Maha Bodhi School
2008 Continual Assessment 1
Science

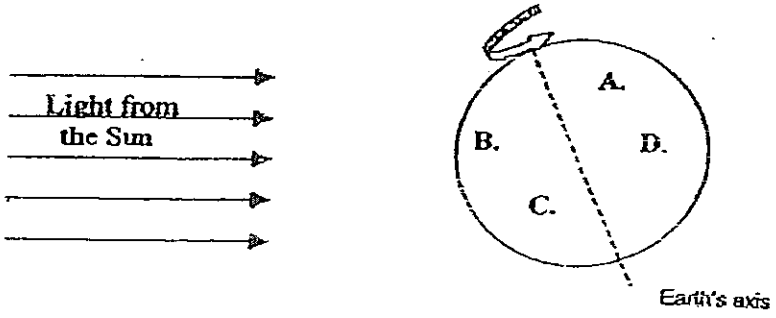
Name : _____ ( ) Date:29 Feb 2008

Class : P 6 (_____) Duration : 1 h 30 min
(Parts I & II)

Part I: (50 marks)

For each question from 1 to 25, 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 Mark sheet (OMS).

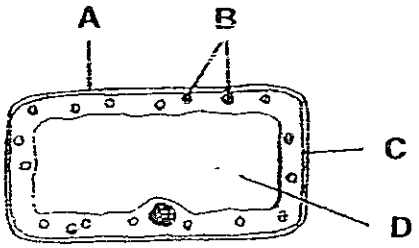
1. Study the diagram below.



Which one of the following A, B, C or D on Earth will be the next to experience night?

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

2. The diagram below shows a typical plant cell.



Which part of the cell enables it to make food?

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

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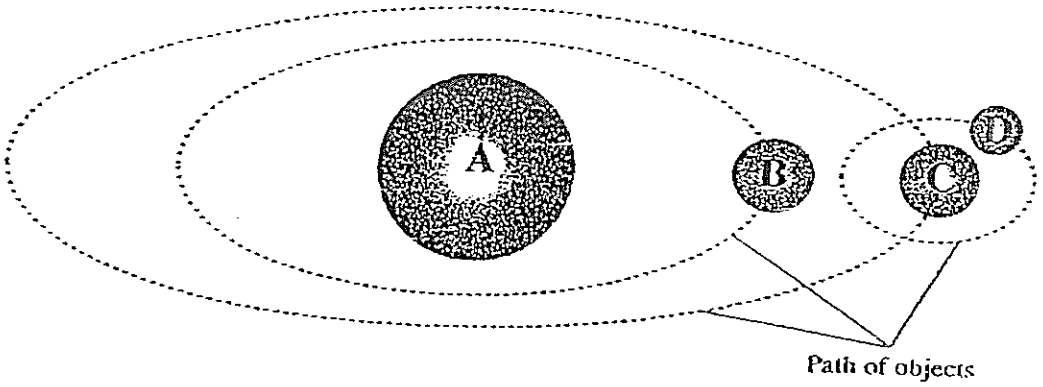
3. The diagram below shows objects A, B, C and D in the Solar System.



Descriptions about each object are given below.

- Object A is a source of light.
- Object B moves around Object A.
- Object C moves around Object A.
- Object D moves around Object C.

What could the following objects A, B, C and D possibly be?

	A	B	C	D
(1)	Sun	Mercury	Earth	Moon
(2)	Sun	Earth	Moon	Mercury
(3)	Moon	Earth	Mercury	Sun
(4)	Moon	Mercury	Earth	Sun

4. Which one of the following statements about fossil fuels is **NOT** true?

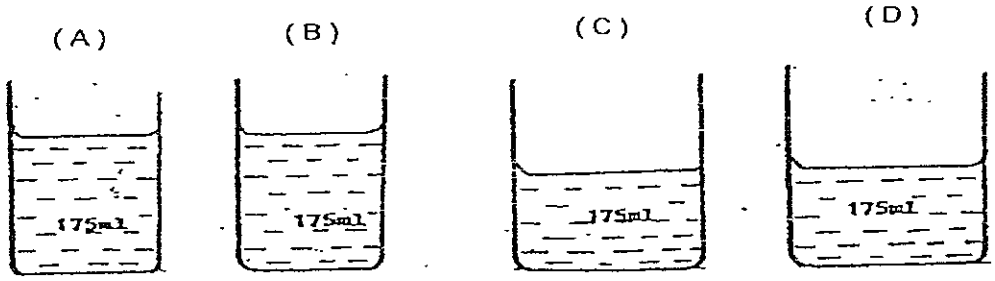
(1) They contain chemical energy.
(2) They are found in the ground.
(3) Burning of fossil fuels causes air pollution.
(4) The usage of fossil fuels causes the depletion of the ozone layer.

5. Which of the following appliances convert electricity into the same form of useful energy?

(A) Oven
(B) Electric drill
(C) Television
(D) Bread Toaster

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

6. A group of pupils are comparing the rates of evaporation from the four containers shown in the diagram below.



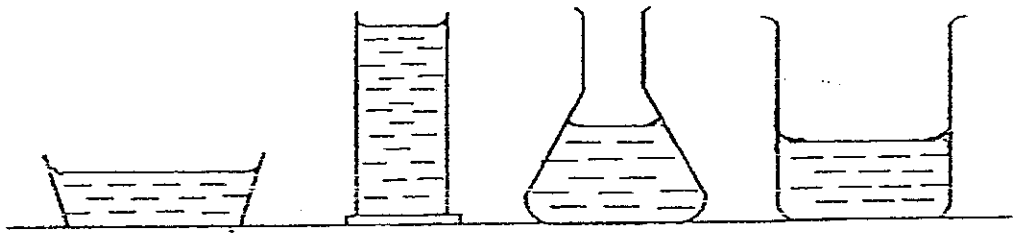
The table below shows the conditions of the four containers.

	A	B	C	D
Amount of water	175 ml	175 ml	175 ml	175 ml
Surface area	45 cm^2	45 cm^2	65 cm^2	65 cm^2
Temperature	25°C	36°C	30°C	36°C
Speed of wind	10 km/h	20 km/h	10 km/h	20 km/h

Which two containers can be used in order to carry out a fair test?

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

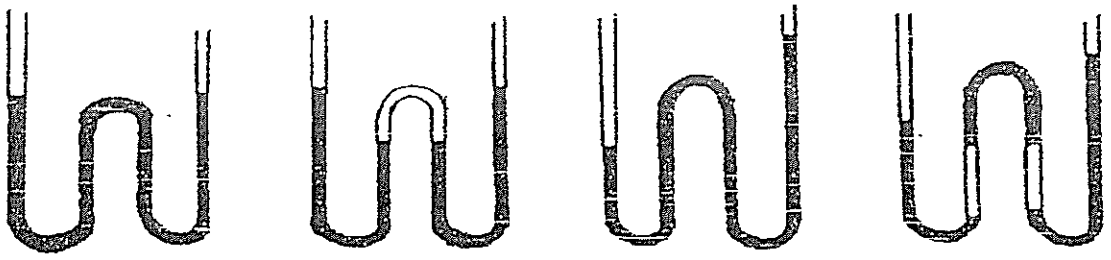
7. The same amount of water at the same temperature is poured into each of the following containers A, B, C and D. The water in container _____ will be the first to reach room temperature.



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

(01)

8. The diagram below shows the water levels in a bent rubber hose.

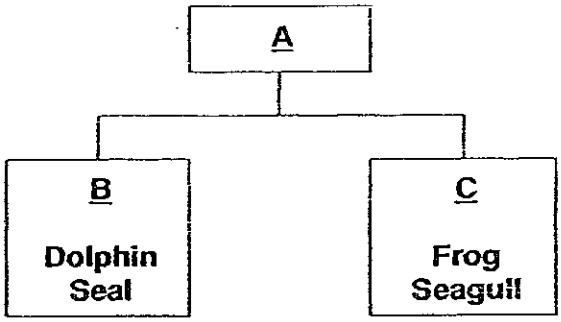


(A) (B) (C) (D)

Which one of the following rubber hoses shows the **correct** water levels?

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

9. Study the classification chart below.



What can **A**, **B** and **C** possibly be?

	A	B	C
(1)	Aquatic animals	Have flippers	Have webbed feet
(2)	Living Things	Live in water	Live on land
(3)	Methods of breathing	Breathe with gills	Breathe with lungs
(4)	Number of stages in life cycle	Three stages	Four stages

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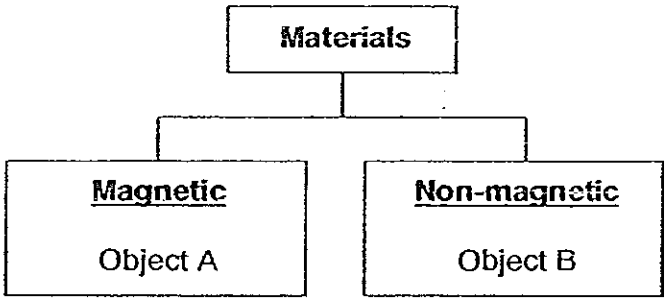
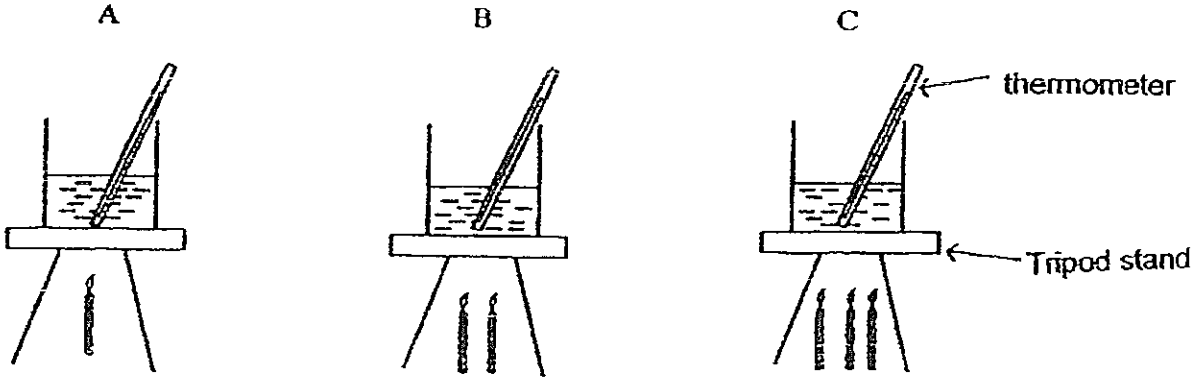
10. Study the classification chart below.



Which one of the following could Objects A and B be?

	Object A	Object B
(1)	Gold	Rubber
(2)	Aluminium	Sawdust
(3)	Steel	Ceramic
(4)	Silver	Plastic

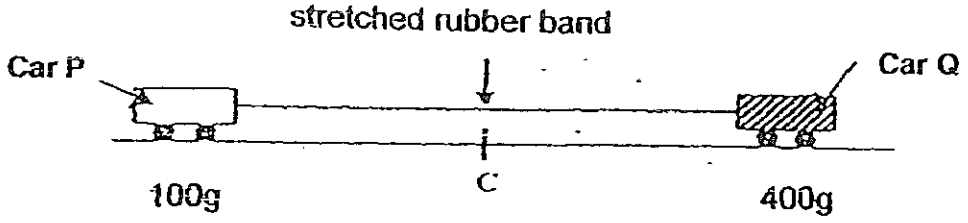
11. The three beakers A, B and C contain the same amount of water. The beakers are heated at the same time until the water boils. The temperature of the water in each beaker is measured.



Which one of the following statements is **correct**?

(1) The water in Beaker A has the lowest temperature.
(2) The temperature of water in Beaker C is more than 100° C.
(3) The water in each of the three beakers has the same temperature.
(4) The temperature of water in Beaker B is higher than that of Beaker A.

12. The diagram below shows two toy cars P and Q of different masses attached to a rubber band at both ends. The rubber band is then stretched to its maximum. Point C shows the equal distance between the two cars.



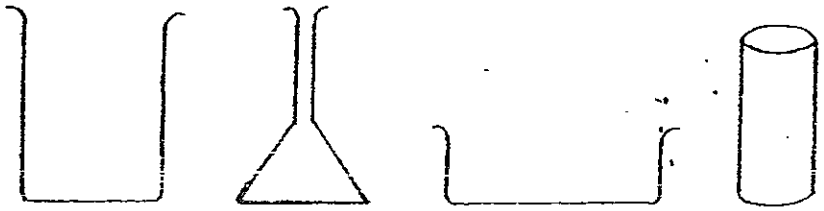
What will happen to cars P and Q when they are released?

(1) Car P will move but Car Q will not.
(2) Car P will not move but Car Q will move.
(3) Both cars will move to the centre point C.
(4) Car Q will move a greater distance than Car P.

13. Timmy classified some plants according to the ways they reproduce. Which one of the following lists is **wrongly** classified?

	Leaves	Suckers	Underground stems
(1)	African violet	Onion	Ginger
(2)	Begonia	Pineapple	Potato
(3)	Bryophyllum	Heliconia	Onion
(4)	Begonia	Banana	Garlic

14. Meiling wanted to find out in which of the 4 containers shown below will water evaporate the fastest.



Which of the following should she do in order to conduct a fair test?

(A) The containers should be left in the same place.
(B) Amount of water in the containers should be the same.
(C) The water level in the containers should be of the same height.

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

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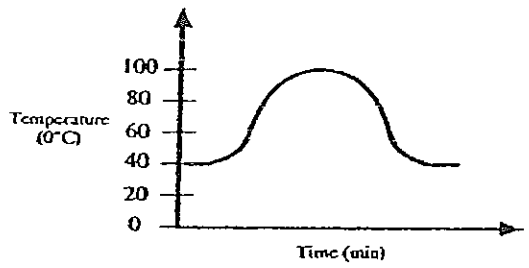
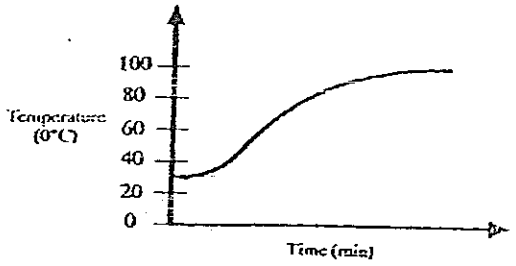
15. The graphs below show the temperature of water in 4 containers, A, B, C and D. Which one of the following graphs **correctly** shows the container of water that undergoes changes in all **3** states?

(1)



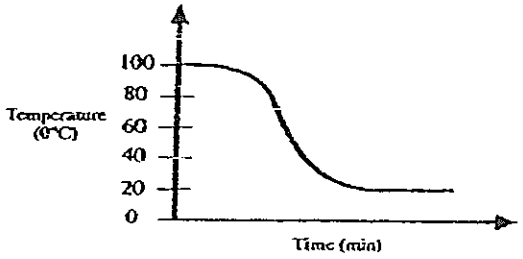
Container A

(3)



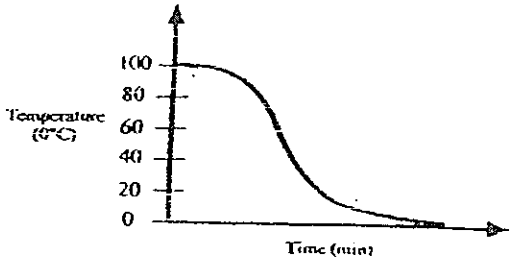
Container C

(2)



Container B

(4)



Container D

16. Which of the following statements about water are **true**?

(A) Water vapour condenses and changes to water.
(B) Water evaporates and changes to water vapour.
(C) Water evaporates at all temperatures.
(D) Water boils at a fixed temperature.

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

17. What are the differences between a glass of ice cubes and a glass of tap water?

(A) They are different substances.
(B) They are in different states.
(C) They are of different temperatures.

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

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18. Study the information of animals B and C given in the table below.

	Animal B	Animal C
Lay eggs	Yes	Yes
Adult has wings	No	Yes
Food	Insects	Nectar
Number of stages in its life cycle	3	4

Which one of the following lists is **correct**?

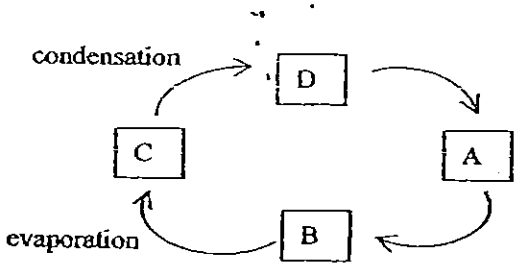
	Animal B	Animal C
(1)	Chicken	Grasshopper
(2)	Dragonfly	Bee
(3)	Frog	Butterfly
(4)	Duck	Mosquito

19. The diagrams below shows two leaves which appear to be very different but are in fact, similar in some ways.

Based on the diagrams, which one of the following statements is one of their similarities?

(1) They are green leaves.
(2) They have lobed edges.
(3) Their veins are of the same pattern.
(4) Their surfaces are of the same roughness.

20. Study the water cycle shown below.



What do letters **A**, **B**, **C** and **D** represent in the water cycle?

	A	B	C	D
(1)	Water	Water vapour	Clouds	Rain
(2)	Rain	Water	Water vapour	Clouds
(3)	Clouds	Rain	Water	Water vapour
(4)	Water vapour	Clouds	Rain	Water

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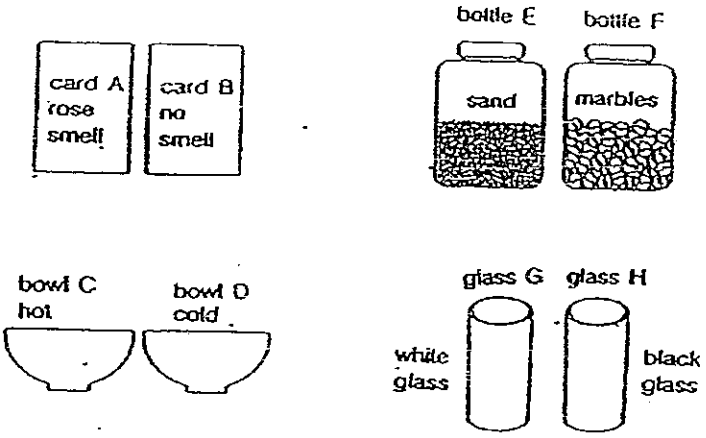
21. There are 4 pairs of objects shown below.

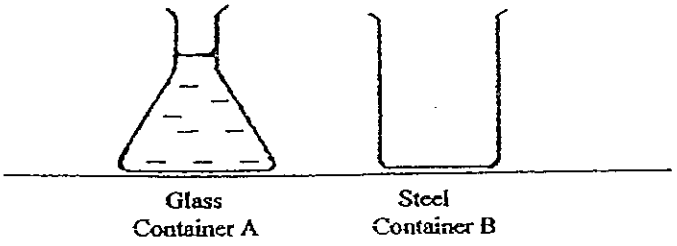


Which pairs of objects do you think a blindfolded person can distinguish?

(A) Cards A and B
(B) Bowls C and D
(C) Bottles E and F
(D) Glasses G and H

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

22. Study container A and B shown in the diagram below.

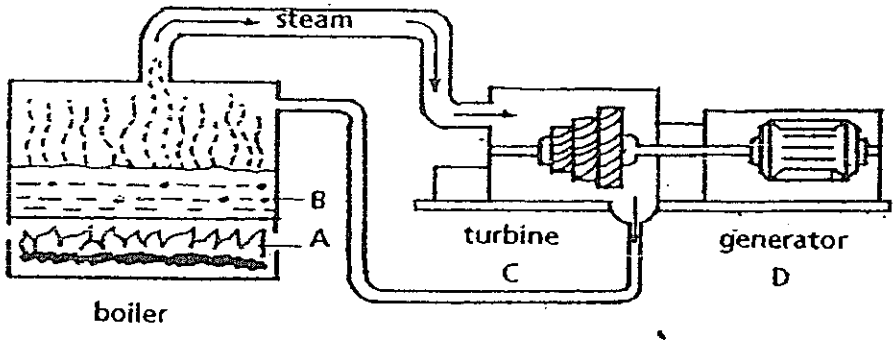


What will happen when all the water from container A is poured into container B?

(A) The shape of the water will be different.
(B) The mass of the water in container B is greater.
(C) The water level in container B will be lower.
(D) The water in container B will have a larger exposed surface area.

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

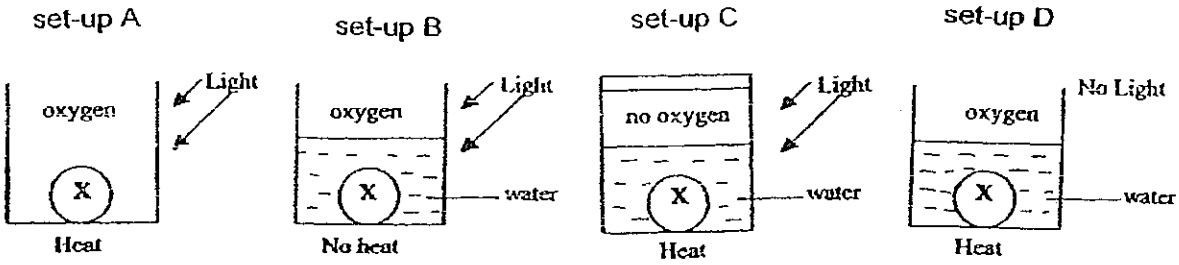
23. The diagram below shows how electricity is produced at a power station.



At which part of the power station is kinetic energy converted to electrical energy?

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

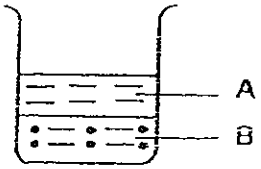
24. An object X was placed in different set-ups.



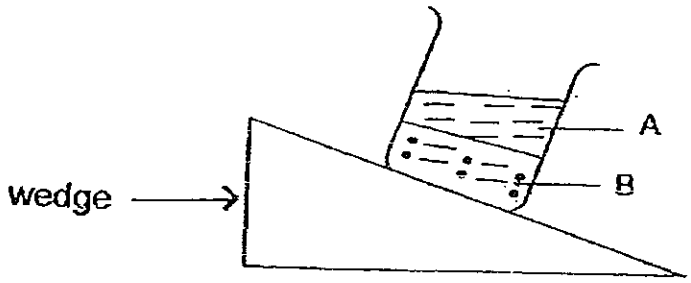
There was a change in Object X only in set-ups B and D.
What are the conditions necessary for Object X to change?

(1) Water only
(2) Light only
(3) Heat and light only
(4) Oxygen and water only

25. A beaker is placed on a table as shown below. It contains two substances A and B at room temperature.



The same beaker with its contents is placed on a wedge as shown below.



Which one of the following could substances **A** and **B** possibly be?

	A	B
(1)	Water	Syrup
(2)	Honey	Alcohol
(3)	Sand	Water
(4)	Oil	Plasticine

END OF PART I

Maha Bodhi School
2008 Continual Assessment 1
Science

Name : _____( )

Class : Pr 6 (_____)

Duration : 1 h 30 min (Parts I & II)

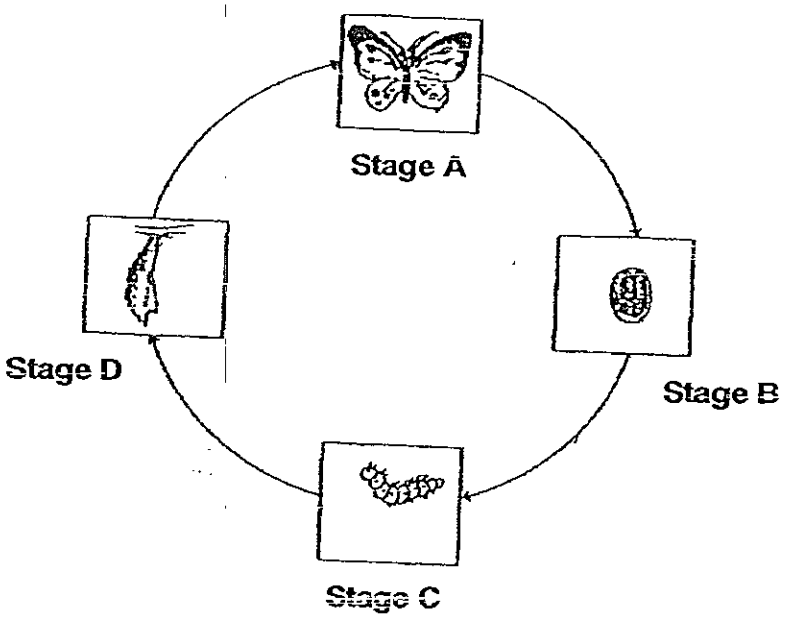
Date : 29 Feb 2008

Parent's Signature : _____

Part I (50 marks)	
Part II (30 marks)	
Practical Test (20 marks)	
Total (100 marks)	

Part II: (30 marks)
Write your answers to questions 26 to 37 in this script.

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



(a) Name stages C and D as shown in the diagram. [1]

(i) Stage C: _____

(ii) Stage D: _____

(b) At which stage in its life cycle does the butterfly eat a lot and grow very fast? [1]

_____

2

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27. The table below shows five planets and their distances from the sun.

Planet	Distance from the Sun (millions km)
Mercury	60
Venus	110
Earth	150
Mars	230
Jupiter	780

(a) Which **two** planets are the closest to Earth? [2]

_____

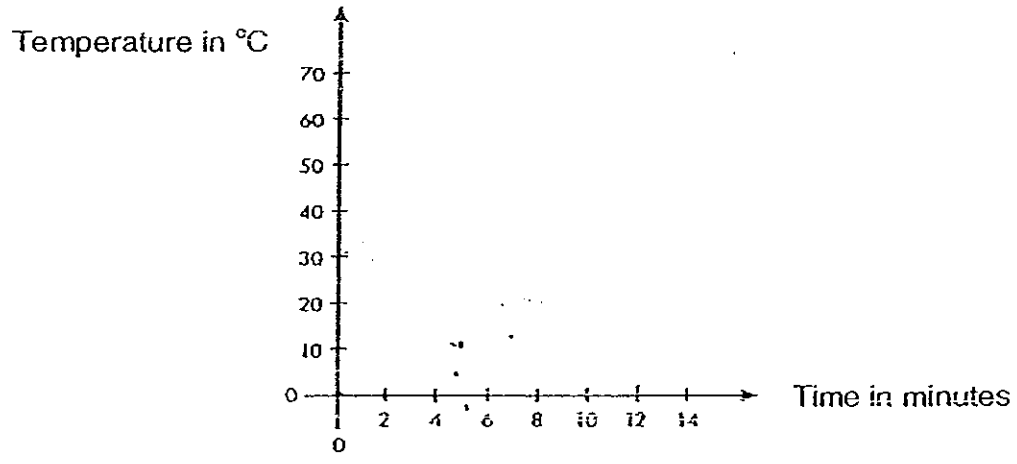
(b) Scientists found that there is no sign of life on Mercury. Explain why it is not possible to have any form of life on Mercury. [1]

_____

_____

28. Some mothballs were heated from 30°C until they melted at 70°C twelve minutes later.

(a) **Draw** in the graph below to show the increase in the temperature of the mothballs.[2]

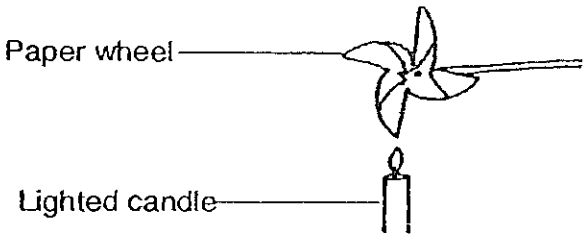


(b) Based on the graph above, what is the melting point of the mothballs? [1]

_____

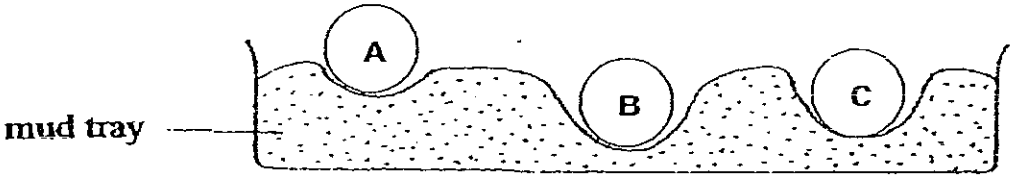
6

29. Jim notices that when a paper wheel is held over a lighted candle as shown in the diagram below, it turns quickly after some time.



Explain clearly what caused the paper wheel to turn. [1]

30. Three similar metal balls were dropped from different heights onto a mud tray. The diagram below shows three depressions A, B and C made by the three balls.



(a) What does the above diagram tell you about the ball that made depression B? [1]

(b) Based on your answer in (a), what is the relationship between the height of the ball and its gravitational potential energy? [1]

3

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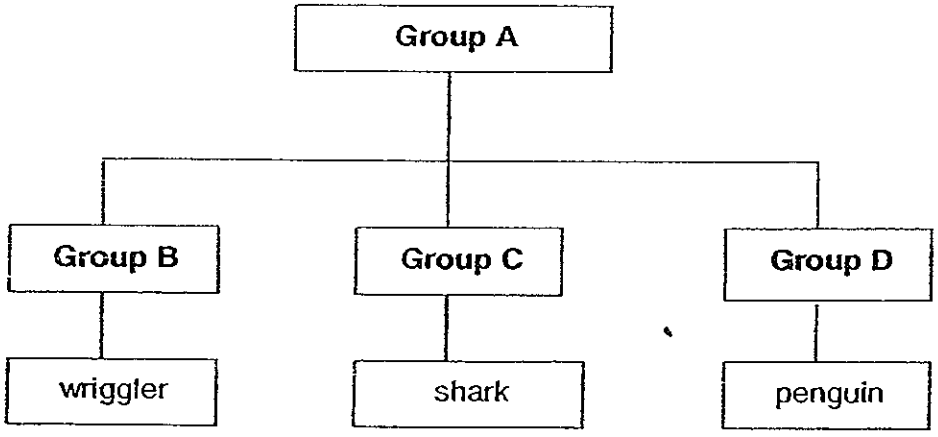
31. Tom classified three organisms based on their methods of breathing in the classification chart below.



(a) Give a suitable heading for Group A. [1]

Group A : _____

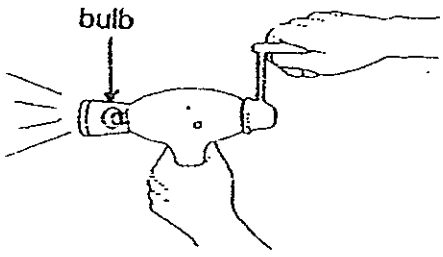
(b) Give suitable **sub-headings** for the classification table above. [3]

(i) Group B : _____

(ii) Group C : _____

(iii) Group D : _____

32. A generator is a machine which produces electricity. Study the model of a generator shown below.



(a) State the energy changes that take place when the handle of the generator is turned. [1]

Potential energy → [ ] → electrical energy → [ ]

(b) What is the source of its potential energy? [1]

_____

6

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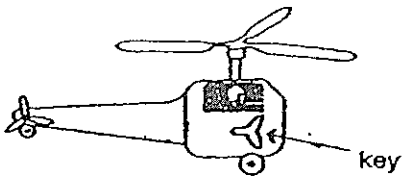
33. The diagram below shows a wound-up toy helicopter.



The table below shows the number of turns of the key of the toy helicopter and the distance it travels.

No. of turns of key	1	2	3	4	5	6	7
Distance travel (cm)	8	15	23	30	40	49	58

(a) What is the relationship between the number of turns of the key and the distance travelled? [1]

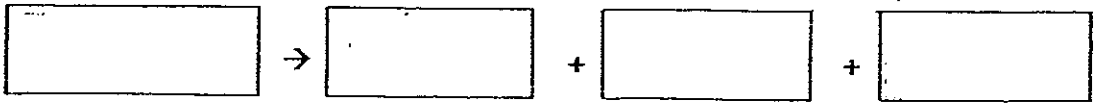
_____

_____

(b) What is the source of energy for the toy helicopter? [1]

_____

(c) Trace the energy conversion that takes place when the toy helicopter moves. [1]



3

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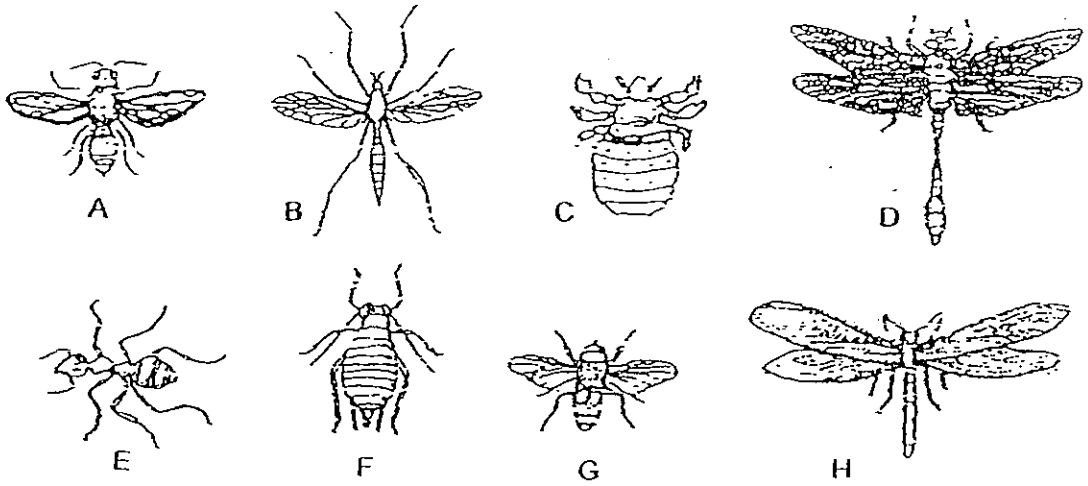
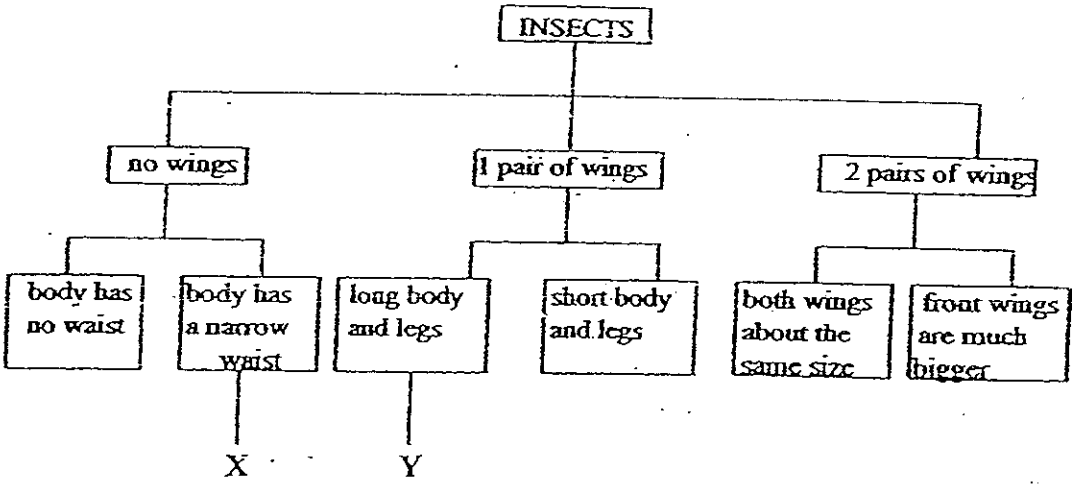
34. Study the diagrams of insect A to H below.



These insects can be grouped according to the classification table below.



(a) Which insects have no wings? _____ [½]

(b) Which ~~insect~~ insects have two pairs of wings? _____ [½]

(c) Which letter represents insect X? _____ [½]

(d) Which letter represents insect Y? _____ [½]

2

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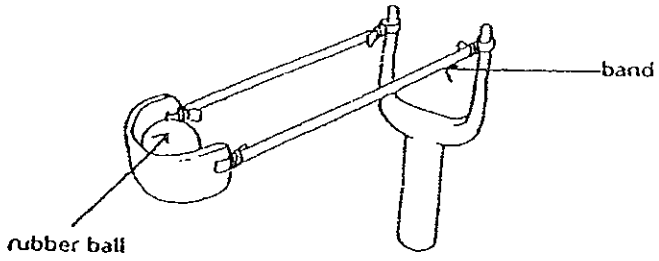
35. A catapult was used to shoot a small rubber ball over a distance as shown in the diagram below.



(a) Using the same set-up (without changing anything) what can you do to increase the distance travelled by the rubber ball? [1]

_____

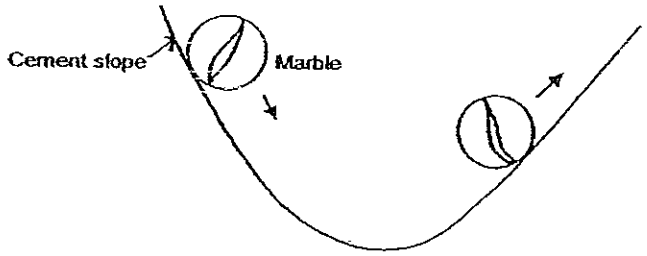
_____

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

_____

_____

36. A marble rolled down a cement slope as shown below.



(a) Describe the energy change that has taken place in the marble. [1]

_____

(b) List **two** ways to make the marble move for a longer period of time. [2]

(i) _____

_____

(ii) _____

_____

5

37. Joe put five similar marbles into a jar and poured in water until it reached the 80 cm^3 mark as shown in figure 1. Then he took out two marbles and the water level dropped to 60 cm^3 as shown in figure 2.

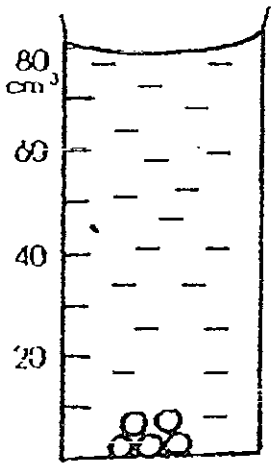


Figure (1)

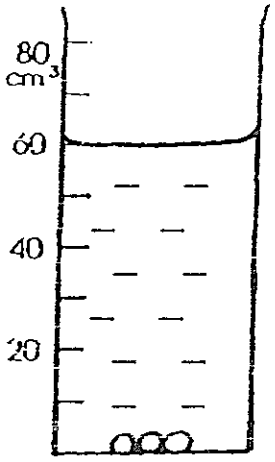


Figure (2)

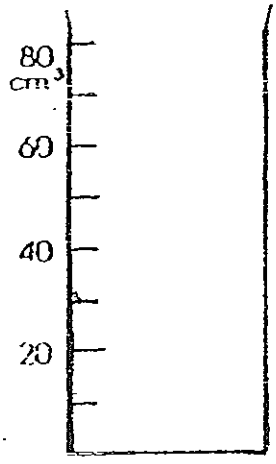


Figure (3)

(a) **Draw** the water level in figure 3 if he took out all the marbles. [1]

(b) What can you conclude from the experiment? [1]

_____

_____

(c) Can the above set-up be used to measure the volume of a cube of sugar? Explain why. [1]

_____

_____

END OF PAPER

3

Maha Bodhi Primary School

Primary 6 Science CA1 Exams (2008)

Answer Keys

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

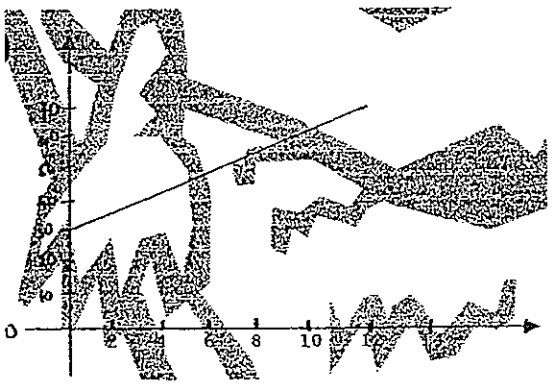
Qn no.	Ans
11	3
12	4
13	1
14	3
15	4
16	4
17	2
18	3
19	3
20	2

Qn no	Ans
21	3
22	3
23	4
24	4
25	4

26a(i). Larve (ii) pupa
26b. Stage C

27a. Venus and Mars
27b. Mercury's is the nearest to the Sun and thus is temperate is far too hot for life.

28a.



28b. 70°C

29. Heat from the candle flame heated up the surrounding air. The hot air rise and the kinetic energy of the moving air caused the wheel to turn.

30a. The ball that made depression B was dropped from the tallest height.
30b. The taller the height the ball was dropped from, the more gravitational potential energy it has.

31a. Methods of breathing.
31b(i). Breath through breathing tubes
(ii) Breathe through gills
(iii) Breathe through lungs.

32a. Kinetic energy, light energy.
b. The man turning the handle of the generator

33a. The more the no. of turns of key, the longer the distance travelled.
33b. The wound-up spring in the toy helicopter.
33c. Potential energy ⟶ kinetic energy + sound energy + heat energy

34a. C, E and F
34b. D and H
34c. E
34d. B

35a. Pull harder on the rubber band.
35b. When you pull the harder on the rubber band, there will be more elastic potential energy and therefore, the rubber ball will travel a longer distance.

36a. Gravitational potential energy ⟶ kinetic energy + heat energy + sound energy.
36b(i). Roll the marble down from a taller slope.
(ii) Change the cement slope to another slope with a smoother surface.

37a.

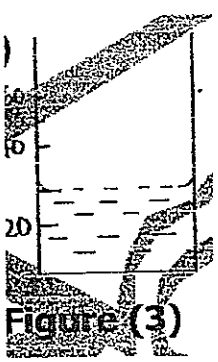


Figure (3)

37b. Marbles have definite shape and volume.
37c. No, it cannot. Sugar dissolves into nothing when it interacts with water, thus you cannot measure the volume of a cube of sugar.