

SA2

**METHODIST GIRLS' SCHOOL (Primary)**  
**Semestral Assessment 2 2004**  
**Primary 5**

**Science**

**Wednesday, Nov 3, 2004**

**Booklet A**

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

Class: P 5. \_\_\_\_\_

Total time for Booklets A and B: 1h 45 min

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DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

FOLLOW THE INSTRUCTIONS CAREFULLY.

ANSWER ALL QUESTIONS.

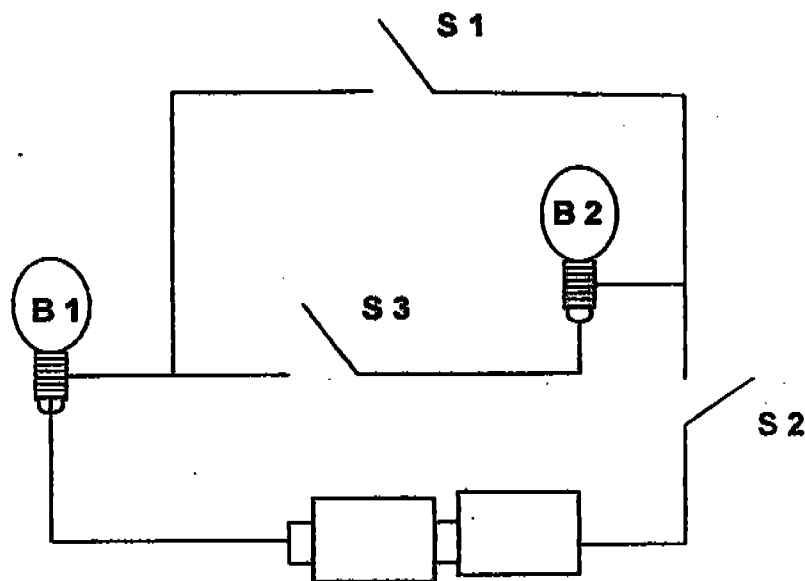


Section A ( 50 marks )

For each question from 1 to 25, four options are given. One of them is the correct answer. Shade the correct oval ( 1, 2, 3 or 4 ) on the Optical Answer Sheet.

( 2 marks each )

1. The circuit is set up by using two bulbs, B1 and B2, and three switches, S 1, S 2 and S3.



Which of the following is correct ?

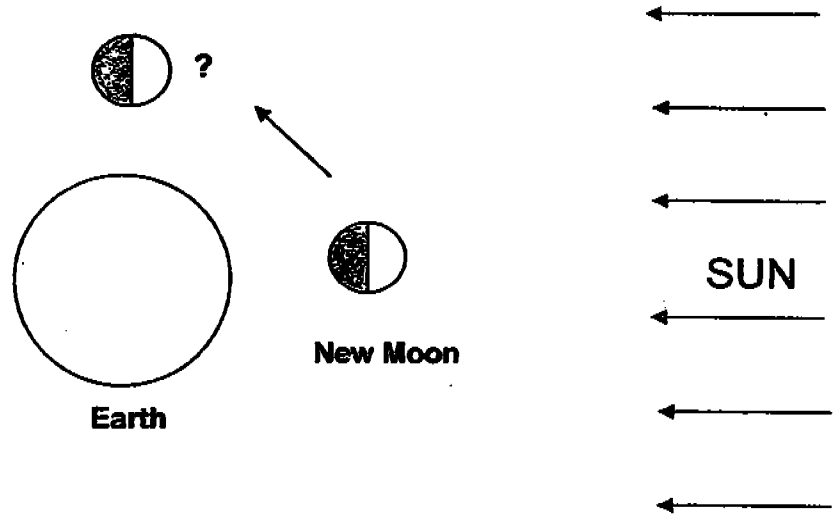
	S1	S2	S3	B1	B2
(1)	closed	open	closed	lighted	not lighted
(2)	closed	closed	open	lighted	not lighted
(3)	open	closed	closed	not lighted	lighted
(4)	open	open	closed	lighted	not lighted

2. Plants are important to all living things because \_\_\_\_\_

- A. they are food producers
- B. they are oxygen producers
- C. they release water vapour into the air
- D. they help to remove carbon dioxide from the air

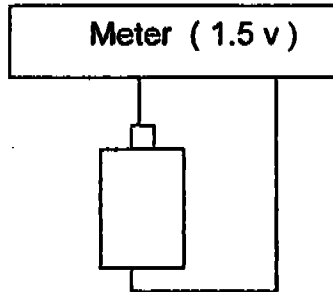
- (1) A only
- (2) A and B only
- (3) B and D only
- (4) All of the above

3. As the Moon orbits the Earth, it goes through different phases. Name the phase of the Moon in the diagram.

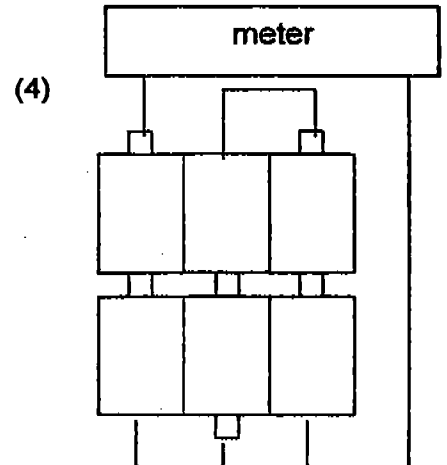
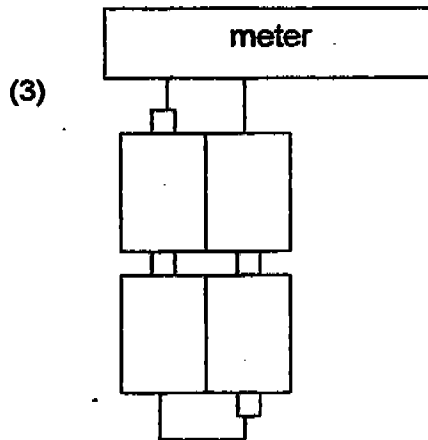
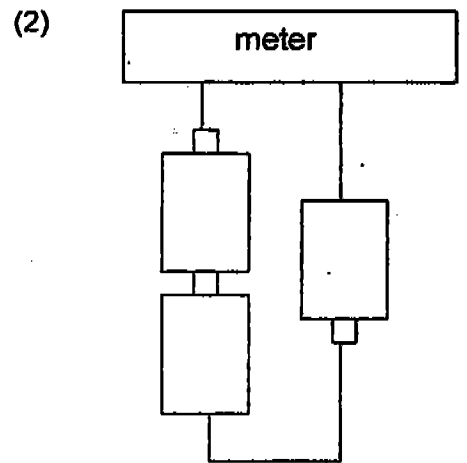
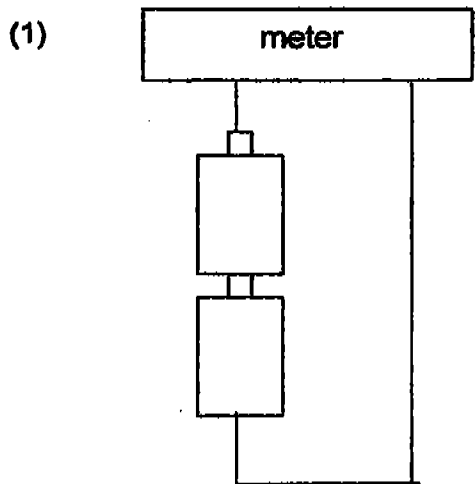


- (1) First Quarter
- (2) Crescent
- (3) Gibbous
- (4) Last Quarter

4. A meter is used to test the voltage produced by batteries connected in different ways. The meter shows the voltage of one cell.



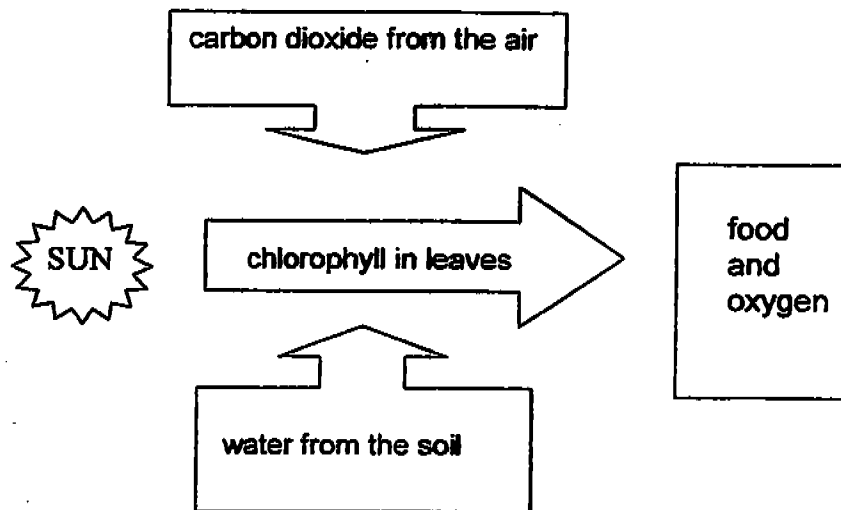
Which group of batteries would produce 6 volts on the meter ?



5. Which of the following equations shows the process of respiration ?

(1)	oxygen + sugar	→	carbon dioxide + water
(2)	carbon dioxide + water	→	energy + oxygen + water
(3)	oxygen + energy	→	carbon dioxide + sugar
(4)	oxygen + sugar	→	energy + carbon dioxide + water

6. The diagram shows what takes place during photosynthesis.



Which of the following shows the correct process ?

	raw materials	products
(1)	water	food
(2)	sunlight	food and oxygen
(3)	water and carbon dioxide	food and oxygen
(4)	sunlight and carbon dioxide	oxygen and water

7. The chick grows into an adult hen. What is one change that cannot be observed in its external appearance ?

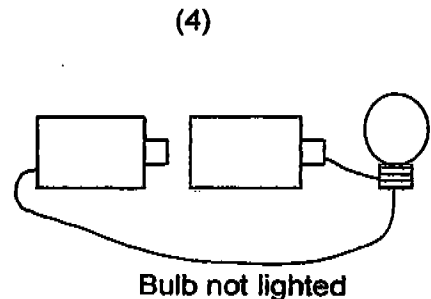
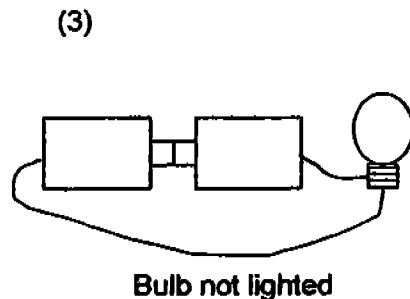
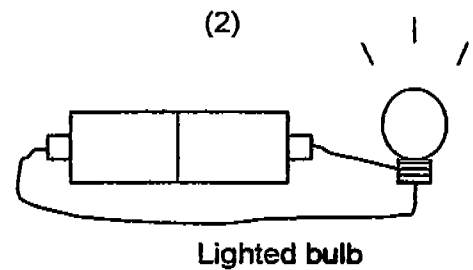
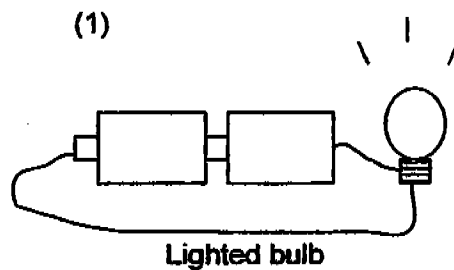
- (1) Growth of feet
- (2) Growth of wings
- (3) Development of egg
- (4) Change of feathers

8. Jia Jia cut a portion of a potato and a portion of a sweet potato. She put them in two identical pots containing garden soil. After some time, she noticed that shoots were growing from the potato but not from the sweet potato. What could be a possible reason for this ?

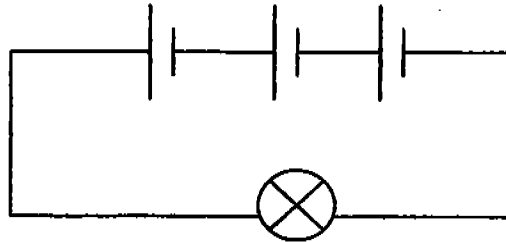
- (1) The potato stores more starch.
- (2) The potato grows from suckers.
- (3) The sweet potato is a storage root.
- (4) The sweet potato only grows from seeds.

9. While setting up an experiment on electricity, some students predicted that if two cells were joined negative end to negative end, electricity would not flow through. They used a 3 - volt bulb and 1.5 - volt cells for this experiment.

If they had predicted correctly, which of the following results would they not expect to see ?

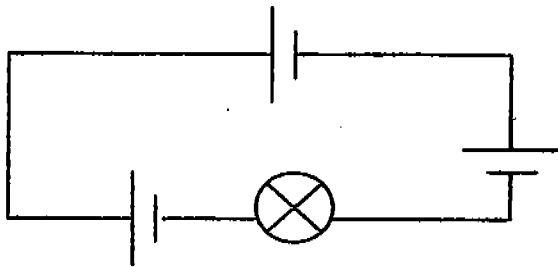


10. Noraini connected three cells and a bulb in a circuit as shown in the diagram.

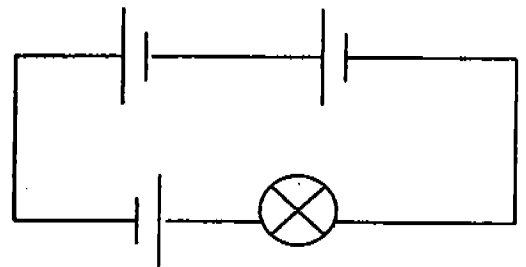


In which of the following circuits is the connection of cells the same as Noraini's ?

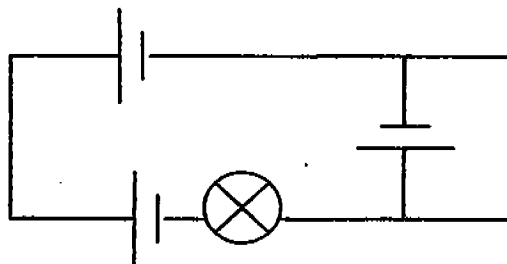
(1)



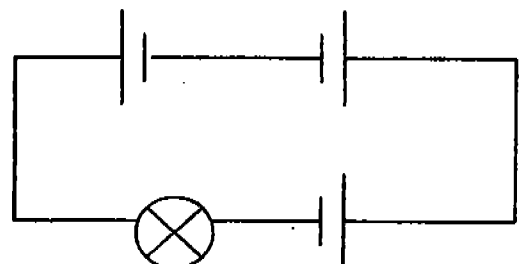
(2)



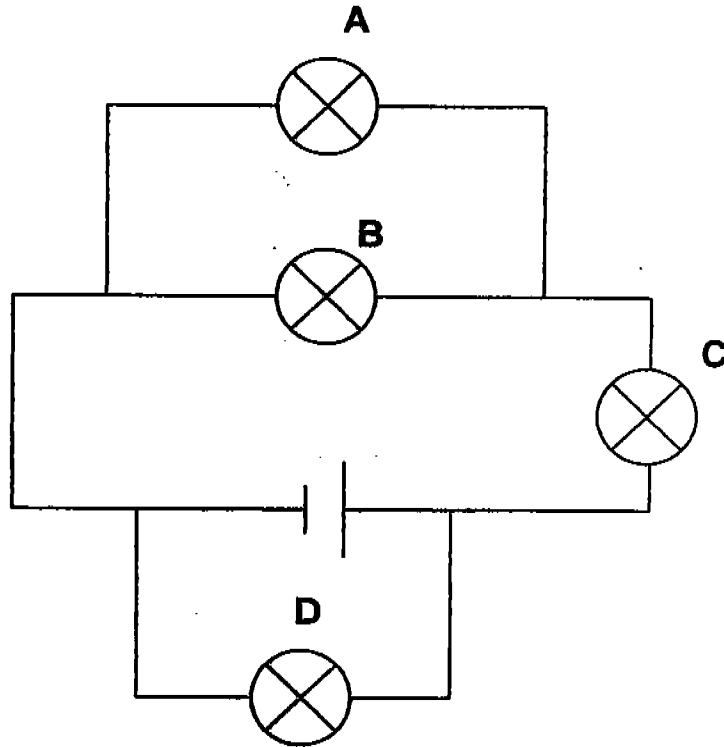
(3)



(4)



11. Study the circuit diagram.



Which bulb, if faulty, would allow only one other bulb to light up in the circuit ?

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

12. Which one of the following fruits is unlikely to be dispersed by wind ?

	Fruits	Characteristics
(1)	A	small and hairy
(2)	B	dry and has wing-like structure
(3)	C	fleshy and juicy
(4)	D	light and has tiny seeds



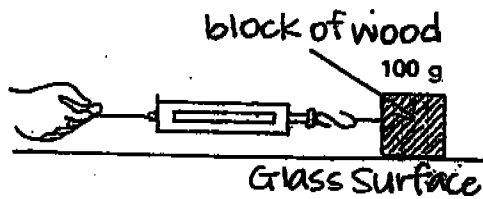
13. What process is taking place in the diagram shown below?



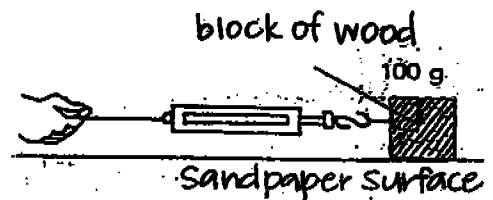
- (1) Budding
- (2) Fertilisation
- (3) Cell division
- (4) Cell multiplication

14. Based on the diagrams shown below, which of the following scales will have the smallest reading?

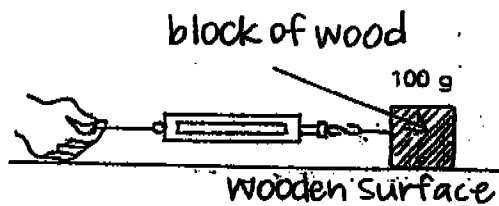
(1)



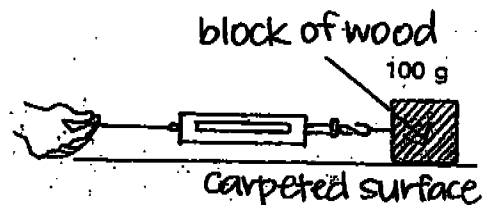
(2)



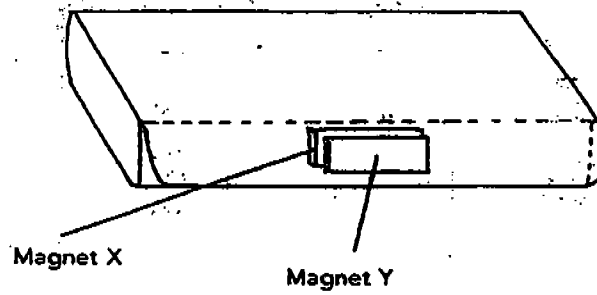
(3)



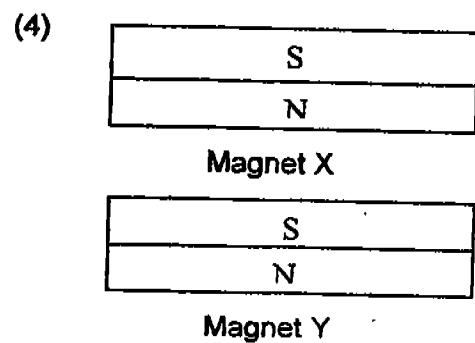
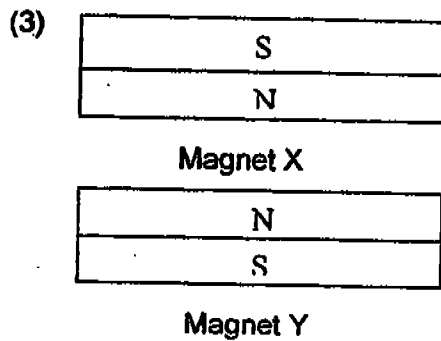
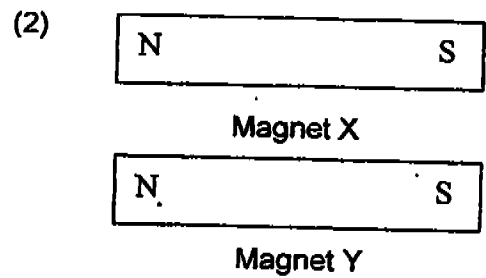
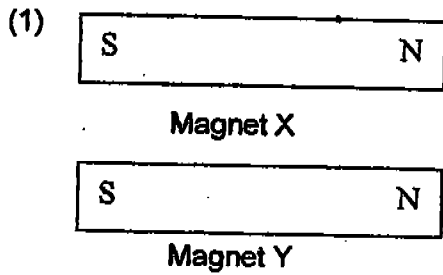
(4)



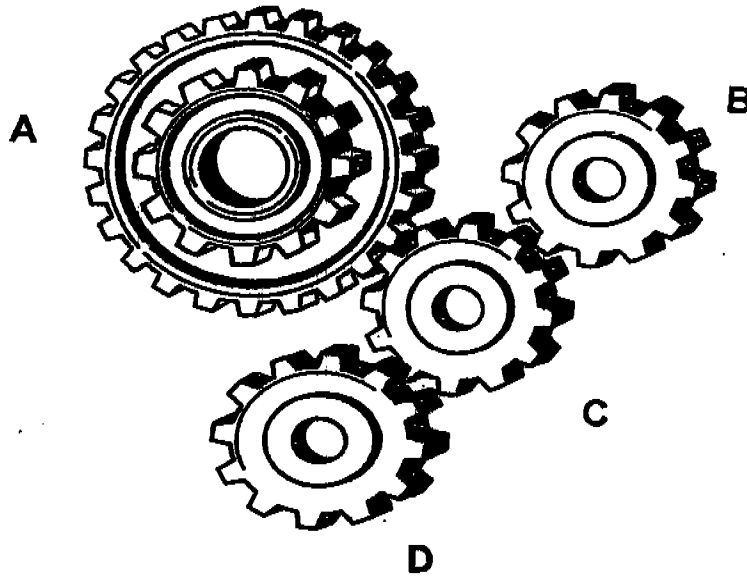
15. The pencil case below makes use of two pieces of magnet to shut itself.



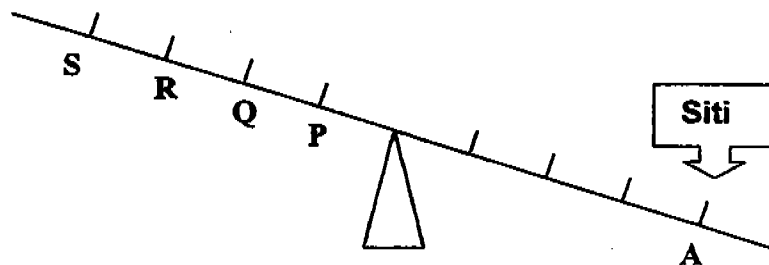
Which one of the following shows the correct position of the poles of Magnet X and Magnet Y ?



16. Study the gear system shown below. Which gear will move in a direction different from the rest when they turn ?



- (1) A  
 (2) B  
 (3) C  
 (4) D
17. Melissa and her friend, Siti, want to play on the see-saw in the playground. Melissa weighs 40kg, but Siti weighs only 30kg. If Siti sits on the see-saw at the point marked A, where should Melissa sit so that the see-saw is balanced?



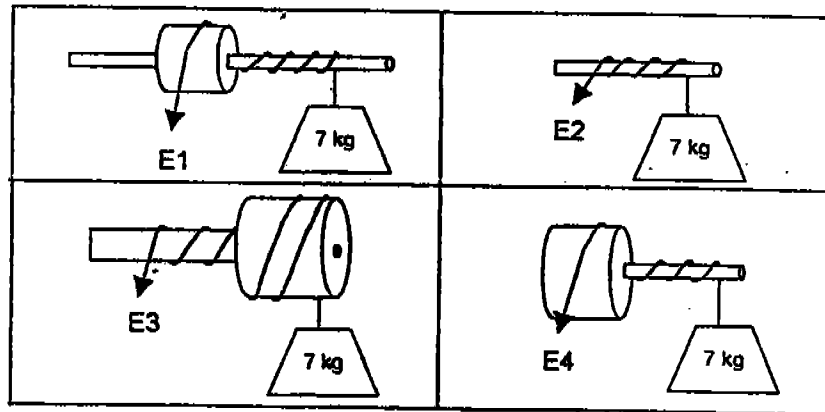
- (1) P  
 (2) Q  
 (3) R  
 (4) S

18. Using a wheel of a larger diameter in a wheel and axle \_\_\_\_\_

- (A) lessens the effort required
- (B) increases the effort required
- (C) makes the wheel move a smaller distance than the axle
- (D) makes the wheel move a greater distance than the axle

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

19. From the diagrams below, the most effort needed to lift the load will be \_\_\_\_\_.



- (1) E1
- (2) E2
- (3) E3
- (4) E4

20. The table below shows how some machines are grouped.

X	Y	Z
vehicle steering wheel	nut cracker	stairs
tap head	ice tongs	ramp
cross-spanner	fishing rod	pulley

Which machine has been wrongly grouped.

- (1) Pulley
- (2) Ice tongs
- (3) Tap head
- (4) Fishing rod

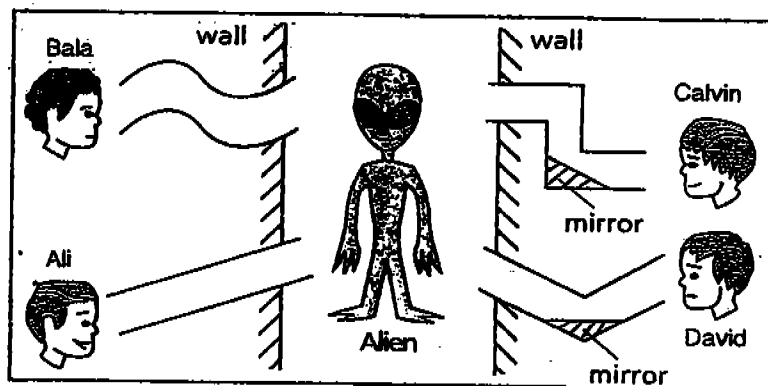
21. Sabrina tested some properties of solids, liquids and gases, and recorded her results in the table below by placing a tick (✓) if that form of matter had that property, and by placing a cross (X) if it did not.

	P	Q	R
Flow easily	X	✓	✓
Can form drops	X	✓	X
Some are invisible	X	X	✓

Sabrina made a mistake of not putting in the headings at the top of columns P, Q and R. Which headings do you think should be at the top of each column?

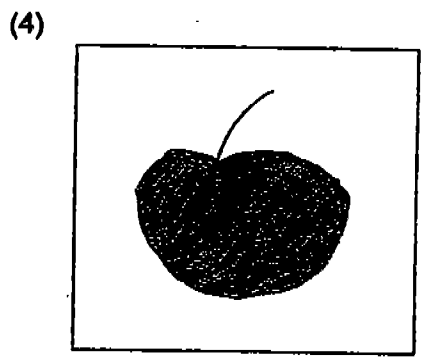
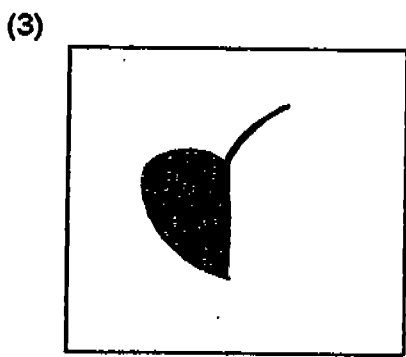
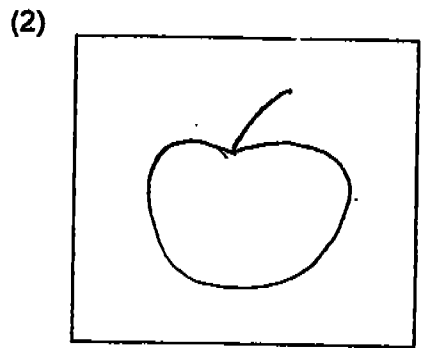
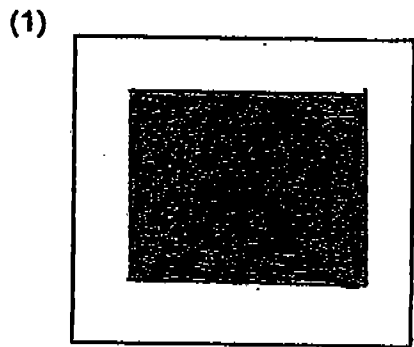
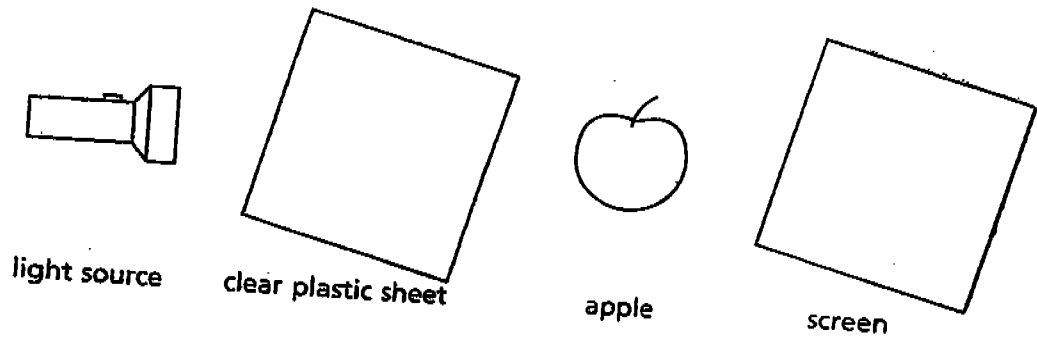
	P	Q	R
(1)	Solids	Liquids	Gases
(2)	Gases	Liquids	Solids
(3)	Liquids	Gases	Solids
(4)	Gases	Solids	Liquids

22. Which of the four boys will be able to see the alien?

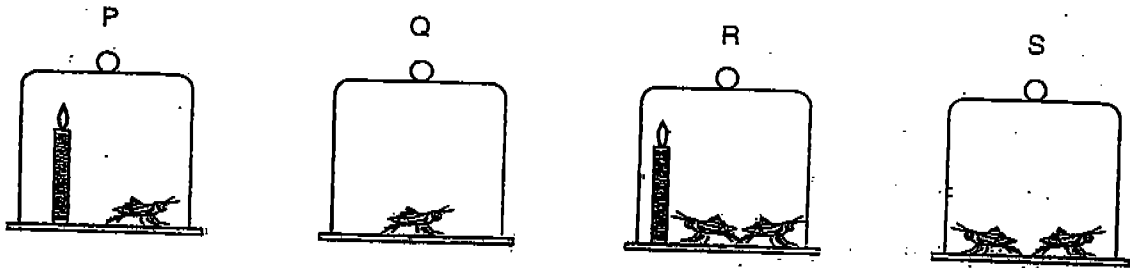


- (1) Ali and Bala  
 (2) Ali and David  
 (3) Bala and Calvin  
 (4) Calvin and David

23. Which one of the following pictures shows what will be seen on the screen?



24. There are 6 grasshoppers and 2 burning candles in 4 inverted glass jars as shown in the diagrams below.



Which one of the following statements is not true?

- (1) All the grasshoppers will not stay alive in the jars.
- (2) The grasshoppers in S will stay alive for the longest time.
- (3) The grasshopper in P dies faster than the grasshopper in Q.
- (4) The grasshoppers in R will die faster than the grasshoppers in S.

25. Which of the following statement(s) is/are true?

- (A) Blood rich in oxygen travels from the heart to the lungs.
- (B) The lungs help to remove carbon dioxide from our body.
- (C) Food is transported to all parts of the body by the blood.

- (1) A only
- (2) A and B only
- (3) B and C only
- (4) All of the above

METHODIST GIRLS' SCHOOL (Primary)  
Semestral Assessment 2 2004  
Primary 5

# Science

Wednesday, Nov 3, 2004

## Booklet B



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

Class: P 5 \_\_\_\_\_

Total time for Booklets A and B:  
1h 45 min

Booklet A (50)
Booklet B (40)
Total (90)

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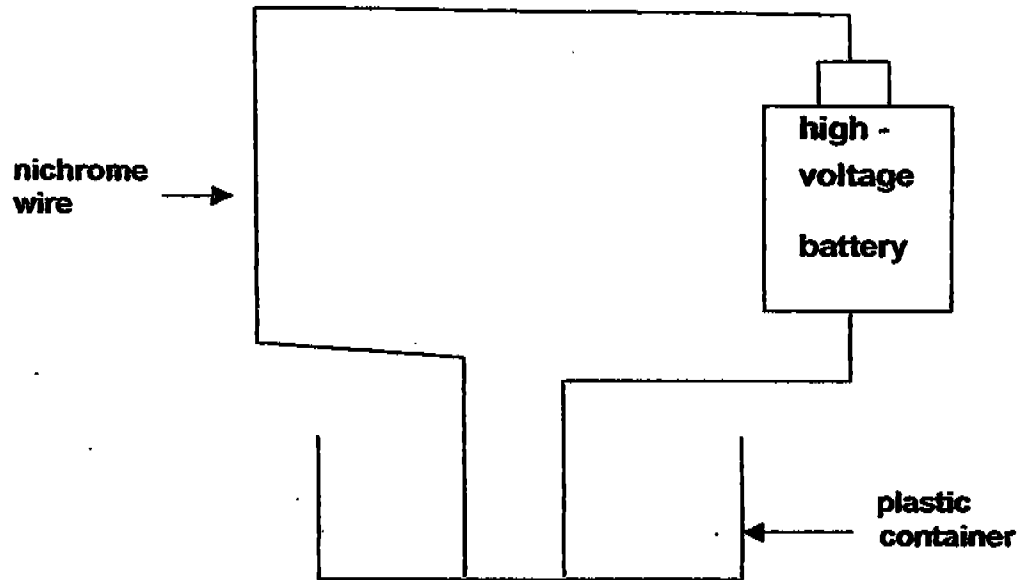
ANSWER ALL QUESTIONS.



**Section B ( 40 marks )**

**For Questions 26 to 40 , write your answers in the spaces provided.**

- 26:** An experiment is set up as shown in the diagram.  
Nichrome wire is a good conductor of heat.



- a) Will the nichrome wire become hot ? ( 1 mark )

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- b) Explain your answer in (a). ( 1 mark )

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- c) What will happen to the nichrome wire when the container is filled to the brim with water ? ( 1mark)

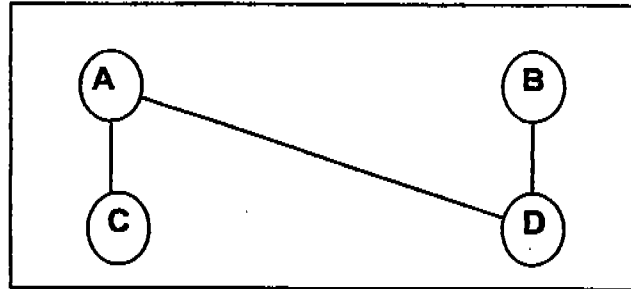
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- d) What conclusion can you draw from the experiment in ( c ) ? ( 1mark)

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27. There are four metal studs, A, B, C and D, fixed to a circuit board. Some of the studs are connected to one another by wires on the other side of the board, as shown in the diagram.



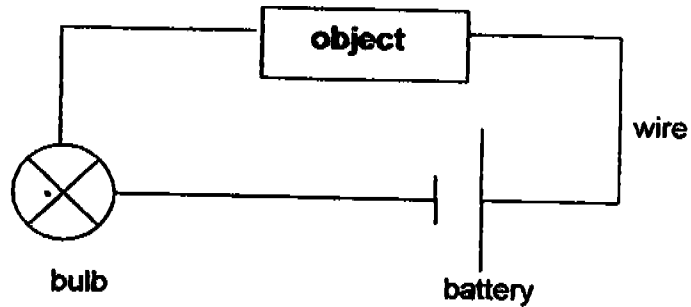
The studs are tested with a circuit tester.

Complete the table by writing 'Yes' or 'No'.

Studs tested	Does the bulb light up ?
A and B	
A and C	
A and D	
B and C	
B and D	
C and D	

( 3 marks )

28. A class wants to find out if some objects are conductors of electricity. They set up the experiment as shown.



Objects to be tested : banana , lime , plastic fork

In order to have a fair test, they have to observe certain conditions. Fill in the table with the correct variables.

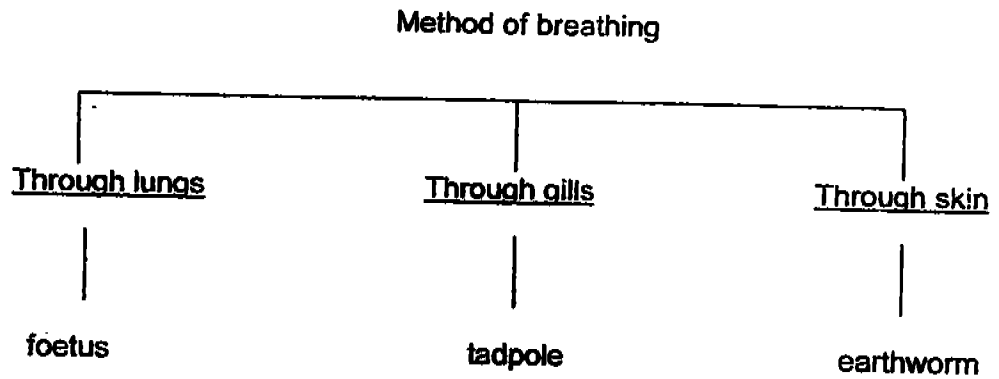
3 variables to be kept the same

( 3 marks )

29. There are two kinds of tubes in the stem of a plant. They are used for moving materials from one part of the plant to another.

- a) One kind of tube transports \_\_\_\_\_ and minerals from the \_\_\_\_\_ to all parts of the plant. ( 1 mark )
- b) The other kind of tube transports \_\_\_\_\_ from the \_\_\_\_\_ to the other parts of the plant. ( 1 mark )

30. The classification table shows three methods of breathing.



a) Which organism in the table has been classified wrongly? ( 1 mark )

\_\_\_\_\_

b) Explain why this organism is classified wrongly. ( 1 mark )

\_\_\_\_\_  
\_\_\_\_\_

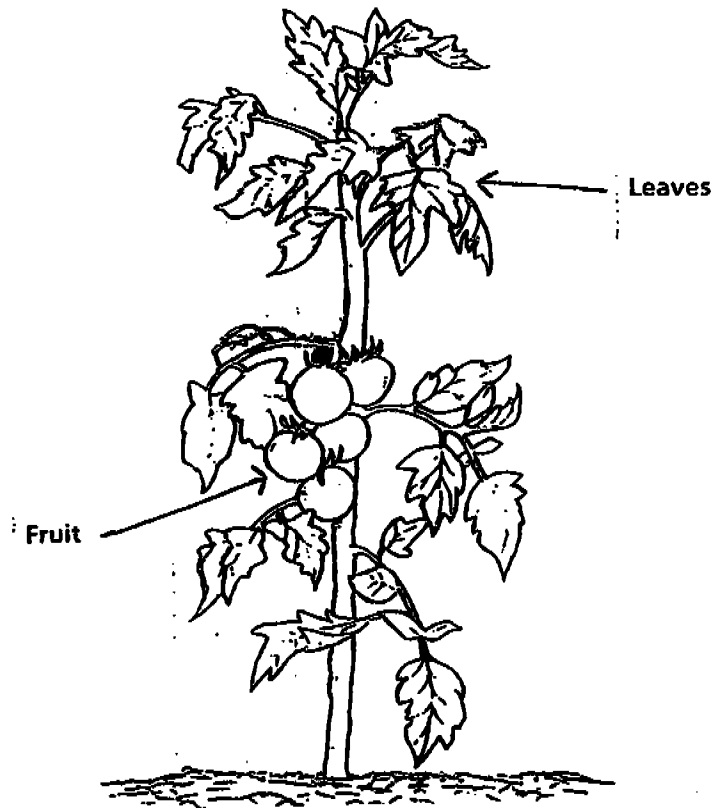
c) The mosquito larva cannot be placed in any of the groups above. How does it breathe in water? ( 1 mark )

\_\_\_\_\_  
\_\_\_\_\_

31. How is oxygen transported from our lungs to other parts of the body? ( 1 mark )

\_\_\_\_\_  
\_\_\_\_\_

32. The diagram shows a plant growing in the garden.



a) Explain why it is a flowering plant. ( 1 mark )

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b) Does the plant have roots ? ( 1 mark )

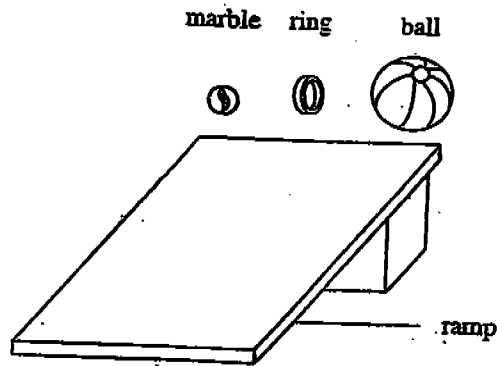
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c) Give a reason to your answer in ( b ). ( 1 mark )

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33. A marble, a ball and a ring were rolled down a ramp. The times taken for the objects to reach the floor were recorded. The table below shows the result of the experiment, which was conducted 3 times.



Objects	Time Taken (seconds)		
	1 <sup>st</sup> try	2 <sup>nd</sup> try	3 <sup>rd</sup> try
Marble	3.2	3.5	2.1
Ring	3.9	4.2	3.5
Ball	1.8	2.6	1.2

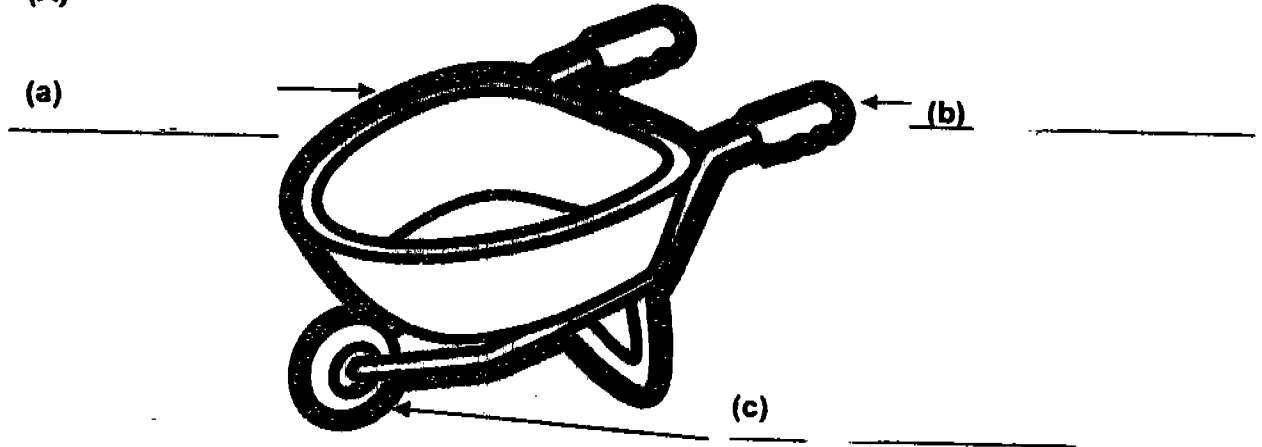
Give two possible reasons why the times taken for each object to reach the floor are different for the 3 tries. (2 marks)

Reason 1 \_\_\_\_\_  
 \_\_\_\_\_

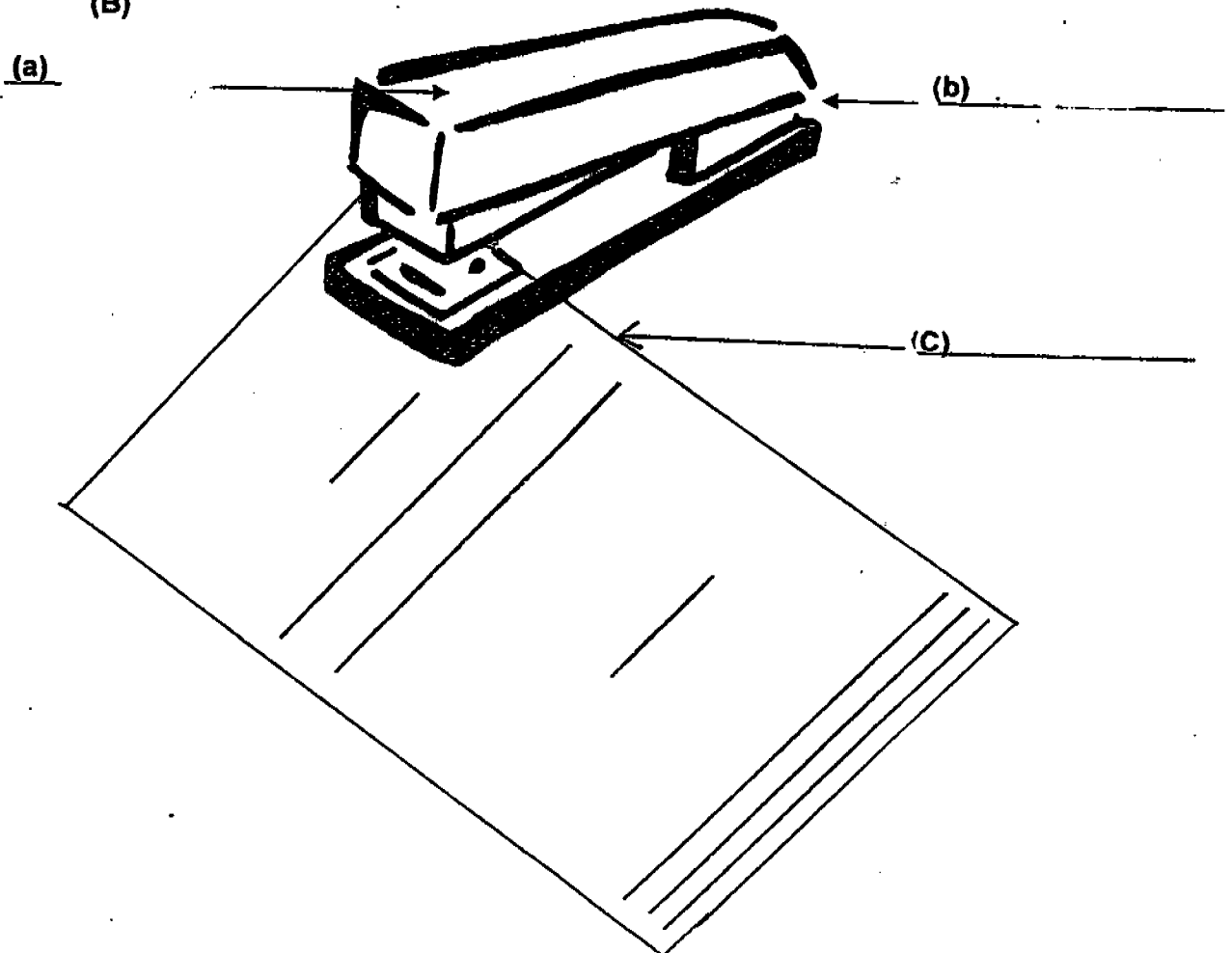
Reason 2 \_\_\_\_\_  
 \_\_\_\_\_

34. Look at the pictures below. Picture (A) shows a wheelbarrow and picture (B) shows a stapler. Label the different parts load, effort and fulcrum in the blanks given. (3 marks)

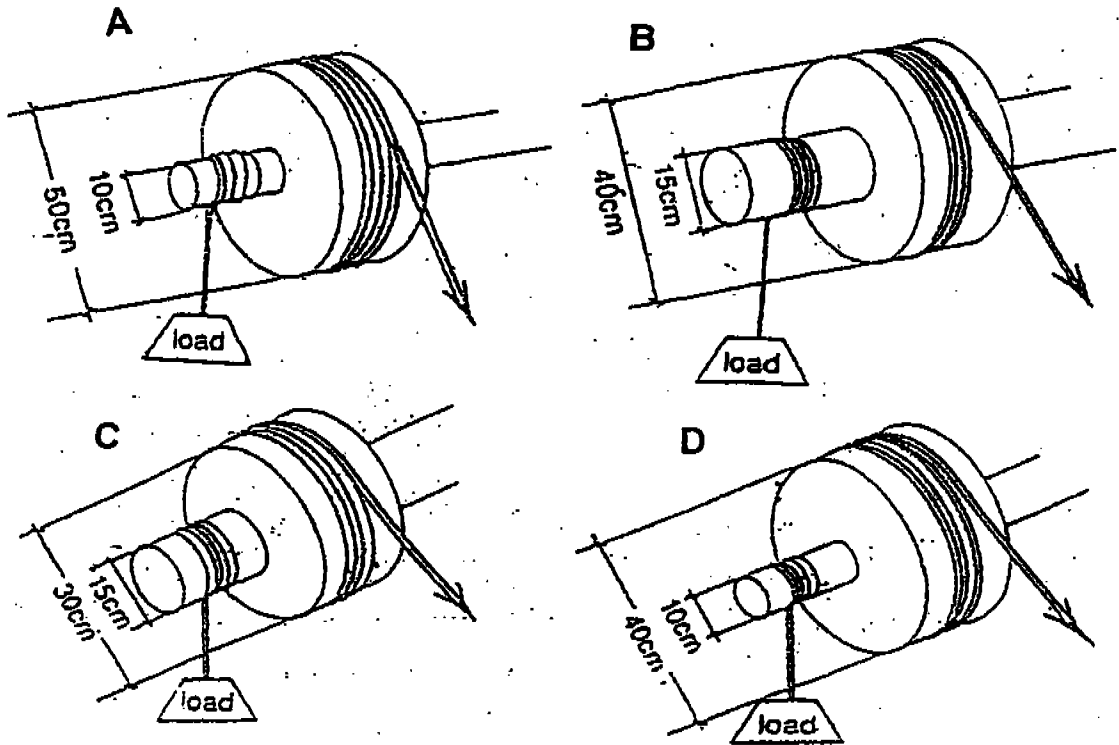
(A)



(B)



35. Four wheels and axles A, B, C and D shown below are used to raise the same load. The diameters of the wheels and axles are given in the diagrams.

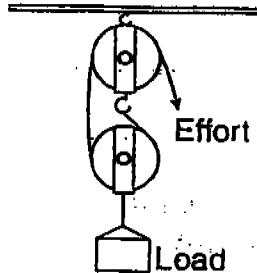


Arrange these wheels and axles in ascending order (from the smallest to the largest) of the effort required to raise the load. (2 marks)

smallest				largest



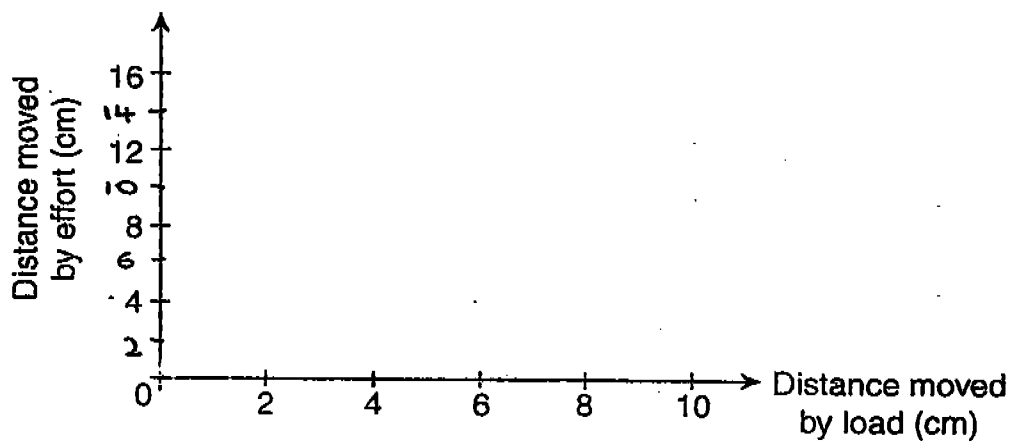
36. Pauline carried out an experiment using the following pulley system.



Her results are shown in the table below.

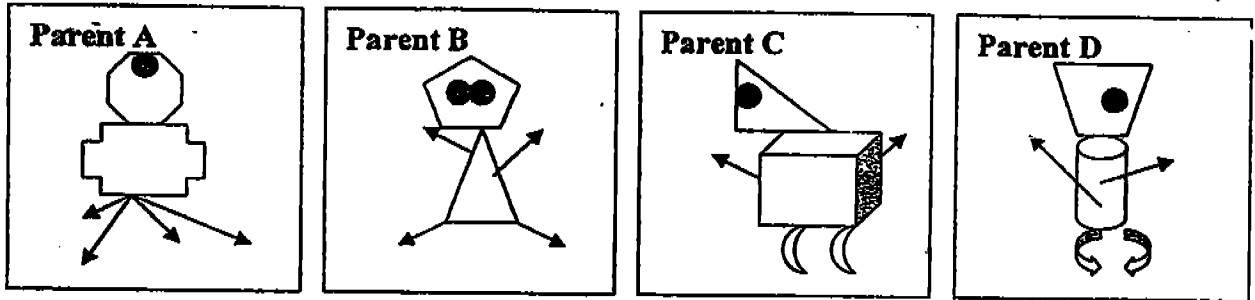
Distance moved by load (cm)	Distance moved by effort (cm)
2	4
4	8
6	12
8	16

- (a) Use her results to plot a graph. (2 marks)



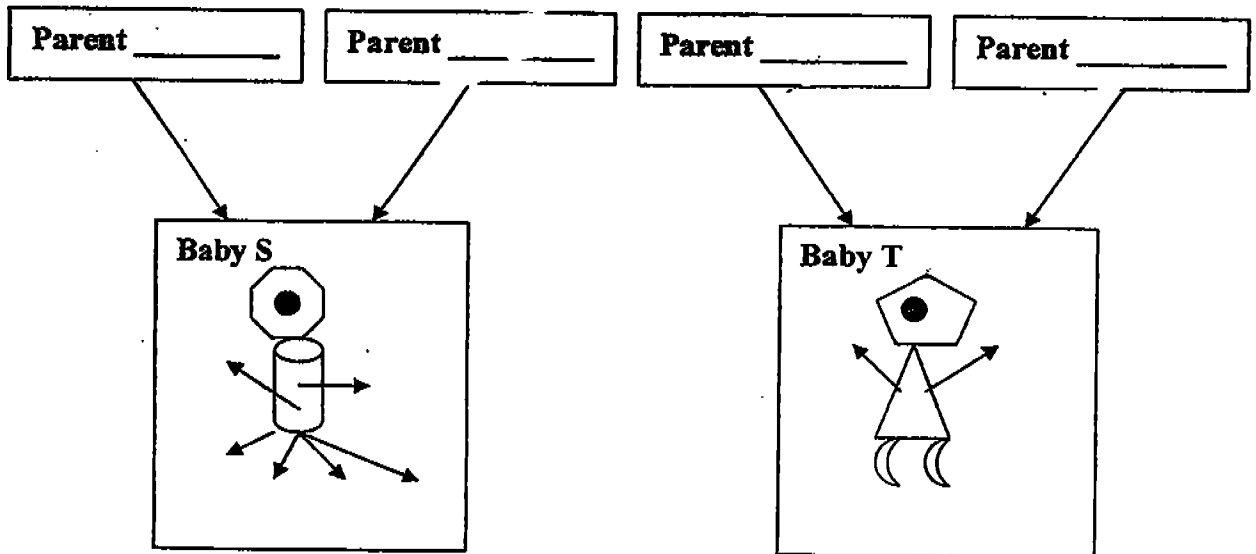
- (b) If the effort moves by a distance of 15cm, what is the distance moved by the load? (1 mark)

37. In Planet Zee, Zee parents pass on some of their own characteristics to their babies just like human beings. At the Zee Hospital, two Zee babies were accidentally mixed up at birth.

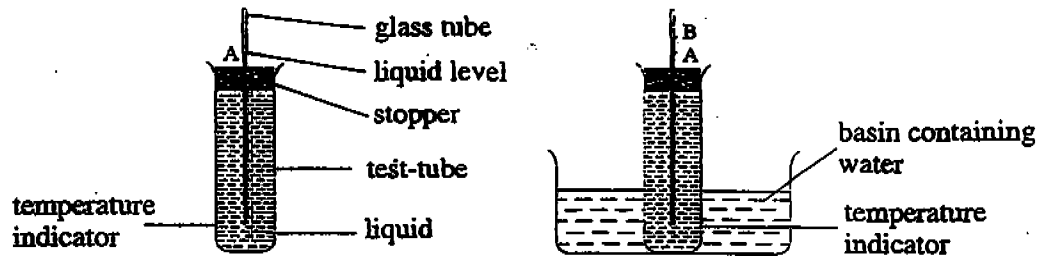


Help the parents shown in the diagrams above to find their own baby.

Write the correct letter in each of the boxes below. (4 marks)



38.



When Brenda inserted the temperature indicator into a basin containing water, she observed the changes as shown above.

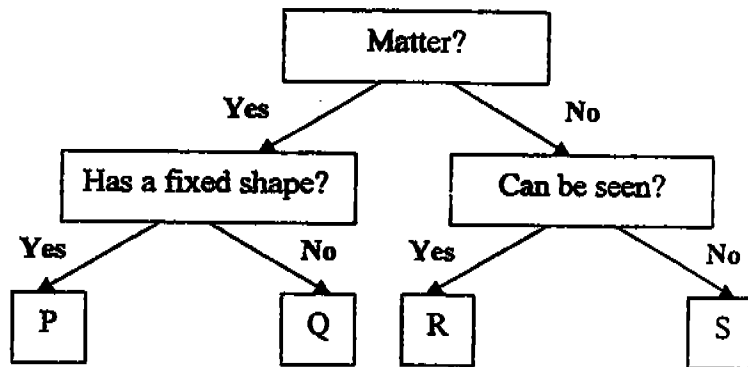
(a) What happens to the level of the liquid in the test-tube? (1 mark)

\_\_\_\_\_

(b) What can you tell about the water in the basin? (1 mark)

\_\_\_\_\_

39. Study the classification table below.



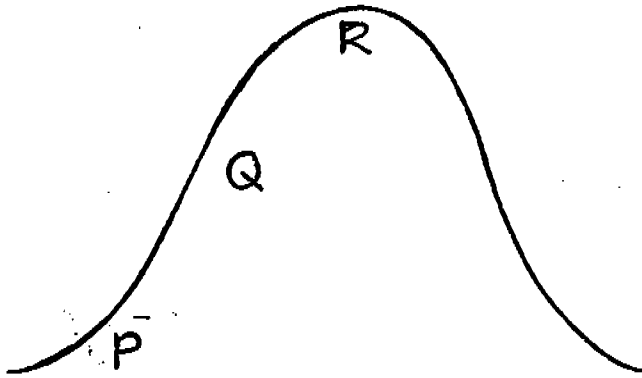
In which group ( P,Q, R or S ) should you classify the following? (3 mark)

(a) Wind - \_\_\_\_\_

(b) Shadow - \_\_\_\_\_

(c) In which group ( P, Q, R, S ) should ' Force ' be classified ? \_\_\_\_\_

40. The diagram below shows a mountain.



- (a) Which part of the mountain will the fog and mist be the thickest? (1 mark)

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- (b) Give a reason for your answer in (a). (1 mark)


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End of Paper

METHODIST GIRLS' SCHOOL  
SEMESTRAL ASSESSMENT 2, 2004  
PRIMARY 5 SCIENCE

SA2

- 1) 4            26) a) No  
2) 4            b) The plastic container is an insulator of  
                  electricity and so the electric current  
3) 3            c) Water is a good conductor of electricity.  
4) 3            27) Yes            28) The number of batteries  
5) 4            Yes                The length of wire  
6) 3            Yes                The voltage of the bulb  
7) 4            Yes  
8) 3            29) a) water        b) food  
9) 2            roots              leaves  
10) 2           30) a) The foetus  
11) 3            b) Foetus receives oxygen and gives out carbon  
                  dioxide through the mother's blood.  
12) 3            c) It breathes through a breathing tube.  
13) 3           31) In our lungs, the blood from the heart goes to  
                  the lungs to collect oxygen. It goes to the  
14) 1            heart and it is then pumped to all parts of the  
                  body.  
15) 4           32) a) It bears fruits. Flowers must be pollinated  
                  and fertilised to become a fruit.  
16) 3            b) The plant has roots.  
17) 3            c) The plant needs the roots to hold it up and  
                  it absorbs water and minerals for the plant.  
18) 2           33) 1) Different amount of force applied.  
19) 4            2) Starting position where object was placed  
                  could be different.  
20) 4           34) (A) a) load        b) effort        c) fulcrum  
21) 1            (B) a) effort        b) fulcrum        c) load  
22) 2           35) A        D        B        C  
23) 4           36) a)             b) 7.5 cm  
24) 2            37) A        D        B        C  
25) 3            38) a) The water level rises.  
                  b) The water in the basin  
                  is hot.  
39) a) Q    b) R    c) S  
40) a) Part R        b) At the highest point, it will be  
                  the coldest and so condensation  
                  is taking place and it can be seen