AI TONG SCHOOL

2008 CONTINUAL ASSESSMENT (1)

PRIMARY SIX SCIENCE

DURATION : 1HR 45 MIN

DATE: 4 MARCH 2008

INSTRUCTIONS

Do not open the booklet until you are told to do so.
Follow all instructions.
Answer all questions.

MARKS	100

Name : _____ ( )

Class : Primary _____

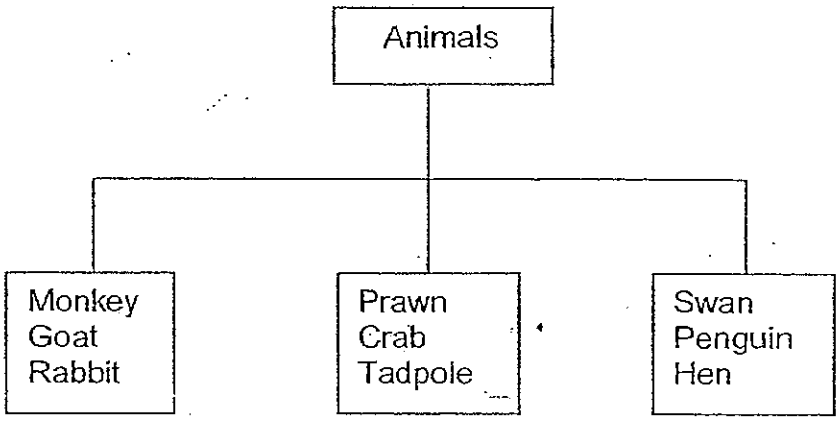
Parent's Signature : _____

Date : _____

Section A

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 chart below shows that animals can be classified according to their outer body coverings.



Which one of the animals is **wrongly** classified in the chart shown above?

(1) penguin
(2) hen
(3) rabbit
(4) tadpole

2. The table below shows a classification table.

A	B
Pumpkin Balsam	Toadstool Mushroom

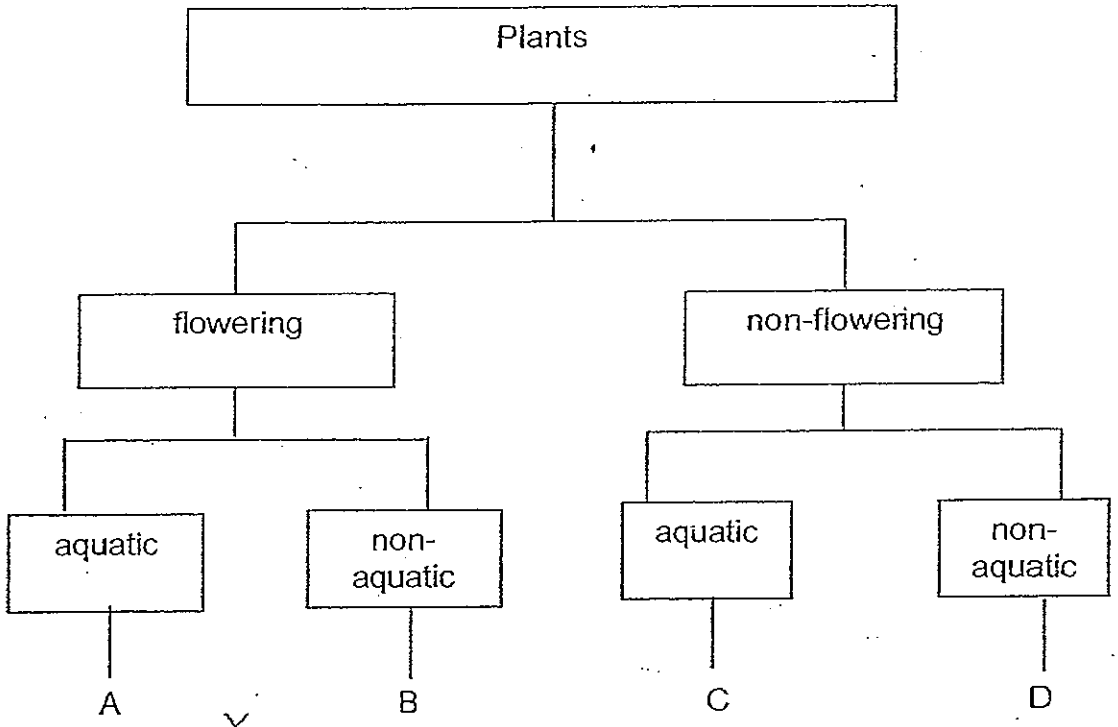
How are the living things in Group A and B classified?

	A	B
(1)	Can make food	Cannot make food
(2)	Decomposers	Not decomposers
(3)	Herbivores	Carnivores
(4)	Natural	Man-made

3. The following table gives information on ~~four~~ two plants, Y and Z, based on two characteristics. A tick (√) shows that the plants has the characteristic.

Characteristic	Y	Z
Bear fruit	√	
Grows in water	√	

From the information above, where do plants Y and Z belong in the following classification table?



Y Z

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

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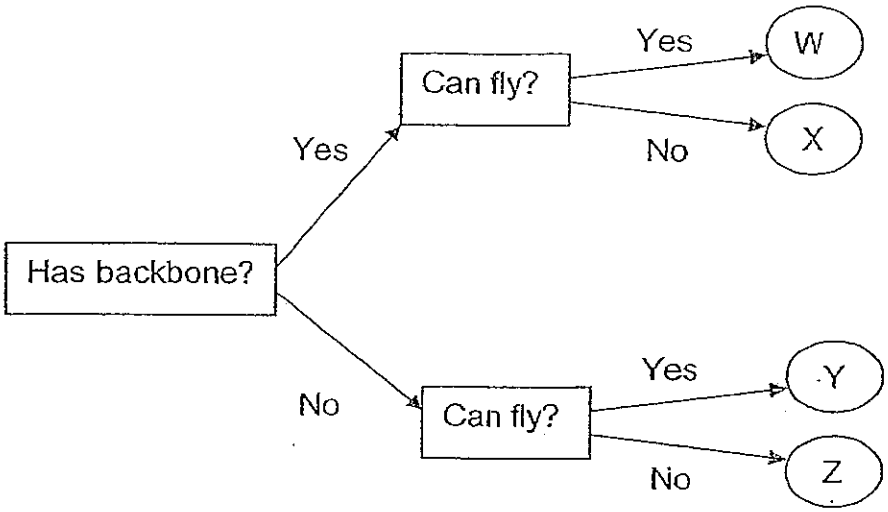
4. Study the flow chart below.



According to the chart, what could be X?

(1) Bird
(2) Dog
(3) Bee
(4) Worm

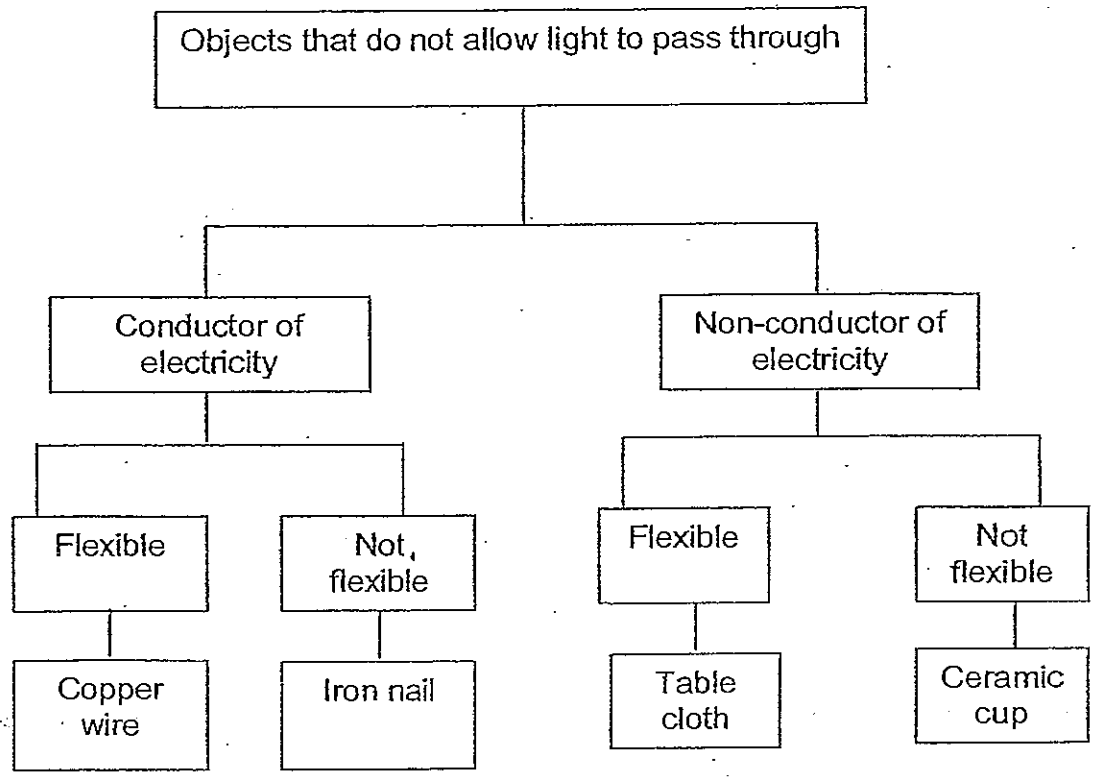
5. April was given a list of materials. She grouped them into 2 groups, X and Y, as shown below.

Group X	Group Y
Clear plastic Glass Water	Thin paper Cloth Frosted glass

Which one of the following properties did April use to group the materials?

(1) Texture
(2) Transparency to light
(3) Thermal property
(4) Magnetic property

6. Four objects have been grouped using the classification chart below.



According to the classification chart, which object has the same property as a balloon?

(1) Copper wire
(2) Iron nail
(3) Table cloth
(4) Ceramic cup

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7. The table below shows the properties of two materials, X and Y.

X	Y
Hard	Hard
Heavy	Light
Opaque	Transparent or opaque
Floats on water	Water proof
Natural material	Man made material
Poor conductor of heat	Poor conductor of heat

What materials are X and Y most likely to be ?

	X	Y
(1)	Wood	Plastic
(2)	Paper	Plastic
(3)	Aluminium	Iron
(4)	Wood	Glass

8. The classification table below shows the properties of Objects A, B and C.

Properties	Object A	Object B	Object C
Waterproof	√	√	X
Hard	√	X	X
Flexible	X	√	√

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

	Object A	Object B	Object C
(1)	Drink can	Wooden table	Cotton
(2)	Steel grille	Thread	Pebble
(3)	Iron nail	Porcelain bowl	Glass
(4)	Pencil lead	Rubber hose	String

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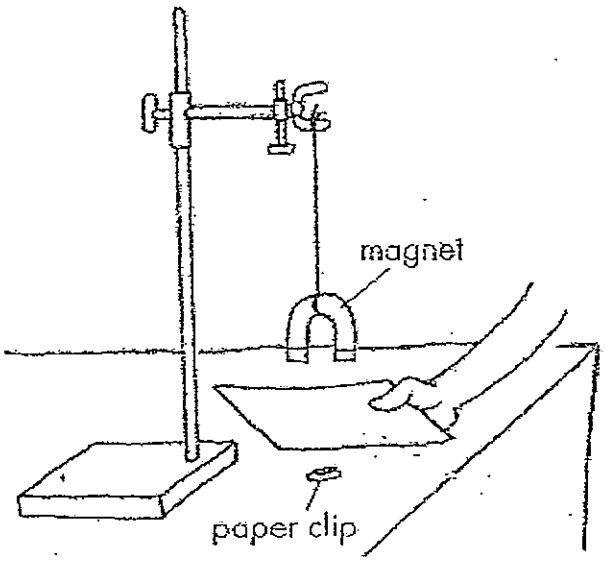
9. Leon conducted an experiment on magnetism. He set up the experiment as shown below. He placed different materials between the magnet and the paper clip.



Leon recorded his results in the table below.

Material	Is the paper clip attracted to the magnet?
A	Yes
B	Yes
C	Yes
D	Yes
E	No

Which one of the following statements explains the results when Material E was put between between the magnet and the paper clip?

(1) E is not magnetic material.
(2) E is a piece of cloth.
(3) E is a piece of aluminium.
(4) E is a sheet of iron.

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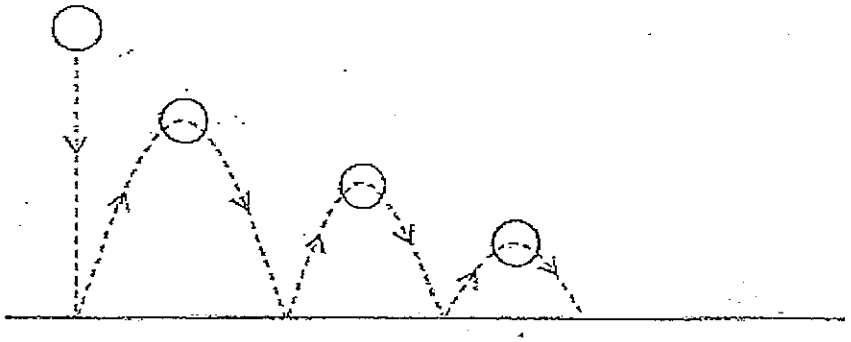
10. John found a rubber seed and he rubbed it on the table. Which one of the following statements shows the correct energy change?

(1) kinetic energy ⟶ sound energy
(2) kinetic energy ⟶ heat and sound energy
(3) potential energy ⟶ heat energy
(4) potential energy ⟶ heat energy and sound energy

11. Electrical appliances change electrical energy into different forms of energy. Which one of the following appliances matches against the useful forms of energy it produces?

	Appliance	Kinetic energy	Sound energy	Heat energy	Light Energy
(1)	Ceiling fan	√		√	
(2)	Computer			√	
(3)	Juice blender	√	√		√
(4)	Hair dryer	√		√	

12. A ping pong ball was dropped from a height of 1m from the ground. It bounced to a lower height each time it hit the ground as shown in the diagram below.

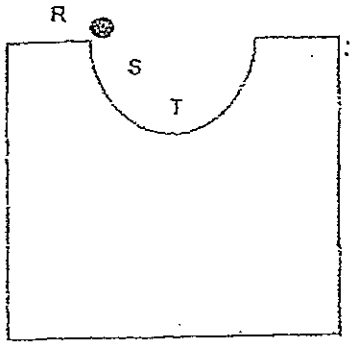


Which answer explains fully why the ball does not bounce back to the same height from which it was first dropped?

(1) The "dropping" height was too low.
(2) Gravity increased with each bounce.
(3) Its potential energy was changed into other forms of energy.
(4) All its potential energy was changed into sound energy.

128.

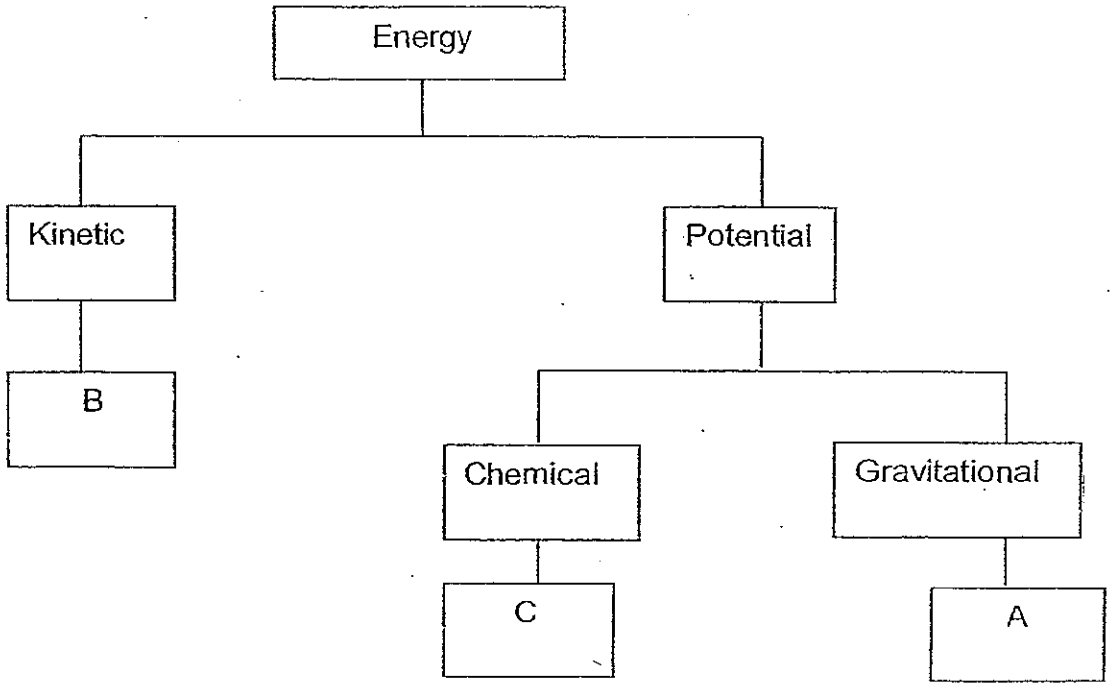
13. John carried out an experiment using a marble and a curved track.
He placed the marble at position R and then allowed it to roll down the curved track.



Which of the following describes the changes in potential and kinetic energy from R to T?

	Potential energy	Kinetic energy
(1)	increases	decreases
(2)	increases	increases
(3)	decreases	decreases
(4)	decreases	increases

14. The chart below shows the classification of energy.



Which of the following descriptions matches the letters as stated in the chart above?

Letter	Descriptions
A	Kite on a tree
B	Ball rolling on the ground
C	Dynamite

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

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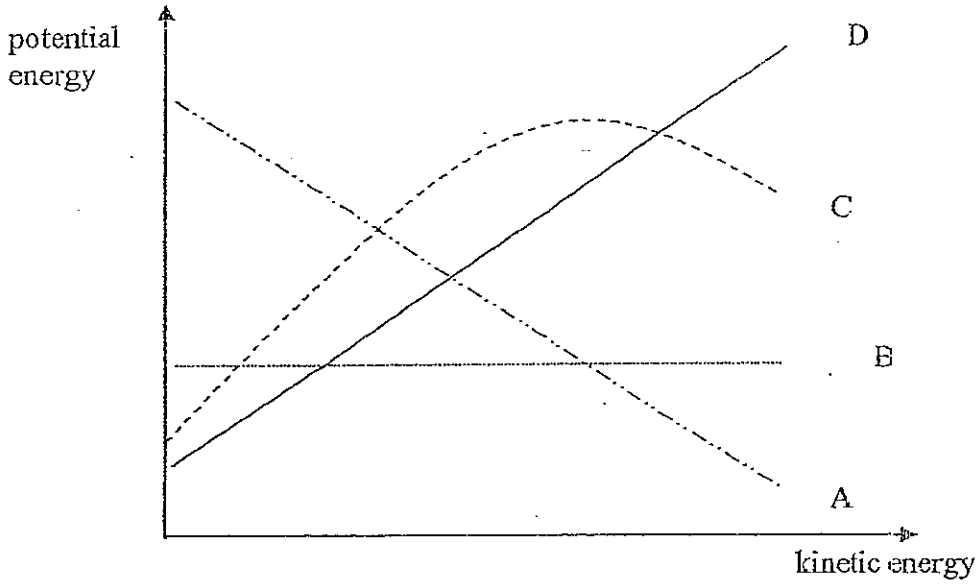
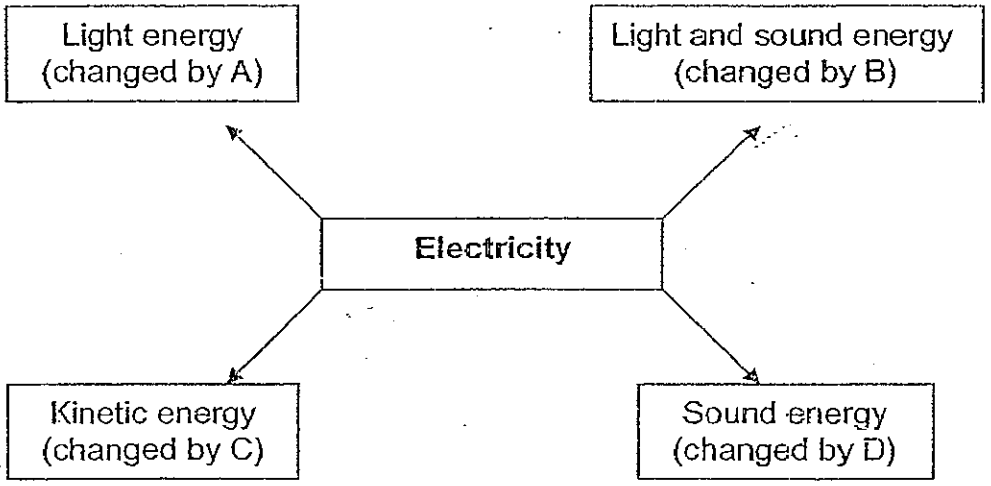
15. A ball rolls down a hill slope. The energy change is plotted on a graph as shown below.



Which line, **A, B, C or D** in the graph shows the correct change in the potential energy and kinetic energy of the ball as it rolls to the foot of the hill?

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

16. Electrical appliances can change electricity to other forms of useful energy. In the chart below, match the letters to the correct appliances.



	A	B	C	D
(1)	DVD player	Jukebox	Cake mixer	Electric blender
(2)	Radio	Video pod	Lift	Loudhailer
(3)	Traffic light	Film projector	Rice cooker	Tape recorder
(4)	Electric lamp	Television set	Blender	MP3 player

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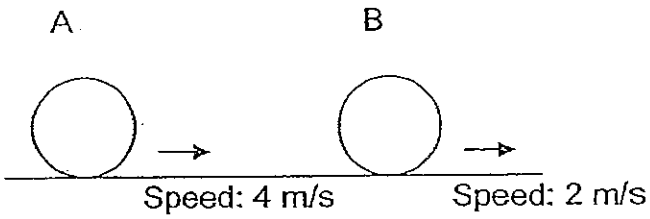
17. Ben rolled two balls, A and B, along the ground. The two balls moved at different speeds but in the same direction as shown below.



What will happen after Ball A hits Ball B?

A A and B will travel in the same direction.
B A and B will travel in opposite directions.
C A will slow down and B will travel faster.
D B will slow down and A will travel faster.

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

18. A boy had 4 springs, A, B, C and D of the same length but of different strengths. He hung ~~different~~ weights on the springs. He measured the length of each spring and recorded his findings in the table below.

Spring	Extension of Spring (in cm)
A	10
B	9
C	8
D	6

Which spring was the strongest?

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

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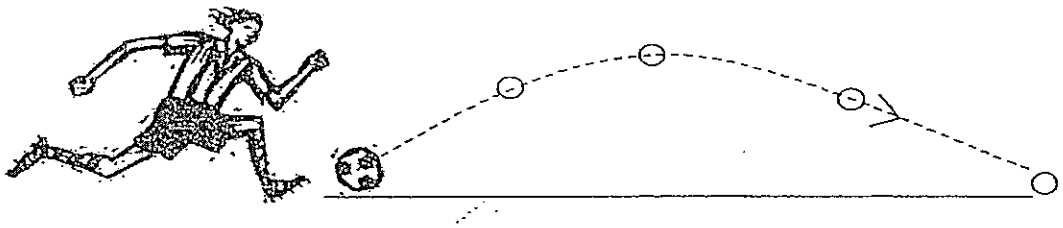
19. David kicked a ball across a field. The diagram below shows the path of the ball.



Which of the following statements about the moving ball is correct?

(1) Gravity acts on the ball throughout its path.
(2) The speed of the ball is constant throughout.
(3) The ball has the least potential energy at its maximum height.
(4) Gravity begins to act on the ball only at its maximum height.

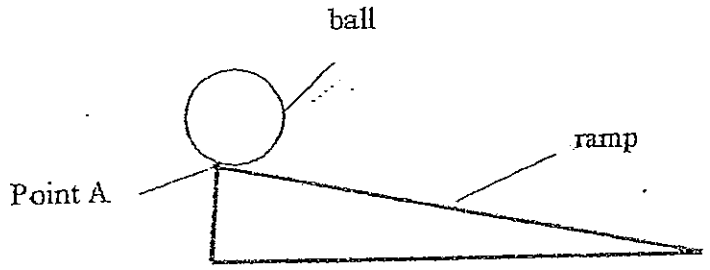
20. A 20-cm long piece of spring was stretched when different weights were hung from it. The extension of spring is constant throughout. The extensions of the spring were recorded as shown in the table below.

Weight (g)	25	50	100
Extension (cm)	6	12	24

What would be the total length of the spring when a 125 g weight is hung from it?

(1) 30 cm
(2) 42 cm
(3) 48 cm
(4) 50 cm

21. Glen set up a ramp as shown below. He placed a ball at the top of the ramp and released it. He measured the distance travelled by the ball.



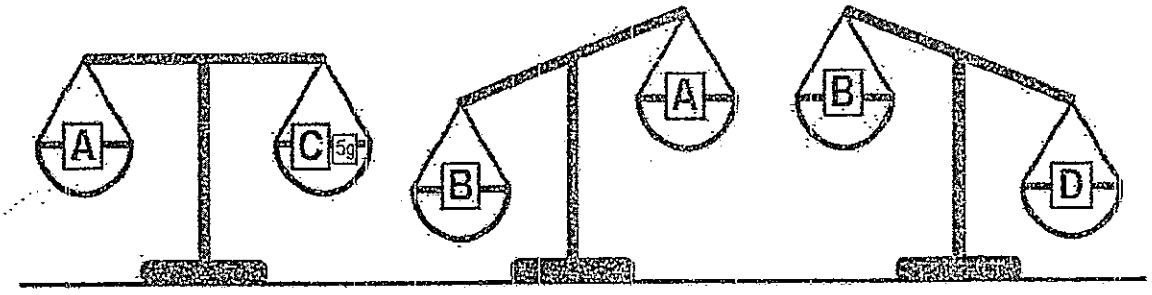
He recorded the results in the table below.

Types of surfaces	Distance travelled by the ball (cm)
A	28
B	45
C	47.5
D	90

From the results, he could infer that _____.

(1) Surface B was smoother than Surface C.
(2) there was frictional force between the ball and the ramp.
(3) the ball had the most potential energy at point A.
(4) there was the least friction between Surface D and the ball.

22. A boy compared the mass of 4 objects A, B, C and D by using a lever balance. He added a weight of 5g to object C to balance it with object A.



The order of the objects from the lightest to the heaviest is _____ .

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

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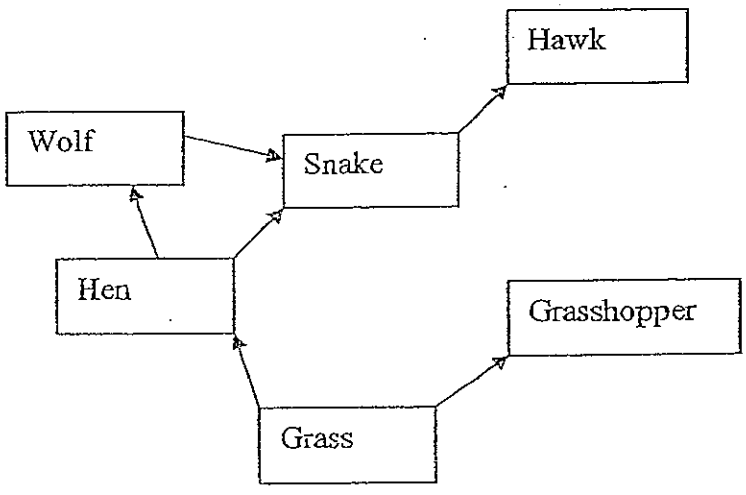
23. The fruits/seeds shown below are grouped according to their methods of dispersal.

Group A	Group B	Group C
Balsam	Shorea	Lotus
Flame of the Forest	African Tulip Seed	Mangrove

Which one of the following sets of fruits/seeds does not match the classification table shown above?

	Group A	Group B	Group C
(1)	Rubber	Lalang	Coconut
(2)	Rain Tree	Angsana	Pong Pong
(3)	Saga	Dandelion	Water-lily
(4)	Mimosa fruit	Cupid's Shaving Brush	Sea Almond

24. The diagram shows a food web in a forest community.



Which population is most likely to decrease if the snakes are removed from this web?

(1) Hen
(2) Wolf
(3) Hawk
(4) Grasshopper

25. The process of respiration is represented as follows:

A + sugar ⟶ B + C + Water vapour

What do the letters A, B and C represent?

	A	B	C
(1)	Carbon dioxide	Starch	Oxygen
(2)	Starch	Energy	Carbon Dioxide
(3)	Oxygen	Carbon Dioxide	Energy
(4)	Energy	Oxygen	Sugar

26. Which of the following statements is/are true about respiration?

A Heat is released during respiration.
B Plants carry out respiration all the time.
C Plants do not respire when they carry out photosynthesis.
D Our body breaks down food to produce oxygen for respiration.

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

27. Which of the following are single-celled organisms?

A Algae
B Yeast
C Coral
D Paramecium

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

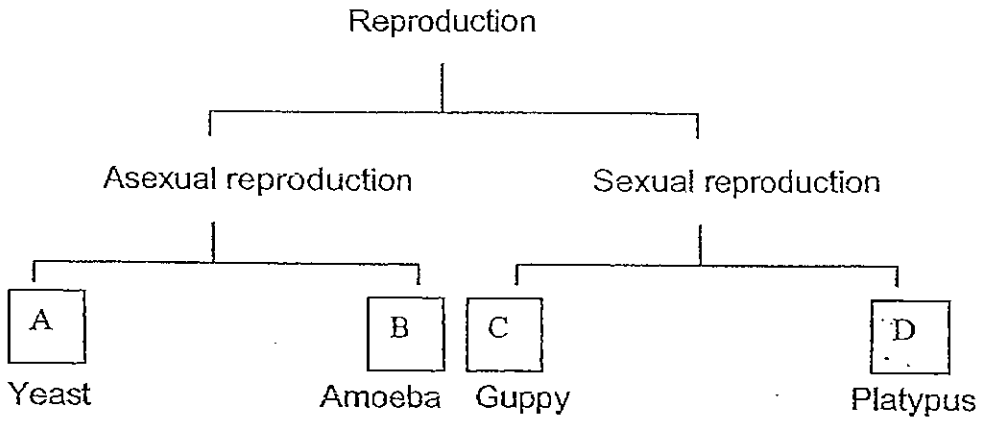
28. Miss Tan gave her pupils a table which shows the properties of three cells, Cell A, Cell B and Cell C.

	A	B	C
Cytoplasm	√	√	√
Cell membrane	√	√	√
Nucleus	√	√	√
Cell wall		√	√
Sap		√	√
Chloroplasts			√

The pupils made the following conclusions. Which one of the conclusions is correct?

(1) Only Cell C is a plant cell.
(2) Only Cell B is a plant cell.
(3) Cell B and Cell C are plant cells.
(4) All the cells are plant cells.

29. The chart below shows the methods of reproduction.



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

	A	B	C	D
(1)	Cell Division	Budding	Laying eggs	Giving birth
(2)	Budding	Cell Division	Giving birth	Laying eggs
(3)	Cell Division	Budding	Giving birth	Laying eggs
(4)	Budding	Cell Division	Laying eggs	Giving birth

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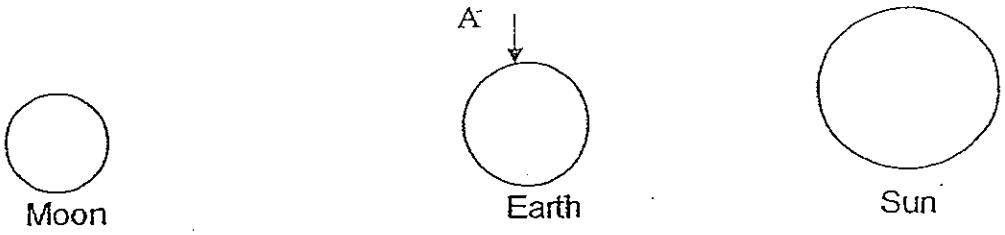
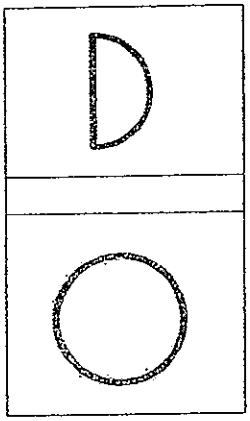
30. The diagram below shows the position of the Moon, Earth and the Sun.

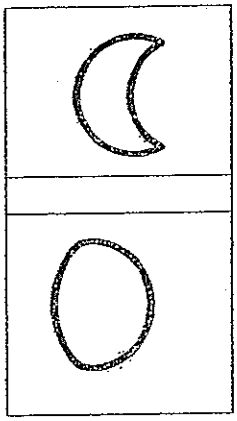


Which of the diagram below represents the shape of the Moon a person standing at Point A on the Earth will see?

(1)



(2)



(3)

(4)

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Name : _____ ( )

Class : P6 ( )

Section B: 40 marks
Read the questions carefully and write down your answers in the spaces provided.

31. The table below shows 2 groups of animals.

Group A	Group B
Lion	Penguin
Fox	Chicken
Platypus	Owl

(a) How are the animals classified? [1]

Group A : _____ _____

Group B : _____

(b) Name another animal that can be classified in Group B. [1]

_____

(c) State one characteristic of the animals in Group A but not in Group B. [1]

_____

_____

3

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32. Study the classification table below.

Group A	Group B	Group C
Parrot	Elephant	Bee
Eagle	Goat	Mosquito
Chicken	Dog	X

(a) What could Animal X be? [1]

(b) There are many other ways to classify the above animals. Re-classify the animals into 2 groups, **using a classification chart.** [1]

(c) Other than the two ways of classification stated in (a) and (b),write down another way to re-classify the animals. [1]

3

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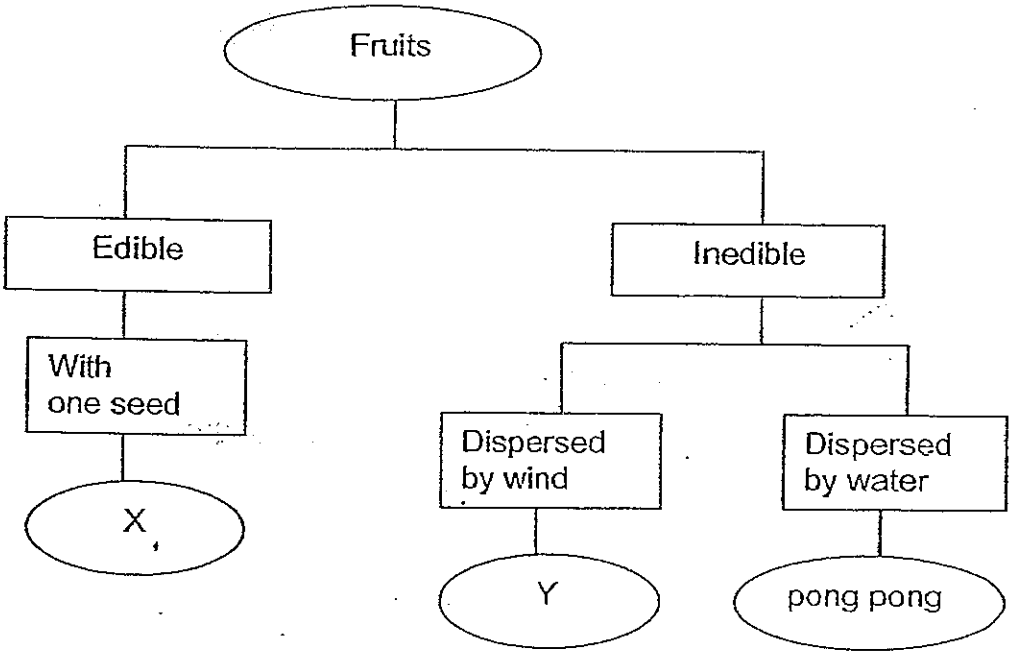
33. A classification chart of fruits is shown below.



(a) Based on the chart, list two characteristics of a pong pong fruit. [1]

_____

(b) State one example of X and Y.

X : _____ [1]

Y : _____ [1]

3

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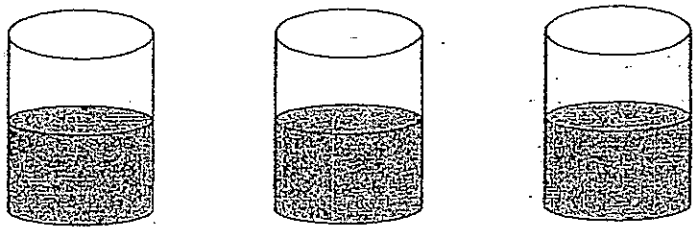
34. The diagram below shows 3 containers which are made of 3 different materials, aluminium, ceramic and plastic . They are similar in shape and size. 300ml of hot water is poured into each of them and their temperatures are recorded at 2- minute intervals over a 10-minute period.



The results are as follows :

Container	Temperature in ° C					
	Start	2 min	4 min	6 min	8 min	10 min
A	65	64	62	60	58	56
B	65	63	61	58	55	52
C	65	62	59	55	51	48

(a) From the results table, which container can retain the most heat? [1]

_____

(b) What material could Container A be made of? [1]

_____

(c) Write down another useful property of the material used to make Container A. [1]

_____

3

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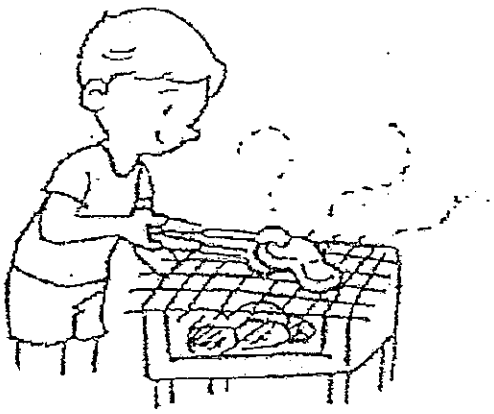
35. In the diagram below, John is using a pair of steel tongs with plastic handles.



Explain why the tongs used by John are made of two different materials. [2]

Plastic : _____

_____

Metal : _____

_____

2

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36. The table below shows the amount of energy per serving of each food item.

Food category	Items	Energy per serving (kJ)
Cakes	Banana cake Chocolate cake Blackforest cake	969 1763 1240
Snacks	Onion rings Cheese balls Potato chips	543 355 428
Drinks	Fruit tea Iced Milo Coffee without milk	137 262 54

(a) A labourer chose to have the chocolate cake, onion rings and iced Milo for lunch. Explain his choice of food. [1]

(b) State the energy conversion when the labourer carried a heavy box ~~up~~ down a flight of stairs. [1]

2

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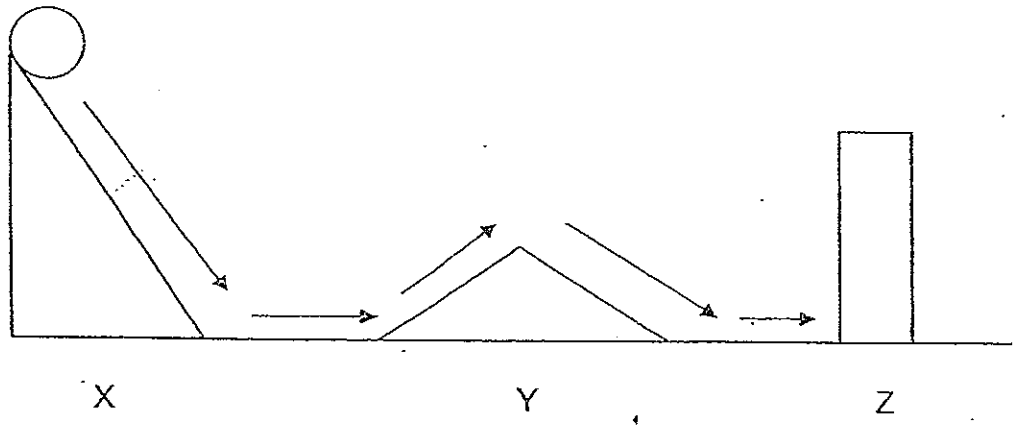
37. A tennis ball is released from the top of ramp X. It rolls downwards and along the floor. Then it travels up ramp Y and down before it is stopped by a wooden block Z, as shown in the diagram below.



Study each of the following statements carefully and state whether it is "True" or "False" by putting a tick in the respective columns. [2]

	Statements	True	False
i)	When the tennis ball is released, it gains potential energy.		
ii)	The tennis ball has the most potential energy at the bottom of ramp X.		
iii)	Kinetic energy is changed to potential energy when the ball travels up ramp Y.		
iv)	The tennis ball has gravitational potential energy at the top of ramp Y.		

2

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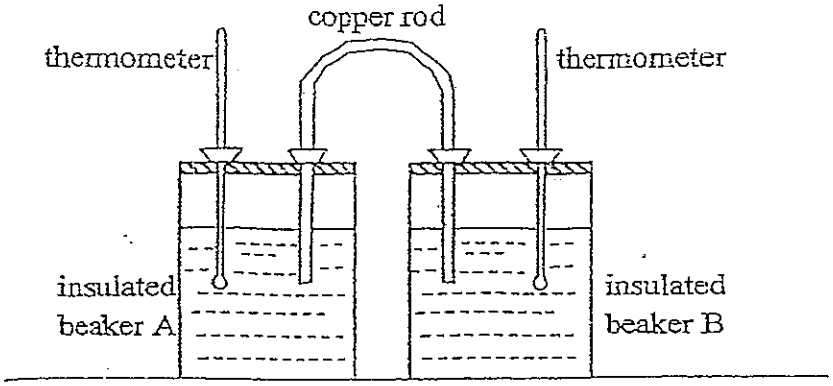
38. Lisa had 3 types of metal rods. She set up an experiment as shown in the diagram.



She connected a copper rod to two insulated beakers containing equal amounts of the same type of liquid. The temperature of the liquid in Beaker A was 95°C and the temperature of the liquid in Beaker B was 5°C.

She recorded the temperatures of the liquids in the 2 beakers at regular intervals. Each experiment ended when the temperature of the liquid in the 2 beakers were the same. She repeated the same experiment using steel and aluminium rods. The table below shows part of the results of her experiment.

Metal	Temperature at the end (°C)		Time taken (min)
	Beaker A	Beaker B	
Aluminium	50	50	24
Copper	50	50	12
Steel	50	50	48

(a) What is the aim of the experiment? [1]

(b) From the results table, what can she conclude about the experiment? [1]

(c) Besides the temperature of the liquids, state one other variable of the experiment that she needed to keep the same for the experiment to be fair. [1]

3

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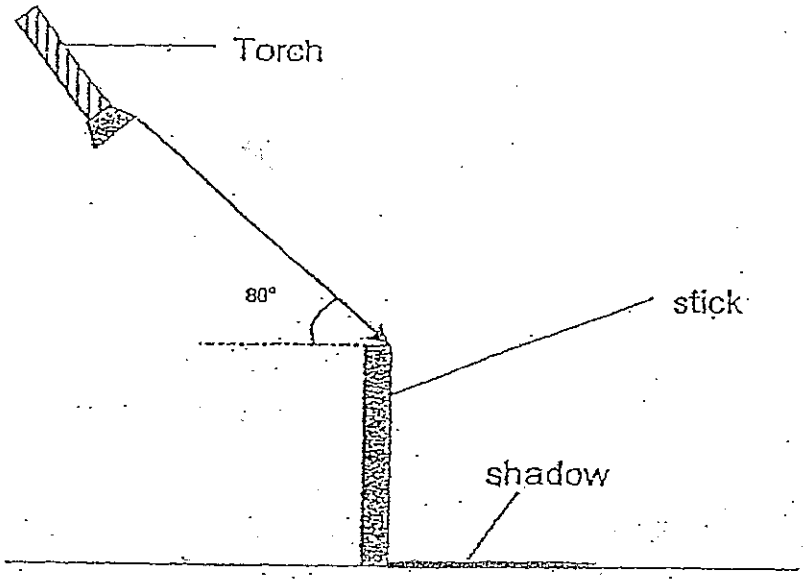
39. Tom positioned his torchlight at an angle X° as shown in the diagram below. He shone it at a stick and then measured the length of the shadow.



He repeated the experiment, increasing the angle of the light source each time. Then he recorded his observation as follows :

Angle of light source (°)	Length of shadow (cm)
80	5
90	0
100	?
110	10
120	15

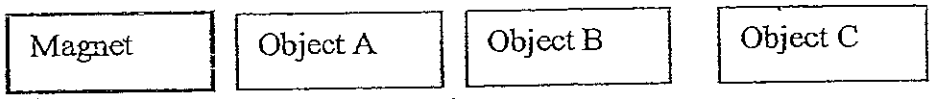
(a) Based on the results, what is the length of the shadow when the angle of the light source is at 100°? [1]

(b) State another source of light energy, besides the one used in this experiment [1]

2

150

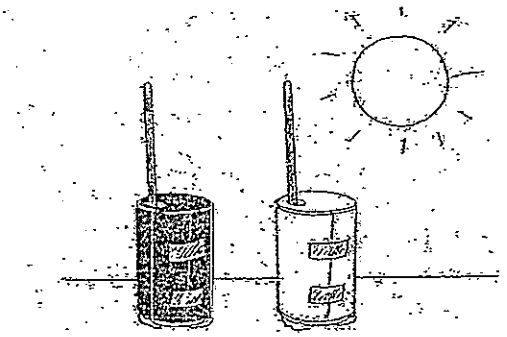
40. During a Science lesson, Sue was given a bar of magnet, and 3 rectangular objects.



Describe, in the box below, the steps she should take to find out the following which of the 3 objects is: a magnet, made of magnetic material, made of non-magnetic material. [3]

3

41. Tim carried out an experiment. He placed two identical tins, with a thermometer in each, under the sun.



Tin A **Tin B**

Wrapped with black construction paper

Wrapped with white construction paper

After 15 minutes, he recorded the temperatures of both cans and presented his readings in the table below.

	Temperature (°c)	
Time (min)	Tin A	Tin B
0	24	24
15	30	27

(a) What is the aim of his experiment? [1]

(b) What can he conclude from his experiment? [1]

(c) Which colour would you choose for a T-shirt if you want to feel cooler? [1]

3

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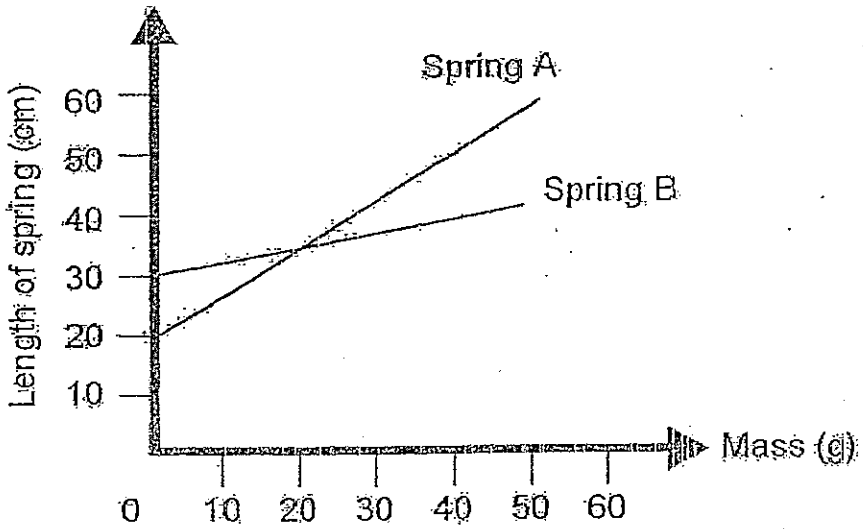
42. Two boys, Tom and Jerry, carried out an experiment to compare the strength of 2 springs. They recorded their findings in the graph as shown below.



(a) What was the mass of the object when their springs were of the same length? [1]

(b) What was the extension of Spring A when an object of 40 g mass was hung on it? [1]

(c) What could they conclude about Spring A and Spring B from the experiment? [1]

3

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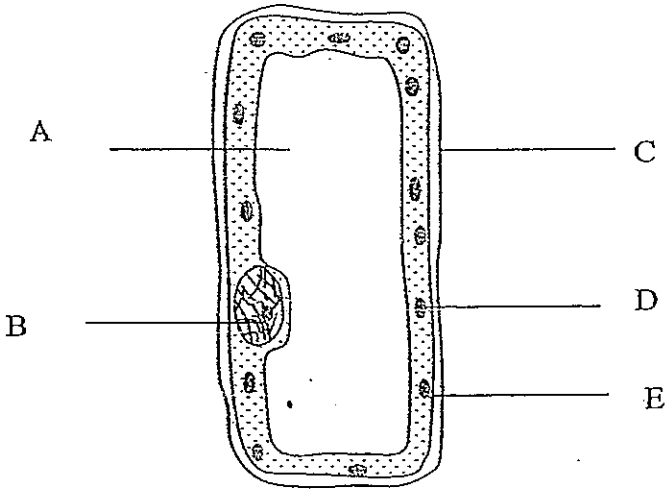
43. Ben used a microscope to examine some plants cells on a slide. One of the cells is shown in the diagram below.



Complete the table below by matching the correct part of the cell (A, B. C, D, E) with its description. [2]

	Function	Part
(a)	It controls celiular activities.	
(b)	It controls what goes in and out of the cell.	
(c)	It gives support to the support to the plant cell and helps it to maintain its shape.	
(d)	It converts light energy to chemical energy.	

2

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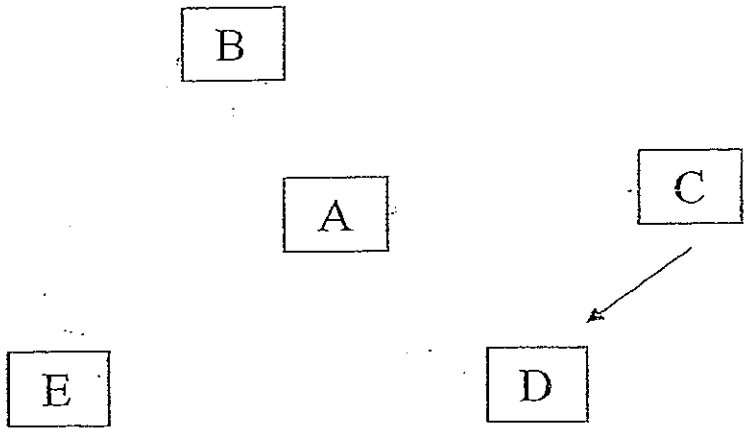
44. Five organisms, A, B, C, D and E are found in a pond community. Information about these organisms is as shown:

- A is the food producer.
- Two of the animals eat plants only.
- Two of the animals are carnivores.
- D eats C

Complete the food web below. [2]



2

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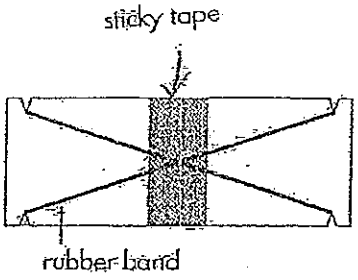
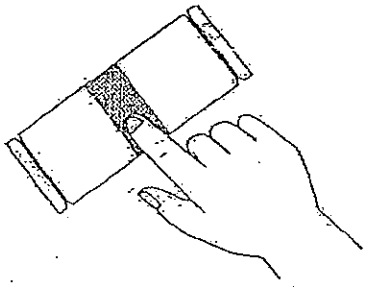
45. Jack made a toy as shown below.



The toy was turned over and pressed down. When the toy was released, it jumped up.



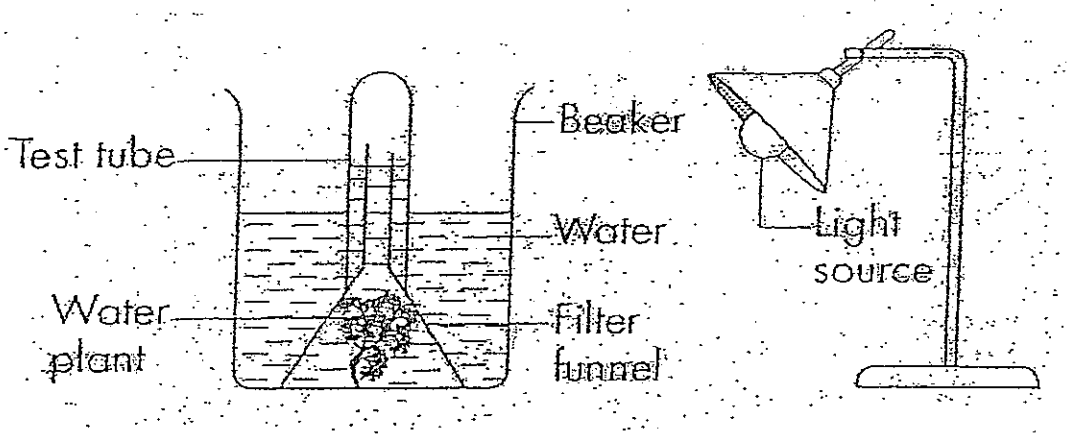
(a) What was the toy's energy source? [1]

(b) How could Jack make the toy jump higher? [1]

2

256

46. Kris carried out an experiment to find out how the brightness of light will affect photosynthesis carried out by a water plant. The diagram below shows her set-up.



State 2 variables she must measure. Explain your reason for measuring each variable.

(a) _____ [1]

_____

(b) _____ [1]

_____

2

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Ai Tong Primary School

Primary 6 Science CA1 Exams (2008)

Answer Keys

Qo.	Ans
1	4
2	1
3	1
4	2
5	2
6	3
7	1
8	4
9	4
10	2

Qn no.	Ans
11	4
12	3
13	4
14	4
15	1
16	4
17	1
18	4
19	1
20	4

Qn no	Ans
21	4
22	3
23	4
24	3
25	3
26	2
27	4
28	3
29	2
30	3

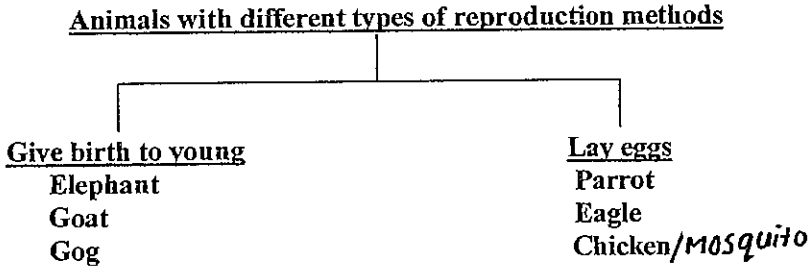
31a. Group A : Mammals
Group B : Birds

31b. Parrot

31c. The animals in Group A have hair but the animals in Group B does not have hair.

32a. Dragon fly

32b.



32c. Animals that fly, animals that do not fly.

33a. It is inedible and dispersed by water.

33b. X : rambutan
Y : Angsana

34a. Container A

34b. Ceramic

34c. It is water proof

35. Plastic. It is conductor of heat is so it enable John to hold the tongs.
Metal. It will not melt when it comes into contact with the heat.

36a. They provide him with the most amount of energy that he needs to carry out his daily work.

36b. Chemical potential energy ⟶ kinetic energy ⟶ heat energy + sound energy.

37(i). False (ii) False (iii) True (iv) True

38a. To find out which materials the best conduction of heat.
38b. Copper is the best conductor of heat.
38c. The same types of beakers.

39a. 5cm (b) The sun

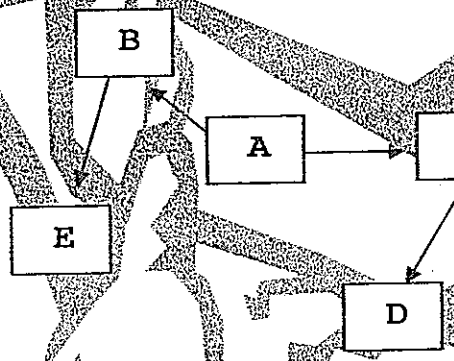
40. (1) Use the magnet to test on the both sides of A.
(2) See the results. In both sides of object A attracts, it is a magnet material. If only one side of object A attracts, the other repels, it is a magnet. If both sides does not attracts, it is made of non-magnetic material.
(3) Repeat the first two steps for object B and C.

41a. To find out if dark-coloured surfaces or light-coloured surfaces absorb more heat.
41b. Dark-coloured surfaces absorb more heat than lightly-coloured surfaces.

42)a)20g
b)30cm
c)Spring B stronger than spring A.

43)a)B
b)E
c)C
d)D

44)



45)a)The stretched rubber band.
b)Put more rubber bands.

46)a)The number of bubbles per minute and the water level in the test tube. Plant carries out photosynthesis in the presence of light. Oxygen is released as a result.
b)Air occupies space. The increased in air bubbles caused the decrease in water level.

--end---

161(b)