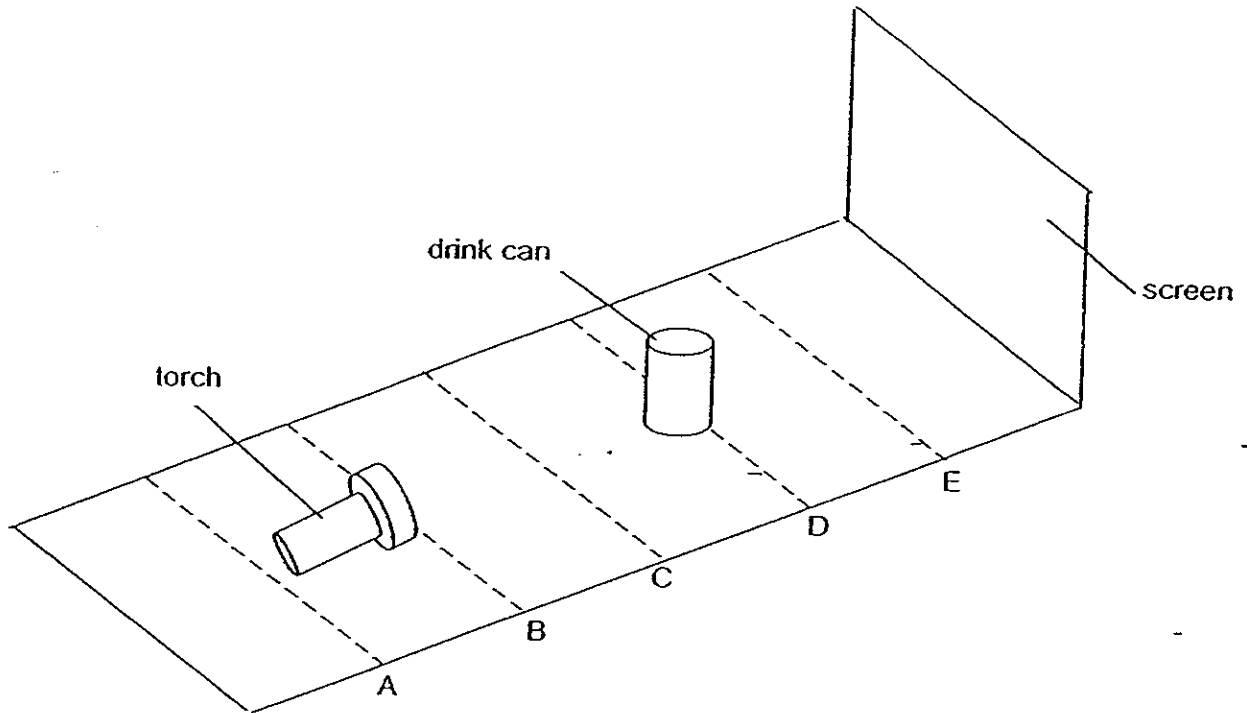
(3)

Thumbtacks connected	Does the bulb in the circuit tester light up?
A and C	yes
A and B	no
D and E	no
C and D	yes

(4)

Thumbtacks connected	Does the bulb in the circuit tester light up?
A and C	no
A and B	no
D and E	yes
C and D	no

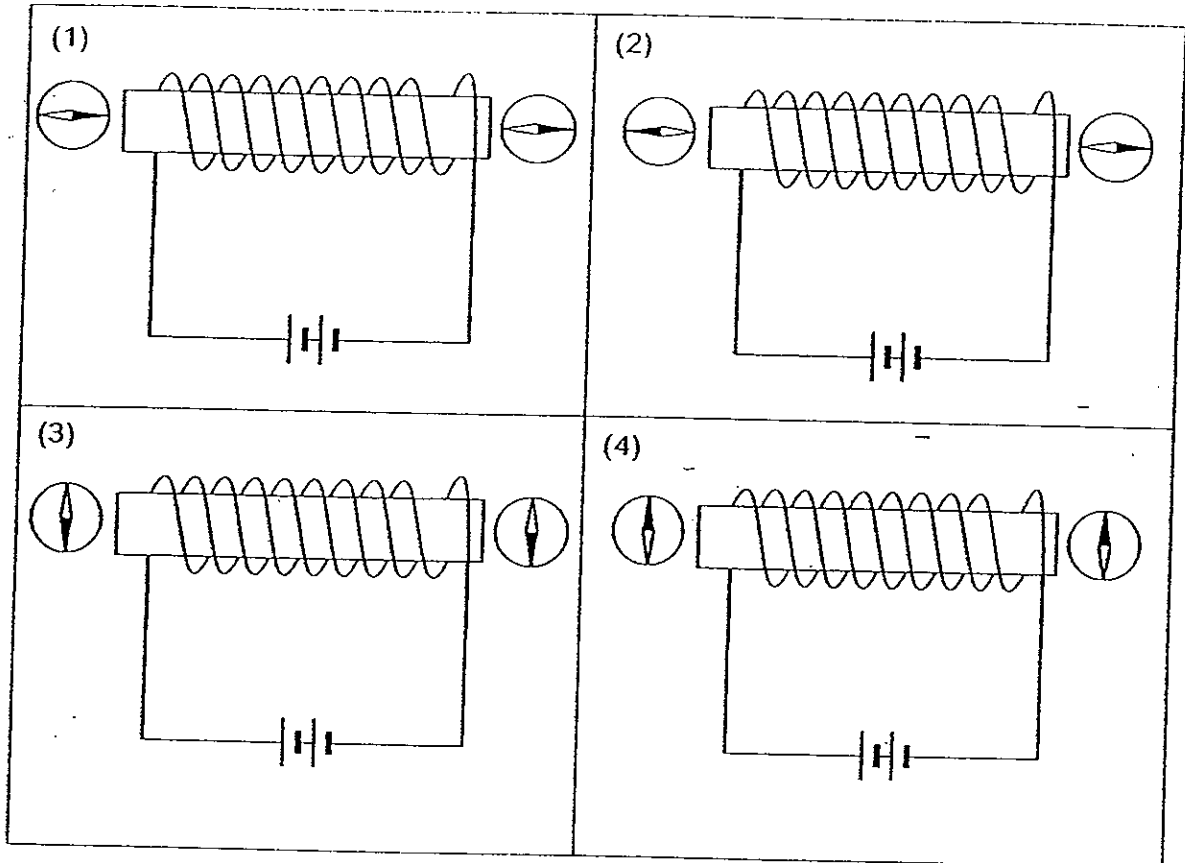
- 28 The diagram below shows a torch, a drink can and a screen. A shadow of the can was cast on to the screen when the light from the torch shines on to the can.



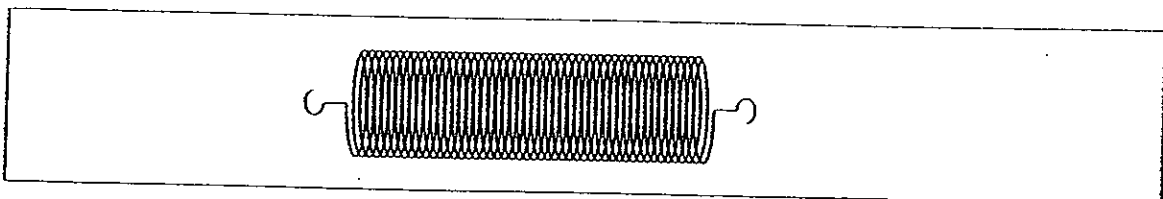
At which lines should the torch and drink can be placed in order to obtain a larger shadow?

	Position of Torch	Position of Drink Can
(1)	Line A	Line D
(2)	Line A	Line E
(3)	Line B	Line E
(4)	Line C	Line D

- 29 Which one of the following diagrams shows the correct position of the needles of the compasses placed at the ends of an electromagnet?



- 30 The diagram below shows a spring.



Which one of the following best describes the forces acting on the spring when it is stretched and when it is compressed?

	Stretching a Spring	Compressing a Spring
(1)	push	pull
(2)	push	push
(3)	pull	push
(4)	pull	pull

End of Part I. Please go on to Part II



Anglo-Chinese School (Primary)

END-OF-YEAR EXAMINATION 2008
SCIENCE PAPER
PRIMARY FIVE

BOOKLET B

Name: _____ () Class: Primary 5 _____

Date: 23 October 2008

Duration of paper: 1 h 45 min

Parent's/Guardian's signature

	MARKS	MARKS
Section A / Booklet A	60	
Section B / Booklet B	40	
Total	100	

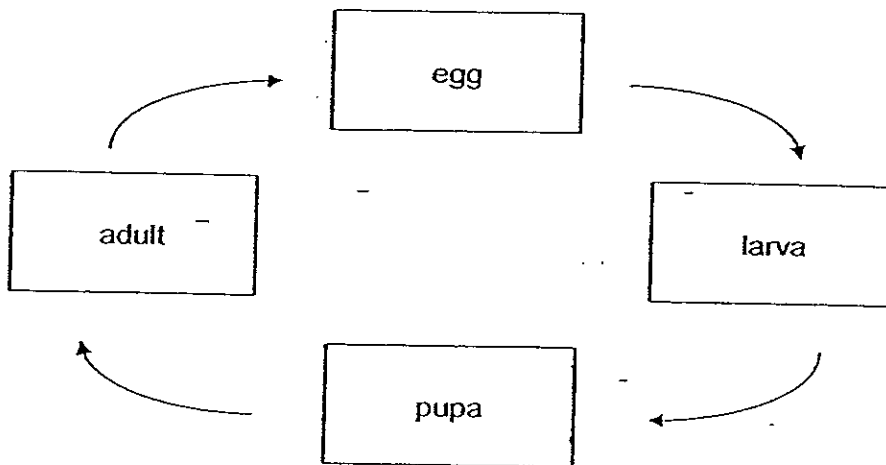
THIS BOOKLET CONTAINS 16 PAGES.
DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.

PART II

For questions 31 to 46, write your answers in this booklet.

The number of marks available is shown in brackets [] at the end of each question or part question. (40 marks)

31 The diagram below shows the life cycle of a butterfly.

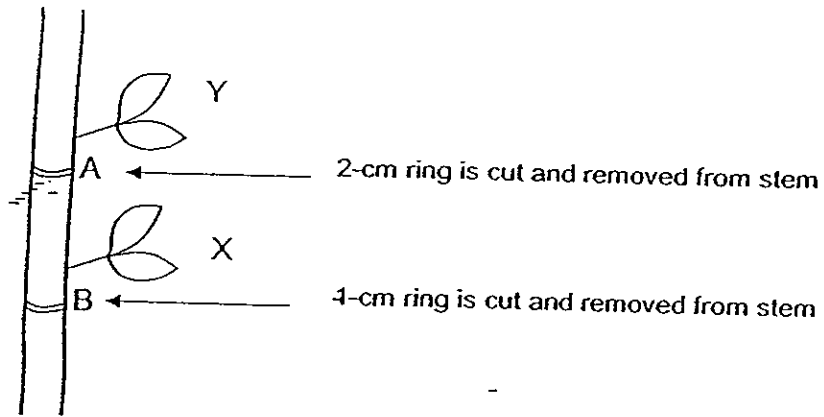


(a) In the adult stage, the butterfly can be useful to flowering plants. Describe how this is so. [1]

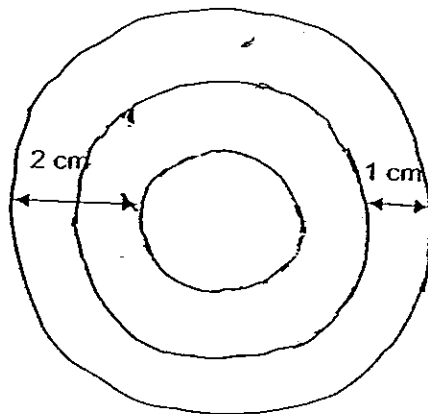
(b) Like the butterfly, the mosquito has four stages in its life cycle. One method of controlling the population of the mosquito is to introduce fish into stagnant water.

State the stage of the mosquito life cycle at which this method will not likely work [1]

- 32 Maggie carried out an experiment on a plant by carrying out the actions as shown below. She observed that the leaves at position Y died after a few days.

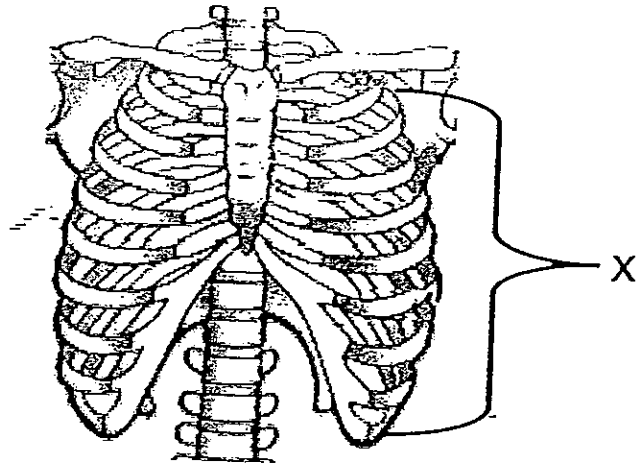


- (a) The diagram below shows the cross-section of the stem between A and B. Shade the part of the stem that transports water. [1]



- (b) Explain why the leaves at position Y died after a few days. [1]

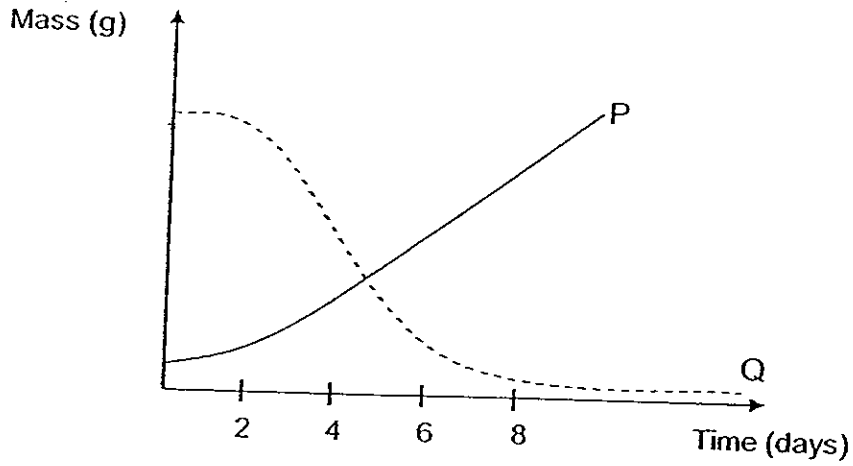
33 The diagram below shows part of the human skeletal system.



(a) Part X protects vital organs in the body. State two organs that it protects. [1]

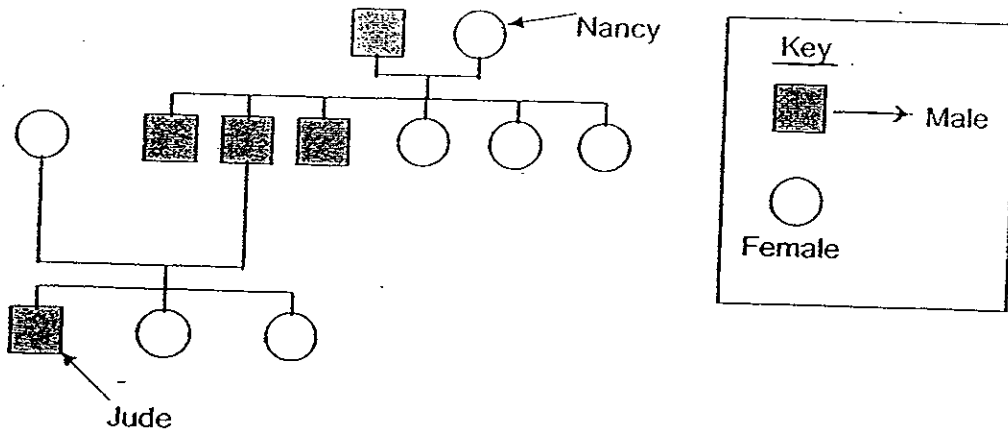
(b) Which part of the skeletal system protects the brain? [1]

- 34 Erlyna carried out an experiment on a seed growing into a seedling. In the graph below, the two curves P and Q, show changes in the mass of the shoot and the seed leaf during the experiment.



- (a) State three conditions required for the change in mass shown by curve P. [1]
- _____
- _____
- _____
- (b) Give a reason for the change in mass shown by curve Q. [1]
- _____
- _____
- (c) How did the seedling get its food from day 8 onwards? [1]
- _____
- _____

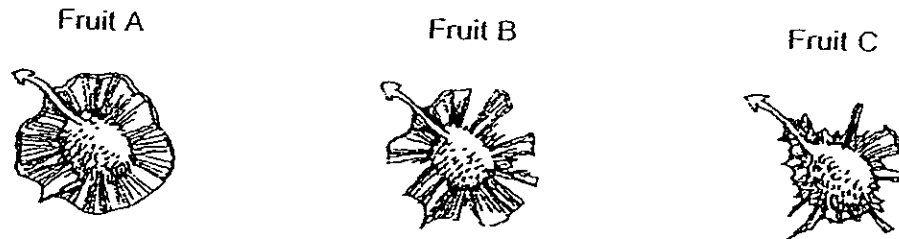
35 Study the family tree shown below carefully.



(a) Based on the family tree, how many uncles and how many aunts does Jude have? [1]

(b) How is Nancy related to Jude? [1]

- 36 Luke conducted an experiment to determine how the area of the wing-like structure of an angšana fruit affects the duration it remains in the air. He used three angšana fruits as shown below.

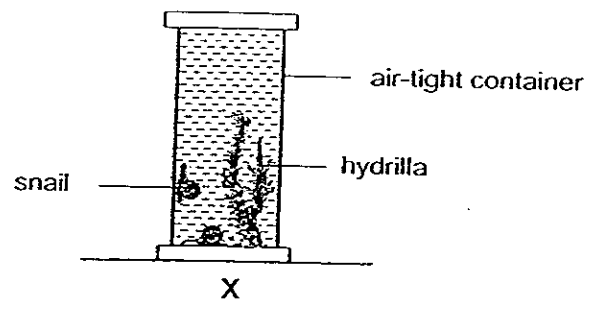


He conducted the experiment four times and recorded the time taken by each fruit to reach the ground in the table below.

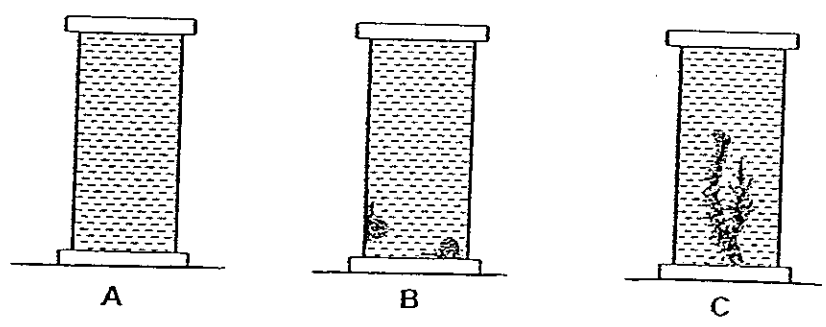
Set of record	Time (in seconds)		
	Fruit A	Fruit B	Fruit C
1	5.0	4.7	3.9
2	5.3	5.2	4.5
3	5.5	4.9	4.6
4	5.9	6.2	4.5

- (a) Luke's teacher commented that one of the readings has been taken wrongly. Which one is he referring to? [1]
- Set _____ Fruit _____
- (b) Based on the readings taken in Luke's experiment, what conclusion can he make? [2]

37 Wee Keong wanted to find out about the relationship between water snails and hydrilla. He placed the set-up shown below under a strong light source for one week.



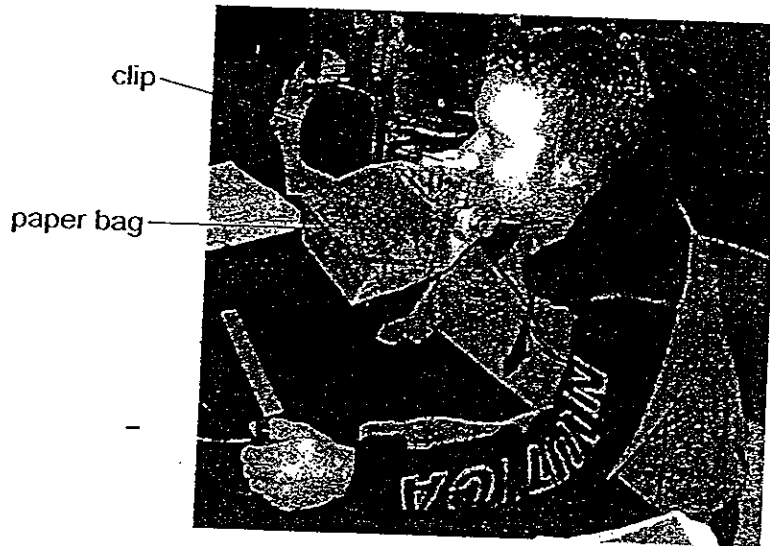
(a) Which of the following set-up (or set-ups) below should Wee Keong compare with X to reach a conclusion? [1]



He should use set-up(s) _____

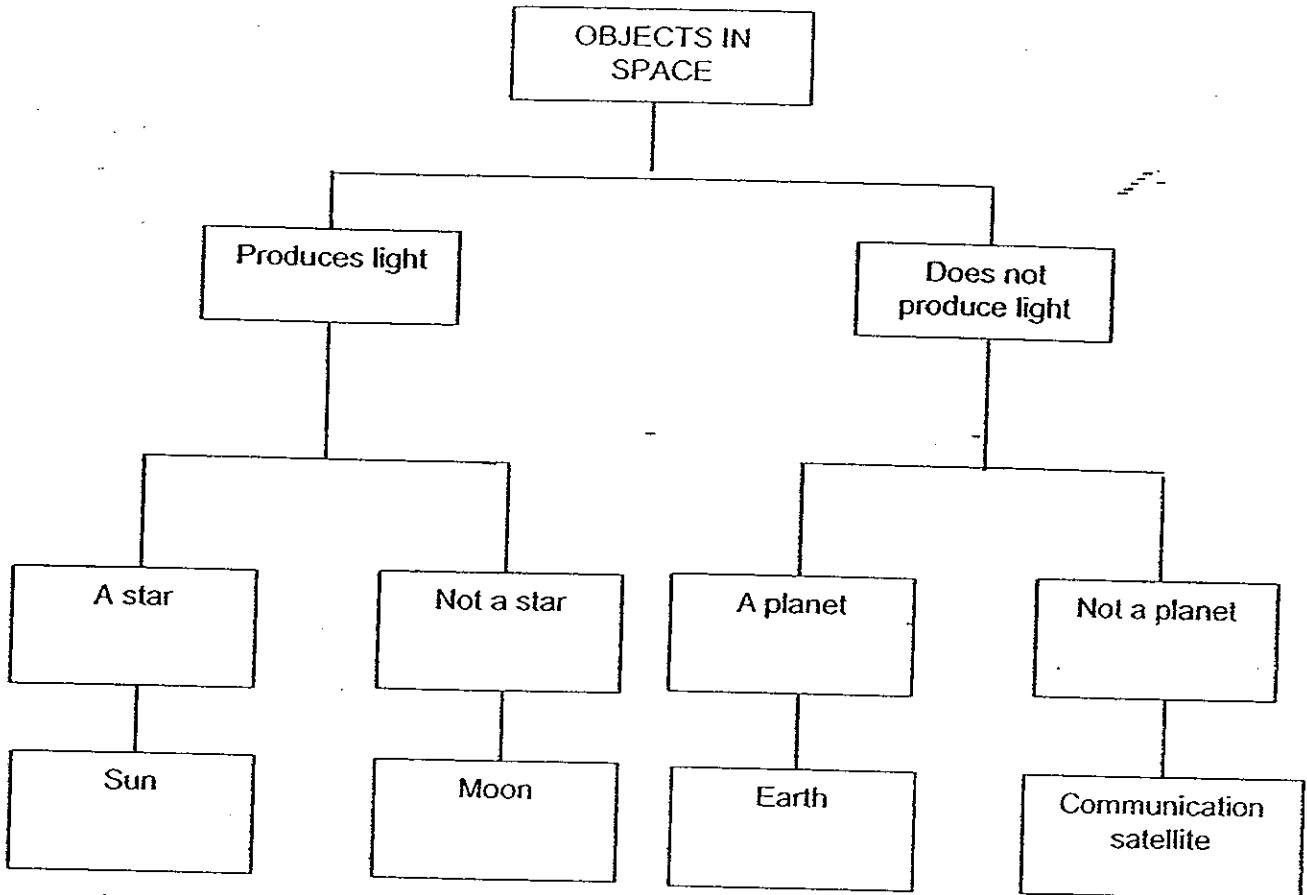
(b) At the end of one week, both the snails and the hydrilla in set-up X remained healthy. Give two ways in which the snails helped the hydrilla to survive. [2]

- 38 Lowell put on a nose clip so that he could not breathe through his nose. Covering his mouth with a paper bag, he continued to breathe in and out of the paper bag as shown in the picture below for one minute.



- (a) What happens to the amount of oxygen and carbon dioxide in the paper bag at the end of one minute? [1]
-
-
- (b) What other substance in the paper bag changes in its amount? [1]
-
-
- (c) Besides the changes in the amounts of substances, what is one other difference between the air that is breathed in and the air that is breathed out? [1]
-
-

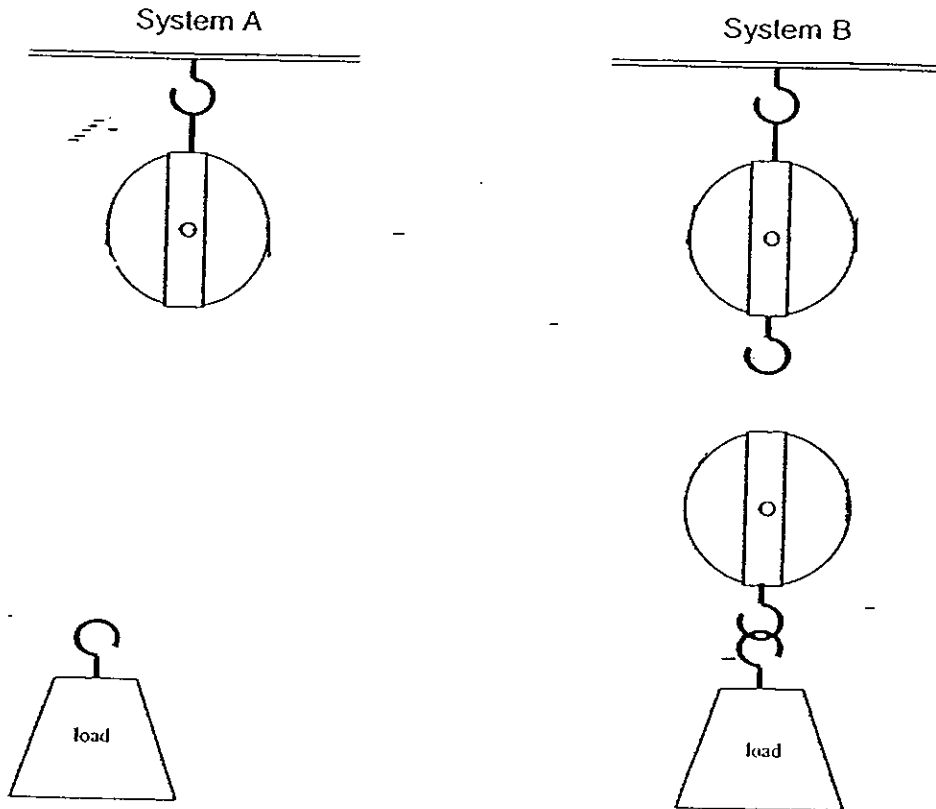
39 A student classified four objects in space as shown below.



(a) Based on the diagram above, which of the object(s) did the student classified wrongly? [1]

(b) Explain your answer in (a). [1]

- 40 The diagram below shows two pulley systems, A and B. System A is a single fixed pulley while system B is a combination of a fixed pulley and a movable pulley.

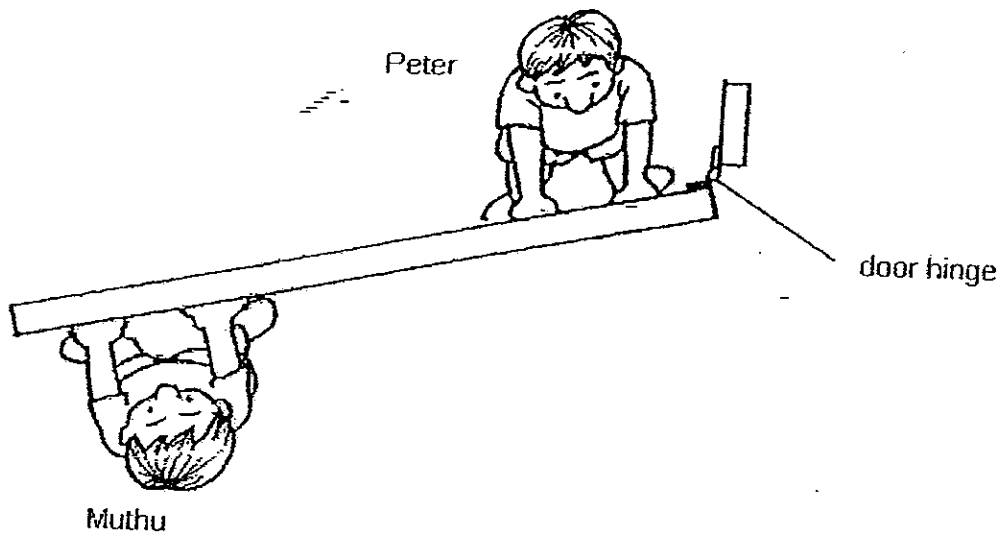


- (a) Complete the diagrams above by drawing in the missing ropes. [2]
- (b) Write down one similarity and one difference between the two pulley systems, A and B, with regard to their effort and load. [2]

Similarity: _____

Difference: _____

- 41 The diagram below is a view seen from above. It shows Peter and Muthu pushing with the same amount of force against a door from opposite directions.



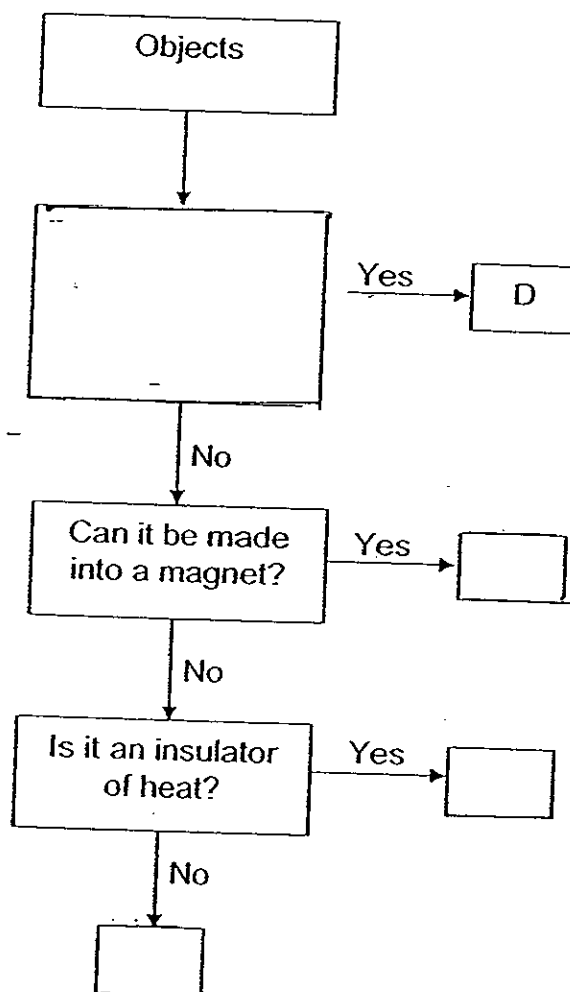
- (a) Who will be able to move the door most easily? [1]

- (b) Give a reason for your answer in (a) [1]

42 The table shows the properties of 4 objects – A, B, C and D.

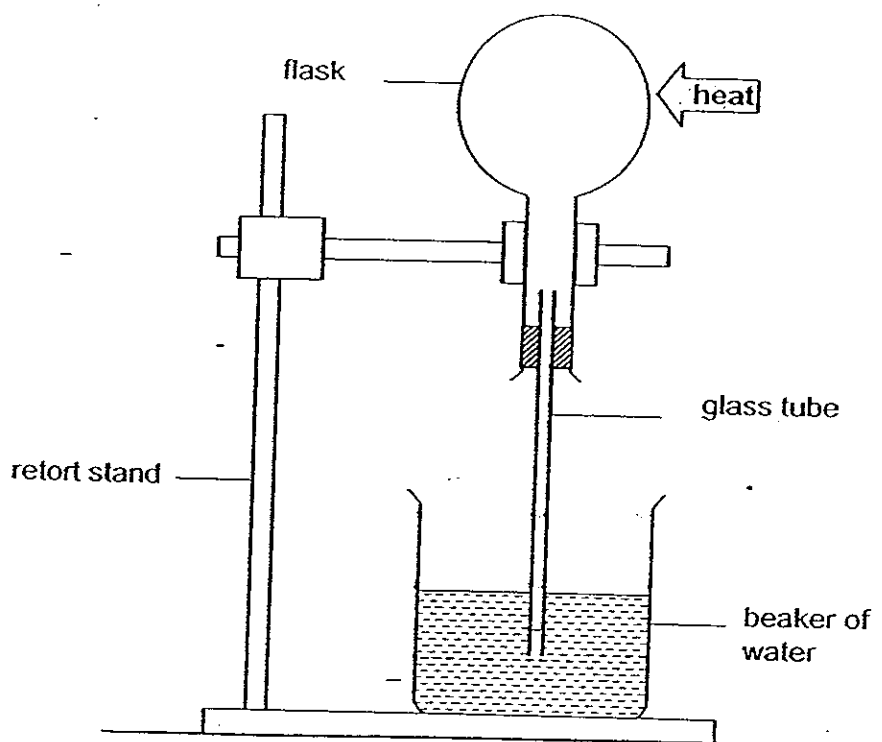
Object	Is it a good conductor of heat?	Is it a good conductor of electricity?	Is it magnetic?
A	yes	Yes	No
B	Yes	yes	Yes
C	No	yes	No
D	No	No	No

The following flowchart shows some of the information obtained from the table.



- (a) Using information from the table, complete the flowchart above. [2]
- (b) Which of the objects – A, B, C or D, is most likely to be a copper wire? [1]

43 John set up the apparatus shown below.

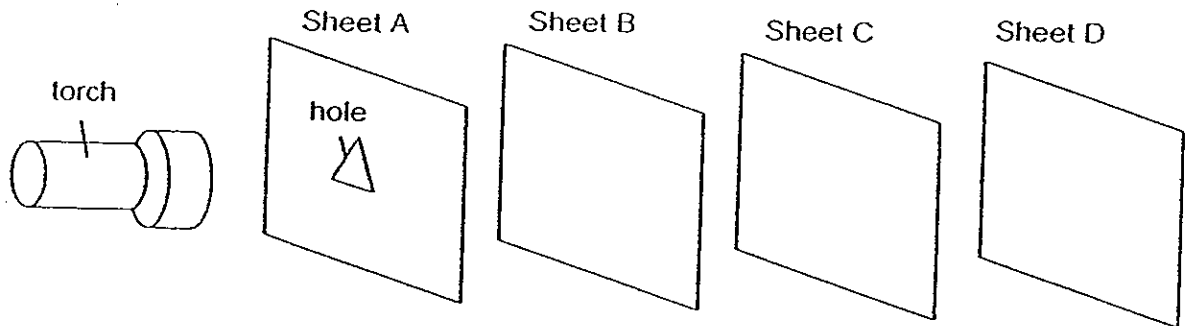


(a) What would he observe in the beaker of water when the flask was heated? [1]

(b) Give a reason for your answer in (a) [1]

(c) What would he observe about the water in the beaker when the heating was stopped? [1]

- 44 The diagram below shows 4 similar sheets – A, B, C and D, made from different materials.

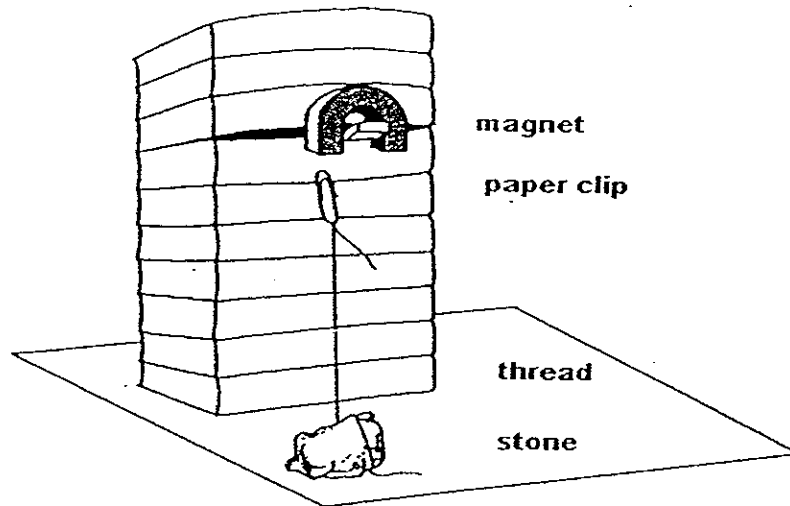


The sheets are arranged in a straight line inside a dark room. When the torch is switched on, a bright triangular-shaped patch of light is seen on Sheet C only. Use the information to decide if the following statements are 'TRUE', 'FALSE' or 'NOT POSSIBLE TO TELL' by putting a tick (✓) in the appropriate box ...

[2]

	STATEMENTS	TRUE	FALSE	NOT POSSIBLE TO TELL
(i)	Sheet A is transparent.			
(ii)	Sheet B is opaque			
(iii)	Sheet C is opaque			
(iv)	Sheet D is translucent.			

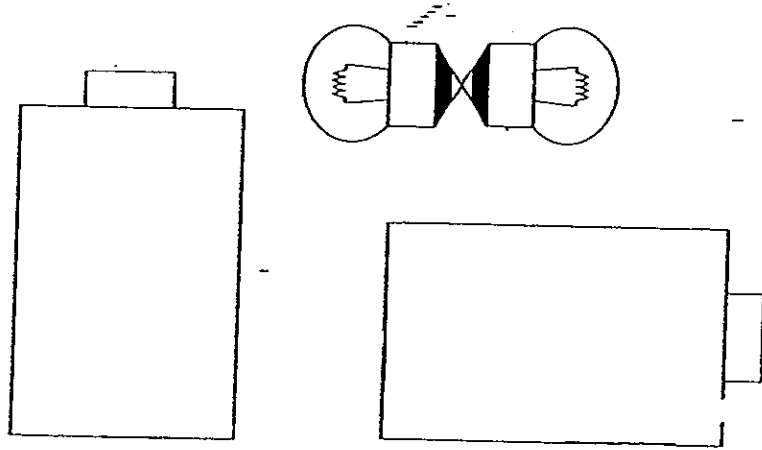
- 45 The diagram shows a paper clip suspended in the air underneath a U-shaped magnet.



- (a) When a piece of cardboard was placed between the paper clip and the magnet, the paper clip remain suspended. What can you conclude about the cardboard and the magnetic force acting on the clip? [1]

- (b) Name a metal which magnets are usually made of. [1]

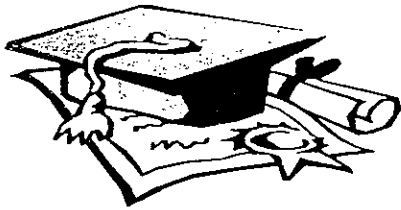
46 The diagram below shows 2 dry cells and 2 bulbs.



Draw 3 wires to connect the two dry cells to the two bulbs in such a way that all the dry cells and the bulbs are arranged in a series circuit and the bulbs will light up.

[2]

- End of Paper -



ANSWER SHEET

EXAM PAPER 2008

SCHOOL : ACS PRIMARY SCHOOL
SUBJECT : PRIMARY 5 ACS

TERM : SA 2

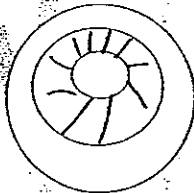
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
4	2	3	3	2	4	1	3	4	2	3	4	4	1	2	4	3

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
3	3	2	2	1	4	3	4	2	4	4	1	3

31)a) When the butterfly visits a flower to suck the nectar, pollen grains will stick onto its body and when it visits another flower, the pollen grains will be caught by the stigma.

b) adult stage.

32)a)



b) At A, when the 2-cm ring is cut, the xylem tubes are cut and removed, hence water cannot reach the leaves at position Y and they died after a few days.

33)a) The heart and the lungs.

b) The skull.

34)a) water, warmth and air.

b) The food stored inside the seed has been used up.

c) It started to photosynthesis.

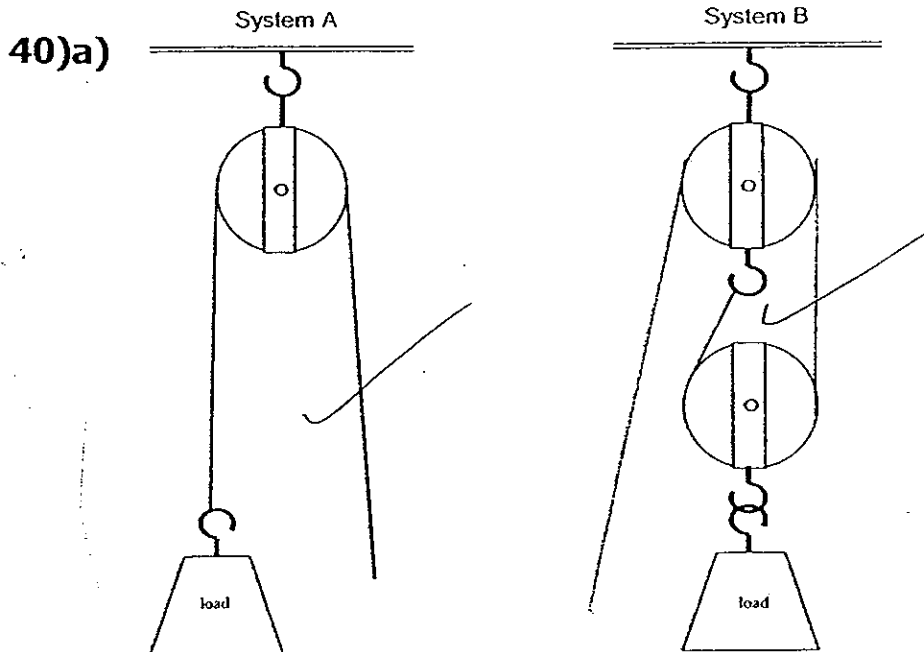
35)a)2 uncles and 3 aunts.
b)Nancy is Jude's grandmother.

36)a)4,B
b)The bigger the area of the wing-like structure of an angsana fruit, the longer is the duration it remains in the air.

37)a)B and C
b)The snails gave out carbon dioxide for the hydrilla to photosynthesis. The waste matter of the snail became nutrients for the hydrilla.

38)a)The amount of oxygen will decrease and the amount of carbon dioxide will increase.
b)Water vapour.
c)The air that is breathed out is warmer than the air that is breathed in.

39)a)Moon.
b)The moon can be seen from Earth as it reflects light from the sun.



40)b) Similarity: Both their effort and load move in opposite directions.

Difference: In system B, less effort is needed to lift the load than in system A.

41)a) Muthu.

b) Muthu is further away from the door hinge (fulcrum) hence he required less effort to move the door.

42)a)

Is it an insulator of electricity?

b) A.

43)a) Air bubbles.

b) The air in the flask expanded when heated and moved into the water.

c) Some of the water in the beaker moved up the glass tube and into the flask.

44)i) F ii) F iii) T iv) Not

45)a) The magnetic force can pass through the cardboard.

b) Iron.

46)

