

SIA2



**RAFFLES GIRLS' PRIMARY
SCHOOL**

**PRELIMINARY
EXAMINATION**

SCIENCE

2005

NAME: _____)

CLASS: 6 ()



RAFFLES GIRLS' PRIMARY SCHOOL

PRELIMINARY EXAMINATION (2)

2005

Name : _____ Class: P6 _____ Index No: _____

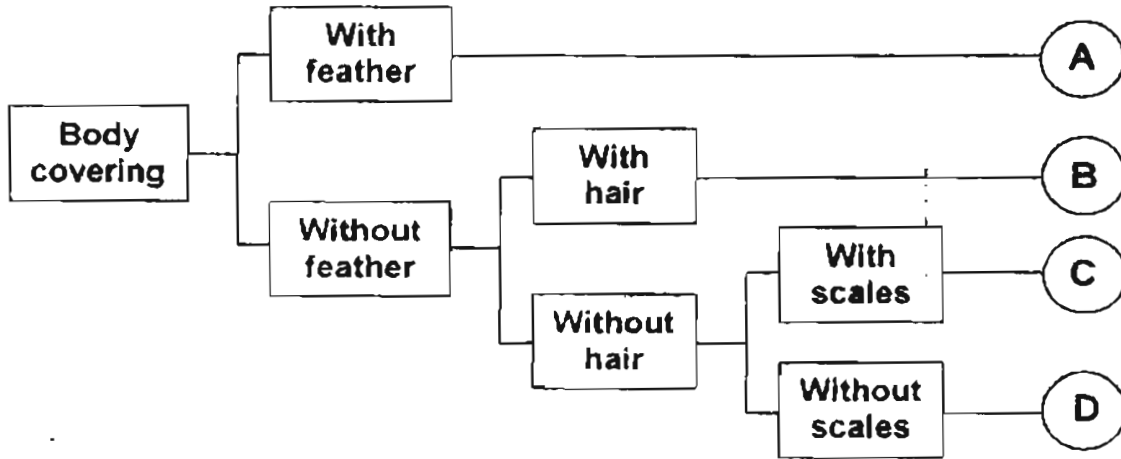
25 August 2005 Science

Your Score Out of 100 marks		
	Class	Level
Highest score		
Average score		
Parent's Signature		

SECTION A (30 x 2 marks)

There are 30 questions in this section. Answer **all** of them. For each question, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

1. Study the dichotomous key below.



Which of the following belong(s) to Group B?



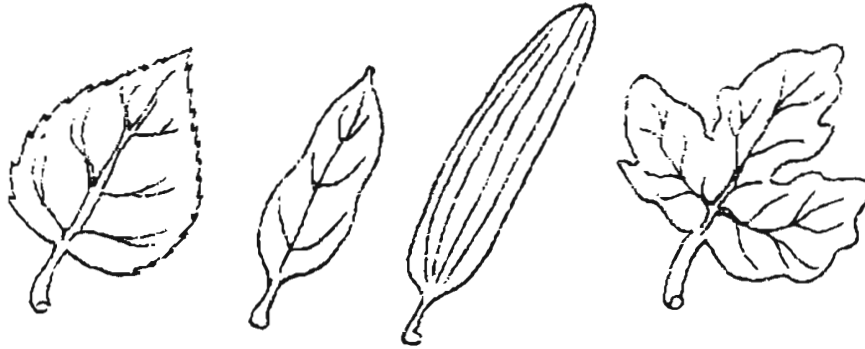
(1) X only

(2) Y only

(3) X and Z only

(4) W and Y only

2. Study the diagrams of leaves shown below.



Which of the statement(s) below describe(s) the leaves accurately?

- A. They have similar edges
- B. They have different shapes
- C. They have similar vein patterns

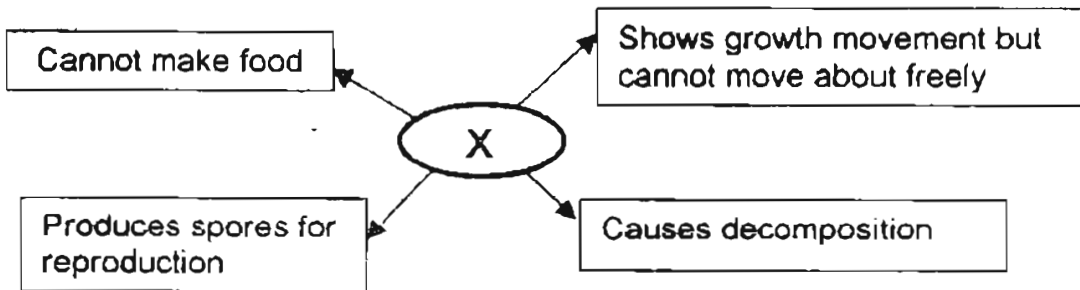
(1) A only

(2) B only

(3) A and C only

(4) B and C only

3. Study the diagram below which shows some characteristics of an organism X.



What can "X" be?

- A. Bird's nest fern
- B. Earthworms
- C. Mushroom
- D. Bread mould

(1) A and B only

(2) C and D only

(3) B, C and D only

(4) A, B, C and D

4. Use the following table to answer the question below.

	Venus	Earth	Mars	Jupiter	Saturn	Uranus	Neptune	Pluto
Distance from the Sun (Millions of km)	108.2	149.6	227.9	778.6	1433.5	2872.5	4495.1	5870
Diameter of Planet (km)	12104	12756	6794	142984	120536	51118	49528	2390
Mean Temperature (°C)	464	15	-65	-110	-140	-195	-200	-225

Source: <http://nssdc.gsfc.nasa.gov/planetary/factsheet/index.html>

Suppose two new planets P and Q have been discovered.

Planet P is located between Venus and Earth and is about the same size as Earth.

Planet Q on the other hand is located between Jupiter and Saturn and is about the same size as Venus.

Based on the information above, which one of the following statements is likely to be true?

- (1) Planet P is hotter than Planet Q.
- (2) Planet P is colder than Planet Q.
- (3) Planet Q is heavier than Planet P.
- (4) Planet Q is lighter than Planet P.

5. Jason, Cindy, Paul and Jane each received a slide with cells on it to observe under the microscope. They recorded the parts of the cells observed in the following table:

Name of student	Parts of cells observed
Jason	Cytoplasm, nucleus
Cindy	Cytoplasm, cell wall, nucleus
Paul	Cytoplasm, chloroplasts, cell membrane
Jane	Cell membrane, nucleus, cytoplasm

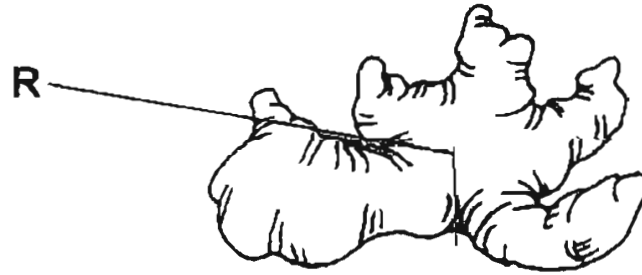
Based on their observation, which pupil(s) could have observed animal cells?

- (1) Paul only
 - (2) Jason only.
 - (3) Jason and Jane only
 - (4) Cindy and Paul only
6. The sentences below describe how sexual reproduction in plants takes place.
- A. Male cell fuses with female cell.
 - B. Pollen grains are transferred to stigma
 - C. Anther releases pollen grain
 - D. Pollen tube grows towards ovule
 - E. Seed develops

Which one of the following shows the correct sequence of events in the process of sexual reproduction?

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

7.



The function(s) of the plant part labelled R shown above is/are for _____.

- A. reproduction
- B. making food in sunlight
- C. storing food for the plant
- D. taking in water for the plant

(1) A only

(2) A and C only

(3) B and D only

(4) A, B, C and D

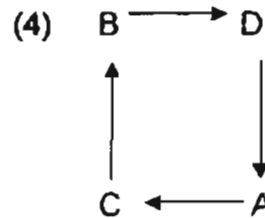
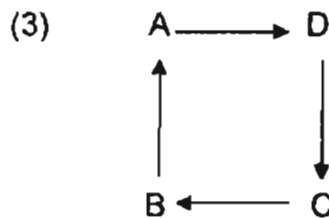
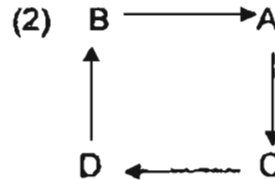
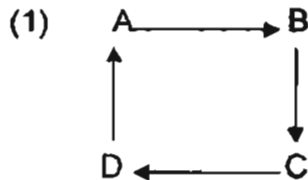
8. Object M melts at 3 °C and boils at 105 °C. It is a solid at X °C and a gas at Y °C. Which one of the following shows correctly what X and Y represent?

	X (°C)	Y (°C)
(1)	2	57
(2)	2	110
(3)	3	95
(4)	7	115

9. The statements A, B, C, ^{and} D and E below show the stages in the water cycle.

- A. rain falls
- B. clouds form over the land
- C. water flows to the rivers and seas
- D. water evaporates from seas, rivers and living things.

Which one of the following shows these stages in their correct order?



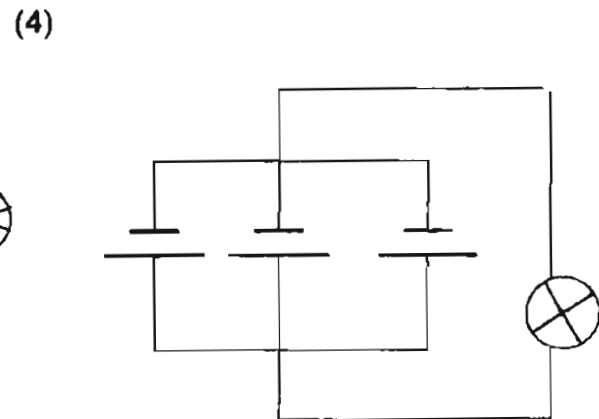
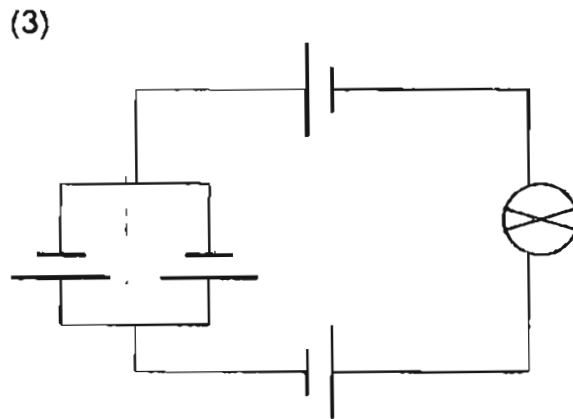
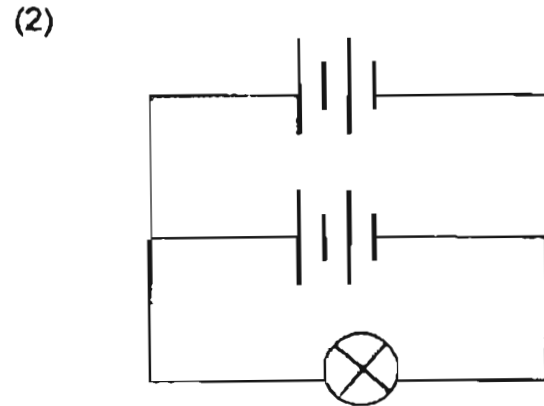
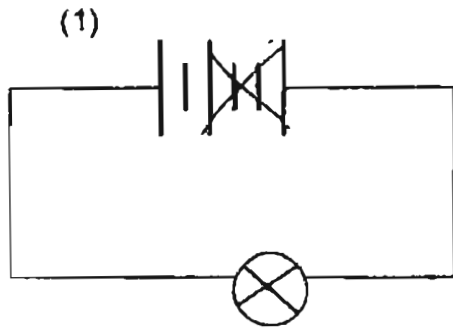
10. Jason filled two jars, A and B, with equal volumes of water. He placed 10 duckweeds in each jar and added 15 drops of vinegar, which is a weak acid, into Jar A. Both jars were placed in the same part of the garden for 1 week. The table below shows what he observed during the week.

Day	1	2	3	4	5	6	7
Jar A	10	10	10	8	7	6	5
Jar B	10	10	10	10	11	12	13

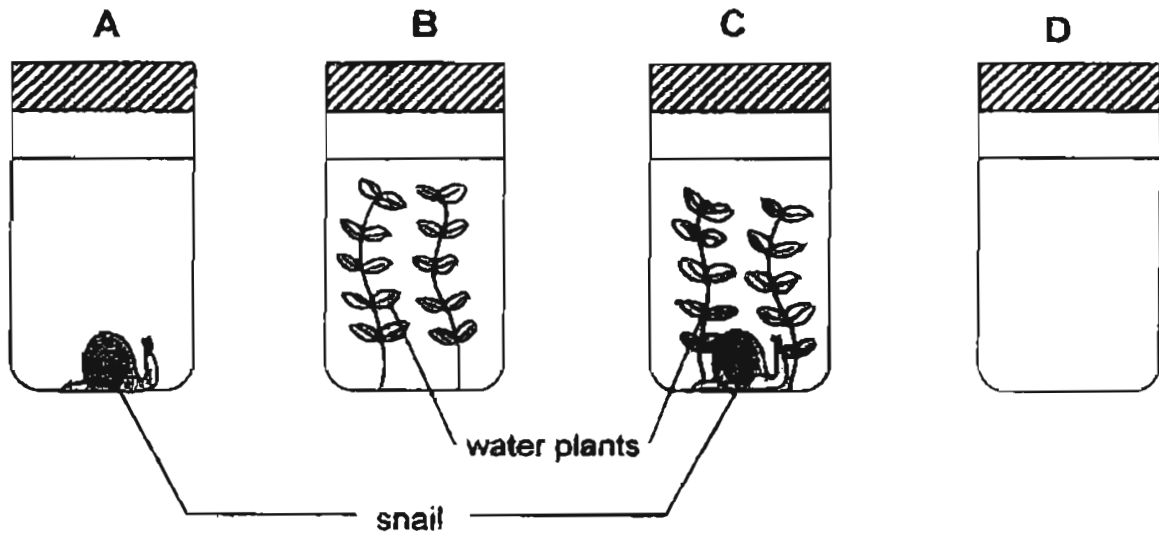
This experiment shows _____

- (1) the harmful effect of acid rain
- (2) that vinegar helps in the growth of duckweeds
- (3) that water is needed for the duckweeds to grow
- (4) that sunlight slows down the growth of duckweeds

11. Study the diagrams below carefully. In which one of the following circuits will the bulb light up the brightest?



12. Study the diagram carefully.



Four beakers of the same size were set up as shown above using water plants and animals. The four beakers were left in the sunlight for six hours (9am till 3pm).

At the end of the experiment, which one of the following beakers of water would you expect to contain the least amount of carbon dioxide?

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

13. Which of the following are functions of blood?

- A. To keep the heart pumping.
- B. To defend the body against germs and diseases.
- C. To transport oxygen and carbon dioxide in the body.
- D. To transport food substances from the small intestine to all parts of the body.

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

14. Melissa was at a crowded shopping mall watching an entertainer blow up a balloon. She then exclaimed to her mother that the balloon was going to burst. Which one of the following senses did Melissa use when making such a statement?

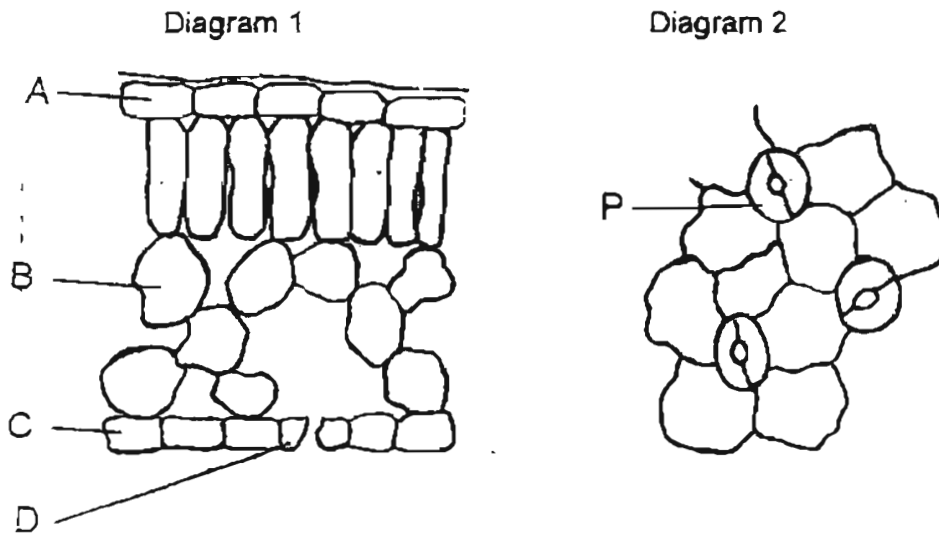
- | | |
|-----------|-------------|
| (1) sight | (2) hearing |
| (3) touch | (4) smell |

15. Breathing consists of inhalation and exhalation. Which of the following system(s) is/are involved in breathing?

- A. Skeletal system
- B. Muscular system
- C. Respiratory system

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

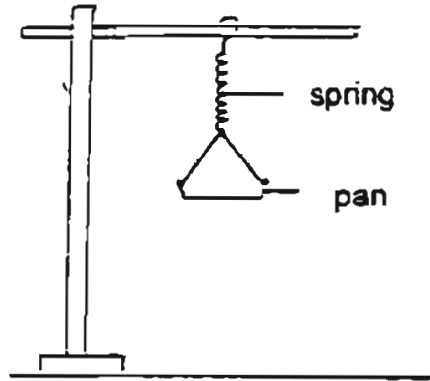
16. The diagrams below show the cells of a leaf taken from two different views.



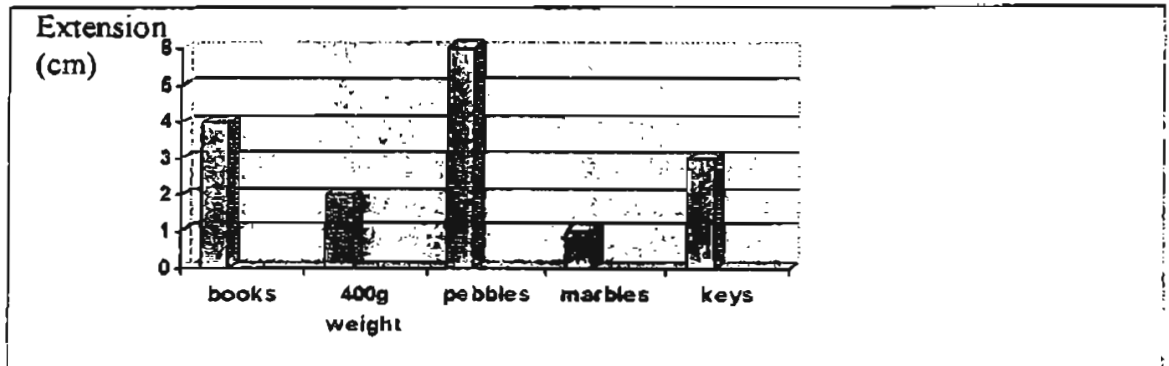
Which cell A, B, C or D in Diagram 1 is the same as the cell labelled P in Diagram 2?

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

17. Audrey conducted an experiment to determine how much a spring extends when different objects are placed in the pan as shown below.



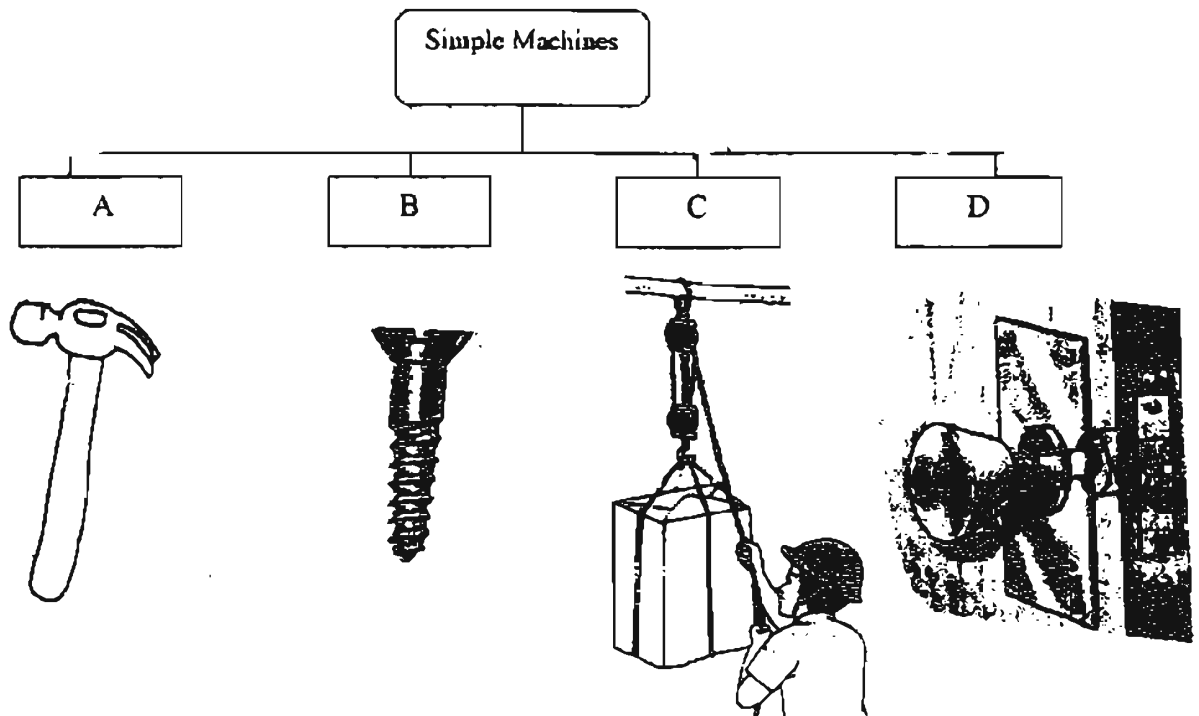
The bar graph below shows the results she obtained.



Which one of the objects weighs about 600g?

- (1) keys
- (2) books
- (3) pebbles
- (4) marbles

18. The classification table below shows four types of simple machines.



In which group A, B, C or D would a stapler belong?

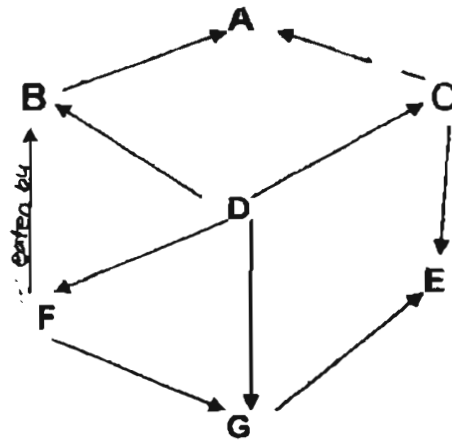
- (1) A
- (2) B
- (3) C
- (4) D

19. Grace suspended a bar magnet on a string. She then waited until the magnet stopped turning. When she observed it carefully, she found that the magnet did not point in a north-south direction. What was / were the possible reason(s) for this?

- A. The bar magnet she used was too strong.
- B. Powerful magnetic substances were near the bar magnet.
- C. She had used a defective compass to determine the direction.

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

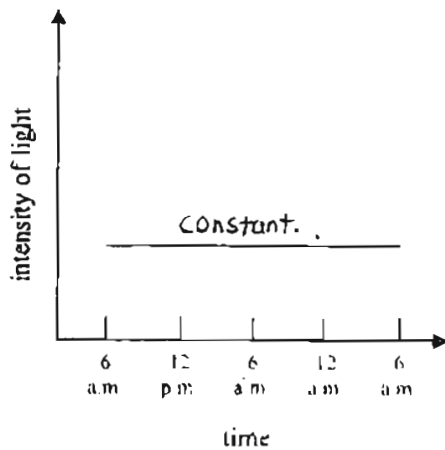
20. Study the food web below.



This food web has _____.

- (1) 4 herbivores and 2 omnivores
- (2) 4 herbivores, 1 omnivore and 2 carnivores
- (3) 2 herbivores, 2 omnivores and 4 carnivores
- (4) 2 herbivores, 2 omnivores and 2 carnivores

21. The changes in the intensity of light and temperature of a certain habitat were measured throughout a day. The graph and table below show the intensity of light and temperature respectively.



Time	6 am	12 pm	6 pm	12 am	6 am
Temperature (Degree Celsius)	28.5	31.5	31	29.5	29.5

The above results best describe the conditions _____.

- (1) in a pond
- (2) in a leaf litter
- (3) at the seashore
- (4) in a school field

22. The picture shows a dolphin.



Which of the following adaptations help it to survive in the ocean?

- A. Powerful tail fin and flippers.
- B. Blowholes located on top of its head.
- C. Scaly and slimy outer covering that camouflages it.
- D. Ability to regulate its body temperature to match its surroundings.

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

23. Which property of modern pesticides helps minimise environmental pollution?

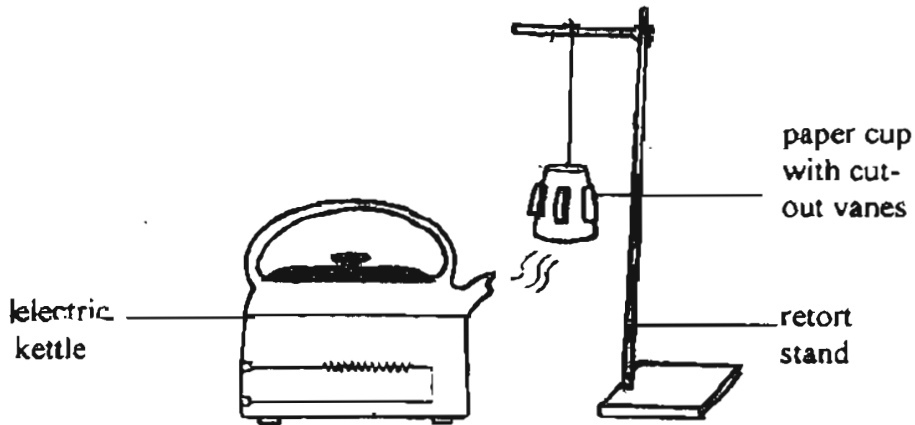
- (1) It can be easily broken down by soil bacteria.
- (2) It can be easily washed into our water bodies.
- (3) It can easily dissolve in the moisture in the air.
- (4) It can be removed when plants take it in through their roots.

24. Human activities can have positive and negative impact on our environment. Which of the following are possible consequences of uncontrolled logging?

- A. Global warming
- B. Barren land
- C. Extinction of some animal and plant species
- D. Excessive flooding due to increased sea levels

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

25. Study the diagram below carefully. The diagram shows an electric kettle of boiling water. Its spout is placed under a paper cup with cut-out vanes.



Which one of the following gives a correct description of the energy changes occurring in the above diagram?

- (1) electrical energy → heat energy → kinetic energy
- (2) electrical energy → heat energy → light and kinetic energy
- (3) electrical energy → kinetic energy → heat and kinetic energy
- (4) electrical energy → kinetic energy → heat energy → kinetic energy

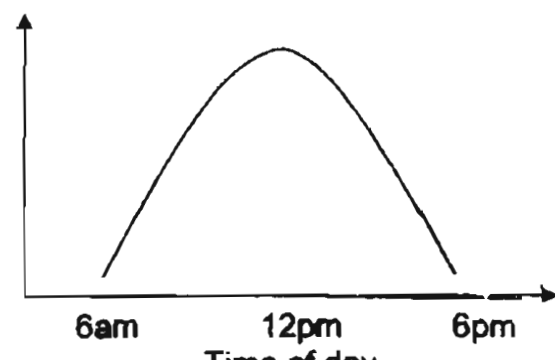
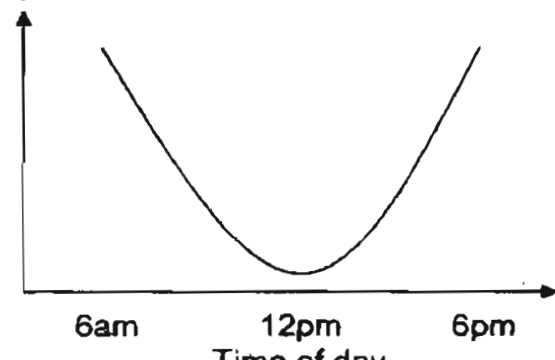
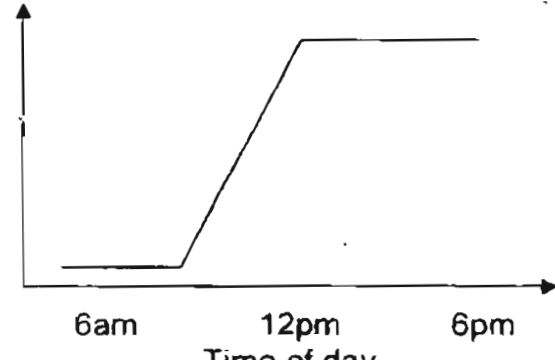
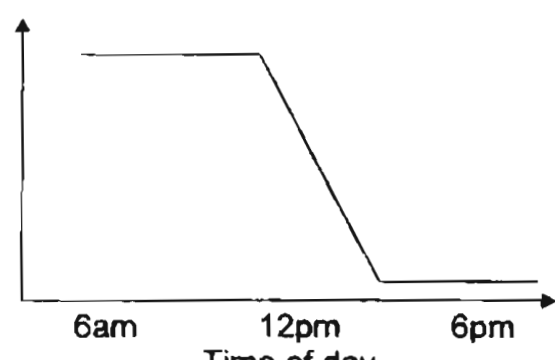
26. Study the table below carefully. Which of the following are correctly classified?

	Energy Source	Renewable	Environmentally friendly when used to generate electricity
A	wind	Yes	Yes
B	natural gas	No	No
C	petroleum	No	Yes
D	running water	Yes	Yes

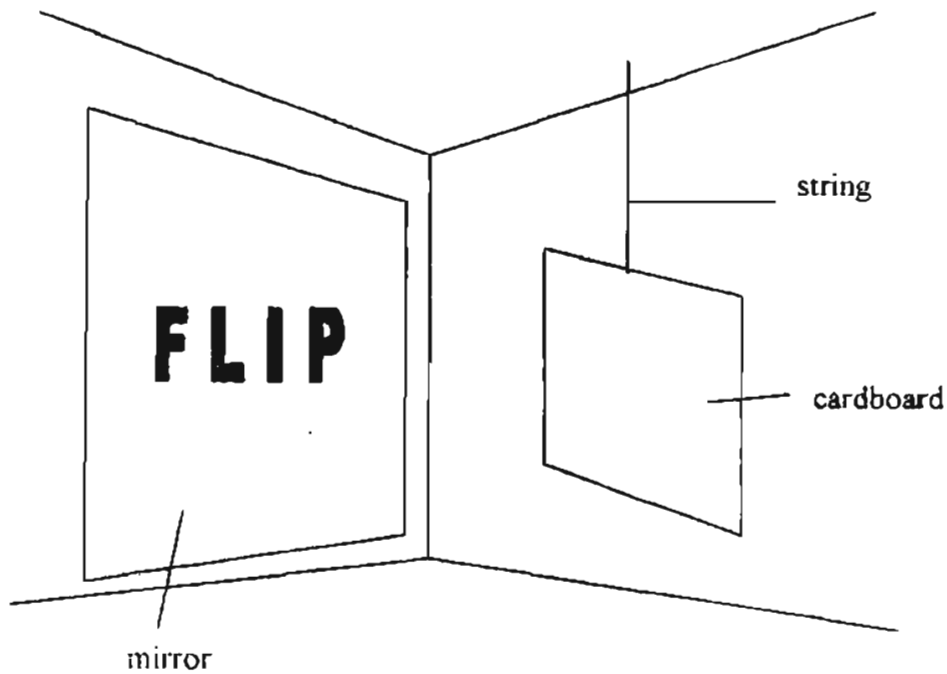
- (1) A and B only
- (2) A and D only
- (3) B and C only
- (4) C and D only

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27. Mary wanted to find out the amount of oxygen given out by plants in a pond during photosynthesis on a sunny day. She collected samples of pond water to find out the percentage of dissolved oxygen in pond water at various times during the day. She plotted her results in a graph. Which one of the following graphs shows correctly her results?

(1)	<p>Percentage of dissolved oxygen (%)</p>  <p>6am 12pm 6pm</p> <p>Time of day</p>
(2)	<p>Percentage of dissolved oxygen (%)</p>  <p>6am 12pm 6pm</p> <p>Time of day</p>
(3)	<p>Percentage of dissolved oxygen (%)</p>  <p>6am 12pm 6pm</p> <p>Time of day</p>
(4)	<p>Percentage of dissolved oxygen (%)</p>  <p>6am 12pm 6pm</p> <p>Time of day</p>

28. Peter hangs a word written on a cardboard in front of the mirror. The reflected image of the word is seen in the mirror as shown below.



Which one of the following below shows the word as printed on the cardboard?

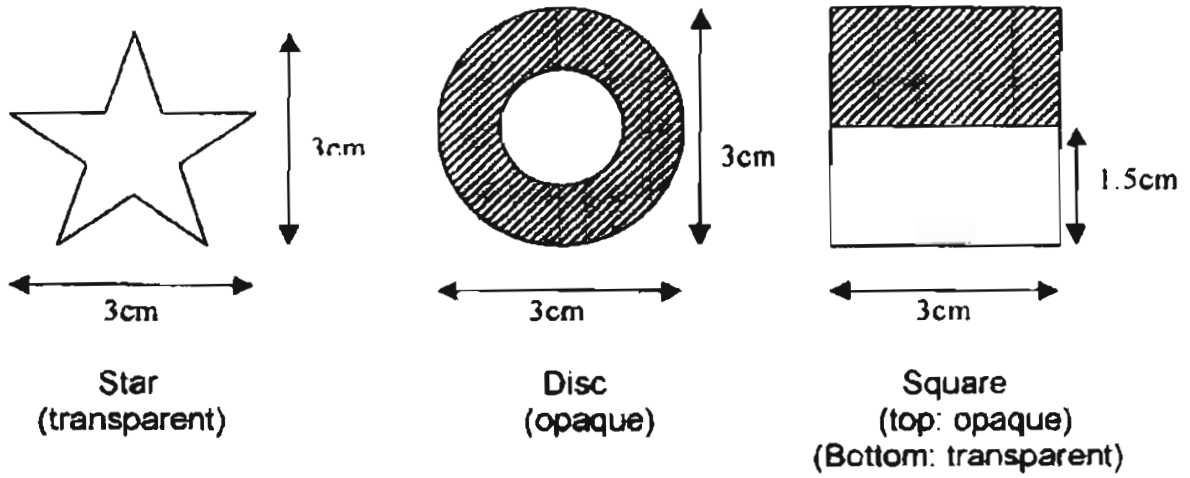
(1) **FLIP**

(2) **PILF**

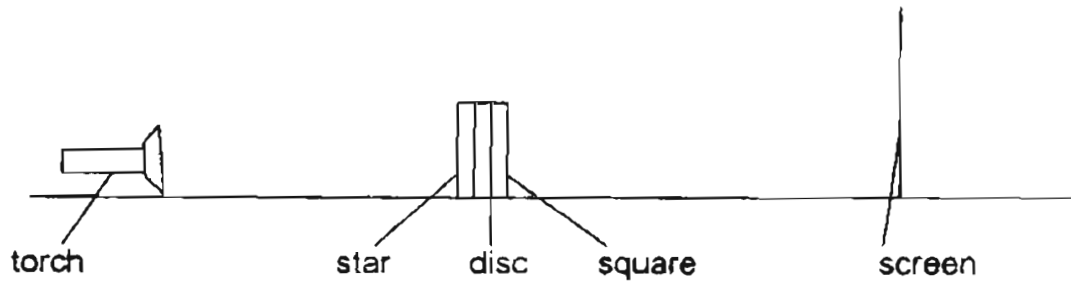
(3) **ƆLIP**

(4) **ƆILF**

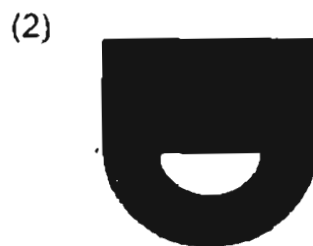
29. The diagram below shows three objects.



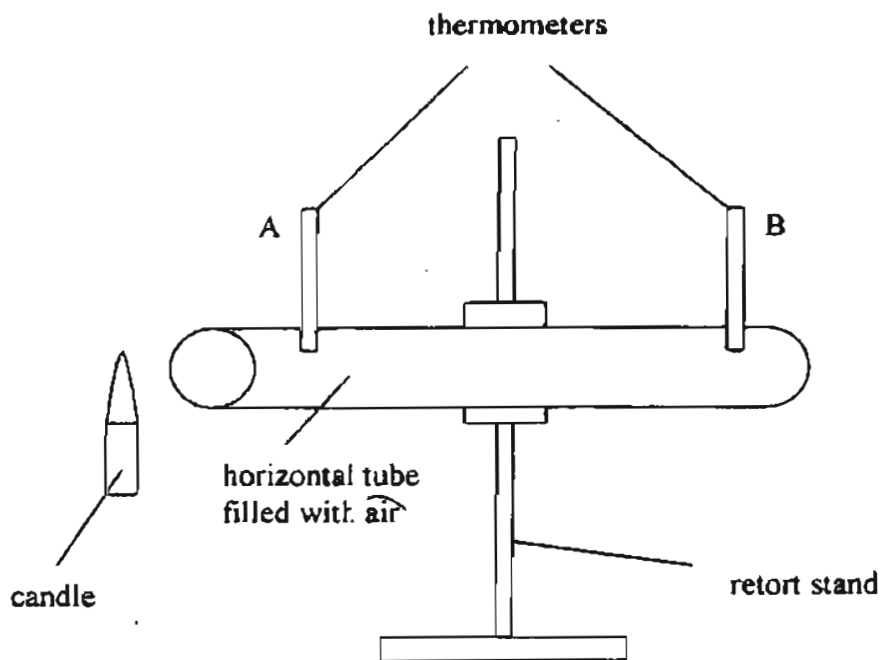
The three objects were glued together. They were placed between a torch and a screen as shown below.



Which one of the following shadows is possible?



30. Paul set up the experiment shown below in a science laboratory.



He recorded the results in the table below.

Time (mins)	Temperature reading on thermometers A and B ($^{\circ}\text{C}$)	
	A	B
0	30	30
5	40	30.5
10	45	31.5
15	50	33

Based on Paul's results, which of the following conclusion(s) can he draw?

- A. Hot air rises
- B. Air is a bad conductor of heat
- C. Air is a good conductor of heat
- D. Heat travels from a hotter place to a colder place

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

NAME : _____

DATE : _____

CLASS : _____

WRITE		SHADE OVALS																			
INDEX NUMBER						5	6	7	8	9											
						5	6	7	8	9											
		0	1	2	3	4	5	6	7	8	9										
		0	1	2	3	4	5	6	7	8	9										
		0	1	2	3	4	5	6	7	8	9										
		A	B	C	D	E	F	G	H	I	J	Z									

SUBJECT :

EXAMPLE: IF YOU THINK THE 2ND OPTION IS THE CORRECT ANSWER SHADE THE OVAL 2 LIKE THIS :



- | | | | | | | | | | | | | | | |
|----|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 21 | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 41 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2 | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | 22 | <input checked="" type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | 42 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3 | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | 23 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 43 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 24 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 44 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5 | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | 25 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 45 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6 | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | 26 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | 46 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7 | <input checked="" type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | 27 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 47 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
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| 10 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 30 | <input checked="" type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | 50 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11 | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | 31 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 51 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12 | <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | 32 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 52 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
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| 15 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 35 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 55 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 36 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 56 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 37 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 57 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18 | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 38 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 58 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19 | <input type="radio"/> | <input checked="" type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | 39 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 59 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> | 40 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 60 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



**RAFFLES GIRLS' PRIMARY SCHOOL
PRELIMINARY EXAMINATION 2005
PRIMARY 5 SCIENCE (EM1/EM2)**

Booklet A 60 marks		
Booklet B 40 marks		
Total 100 marks		
	Class	Level
Highest score		
Average score		
Parent's Signature		

BOOKLET B

Name: _____

Class: P5 _____

Date: 25th August 2005

30 Questions

60 marks

Total time for Booklets A and B: 45 min

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

FOLLOW ALL INSTRUCTIONS CAREFULLY.

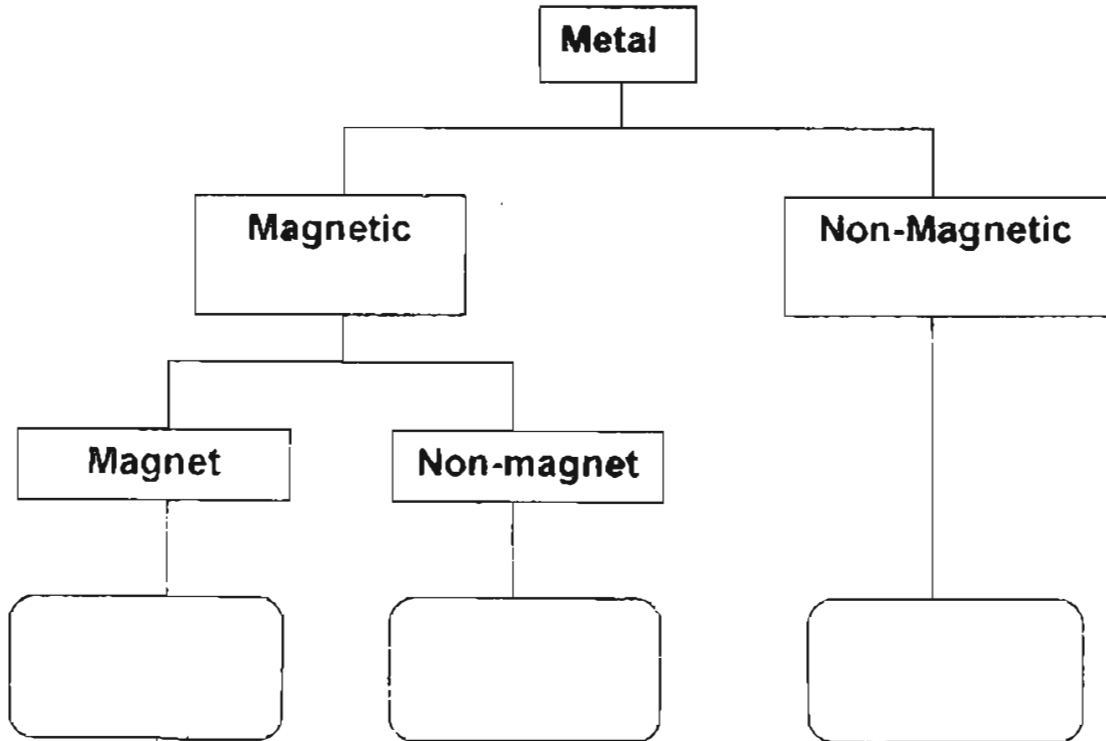
SECTION B (40 marks)

There are 16 questions in this section. Answer all of them. Write your answers in the spaces provided.

31. Susan used a strong magnet to test four objects to see if they were magnets. She placed both ends of the strong magnet near each object. Her findings were recorded in the table as shown below.

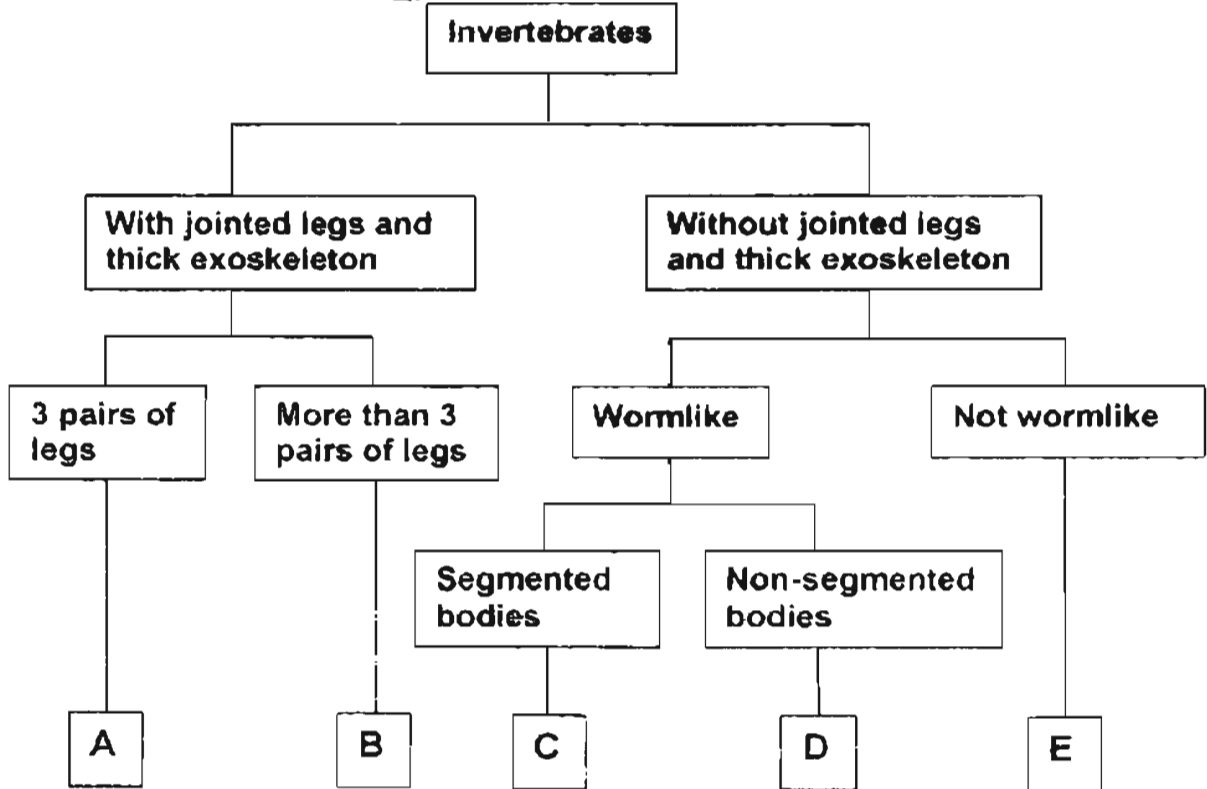
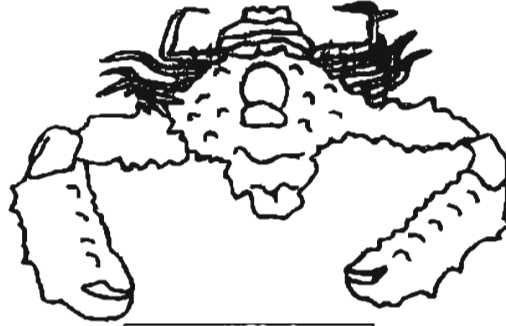
	A	B	C	D
North Pole of Strong Magnet	no effect	attracted	repelled	attracted
South Pole of Strong Magnet	no effect	repelled	attracted	attracted

Based on her findings, classify the objects by writing the letters A, B, C and D in the classification table below. [2]



/ 2

32. The diagram below shows a new species from Guam. Study the dichotomous key and answer the questions below.

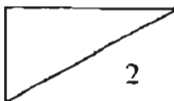


(a) Which letter (A, B, C, D or E) do you think best represents the new organism found in Guam?

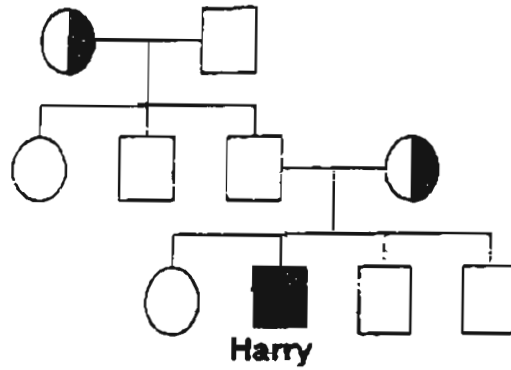
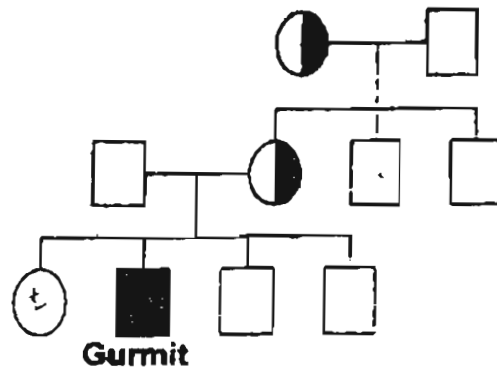
$\left\{ \frac{1}{2} \right\}$

(b) Weimin claims that letter D could represent a snake. Do you agree with him? Why?

$\left\{ 1 \frac{1}{2} \right\}$



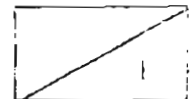
33. (a) Gurmit and Harry are colour-blind. Colour-blindness is a trait and it "runs in the family". Study the two family trees below carefully.



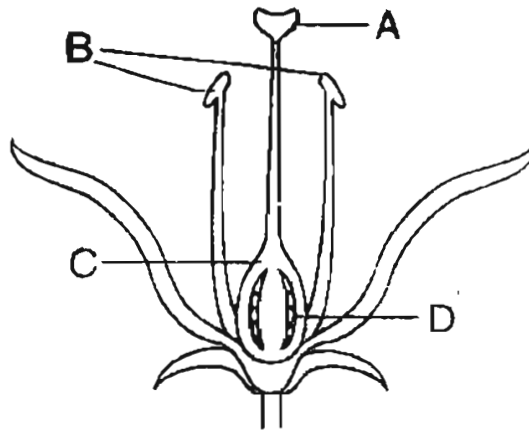
Key:	<input type="checkbox"/> Normal male	<input type="checkbox"/> Normal female	<input checked="" type="checkbox"/> Carrier female
	<input checked="" type="checkbox"/> Colour-blind male		

Circle "True", "False" or "Unable to tell" for the following statements below:

(i)	Gurmit's father and maternal uncles are not colour-blind.	True	False	Unable to tell
(ii)	Harry's mother and maternal grandmother are both carriers of colour-blindness.	True	False	Unable to tell

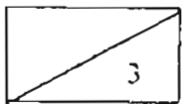


(b) The diagram below shows a cross-sectional view of a flower.

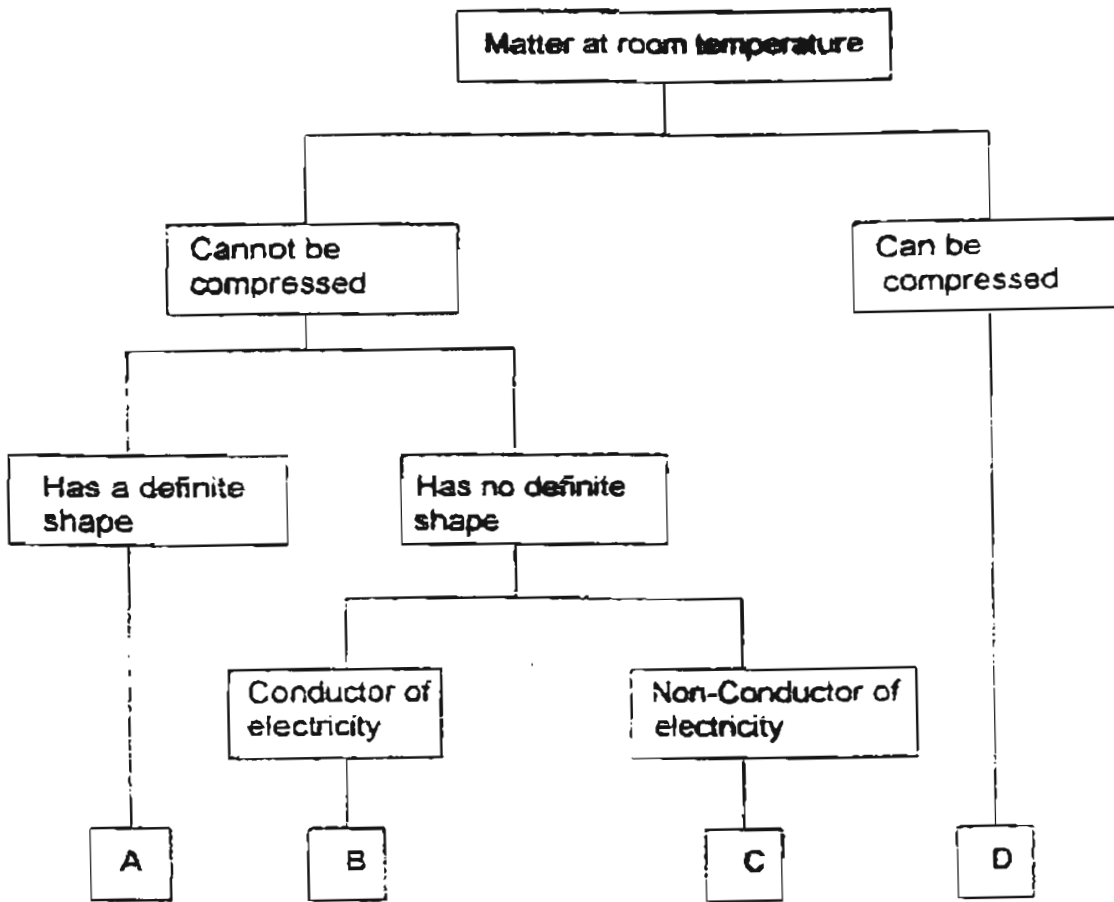


(i) Which part(s) indicate(s) the female parts of a flower? [1]

(ii) If the parts labelled B are removed, the flower can still develop into a fruit? Explain why. [2]



34. Study the dichotomous key below.



(a) Where would you place

(i) water _____ [$\frac{1}{2}$]

(ii) copper coin _____ [$\frac{1}{2}$]

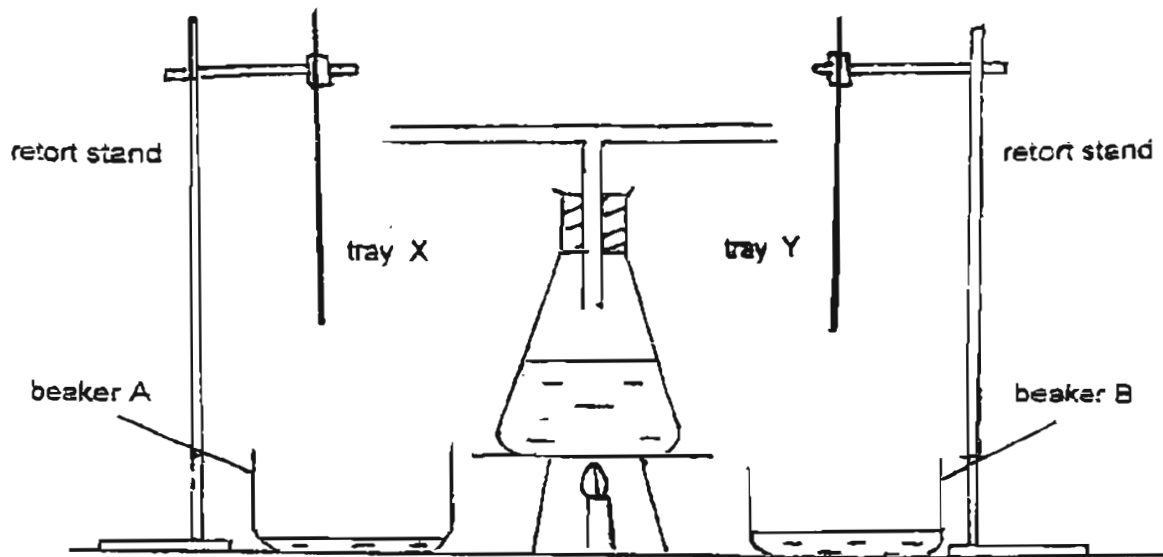
(b) A 1-litre bottle contains 800 cm^3 of substance D (as described in the dichotomous key) and 200 cm^3 of oil.

If another 100 cm^3 of substance D is added to the bottle, what is the volume of substance D in the bottle now? [1]

The volume of substance D is _____ cm^3



35. Jane suspended two trays of the same size at the same distance from the ends of a T-tube attached to a conical flask containing water, as shown below.

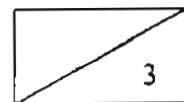


Before she started heating the water, the two trays were at room temperature. Jane then heated up the water in the conical flask until it came to a boil. She continued to let the water boil for another 10 minutes. After 5 minutes, more water was collected in Beaker B than in Beaker A.

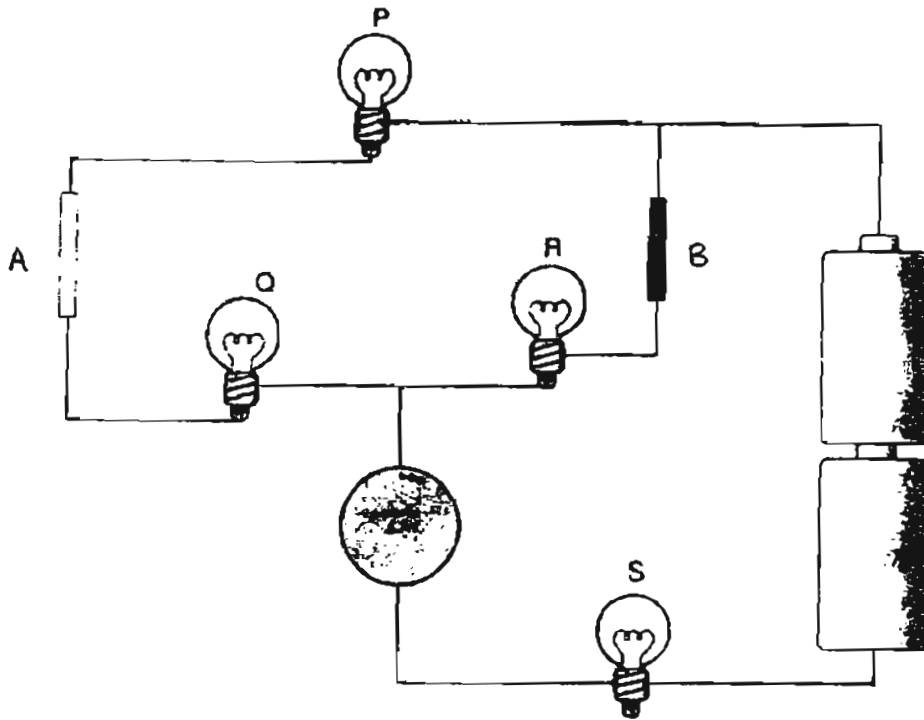
- a) If one tray is made of plastic and the other metal, which tray, X or Y, do you think is made of metal? [1]

- b) At the end of 10 minutes, Jane noticed fewer water droplets forming on both trays. Give a reason for her observation. [1]

- c) If Jane continued to boil the water in the conical flask for another 2 minutes, what would the temperature of the water be? [1]



36. Sam set up an electric circuit using 4 bulbs P, Q, R and S and 3 objects as shown in the diagram below.



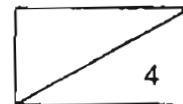
- (a) If all the bulbs are in working order, what objects can he place at A, B and C in order to light up only bulbs P and Q? [3]

A _____

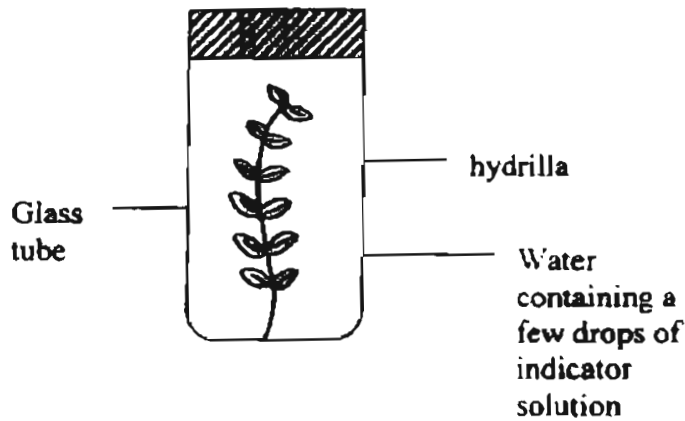
B _____

C _____

- (b) Without removing any of the objects he had placed in (a) or rearranging the whole circuit, what must he do in order to light up bulbs P, Q and S? [1]



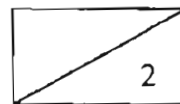
37. Anwar placed a hydrilla plant in a sealed glass tube containing a few drops of indicator solution as shown below.



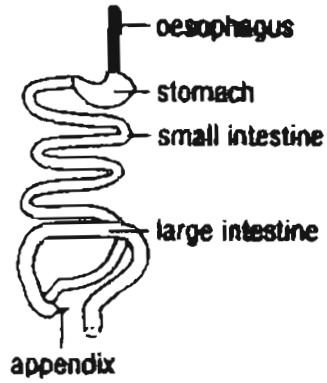
The indicator solution in the water causes the colour of the water to change in response to the amount of carbon dioxide dissolved in the water. The table below gives information about the possible colour changes.

Colour of water with indicator solution	What the colour indicates
blue	smaller amount of carbon dioxide in water
yellow	greater amount of carbon dioxide in water

If Anwar left the above set-up in his garden at 9 a.m. on a sunny day, what do you think the colour of water will be at 12 noon? Explain why. [2]



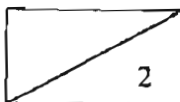
38. The diagram below shows part of a human digestive system.



(a) Digestion of food also takes place in another part of the system which is not shown in the diagram above. Name that part. [1]

(b) Write "T" for true statement(s) and "F" for false statement(s) in the table below. [1]

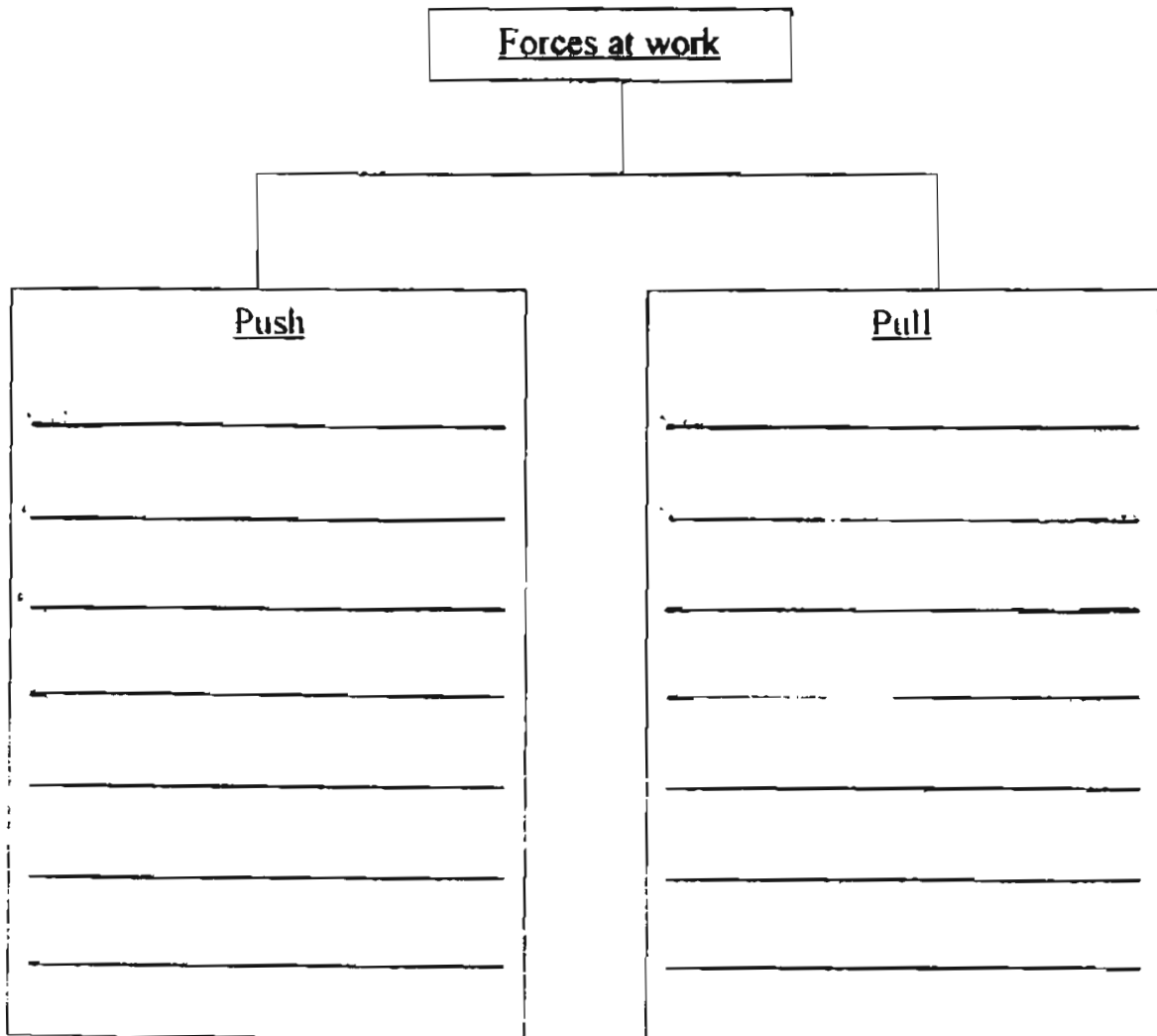
Statements	T/F
Digestive juices are produced in the gullet.	
Digestion of food ends in the large intestine.	



39. Classify the following actions which involve 'pushes' and 'pulls' in the classification table given.

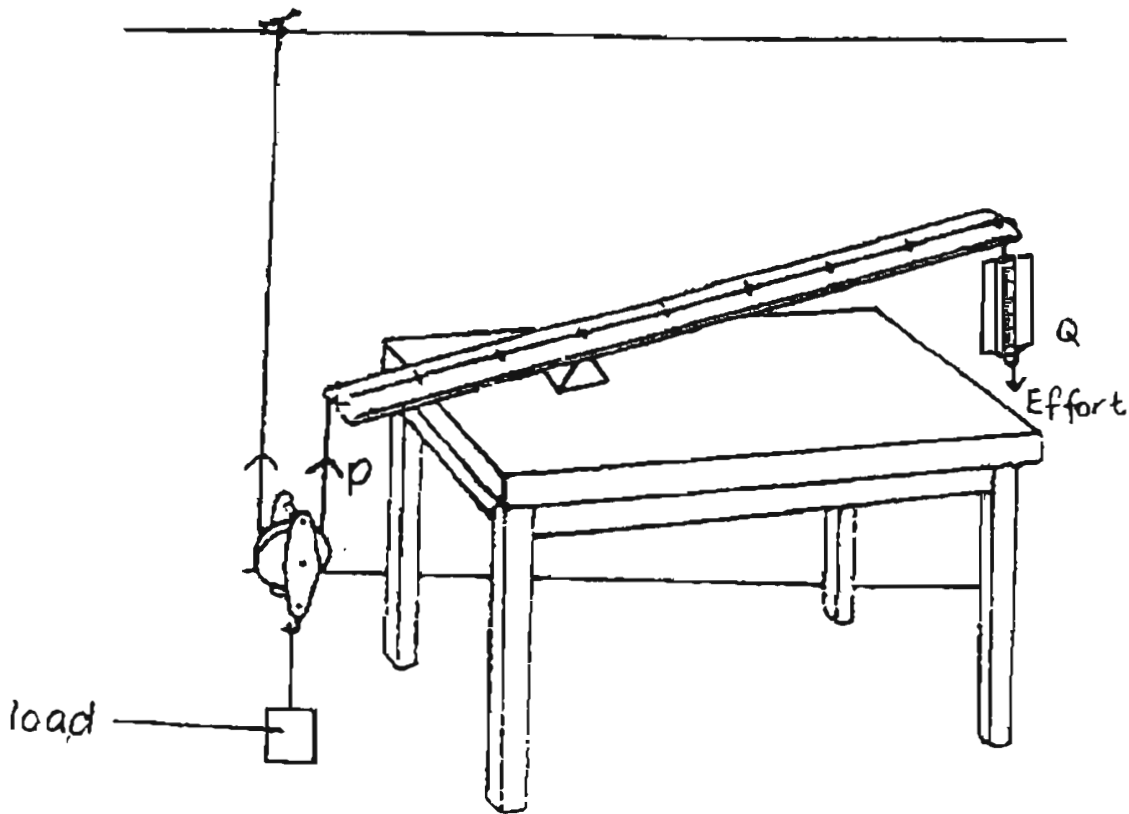
[3]

- hoisting a flag
- throwing a shot putt
- explosive action of a fruit
- opening the refrigerator door
- placing your thumbprint on a piece of paper
- getting a piece of tissue from the tissue box



3

40. Study the set-up below which Tom used to lift a load.



He recorded his readings in the table below.

Effort at Q (g)	Load (g)
36	90
48	120
60	150

(a) Name the 2 simple machines which he made use of in the above set-up.

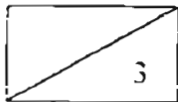
[2]

(i) _____

(ii) _____

(b) Without removing or adding any objects, what adjustment can be made to the set-up to enable Tom to use even less effort to lift the load?

[1]



41. The diagram below shows how Lynn tried to move the iron nail from the base of the container to its brim by pulling a bar magnet along the side of the container.



She found that she could not move the iron nail. Give 2 possible reasons why she could not do it.

[2]

(a) _____

(b) _____

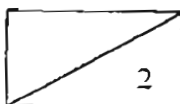
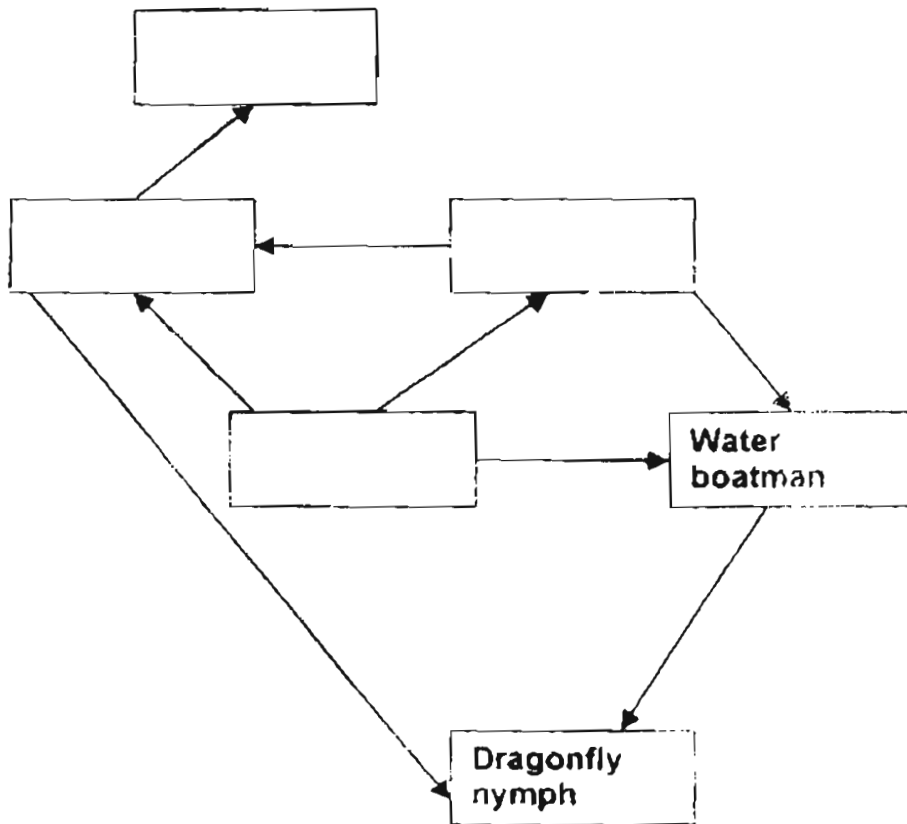


42. The table below shows the food eaten by some animals in a pond.

Animal	Food Eaten
Kingfisher	Fish
Dragonfly nymph	Water Boatman, Fish
Fish	Algae, Water flea
Water Boatman	Algae, Water flea
Water flea	Algae

Complete the food web below using the above information.

[2]



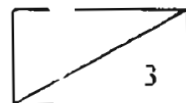
43. Living things have special adaptations to help them cope with the physical factors of an environment.

- (a) A polar bear and a camel live in two totally different environments. Compare the feet of the camel and the polar bear. In what way are the feet adapted to help each animal move easily in their respective habitats?

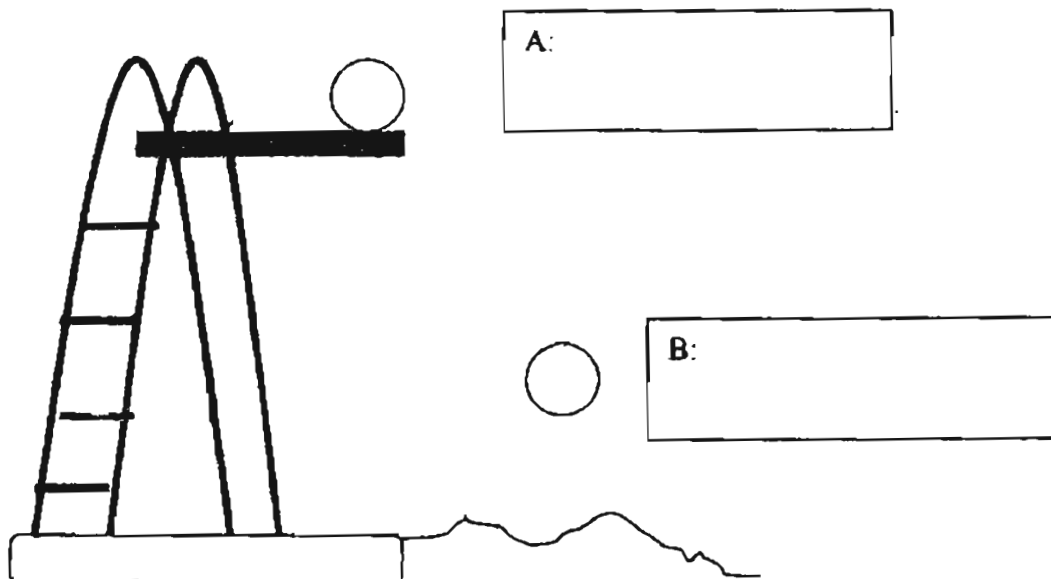
[2]

- (b) Penguins do not have large flat feathers that flying birds have. Their feathers are short with an under-layer of woolly down. When it gets cold, penguins can puff their feathers out. How does puffing their feathers out help them to keep warm?

[1]



44. The diagram below shows a ball dropping into the swimming pool from a diving board. Write down the energy which the ball possessed at points A and B. [2]



45. Abigail wanted to find out what type of light was suitable for growing rose plants. Table 1 shows the possible options for each variable.

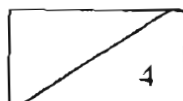
Table 1

Variables	Possible Options
Material of pot:	plastic, ceramic, clay
Type of soil :	garden soil, sandy soil, clayey soil
Size of pot:	250cm ³ , 500cm ³ , 1000cm ³
Amount of water given daily:	100cm ³ , 150cm ³ , 200cm ³
Colour of light:	blue, white, red

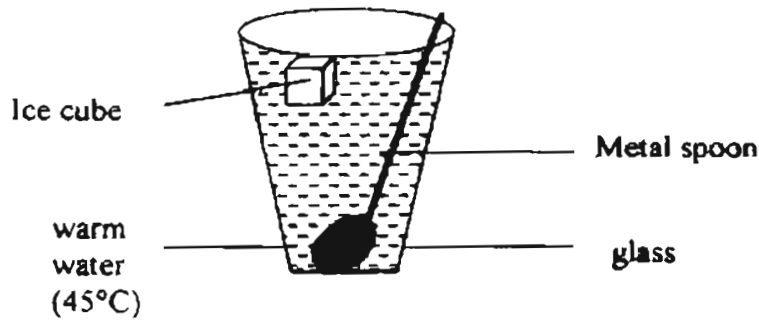
Using the information in Table 1, design a fair test by completing Table 2. [2]

Table 2

	Pot X	Pot Y	Pot Z
Material of pot:			
Type of soil :			
Size of pot:			
Amount of water:			
Colour of light:			



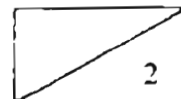
46(a) The diagram below shows a glass containing some water, ice and a spoon. Peter poured some warm water into the glass. Next, he put in a spoon and then added a piece of ice into the water.



Fill in the table below by putting a tick (✓) in the appropriate column, showing heat gain and/or heat lost [1]

	heat gain	heat lost
spoon		
ice-cube		
glass		
water		

(b) Paul accidentally spilled some alcohol on his arm. After a short while, he felt a cooling sensation on his arm. Give an explanation for his observation. [1]



Setters: Mrs. C. Lim, Ms. J. Phua, Mr. Cheng K.H. & Mdm. J. Woon

Answer Sheets

Raffles Girl Primary School / SA2/2005 Pri 6 Science

1. (4) 2.(2) 3.(2) 4.(1) 5.(3) 6.(3) 7.(2) 8.(2) 9.(2) 10.(1)

11.(3) 12.(2) 13.(3) 14.(1) 15.~~(4)~~ 16.~~(4)~~ 17.(1) 18.(1) 19.(3) 20.(4)

21.(2) 22.(1) 23.(1) 24.(3) 25.(1) 26.(2) 27.(1) 28.(4) 29.(2) 30.(3)

31. Magnetic ----Magnet : B, C Non-magnet : D

 Non-Magnetic-----A

32a. B 32b.No snakes is a vertebrates, it is not invertebrates.

33ai. True 33ii.unable to tell

33bi A,C and D

33bii It is because part B and the parts of the male if they are removed, there are still the parts of the female plants, so they can be reproduce by the wind or the other animals. Pollen grains from the same type of flower can be carried by to the part A.

34ai. B 34aii. A

34b. 800cm^3

35a. Tray X

35b.Both the tray had been heated up. The tray were becoming hotter, thus condensation is unable to take place. $35^{\circ}\text{C} - 100^{\circ}\text{C}$

36a. A-metal rod B-rubber C-Metal ball

36b. Put the wire of S one in the metal tip, one in the metal casing.

37. During the day, plants take in carbon dioxide and give out oxygen so as to photosynthesize (blue).

38a. Mouth

38b. Both are false

39.

Push

Pull

-throwing a shot putt

-hoisting a flag

-explosive action of a fruit

-opening the refrigerator door

-placing your thumbprint on
a piece of paper

-getting a piece of tissue from
the tissue box

40ai. Levers

40aii. movable pulleys

40b. move P closer to the fulcrum

41a. The magnet is weak

41b. The container is made of a magnetic material.

42. Kingfisher

|

Fish <----- water flea

Algae ----> Water Boatman

Dragonfly nymph

43a. The polar bear has stiff hair at the bottom of the feet to walk on ice without slipping. The camel has large padded feet to walk on sand without sinking.

43b. The thick feather keeps layer of hair close to its slant which insulates it, traps heat against the cold.

44a. Potential energy

44b. Kinetic and potential energy

45.

	Plot X	Plot Y	Plot Z
Material of pot	ceramic	ceramic	ceramic
Type of soil	Garden soil	Garden soil	Garden soil
Size of pot	1000cm ³	1000cm ³	1000cm ³
Amt of water	150cm ³	150cm ³	150cm ³
Colour of light	blue	white	red

46a. spoon :-heat gain ice-cube:-heat gain

glass:-heat gain water:-heat loss

46b. The cooling sensation was from the alcohol, the alcohol evaporate from the surface of Paul's skin, the process of evaporation used up heat from his skin, thus it cause the cool sensation on her skin that she felt.