



Rulang Primary School

CONTINUAL ASSESSMENT SCIENCE 2009

Name: _____ ()

Marks: _____ / 60

Level: Primary 6

Total Time for Booklets

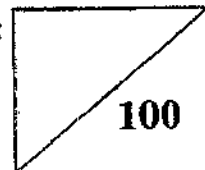
Class: Primary 6 ()

A and B: 1 h 30 min

Setter: Mrs Chan Khue Hiang

Date: 3 Mar 2009

Total Marks:



BOOKLET A

Instructions to pupils:

1. Do not open this booklet until you are told to do so.
2. You are required to answer **all** the questions in this booklet.
3. This question booklet consists of

19

 printed pages, including the cover page.

Section A (30 x 2 marks)

For each of the 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.

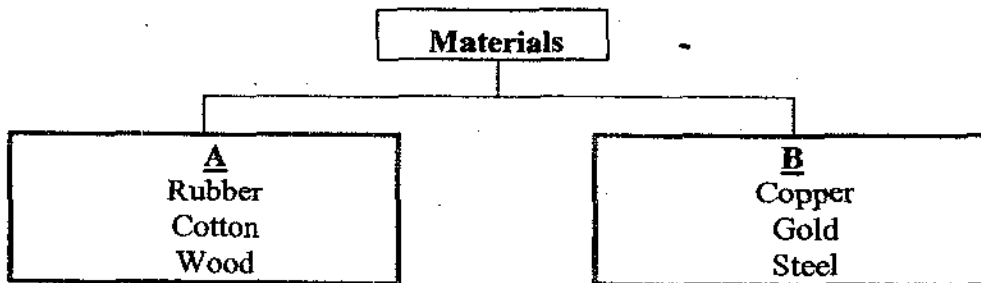
1. In which one of the following groups are all the objects obtained from things that were once alive?

- (1) Woollen scarf, gold ring and cotton shirt
- (2) Silk tie, nichrome wire and plastic raincoat
- (3) Glass rod, wooden chopsticks and paper clip
- (4) Leather bag, rubber tyre and silk handkerchief

2. Which one of the following characteristics of the bracket fungus distinguishes it from a plant?

- (1) It does not bear flowers.
- (2) It reproduces from spores.
- (3) It gets its nutrition from decaying matter.
- (4) It is able to move from one place to another on its own.

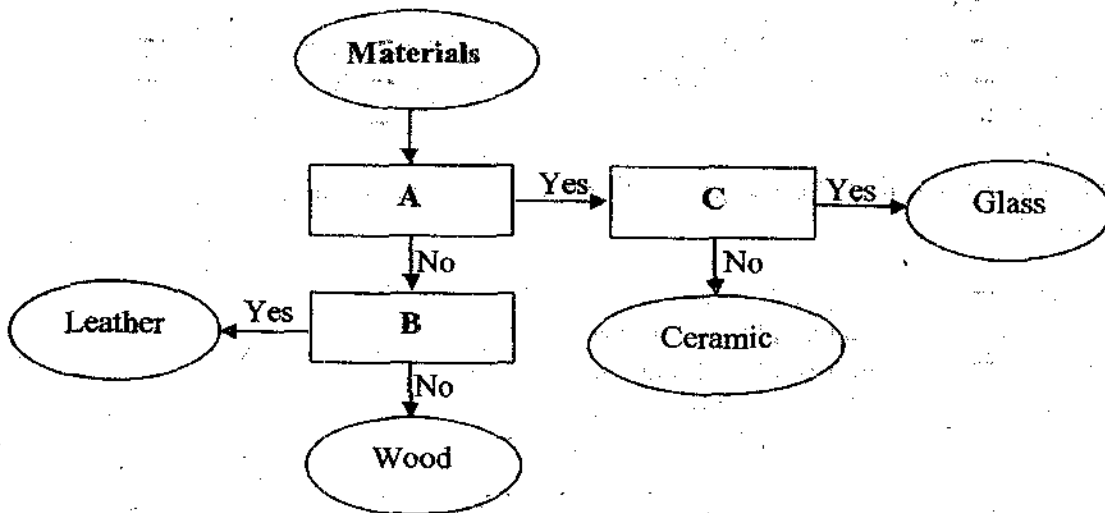
3. Study the classification chart below carefully.



Which one of the following sets are appropriate headings for A and B respectively?

	A	B
(1)	Natural	Man-made
(2)	Flexible	Not flexible
(3)	Non-magnetic	Magnetic
(4)	Non-metals	Metals

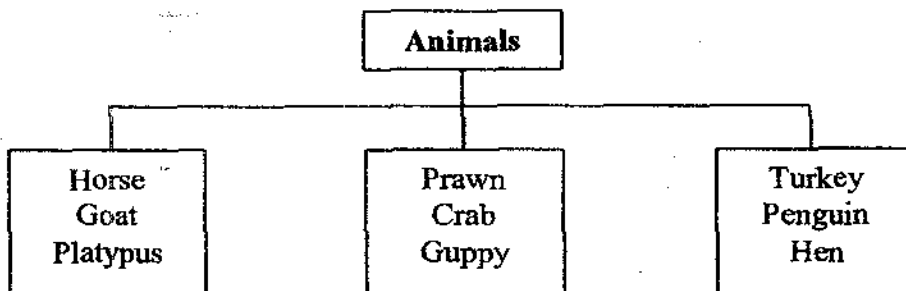
4. Study the flowchart below carefully.



Which one of the following sets of questions in the table below can A, B and C be?

	A	B	C
(1)	Is it hard?	Is it magnetic?	Is it a good conductor of heat?
(2)	Is it flexible?	Is it a good conductor of heat?	Is it magnetic?
(3)	Does it break easily?	Is it flexible?	Does it allow light to pass through?
(4)	Does it allow light to pass through?	Does it break easily?	Is it hard?

5. Study the classification chart below carefully.



Which one of the following animals is wrongly classified?

- (1) Hen
- (2) Guppy
- (3) Penguin
- (4) Platypus

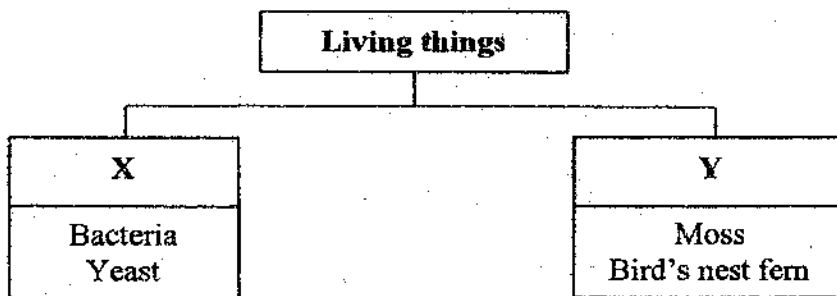
6. Study the three groups of animals below carefully.

Group A	Group B	Group C
Bear	Giraffe	Shark
Rat	Zebra	Lion

The animals have been classified according to _____.

- (1) their nutrition
- (2) their way of movement
- (3) their way of reproduction
- (4) the number of cells they have

7. The classification chart below shows how some living things can be grouped.

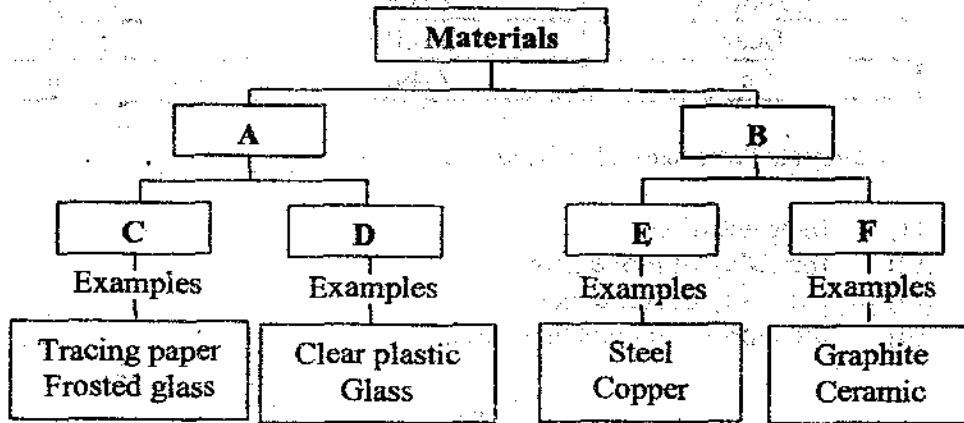


Which of the following is / are the correct headings for X and Y?

	X	Y
A:	Feed on other organisms	Cannot make their own food
B:	Have one cell	Have many cells
C:	Reproduce from spores	Reproduce from seeds
D:	Cannot move from place to place by themselves	Can move from place to place by themselves

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

8. The classification chart below shows how different materials are classified according to certain characteristics, A, B, C, D, E and F.



Which one of the following are appropriate headings for A and E respectively?

	A	E
(1)	Non-metals	Magnetic
(2)	Allow some or all light to pass through	Metals
(3)	Poor conductors of heat	Conductors of electricity
(4)	Electrical insulators	Good conductors of heat

9. The diagram below shows a drill bit that is used in a cordless power drill to drill holes in wood, plastic, metal and concrete walls. Material X is used to make the drill bit.

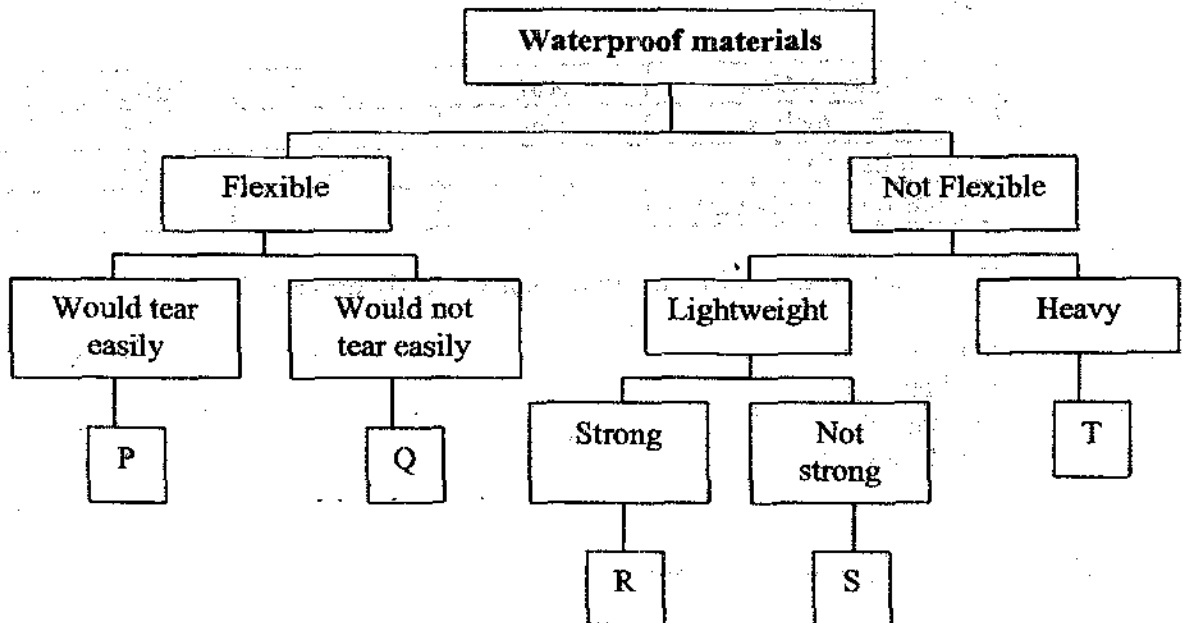


Which of the following physical properties must Material X possess in order for it to serve its purpose well?

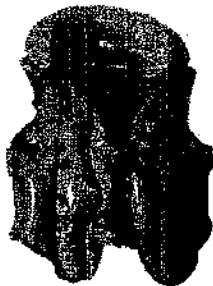
- A: Hard
- B: Strong
- C: Flexible
- D: Opaque

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

10. Study the classification chart below carefully.

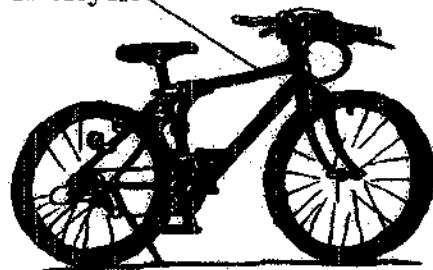


Which one of the following pairs of materials should Mr Lee recommend his customers to purchase for making an inflatable swimming vest and the frame of a bicycle?



Inflatable swimming vest

Frame of bicycle



	Inflatable swimming vest	Frame of bicycle
(1)	S	Q
(2)	R	P
(3)	Q	R
(4)	T	S

11. Anderson observed some animals. He recorded his observations in the table as shown below.

Observation	Ant	Spider	Butterfly	Cockroach
It has feelers.	Yes	No	Yes	Yes
It has six legs.	Yes	No	No	Yes
It has three body parts.	Yes	Yes	Yes	No

Which one of the following animals is correctly described?

- (1) Ant
 - (2) Spider
 - (3) Butterfly
 - (4) Cockroach
12. The table below shows how two animals, X and Y, are classified.

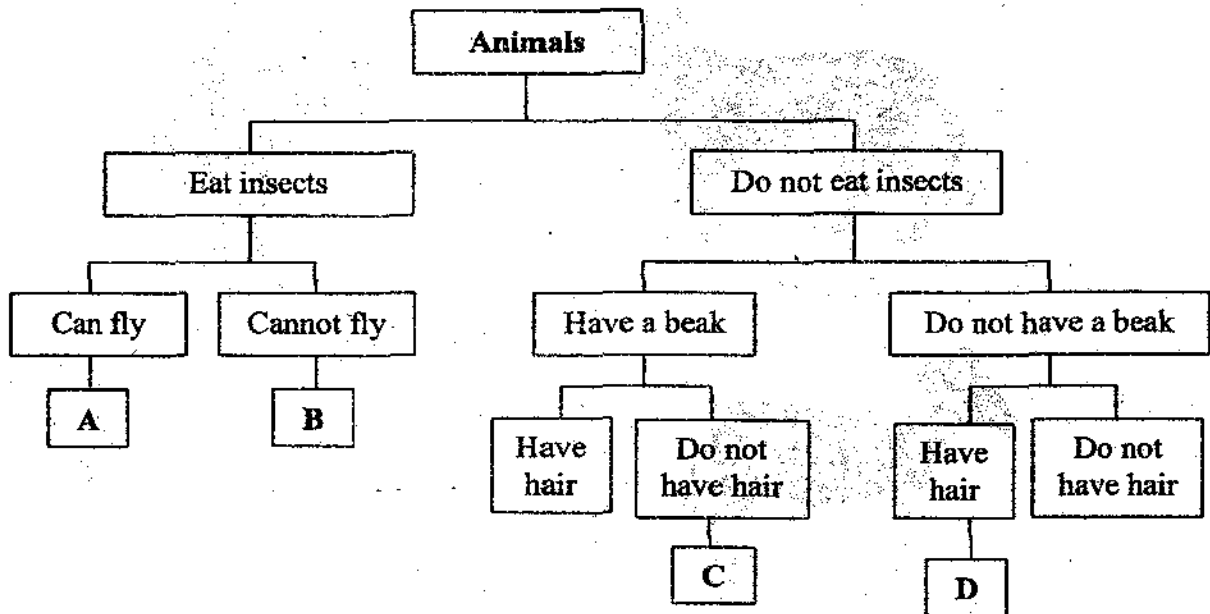
With hair			
Without wings		With wings	
Give birth to young alive	Do not give birth to young alive	Give birth to young alive	Do not give birth to young alive
	X	Y	

Which of the following statements is / are definitely true?

- A: Y is a mammal but X is not.
- B: X and Y live on land only.
- C: X and Y suckle their young.

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

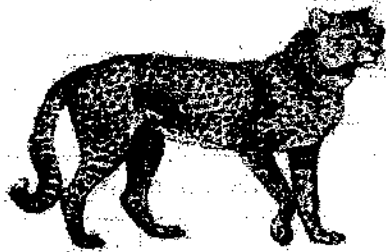
13. Study the classification chart below.



Jane has a pet which feeds only on fruits and has an outer covering of feathers. Which one of the following letters best represents Jane's pet?

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

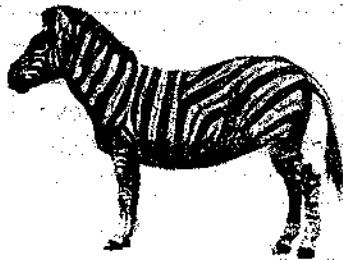
14. The diagrams below show four different animals.



Cheetah



Tiger



Zebra



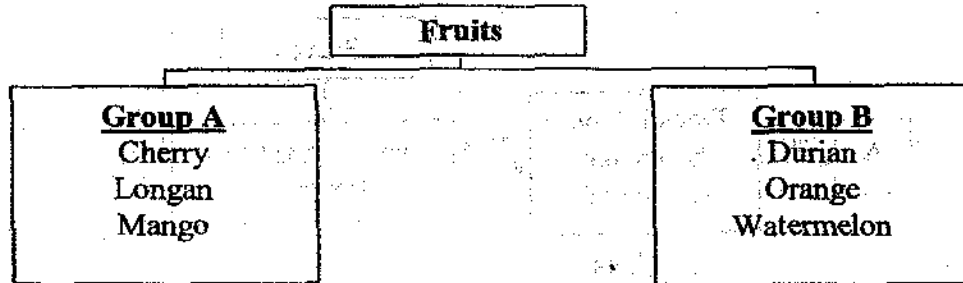
Platypus

Which of the following are common characteristics of the four animals?

- A: They have tails.
- B: They have stripes on their bodies.
- C: They have hair on their bodies.
- D: They have a pair of feelers.

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

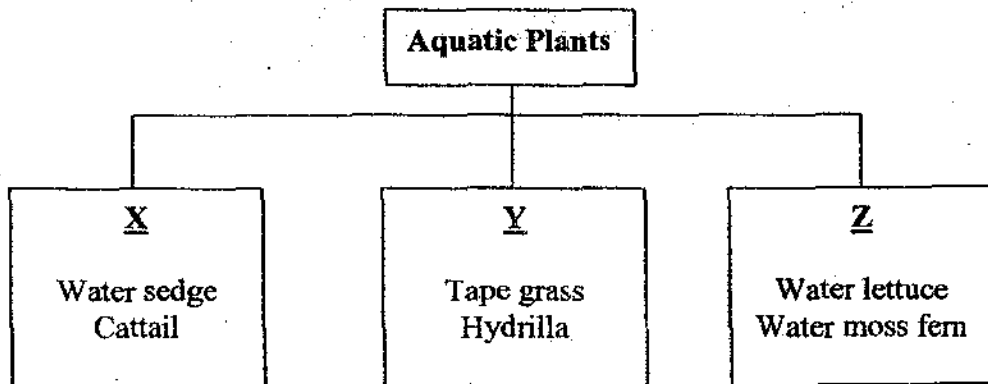
15. Study the classification chart below.



The fruits are most likely classified according to _____.

- (1) their size
- (2) the texture of their skin
- (3) the colour of their flesh
- (4) the number of seeds that they have

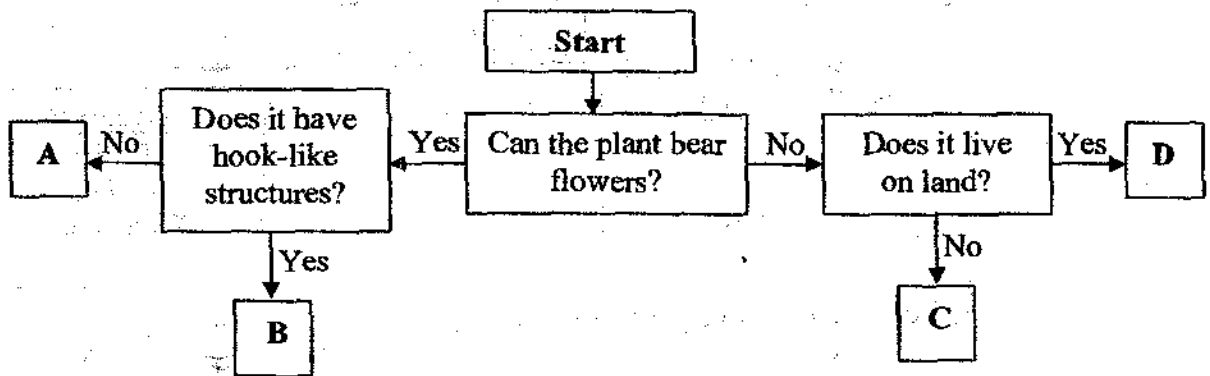
16. Study the classification chart below.



Aquatic plants can be classified in the above 3 ways. Which one of the following plants can be put in Group X?

- (1) Elodea
- (2) Duckweed
- (3) Water lily
- (4) Seaweed

17. The flowchart below provides information on characteristics of some plants.



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

	A	B	C	D
(X)	Mimosa	Shorea	Water lily	Rose X
(X)	Coconut tree	Love grass	Water moss fern	Bird's nest fern
(X)	Angsana	Mimosa	Lotus	Mushroom
(X)	Cotton plant	Lalang	Duckweed	Lotus

18. The box below shows a list of plants.

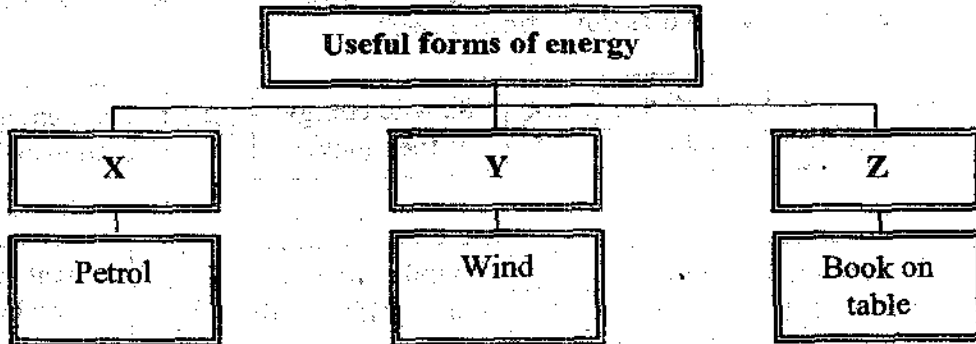
Banana	Heliconia	Water hyacinth
Lotus	Coconut	Money plant

Which of the following characteristics can be used to classify the above plants into 2 groups?

- A: Water plants and land plants
- B: Plants with edible parts and plants with no edible parts
- C: Flowering plants and non-flowering plants
- D: Seeds dispersed by wind and seeds dispersed by water

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

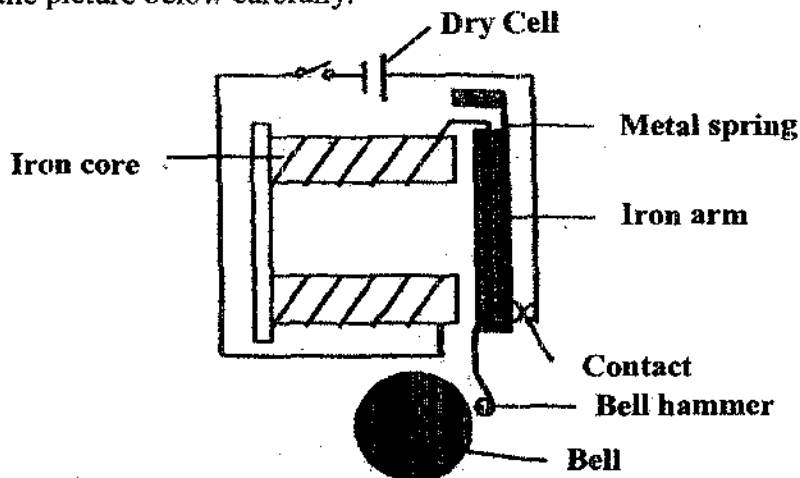
19. Study the classification chart below carefully.



Which one of the following are the correct headings for X, Y and Z?

	X	Y	Z
(1)	Electrical energy	Gravitational Potential energy	Solar energy
(2)	Kinetic energy	Sound energy	Heat energy
(3)	Chemical energy	Kinetic energy	Gravitational potential energy
(4)	Solar energy	Heat energy	Chemical energy

20. Study the picture below carefully.



Which one of the following shows the main forms of energy present at the various parts after the switch is closed?

	Dry Cell	Circuit	Bell Hammer
X	Electrical energy	Magnetic energy	Potential energy
<input checked="" type="checkbox"/>	Chemical energy	Electrical energy	Kinetic energy
X	Heat energy	Light energy	Sound energy
X	Gravitational potential energy	Heat energy	Magnetic energy

21. Which one of the following energy conversions best describes what happens when a monkey swings down from a tree?

- (1)

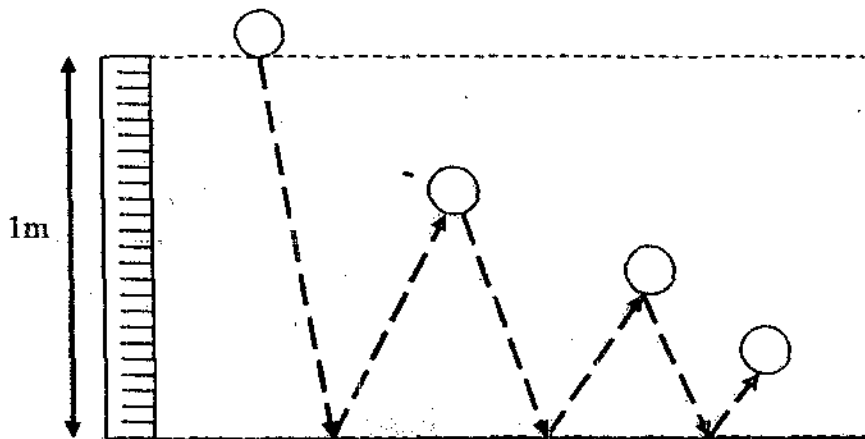
Gravitational potential energy of the monkey	⇒	Kinetic energy of the monkey	+	Heat energy between the branch and the monkey's arms
--	---	------------------------------	---	--
- (2)

Gravitational potential energy of the monkey	⇒	Sound energy from the swinging of the branch	+	Heat energy between the branch and the monkey's arms
--	---	--	---	--
- (3)

Gravitational potential energy of the monkey	⇒	Sound energy from the swinging of the branch	+	Sound energy from the monkey landing on the ground
--	---	--	---	--
- (4)

Gravitational potential energy of the monkey	⇒	Kinetic energy of the monkey	+	Chemical energy stored in the monkey
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22. A ping pong ball was dropped from a height of 1 metre from the ground.

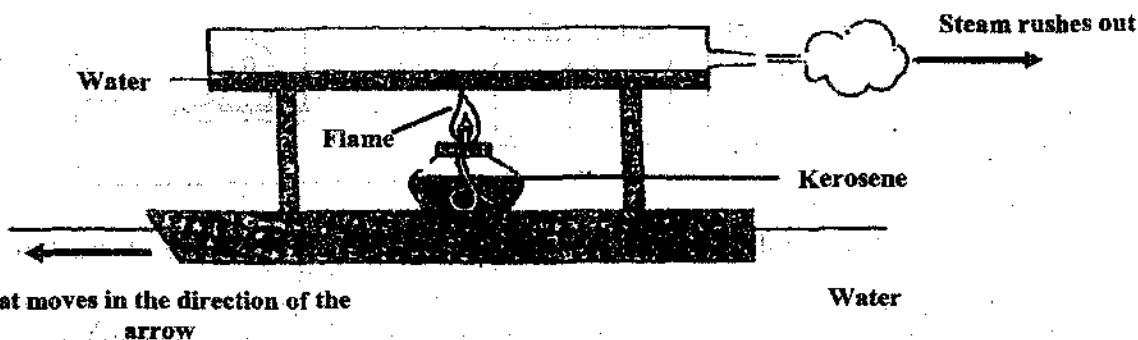


It bounced to a lower height each time it hit the ground as shown in the diagram above.

The ball did not bounce back to the same height from which it was first dropped because _____.

- (1) gravity pulled the ball more with each bounce
- (2) of the friction between the ball and the ground
- (3) all its potential energy was converted to sound and heat energy
- (4) friction needed to be overcome and some of its potential energy was converted to sound and heat energy

23. The diagram below is a simplified model of how a steamship works.



Which one of the following correctly describes the energy conversion in the steamship?

- (1) Heat energy \rightarrow Light energy \rightarrow Kinetic energy
 - (2) Kinetic energy \rightarrow Heat energy \rightarrow Kinetic energy
 - (3) Chemical energy \rightarrow Heat energy \rightarrow Kinetic energy
 - (4) Gravitational potential energy \rightarrow Light energy \rightarrow Kinetic energy
24. There are three cars, A, B and C, moving along a road. The table below shows their speed as they travel along the road.

Car	Speed	Mass
A	80 km/h	2000 kg
B	90 km/h	2200 kg
C	50 km/h	2000 kg

Four pupils made the following statements based on the above situation.

Alan: Some energy of these cars is converted into other forms of energy such as sound and heat energy.

Ben: Car C has the least kinetic energy.

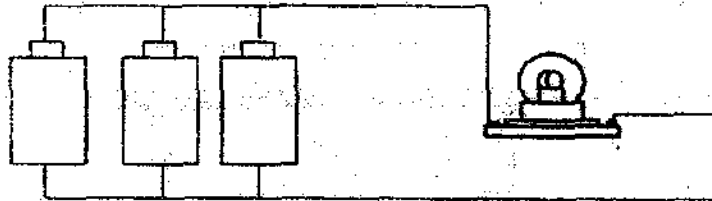
Carl: Cars A and B have the same amount of kinetic energy

David: The source of energy for the cars is from the petrol.

Which of the following pupils' statements are correct?

- (1) Alan and David only
- (2) Ben and Carl only
- (3) Carl and David only
- (4) Alan, Ben and David only

25. Study the diagram below carefully.



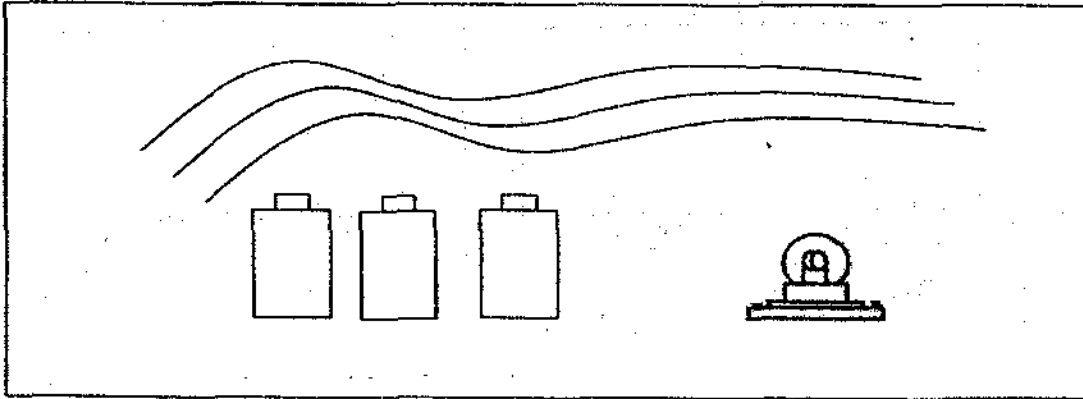
Which one of the following circuit diagrams represents the above electric circuit correctly?

<p style="text-align: center;">Circuit A</p>	<p style="text-align: center;">Circuit B</p>
<p style="text-align: center;">Circuit C</p>	<p style="text-align: center;">Circuit D</p>

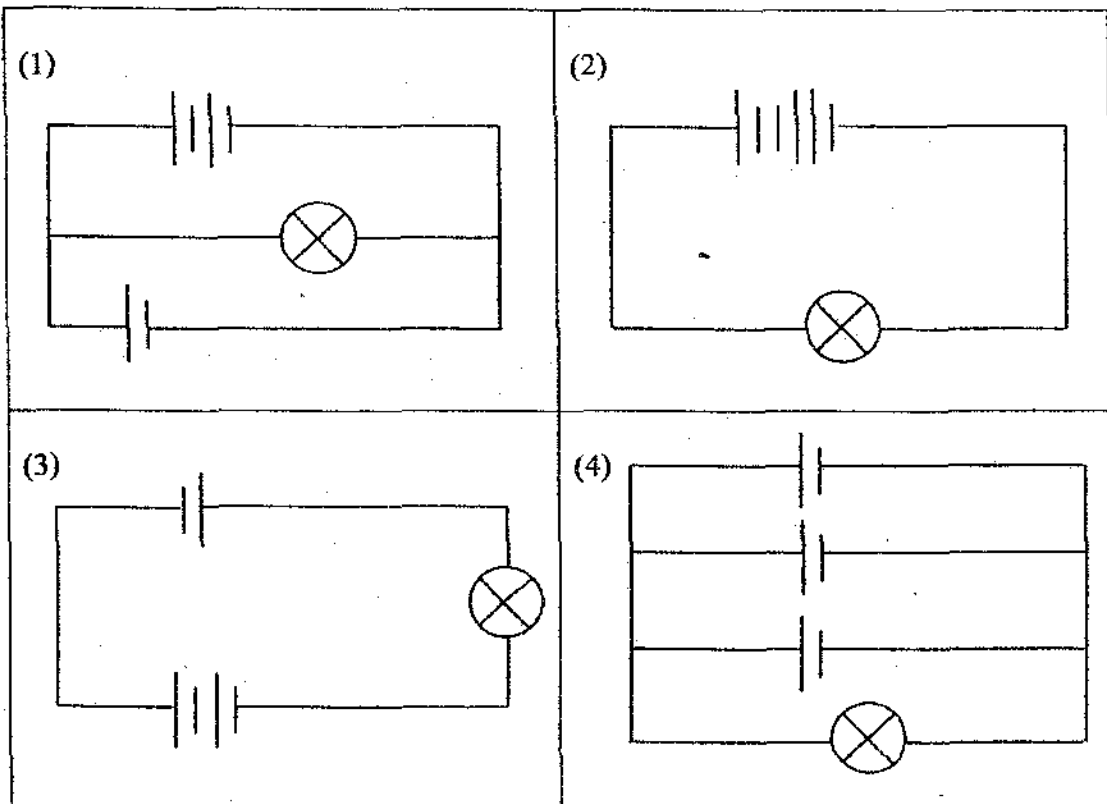
- (1) A
- (2) B
- (3) C
- (4) D

26. Elizabeth wants to set up a circuit that will allow the bulb to light up with the most brightness.

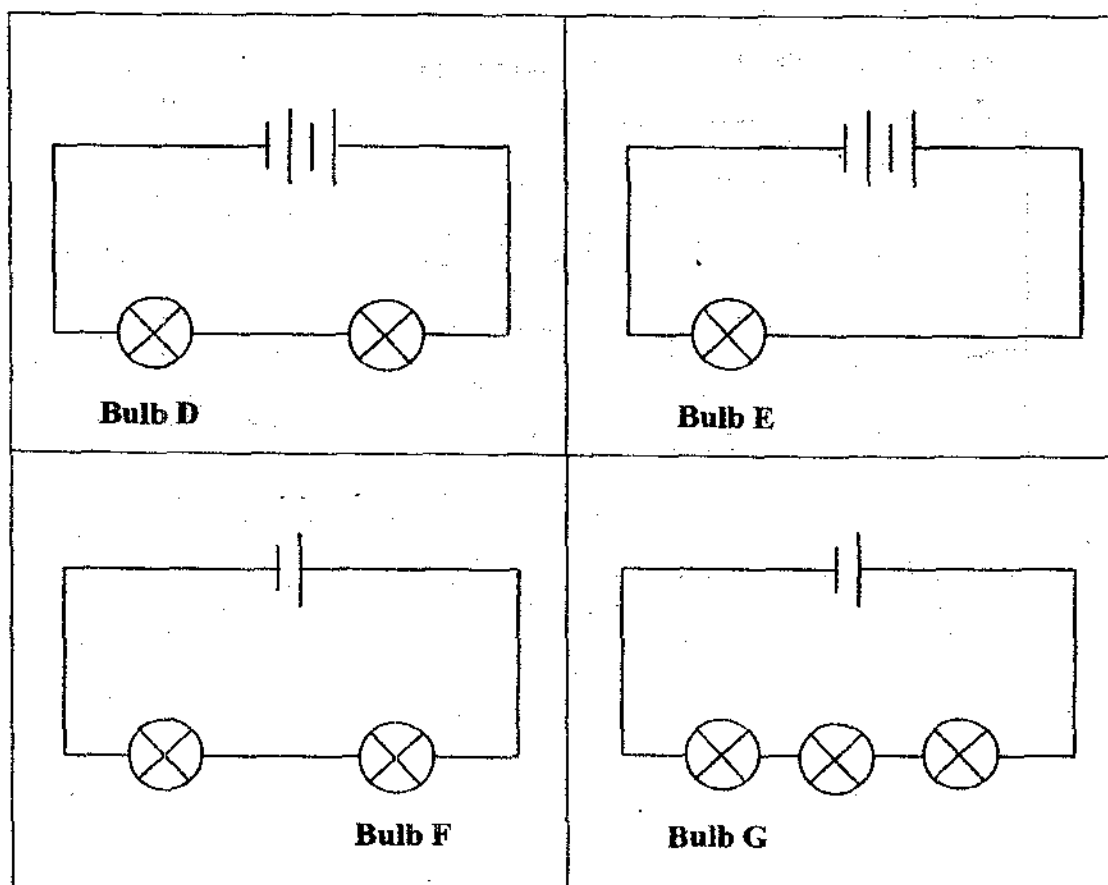
She is given a bulb, three dry cells and some wires.



Which one of the following circuit diagrams shows the circuit set up by Elizabeth?



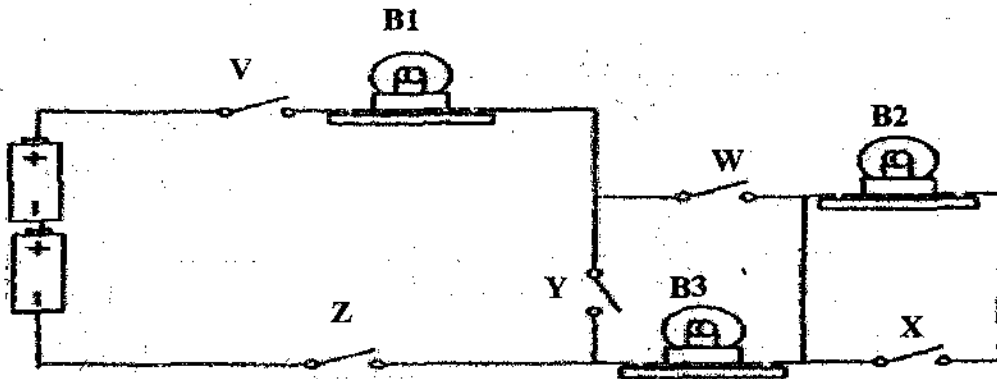
27. The diagram below shows four electric circuits.



If the types of dry cell and bulb used are the same for each electric circuit, which one of the following shows the bulbs arranged from the dimmest to the brightest?

- (1) D, E, G, F
- (2) E, D, G, F
- (3) G, F, E, D
- (4) G, F, D, E

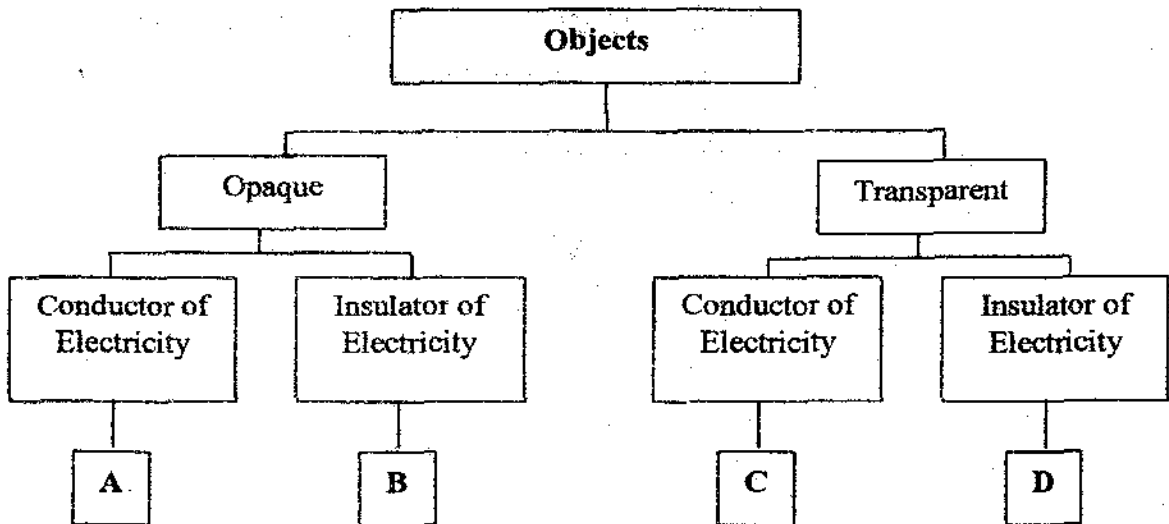
28. Study the following diagram carefully.



In order to light up only B1 and B3, which switches need to be closed?

- (1) V, W and X only
- (2) V, W and Z only
- (3) W, X and Y only
- (4) X, Y and Z only

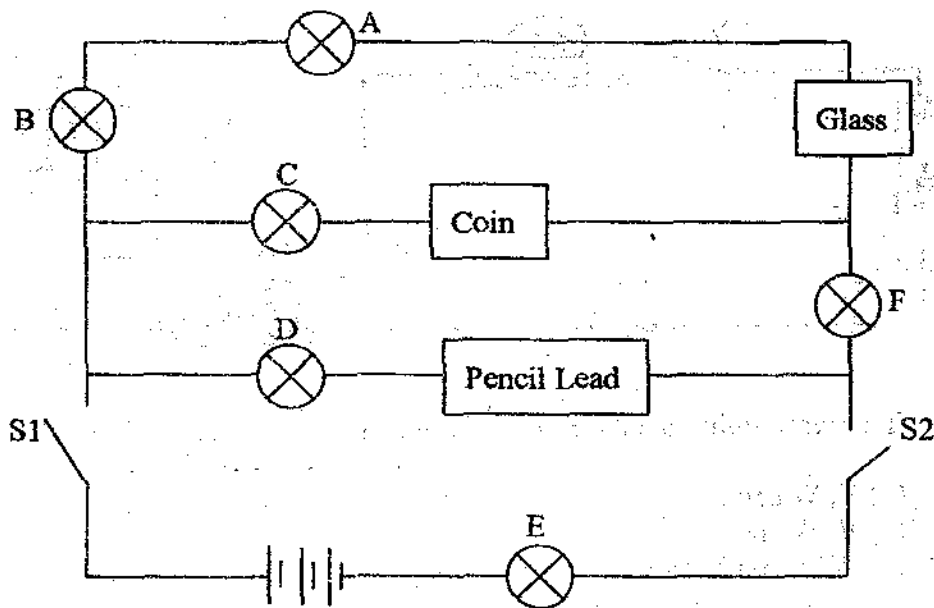
29. Study the classification chart below carefully.



Which one of the following best fits the above categorisation for materials A, B, C and D?

	A	B	C	D
(1)	Copper	Wood	Silver	Porcelain
(2)	Copper	Wood	Water	Glass
(3)	Steel	Plastic	Silver	Glass
(4)	Aluminium	Plastic	Glass	Water

30. Study the diagram below carefully.



Which one of the following is correct when both switches S1 and S2 are closed?

	Bulbs will light up	Bulbs will not light up
(1)	A, B, C	D, E, F
(2)	B, D, F	A, C, E
(3)	B, C, D, F	A, E
(4)	C, D, E, F	A, B



Rulang Primary School

CONTINUAL ASSESSMENT SCIENCE 2009

Name: _____ () Marks: ____ / 40

Level: Primary 6 Date: 3 Mar 2009

Class: Primary 6 () Parent's Signature: _____

BOOKLET B

Instructions to pupils:

1. Do not open this booklet until you are told to do so.
2. You are required to answer **all** the questions in this paper using your own words / expressions as far as possible.
3. All drawings / diagrams must be clearly shown and labelled.
4. Marks will be deducted for wrongly spelt key words.
5. This question booklet consists of

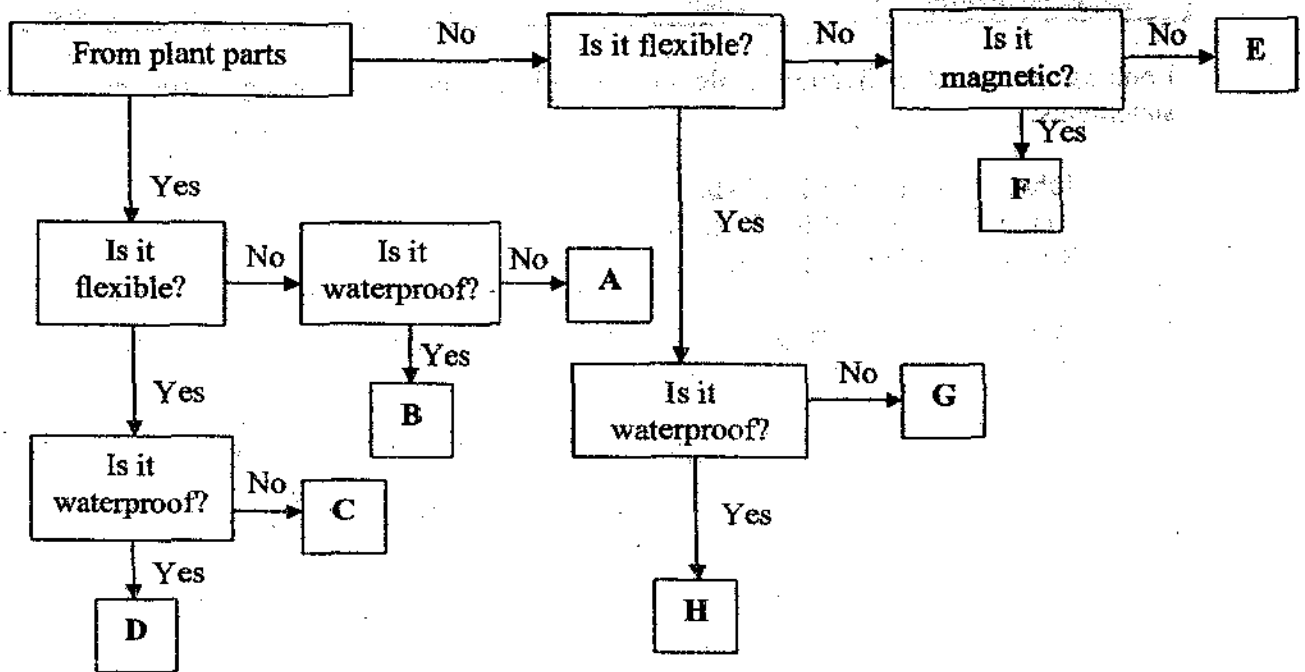
13

 printed pages, including the cover page.

Section B (40 marks)

Write your answers to questions 31 to 40 in this booklet.

31. The flowchart below shows the characteristics of 8 different materials represented by A, B, C, D, E, F, G and H.



(a) What is the difference between materials A and E? (1 m)

(b) Name a material that could be C. (1 m)

(c) Name a material that could be F. (1 m)

(d) Which one of the exit points (A to H) best describes steel? (1 m)

Exit Point _____

32(a) The table below shows the characteristics of three animals, A, B and C.

Characteristics	Animal A	Animal B	Animal C
The way it moves	Swims and waddles	Walks	Swims
Where it lives	Land and water	Land	Water
How it reproduces	Lays eggs	Lays eggs	Lays eggs
Body covering	Hair	Feathers	Scales

Looking at the classification table above, John, Alan and Stanley made the following statements:

John: Animal A is a fish.

Alan: Animal B is a bird.

Stanley: Animal C is a fish.

- (i) Which one of the pupils, John, Alan or Stanley, has made an incorrect statement? Why? (2 m)

- (b)(i) Write down one characteristic that is similar for both the bird's nest fern and the mushroom. (1 m)

- (ii) Write down one difference between the bird's nest fern and the mushroom. (1 m)

33. There are six objects listed in the box below.

Pencil lead	Wooden chair	Mercury
Plastic bowl	Rubber band	Water

Ali is asked to classify all the above objects into two groups. As shown below, he has done a classification table. However, the headings are missing.

Objects	
Group A	Group B
Pencil lead	Wooden chair
Mercury	Rubber band
Water	Plastic bowl

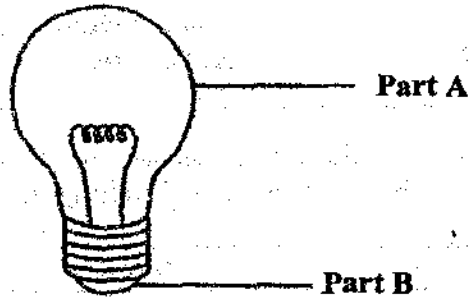
(a) Fill in the blanks with appropriate headings for Group A and Group B. (2 m)

Group A: _____

Group B: _____

(b) Ali is given another three objects, X, Y and Z. How can he find out if the objects are made of materials which are magnetic? (2 m)

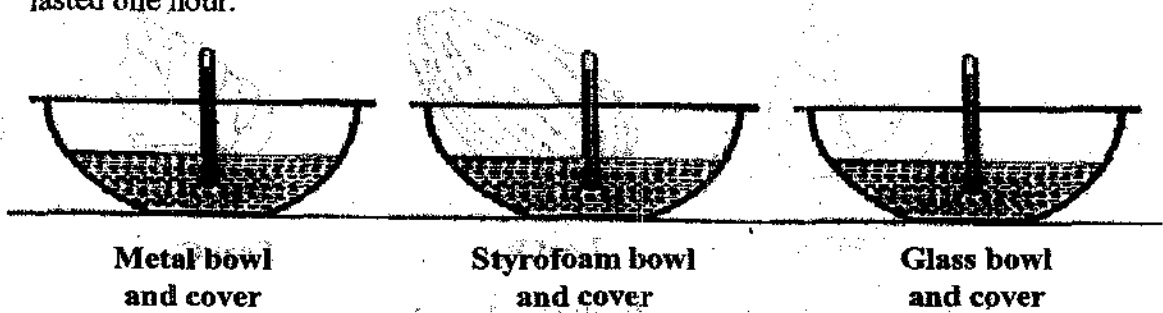
34. The diagram below shows a light bulb.



(i) What material is used to make Part A? Why is this material used? (2 m)

(ii) What material is used to make Part B? Why is this material used? (2 m)

35. Devi set up an experiment in a room as shown below. She measured the temperature of the water in each bowl at the beginning and at the end of the experiment which lasted one hour.



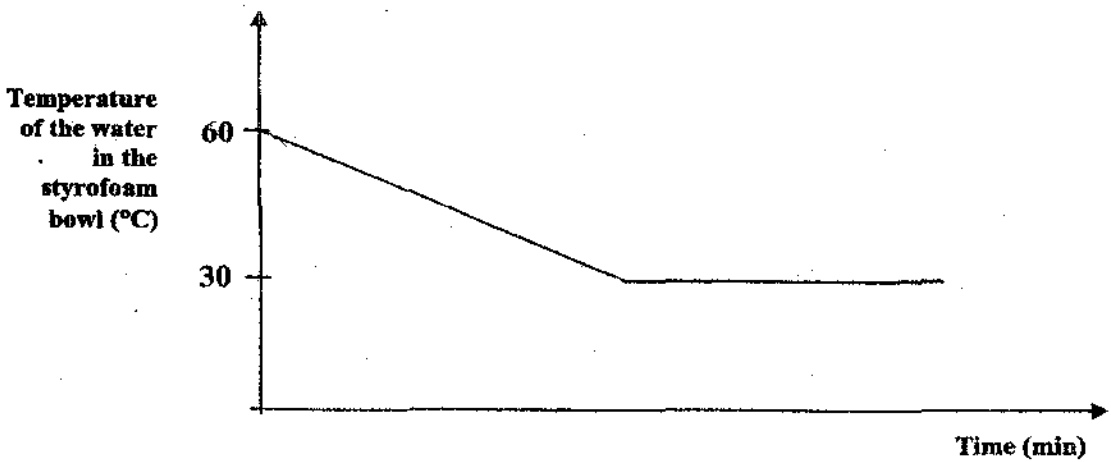
(a) What could the aim of Devi's experiment be? (2 m)

(b) State two other variables that Devi should keep constant to ensure that it was a fair test. (1 m)

(i) _____

(ii) _____

(c) Devi plotted a line graph to show the change in temperature of the water in the styrofoam bowl from the start of the experiment till one hour later as shown below.



Draw a line graph on the above given axes to show the change in temperature of the water in the metal bowl from the start of the experiment till one hour later and label it "Y". (1 m)

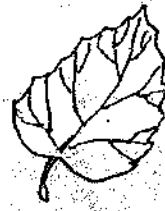
36. Study the leaves below carefully.



Leaf A



Leaf B



Leaf C



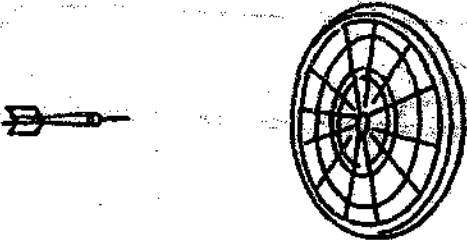

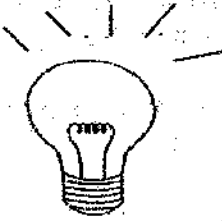
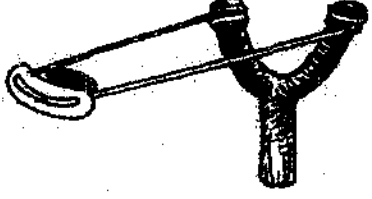
Leaf D

Alisa was asked to classify all the above leaves into two groups in 2 possible ways.

- (a) Classify all the leaves above into 2 groups (Do not compare the size or length of the leaves). Suggest a suitable heading for each group. (2 m)

- (b) Classify all the leaves above into 2 groups using another characteristic (Do not compare the size or length of the leaves). Suggest a suitable heading for each group. (2 m)

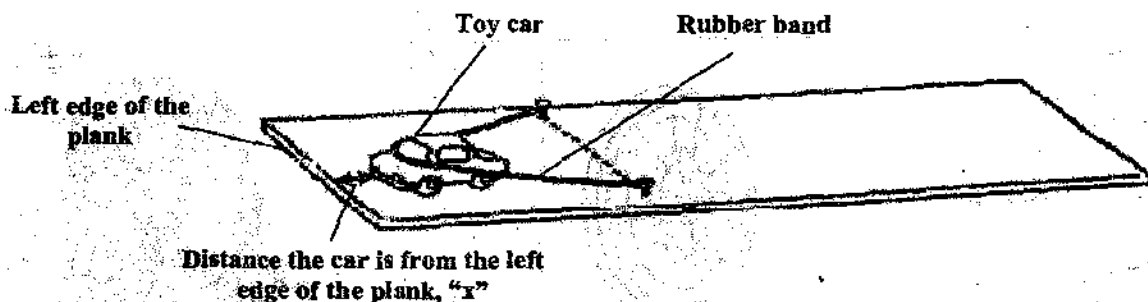
37. Study the diagrams below carefully.

 <p>A: A dart moving towards a target</p>	 <p>B: Blowing a recorder</p>
 <p>C: A lit light bulb</p>	 <p>D: A stretched catapult</p>

Identify the most useful form of energy that is present for each situation. (4 m)

Diagram	The most useful form of energy present
A	
B	
C	
D	

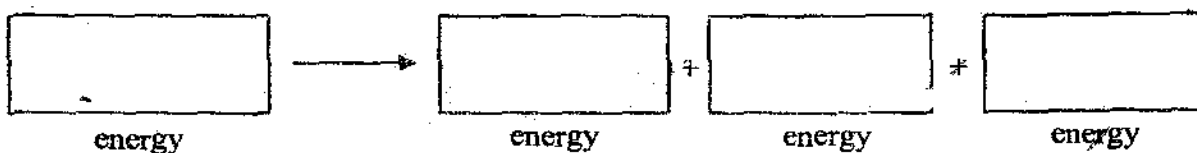
38. Sue conducted an experiment as shown below.



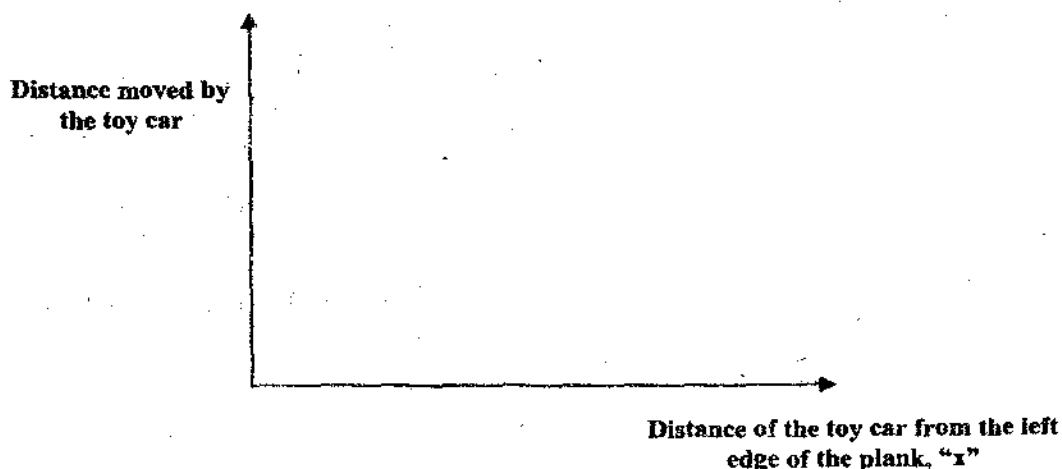
She pulled back the rubber band towards the left edge of the plank and then measured the distance the toy car travelled along the plank after the rubber band was released. She conducted the experiment a few times, each time pulling the rubber band back towards the left edge of the plank to a different extent before measuring the distance travelled by the toy car for the various values of "x".

(a) Sue's teacher suggested that she should do the experiment three times for each value of "x". Explain why the teacher suggested that. (1 m)

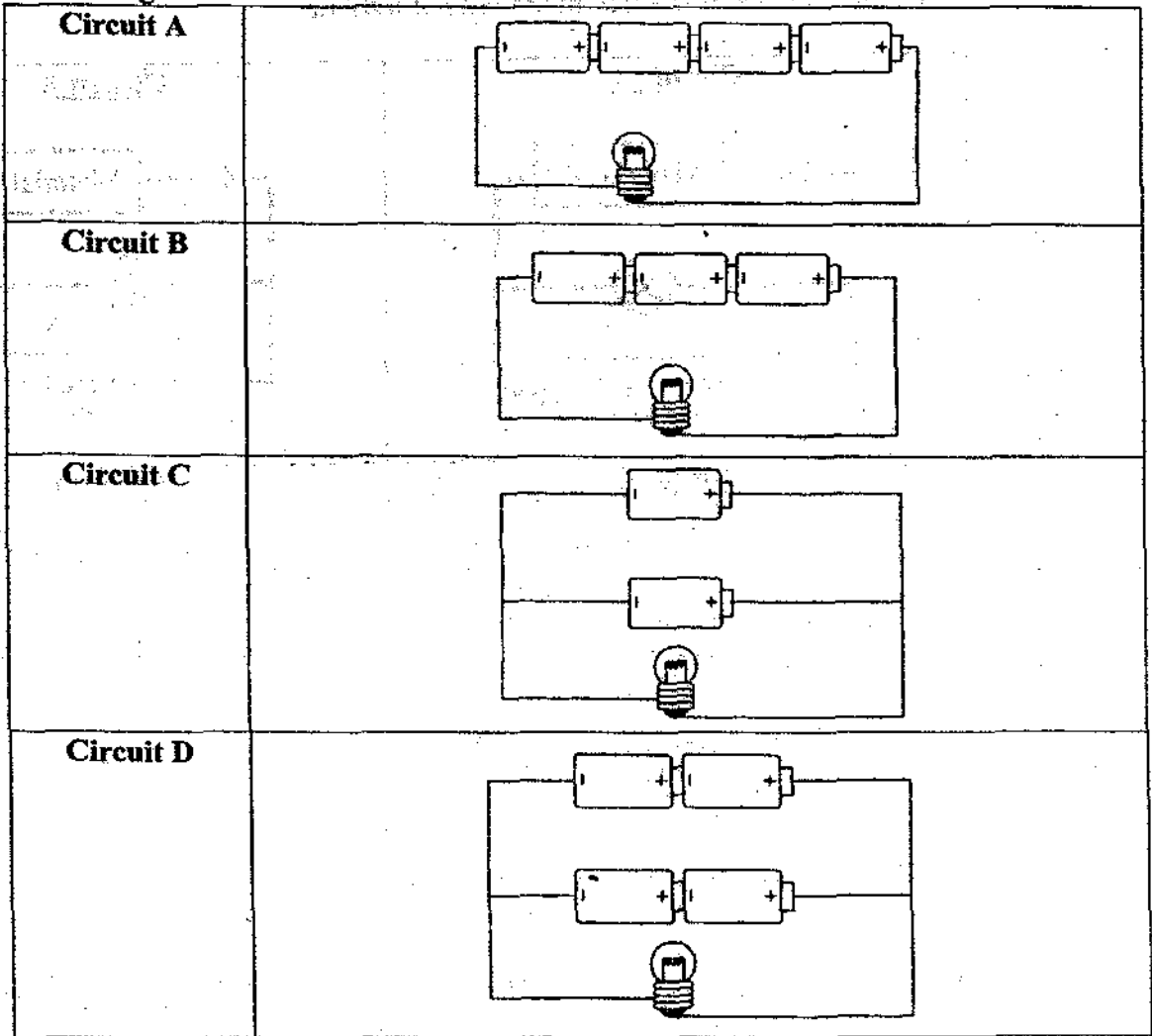
(b) State the energy change when the toy car was released. (2 m)



(c) Complete the graph below to show the relationship between the value of "x" and the distance moved by the toy car. (1 m)

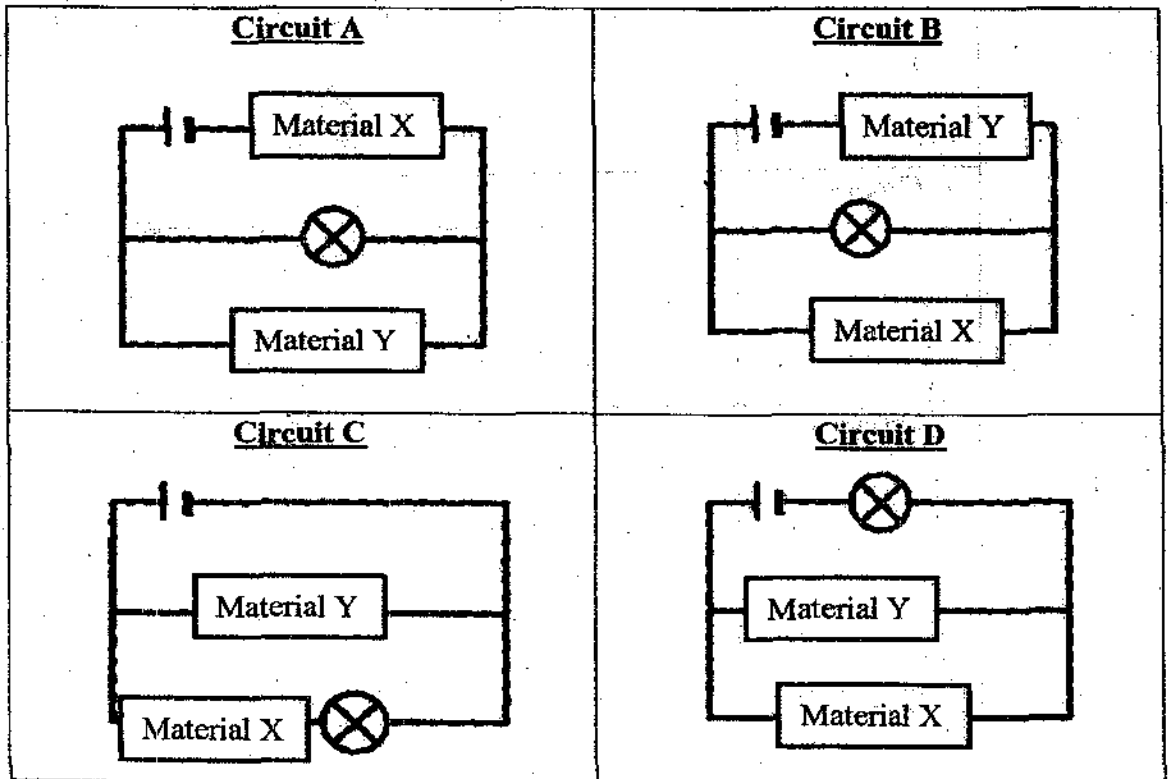


39. Phoebe sets up four circuits with some dry cells of the same strength, bulbs and wires as shown below. She wants to investigate the effect of the arrangement of dry cells on the brightness of the bulb.



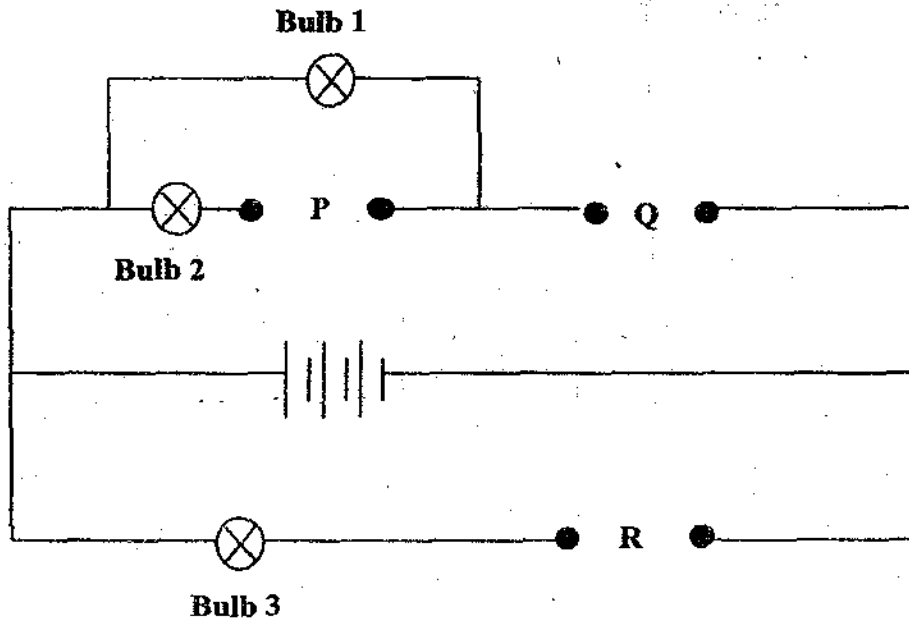
- (a) Which two circuits can be used for her experiment? (1 m)
-
- (b) What could be the hypothesis of her experiment? (2 m)
-
- (c) State two variables that have to be kept constant for her experiment to be a fair one. (1 m)
- (i) _____
- (ii) _____

40. Jeremy set up four circuits as shown below using some wires, a bulb, a battery, an electrical conductor and an electrical insulator. After setting up the circuits, he found out that only one of the four bulbs did not light up.



- (a) In which one of the above circuits did the bulb not light up? Explain your answer. (2 m)

- (b) Jeremy then conducted another experiment using a new material, W, together with materials X and Y. He placed the three materials in three different parts of an electrical circuit, P, Q and R, respectively and observed if the light bulb lit up. He then recorded the results of the experiment in a table as shown below.



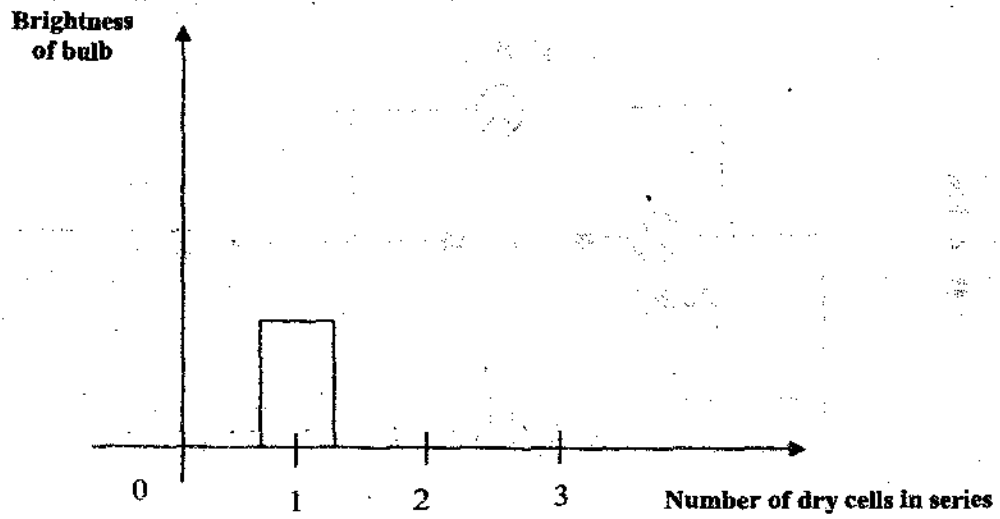
Results of the experiment:

Material at P	Material at Q	Material at R	Did Bulb 1 light up?	Did Bulb 2 light up?	Did Bulb 3 light up?
W	X	Y	Yes	No	No
X	Y	W	No	No	No
Y	W	X	No	No	Yes

- (i) What could we conclude about material W?

(1 m)

- (ii) Complete the bar graph below to show the brightness of Bulb 3 if we vary the number of dry cells in series from 1 to 3. (1 m)



END OF PAPER

ANSWER SHEET

EXAM PAPER 2009

**SCHOOL : RULANG PRIMARY
SUBJECT : PRIMARY 6 SCIENCE**

TERM : CA1

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

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

31)a)Material A is not flexible but material E is flexible.

b)Cotton.

c)Steel.

d)F.

32)a)i)John made an incorrect statement. Fishes have scales as their body coverings but animal A has hair as its body covering, hence animal A is not a fish.

b)i)Both of them cannot move from place to place by themselves.

ii)The bird's nest fern makes its own food but the mushroom feeds on decaying matter.

33)a)A: Electrical Conductors.

B: Electrical Insulators.

b)Ali could place a magnet near object X,Y and Z. If any of the object is attracted to the magnet, the material of the object is magnetic. If any of the objects is not attracted to the magnet, the material of the object is not magnetic.

34)i)The material is glass. Glass is hard and transparent, allowing most of the light to pass through it.

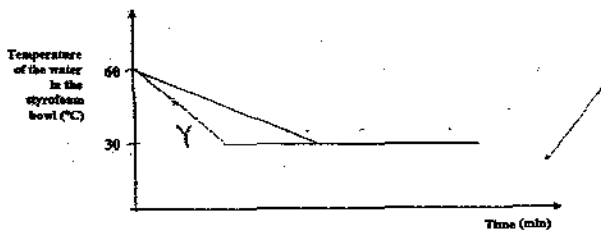
ii)The material is steel. Steel is a conductor of electricity, hence, it allows the electricity to be conducted to the wire inside the light bulb.

35)a)His aim was to find out which one of the materials is the poorest conductor of heat.

b)i)The same amount of water in each bowl.

ii)The same type of thermometer in each bowl.

c)



36)a)Network Veins

- Leaf A
- Leaf C
- Leaf D

Parallel Veins

Leaf B

b)Entire Edge

- Leaf A
- Leaf B
- Leaf D

Toothed Edge

Leaf C

37)A: Kinetic Energy

B: Sound Energy

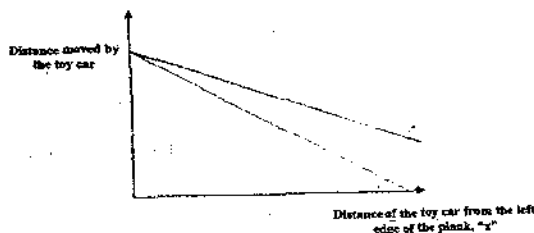
C: Light Energy

D: Elastic Potential Energy

38)a)It was to reduce experimental errors so as to ensure a greater reliability of the result.

b)Elastic Potential \rightarrow Kinetic energy + Sound energy + Heat energy

c)



39)a)Circuits A and D.

b)Bulb in circuit with batteries arranged in series is brighter than bulb in circuit with batteries arranged in parallel.

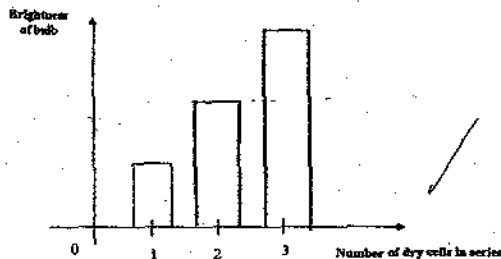
c)i)The same number of batteries.

ii)The same type of bulb.

40)a)The bulb in Circuit B did not light up. Material Y is an electrical insulator and electrical current will not be able to pass through it in Circuit B, leaving a gap in the circuit. Hence, the bulb did not light up.

b)i)Material W is an electrical insulator.

ii)



END