



RED SWASTIKA SCHOOL

RED SWASTIKA SCHOOL

2004 PRELIMINARY EXAMINATION

SCIENCE

Name : _____ ()

Class : Primary 6/ _____

Date : 26 August 2004

BOOKLET A

30 Questions

60 Marks

Duration of Paper : 1 hour 45 minutes

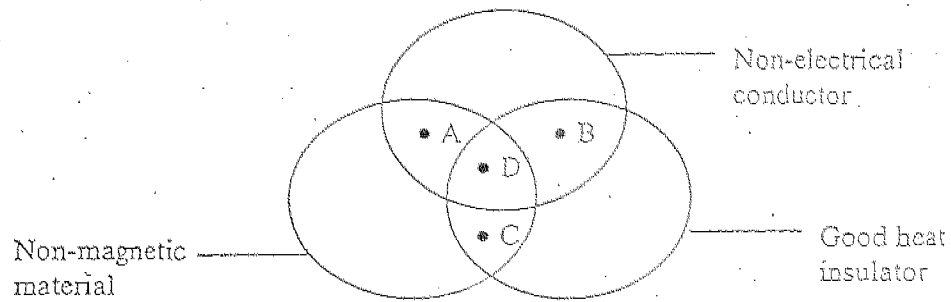
Note:

1. Do not open this Booklet until you are told to do so.
2. Questions 1 - 30 are to be done on the OAS provided.
3. Read carefully the instructions given at the beginning of each part of the Booklet.
4. Do not waste time. If a question is difficult for you, go on to the next one.
5. Check your answers thoroughly and make sure you attempt every question.

Section A: 30 x 2 marks = 60 marks

Read the questions carefully. Choose the most suitable answer and shade it in the OAS provided.

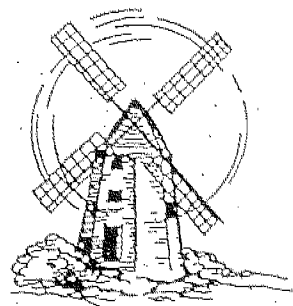
1. Study the Venn diagram below carefully.



To which group does a cardboard belong ?

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

2. The picture below shows a windmill.

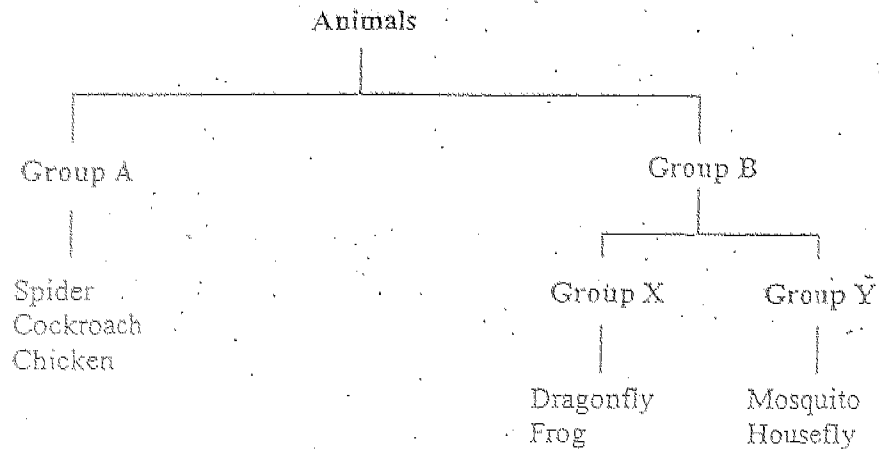


A windmill

The windmill uses the energy from the wind to _____

- (1) generate heat to make electricity
- (2) produce fuel for electricity
- (3) pump water and grind grains
- (4) drive machinery and generate sound

3. Study the classification table below.



How are the above-mentioned animals classified?

	Group A	Group B	Group X	Group Y
1.	Young does not resemble adult.	Young resembles adult.	4 stages in its life cycle.	3 stages in its life cycle.
2.	Young resembles adult.	Young does not resemble adult.	3 stages in its life cycle.	4 stages in its life cycle.
3.	Young hatches from eggs.	Young is born alive.	Predators	Prey
4.	Invertebrates	Vertebrates	Amphibians	insects

4. Which energy sources can be used in watches and calculators?

- A: Solar
 B: Battery
 C: Geothermal
 D: Hydro-electric

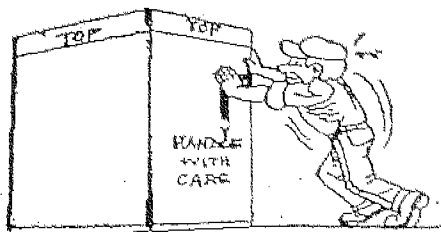
- (1) A and B only
 (2) A, B and D only
 (3) B and C only
 (4) A, B and C only

5. Solar energy is not very efficient because it _____

- A: can be used during the day time only
 B: is difficult to store
 C: can melt the cells if the sun is too strong

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

6. Look at the picture below.



What types of energy are generated when we push a box along the floor?

- A: Light energy
- B: Heat energy
- C: Sound energy
- D: Kinetic energy

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

7. Which of the following forces can interact with objects from a distance?

- A: Magnetic force
- B: Frictional force
- C: Gravitational force

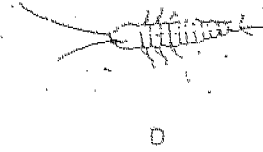
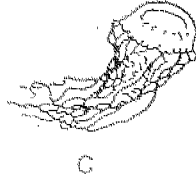
- (1) A only
- (2) B only
- (3) B and C only
- (4) A and C only

8. An ice skater is able to slide on the ice rink because _____



- (1) there is great friction between the skates and the ice
- (2) there is very little friction between the skates and the ice
- (3) there are roller ball bearing under the skates
- (4) there is lubricant under the skates

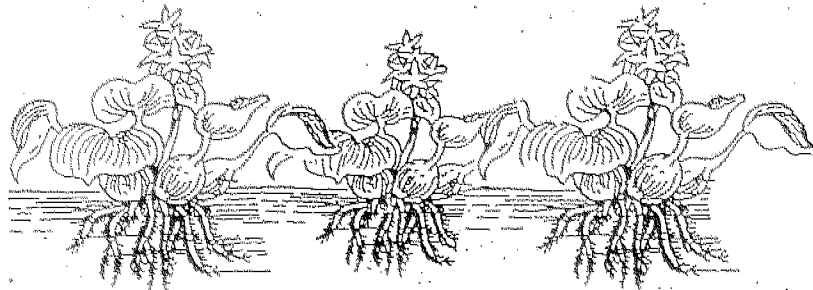
9. Which of the following animal(s) can be found in a pond community?



- A: Mudskipper
- B: Dragonfly nymph
- C: Jellyfish
- D: Silverfish

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

10.



In some countries, water hyacinth plants growing in rivers may grow too rapidly. When this happens, _____

- A: most submerged plants will not get enough sunlight to make food
- B: water transportation along the river will be affected
- C: many fish will suffocate and die

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

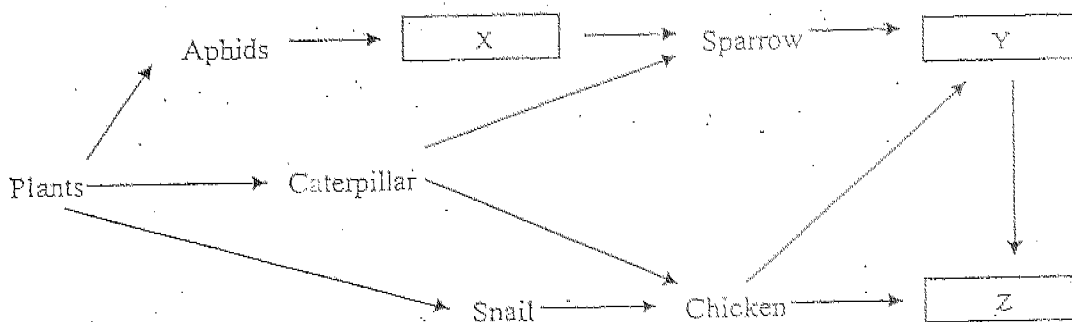
11. A group of boys made some observations in different environments. They recorded the following information.

- A: airy, good sunlight, dry, unstable temperature
- B: airy, good sunlight, wet, cool surroundings
- C: stuffy, good sunlight, damp, cool surroundings
- D: airy, poor sunlight, damp, cool surroundings

In which of the above environments would you most likely find termites thriving?

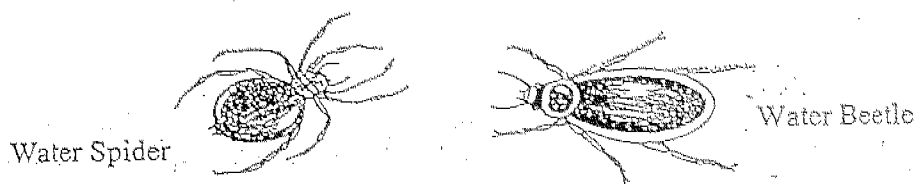
- (1) A
- (2) B
- (3) C
- (4) D

12. In the food web below, what could boxes X, Y and Z be respectively?



	X	Y	Z
(1)	bulbul	snake	monkey
(2)	beetle	lizard	praying mantis
(3)	ladybird	snake	hawk
(4)	lizard	bird	snake

13.



Some animals like the water spider and water beetle can stay underwater for a long time to hunt and feed because they _____

- (1) have air tubes for breathing
- (2) have gills to breathe underwater
- (3) can trap air with their body parts for breathing
- (4) can breathe through their special nostrils

14. The use of plastic materials adds to the pollution of the environment. Which of the following statements explains it?

- A: They take a very long time to decompose.
- B: They are produced from natural resources.
- C: They are waterproof.
- D: They produce harmful gases when burnt.

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

15. Nowadays we can easily call and speak to people from all over the world with our handphones even from an aeroplane. This is made possible because _____

- A: communication satellites are used to transmit the signals
- B: telephone wires are used to connect every country in the world
- C: solar panels are used to produce electricity for phones
- D: antennas are used to receive the signals from satellites

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

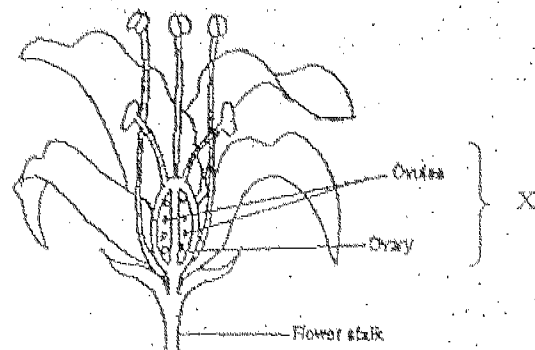
16. Living things need _____ to stay alive.

- A: air
- B: space
- C: food
- D: water

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

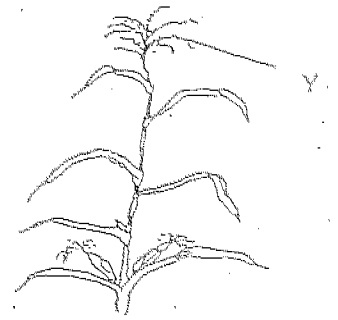
17. The picture below shows the cross section of a flower. The parts X shown in the diagram will develop into a _____

- (1) seed
- (2) fruit
- (3) embryo
- (4) skin

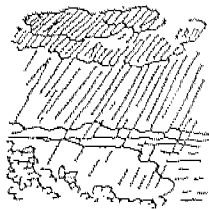


18. The picture to the right shows a maize plant. The part marked Y shows the _____.

- (1) seeds
- (2) fruits
- (3) male flowers
- (4) female flowers

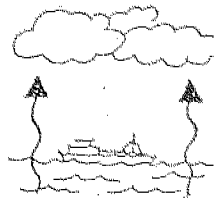


19. Look at the diagrams below. Arrange the letters in sequence to show the water cycle.



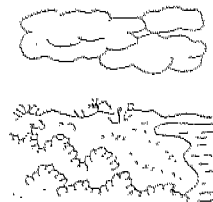
rain

A



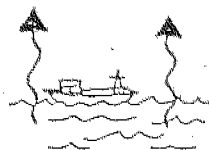
clouds form

B



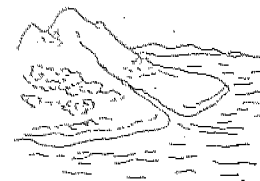
clouds move over land

C



water evaporates

D



river flows to the sea

E

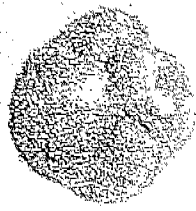
- (1) B, A, E, D, C
- (2) C, A, B, D, E
- (3) D, B, C, A, E
- (4) A, B, C, D, E

20. What is/are the likely reason(s) for droughts, famines and crop failures in some African countries?

- A: Earthquakes
- B: An incomplete water cycle
- C: Hurricanes
- D: Volcanic eruptions

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

21. Ahmad wants to plant a rubber tree in his compound. Which of the following fruit/seed should he look for to plant in the soil?



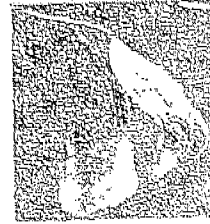
A



B



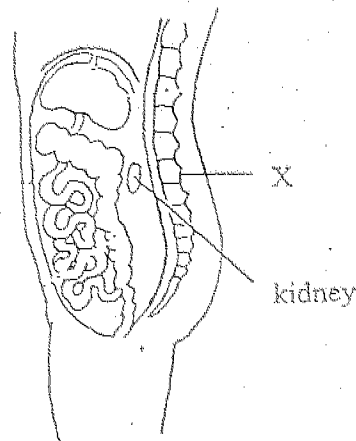
C



D

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

22. The picture below shows the side view of parts of a human body. What is the function of the part marked X?



- A: It protects the kidneys.
- B: It supports the weight of the upper body.
- C: It protects the internal organs.
- D: It protects the spinal cord.

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

23. Why must a shopkeeper keep his stock of grains, dried chillies, onions and potatoes in a cool, dry place like a cold room at 23°C?

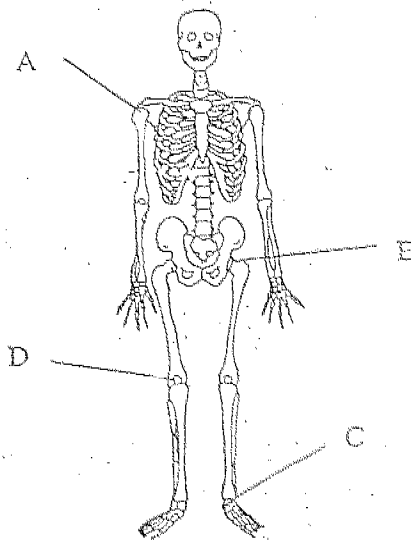
- A: Vermin like rats and cockroaches cannot get at them.
- B: They will not be able to germinate.
- C: The foodstuff can remain fresh.
- D: The foodstuff will become tastier.

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

24. When we breathe, the air going through our nostrils is filtered by the _____ to prevent bacteria and dust from getting into our lungs.

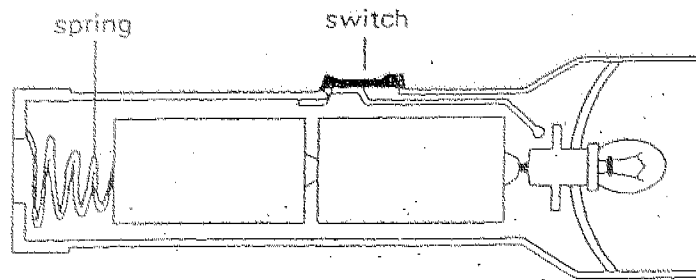
- (1) windpipe
- (2) nostril hairs
- (3) saliva
- (4) alveoli

25. The diagram below shows the human skeleton. Which of the joints indicated allow movement in more than one direction?



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

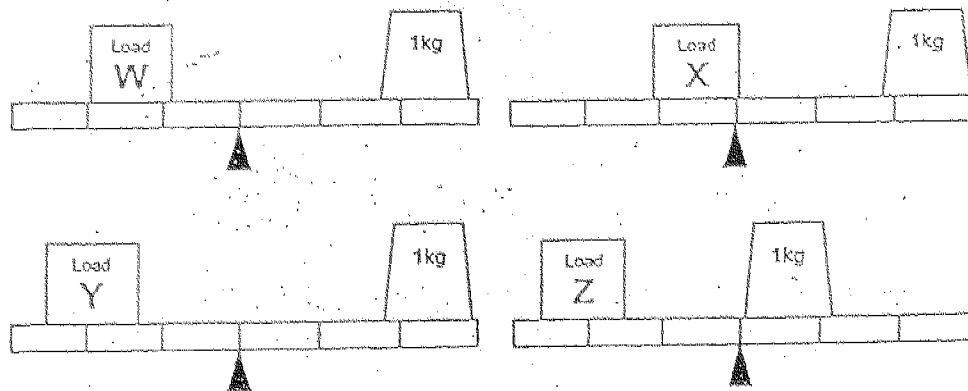
26. The diagram below shows a torch. It lights up when the switch is pushed forward. Which one of the following statements is the reason for having a strong spring?



- (1) It completes the circuit of the torchlight.
 (2) It is connected to the negative terminal of the battery.
 (3) It allows the battery to have a good contact with the bulb.
 (4) It stretches when the switch is pushed to the 'on' position.
27. Exchange of gases like carbon dioxide and oxygen takes place in the _____ of the human body.

- (1) nostrils
 (2) heart
 (3) lungs
 (4) rest of the body

28. Study the diagram below carefully.



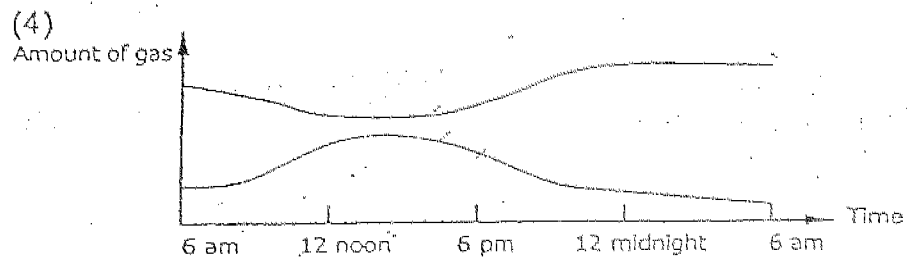
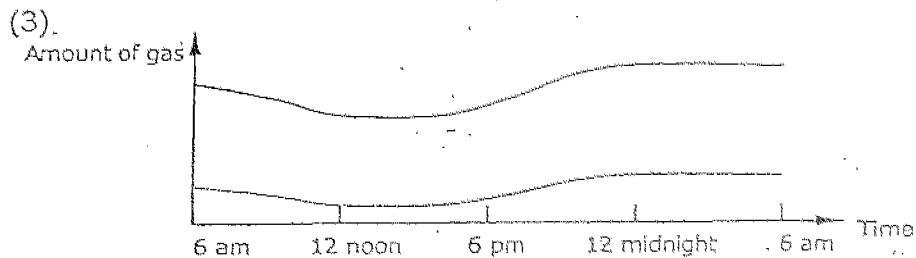
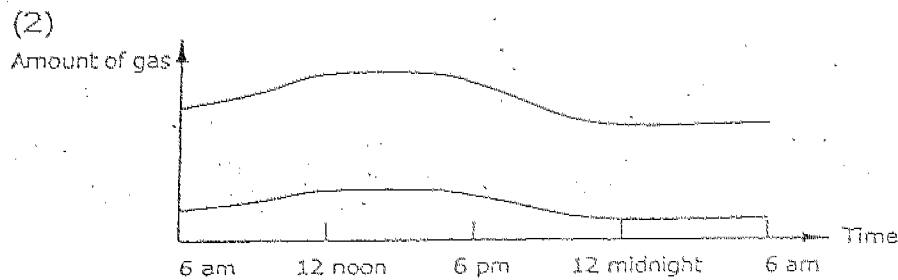
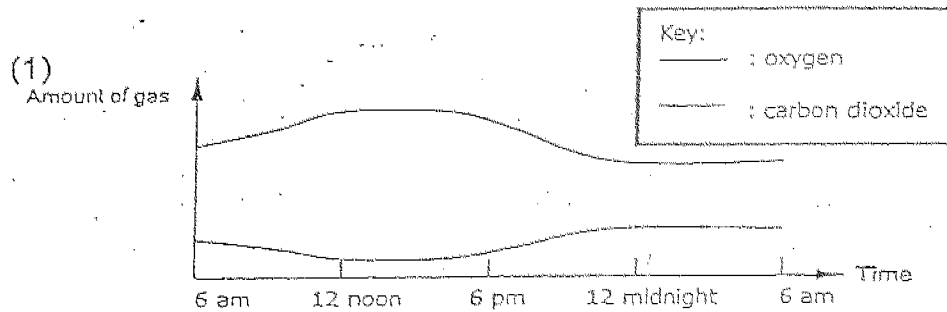
Arrange the masses from the lightest to the heaviest.

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

29. We can create a powerful temporary magnet that can lift up heavy objects like a refrigerator by using _____

- (1) batteries
- (2) electric coils
- (3) a generator
- (4) electricity

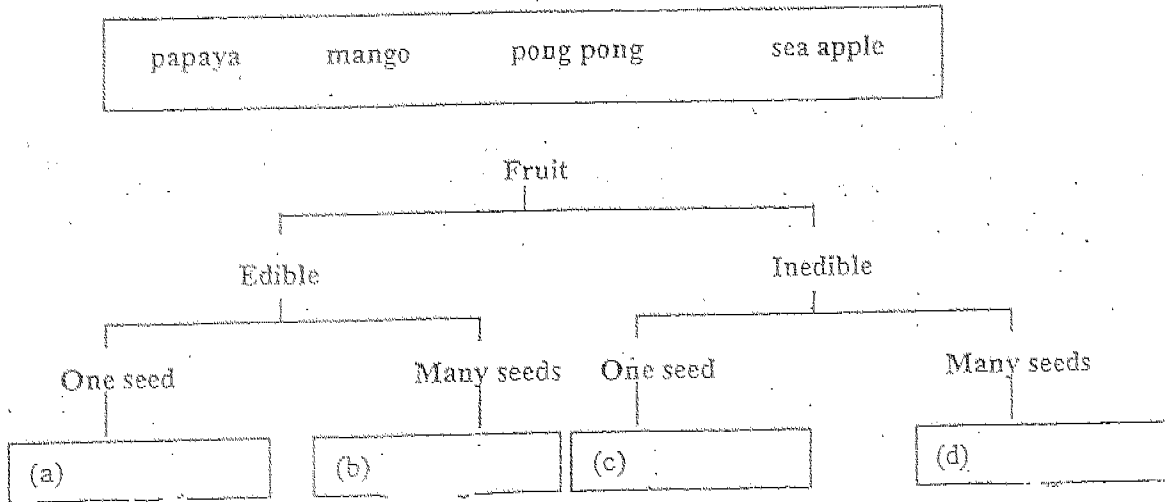
30. Which one of the following graphs correctly shows the level of oxygen and carbon dioxide in the air in a forest over a period of 24 hours?



Section B: Open-ended Questions (40 marks)

Write your answers in the blanks provided.

31. Study the classification diagram. Insert the following words into the correct boxes. (2 m)



32. What kind of energy source is the petrol that is pumped into a car? (1 m)

(a) _____

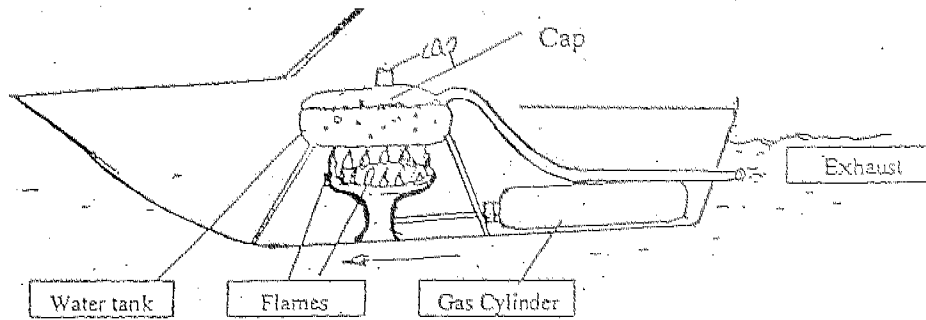
Name a fuel that can be used for cooking in the kitchen of our homes. (1 m)

(b) _____

33. A farmer who has a wheat farm was upset when his goat was eaten by a python. He decided to hunt and kill all the snakes on his farm. Why is it not a wise decision? (2 m)

6

34. Look at the cross-section of a toy boat below and answer the questions that follow.



(a) Describe the energy change that takes place. (2 m)



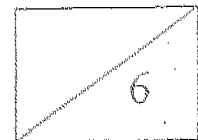
(b) Why must the cap be tightened? (1 m)

(c) When will the boat stop moving? (1 m)

35. Some creepers like the sweet potato adapt themselves to survive on the ground.

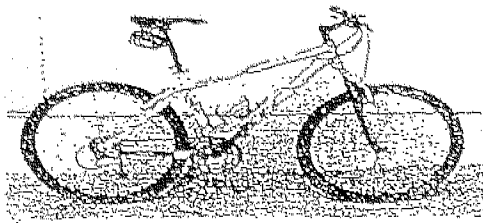
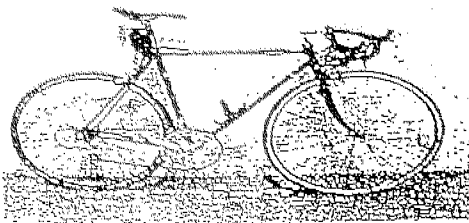
(a) How does it obtain enough sunlight to manufacture and store so much energy in the roots? (1 m)

(b) Which part(s) of the sweet potato is /are edible? (1 m)



36. The pictures below show 2 kinds of bicycles.

- (a) Insert the words mountain bike and racing bike into the appropriate boxes below.
(Hint: Look at the wheels.) (1 m)



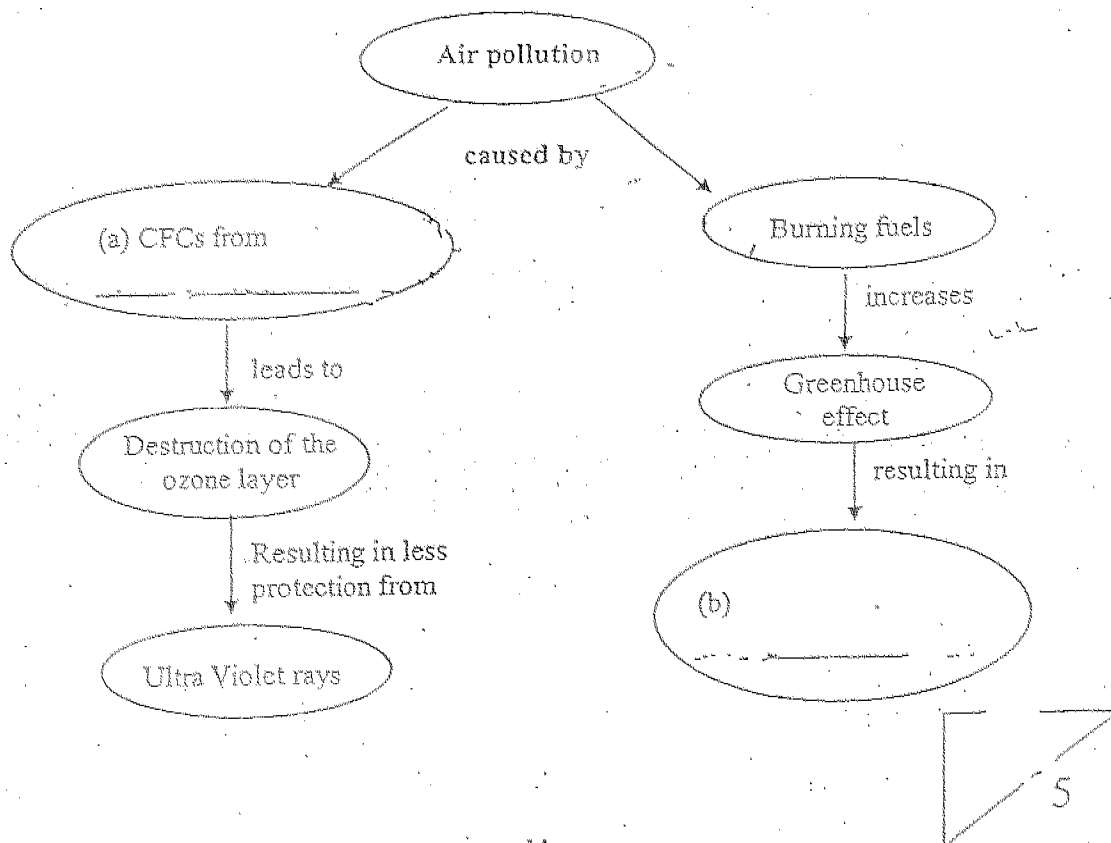
(i) _____

(ii) _____

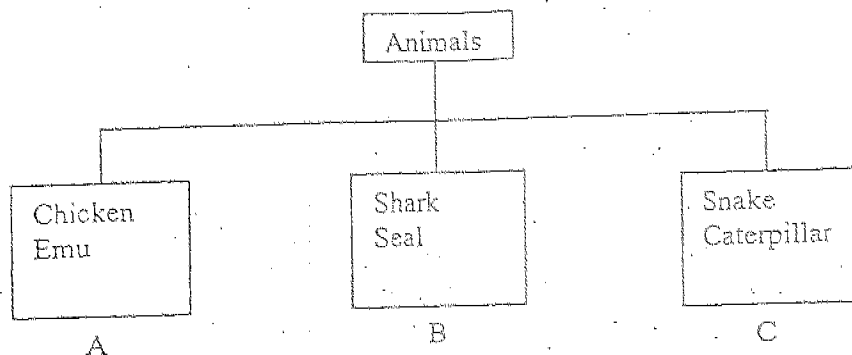
- (b) (i) Which bicycle would you use on a rugged path? (1 m)

- (ii) Give a reason for your choice in b(i) above. (1 m)

37. Complete the concept map below by filling in the blanks. (2 m)

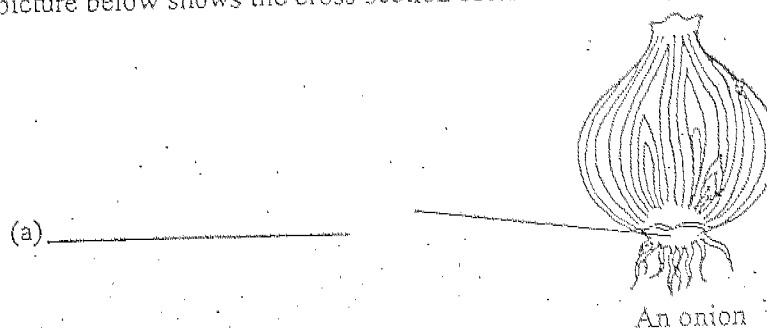


38. Study the diagram below carefully and answer the question that follows.



- (a) The animals above are classified according to _____ (1 m)
- (b) Name the group which is carnivorous. _____ (1 m)

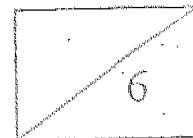
39. The picture below shows the cross-section of an onion.



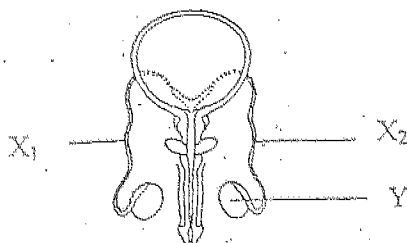
- (a) Label (a) in the diagram. (1 m)
- (b) How many new plants can the onion shown above reproduce? (1 m)
- _____

40. (a) State a characteristic of seeds that are dispersed by birds. (1 m)

(b) Give an example of such a fruit. (1 m)

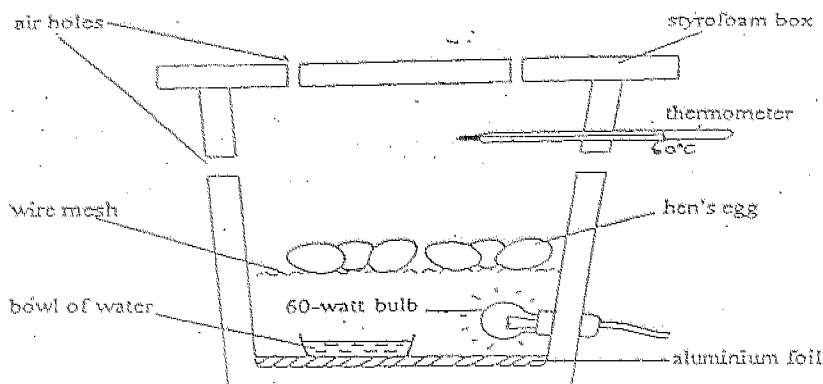


41. The diagram below shows parts of a human reproductive system.

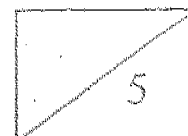


- (a) The diagram shows the reproductive system of a _____ (1 m)
- (b) Name the reproductive part labelled Y. (1 m)
- _____
- (c) What happens when the parts labelled X₁ and X₂ are cut and tied up? (1 m)
- _____

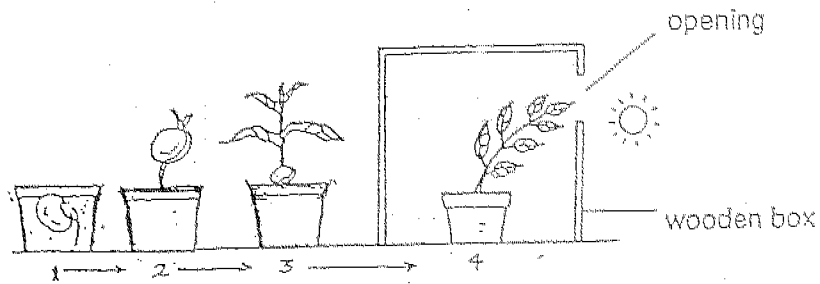
42. Some chicken eggs are placed in the simple incubator to hatch them as shown below



- (a) What is the function of the thermometer? (1 m)
- _____
- (b) What can be done to lower the temperature in the incubator which should be maintained at about 41°C? (1 m)
- _____



43. Mingfa put a seed in a pot of soil. After it had grown to a seedling, he covered it with a box with only one opening on the side as shown.



He wanted to show that plants are living things because they can :

- (i) _____ (1 m)
- (ii) _____ (1 m)

44. A circuit card is tested with a simple circuit tester. The results are given in the table below.

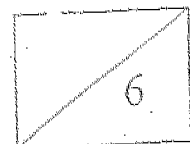
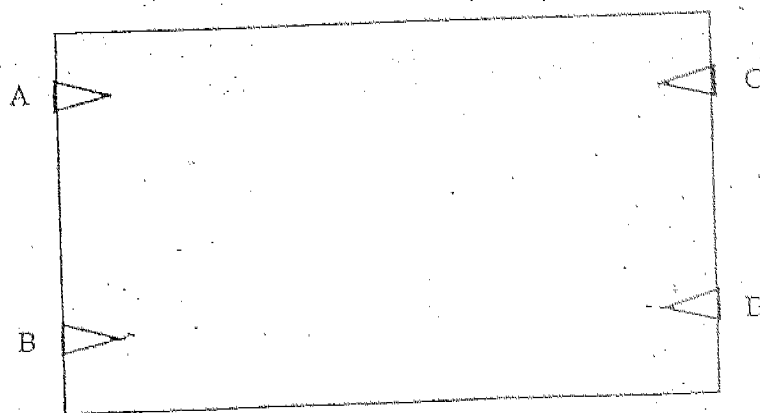
Clips tested	Bulb of circuit tester
A and C	Does not light up
A and D	Lights up
B and C	Does not light up
B and D	Lights up
C and D	Does not light up

- (a) What are the other 4 components of a simple circuit tester besides a bulb holder and a battery holder? (2 m)

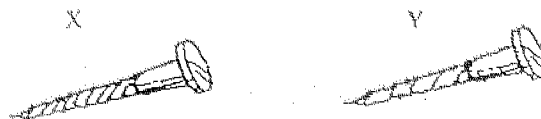
The four components are:

(i)	(iii)
(ii)	(iv)

- (b) On the circuit card below, draw the necessary connections which will show the above results. (2 m)



45. Kenny needed to put up picture frames on a wall. He used two different screws. The screws were of the same length and thickness.



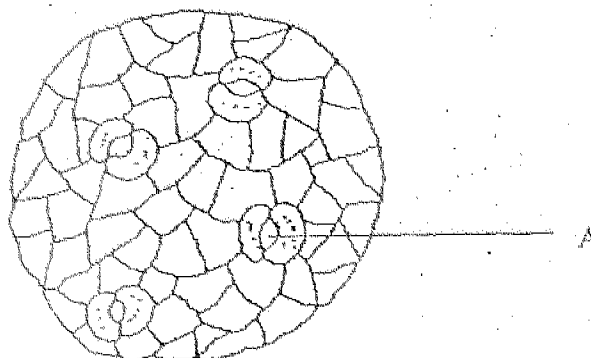
- (a) Which screw was easier to be driven into the wall?

(1 m)

- (b) Explain your answer.

(2 m)

46. The diagram below shows the structures found on the leaves of plants.



- (a) Identify the part labelled A.

(1 m)

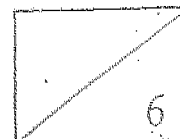
- (b) On which part of a leaf can the structures be found in abundance?

(1 m)

- (c) Name 2 gases that enter and exit the leaves.

(1 m)

~ The End ~
Please Check Your Work Carefully.



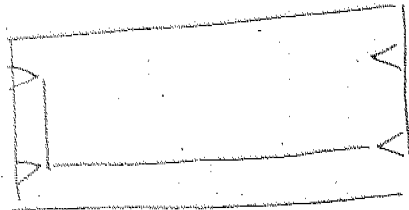
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2004 PRELIMINARY EXAMINATION
SCIENCE
PRIMARY SIX

SIAZ

- 1) 4 28) 4
2) 3 29) 4
3) 2 30) 1
4) 1 31) a) mango b) papaya c) sea apple d) pong pong
5) 2 32) a) Chemical energy
6) 3 b) Charcoal
7) 4 33) If the snakes are all killed, rates of mice will
8) 2 be without predators and will multiply rapidly
 thus causing his crops to be eaten.
9) 2 34) heat energy ---- kinetic energy
10) 4 b) To prevent water from evaporating faster or
11) 4 the cap must be tightened to allow potential
 energy to build up to propel the boat forward
 or Prevent heat from escaping.
12) 3 c) When the tank runs dry or When water in the
13) 3 tank dries up.
14) 4 35) a) It spread everywhere on the ground to obtain
15) 3 enough sunlight.
 b) Underground roots, leaves.
16) 4 36) a) i) racing bike ii) mountain bike.
17) 2 b) i) Mountain bike
18) 3 ii) The wheels of the mountain bike are
19) 3 thicker and this will increase the
 friction between the bicycle and the
20) 2 ground.
21) 3 37) a) fire extinguisher, air conditioner, coolants
22) 4 b) Global warming
23) 3 38) a) habitat, their movement
24) 2 b) B
25) 1 39) a) stem
26) 3 b) 3
27) 3

- 40) a) The seeds are small/edible/cannot be digested.
 b) papaya
- 41) a) male
 b) Testes
 c) Sperms produced in the testes are unable to reach the penis.
- 42) a) To tell what is the temperature in the styrofoam box.
 b) Change the bulb to a lower watt.
- 43) i) Grow into an adult.
 ii) It can respond to changes.
- 44) a) i) Bulb iii) batteries
 ii) wire iv) switch

b)



- 45) a) X
 b) The threads are closer and thus have longer inclined plane. Therefore, less energy is needed to screw in the screw.
- 46) a) Stomata
 b) The underside of the leaf.
 c) Oxygen and carbon dioxide.