

CA2

CATHOLIC HIGH SCHOOL
PRIMARY FIVE
CONTINUAL ASSESSMENT 2, 2004

SCIENCE
EM 1 / EM 2

Name: _____ ()

Class : Primary 5 _____

Date : 26 Aug 2004

BOOKLET A

25 Questions
50 Marks

Total Time for Booklets A & B : 1 hour 30 minutes

Instructions to Candidates

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

Section A: Multiple Choice Questions (50 marks)

For each question from 1 to 25, four options are given. One of them is the most suitable answer. Make your choice (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

1. The _____ of a cell is where respiration takes place.

- (1) nucleus
- (2) cytoplasm
- (3) membrane
- (4) chloroplast

2. All animals reproduce so that _____

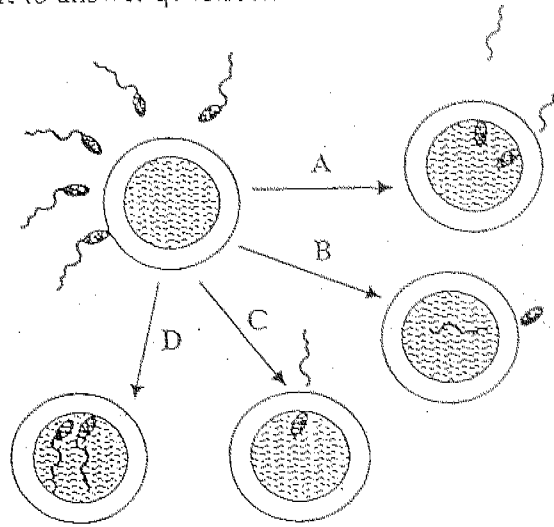
- A their kind will not become extinct
- B more of their kind can be produced
- C they can escape from their predators
- D they can keep the population of plants under control

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

3. Which one of the following descriptions about the testes and ovaries of Man is correct?

	Testes	Ovaries
(1)	They produce sperms.	They produce eggs.
(2)	They fertilise the ovaries.	They receive sperms.
(3)	There are two testes in each male.	There is only one ovary in each female.
(4)	It has a fixed amount of sperms.	It does not have a fixed amount of eggs.

The diagram below shows one of the processes involved in the reproduction of a human. Study it to answer questions 4 and 5.



4. Which one of the following A, B, C or D shows the correct outcome of the process?

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

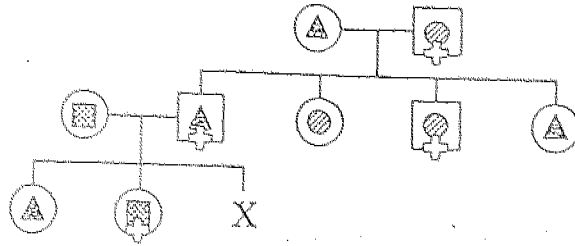
5. The process shown in the diagram is _____.

- (1) ovulation
- (2) pollination
- (3) fertilisation
- (4) binary fission





6. Which one of the following traits is inherited from one's parents?

- (1) Fingerprints
- (2) Length of nail
- (3) Length of hair
- (4) Ability to roll the tongue

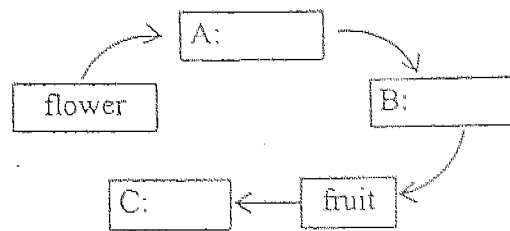
7. The diagram below shows the family tree of a newly discovered creature, Watzo. It was found that they reproduce in the same way as other animals.



Assuming that characteristics are passed strictly from parents to their young, which one of the following figures should be placed at X?

- (1) 
- (2) 
- (3) 
- (4) 
8. Which one of the following plants does not reproduce from seeds?
- (1) Algae
 (2) Lalang
 (3) Mimosa
 (4) Angsana
9. Which of the following help a plant to attract animals to pollinate it?
- A The nectar
 B The number of petals
 C The scent of the flower
 D The colour of the petals
- (1) A and B only
 (2) A and C only
 (3) C and D only
 (4) A, C and D only

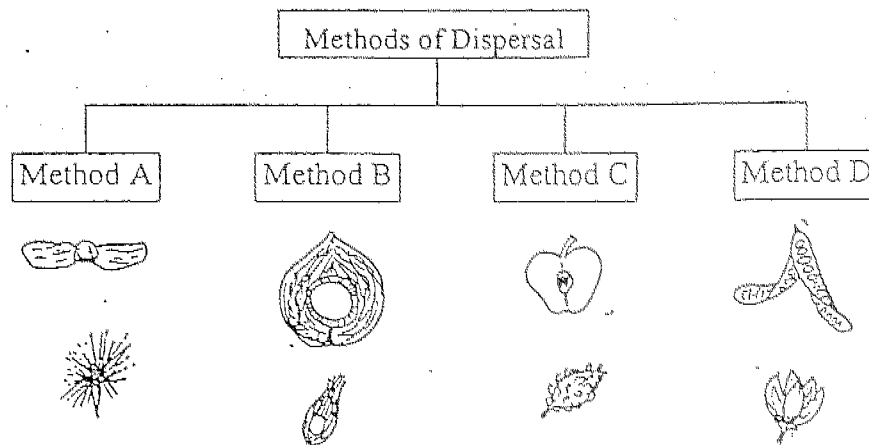
10. The diagram below shows part of the life cycle of a flowering plant. A, B and C are important processes needed for the plant to reproduce.



Which one of the following shows the correct processes?

- (1) A: wilting, B: fertilisation, C: germination
- (2) A: pollination, B: fertilisation, C: dispersal
- (3) A: blooming, B: fertilisation, C: dispersal
- (4) A: fertilisation, B: pollination, C: germination

11. The fruits or seeds below (not drawn to scale) are grouped according to how they are dispersed.



Which one of the following has been grouped correctly?

	Method A	Method B	Method C	Method D
(1)	Angsana	Pong pong	Mango	Rubber
(2)	Rubber	Angsana	Pong pong	Mango
(3)	Mango	Rubber	Angsana	Pong pong
(4)	Pong pong	Mango	Rubber	Angsana

12. Some children made some comparisons between the sexual reproduction of plants and animals. Their comparisons are shown below.

Ali: Both involve the transfer of several male sex cells to one female sex cell.

Mei Hua: The embryos of both the plant and animal develop within the ovaries.

Siti: The development of a plant embryo is much slower than that of an animal.

Muthu: The embryo of the plant obtains its food from the seed whereas that of the animal gets its food from the fertilized egg.

Which one of these children's comparisons is correct?

- (1) Ali
- (2) Siti
- (3) Muthu
- (4) Mei Hua

13. Some pupils wanted to find out the effect of overcrowding on plants. In one pot they placed five seeds and in another, they placed 30 seeds. Which of the following variables must they keep constant in order for the experiment to be a fair test?

- A The amount of soil.
- B The colour of the pot.
- C The kind of seeds used.
- D The place where both pots are placed.
- E The amount of water and nutrients given.

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

14. Which one of the following does not reproduce from spores?

- (1) Moss
- (2) Orchid
- (3) Bread mould
- (4) Stag's horn fern

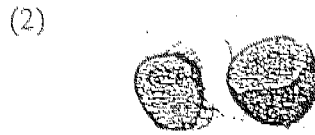
15. An African violet plant can reproduce from its _____.

- (1) roots
- (2) stem
- (3) leaves
- (4) suckers

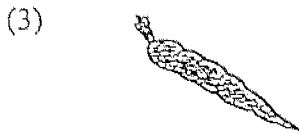
16. Which one of the following reproduces in the same way as the pineapple plant?



Banana



Coconut



Carrot



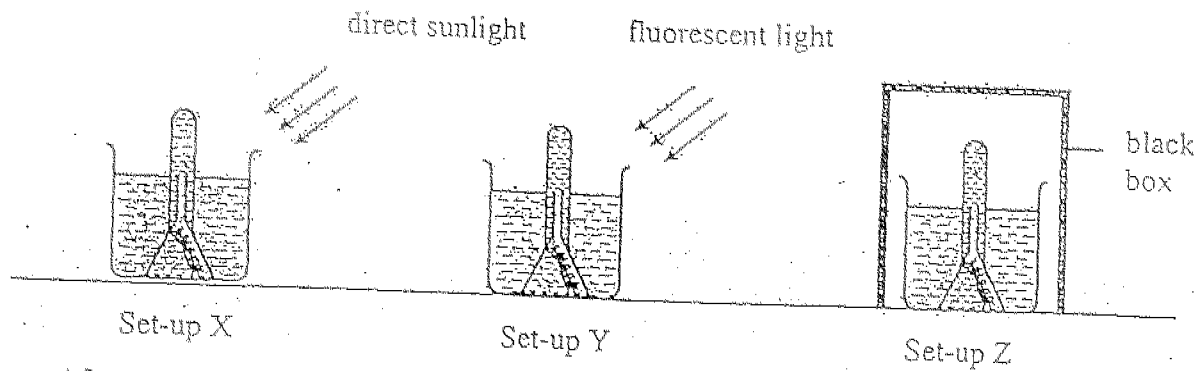
Corn

17. Study the diagrams below. What is one similarity among them?

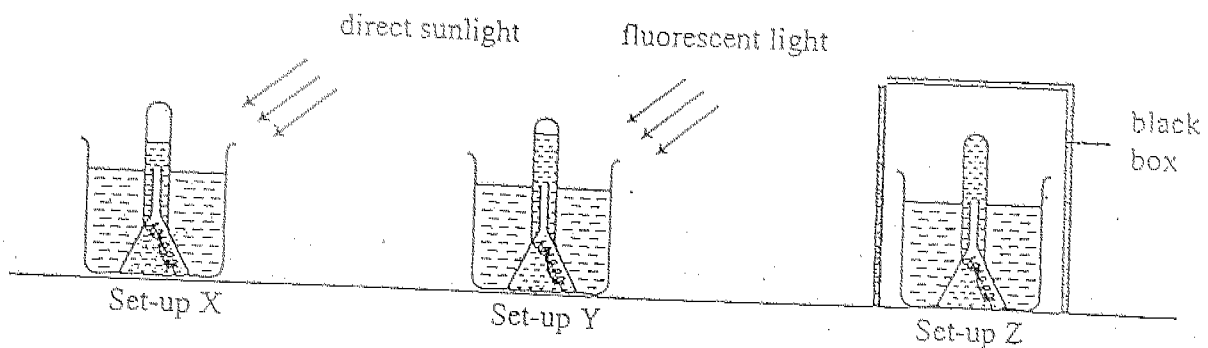


- (1) They reproduce by spores.
- (2) They store food in their roots.
- (3) They disperse their seeds by wind.
- (4) They reproduce from underground stems.

18. Ahmad carried out an experiment as shown below. He placed an equal number of hydrilla plants and the same amount of water in each beaker.



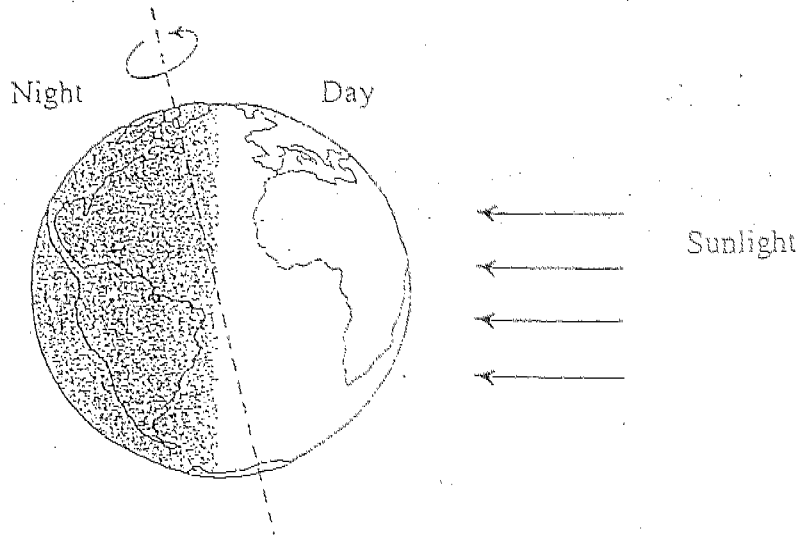
After some time, he noticed that a gas was being collected in the two set-ups X and Y. What do you think was the aim of his experiment?



He wanted to find out whether _____

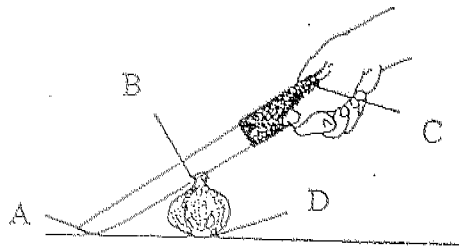
- (1) oxygen is produced during respiration
- (2) sunlight is required for plants to make food
- (3) plants can photosynthesize under fluorescent light
- (4) the amount of light affects the rate of photosynthesis

19. Study the diagram below. Which of the following statements are true based on the diagram below?



- A The Earth spins on an axis.
B The side of the Earth receiving sunlight is experiencing daytime.
C The Earth's tilted axis causes day and night.
D The Earth revolves around the Sun.
- (1) A and B only
(2) B and C only
(3) A, B and D only
(4) A, B, C and D
20. The thread of a screw works like a/an _____.
- (1) lever
(2) force
(3) fulcrum
(4) inclined plane

21. A knife is being used to cut an onion as shown below.



The fulcrum is at _____

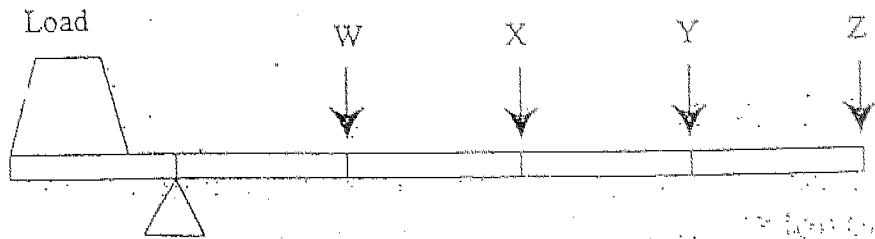
- (1) A
- (2) B
- (3) C
- (4) D

22. Ali carries out the actions shown in the table below on a piece of plasticine. How many of these action(s) has/have been classified wrongly?

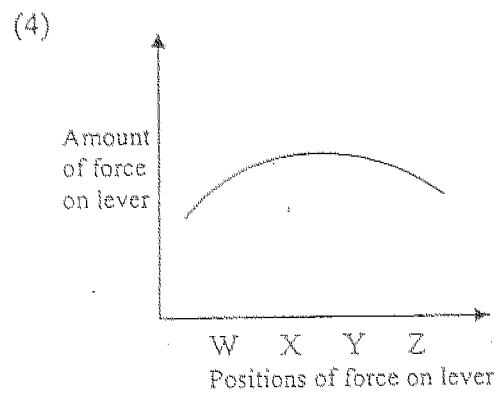
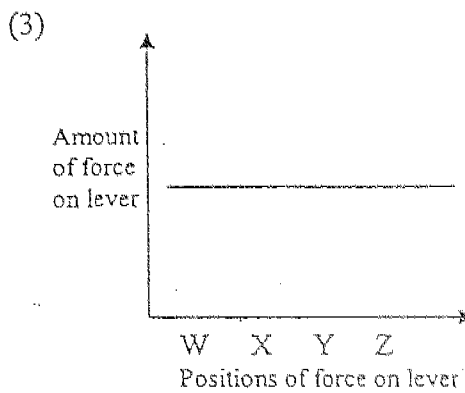
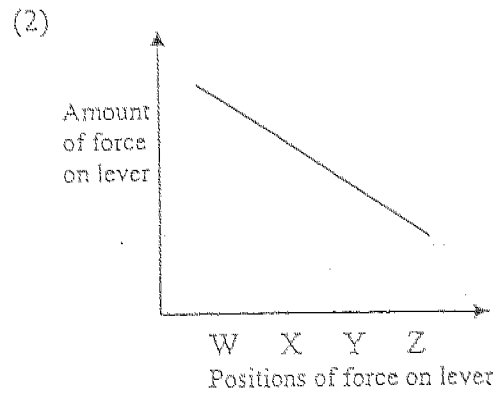
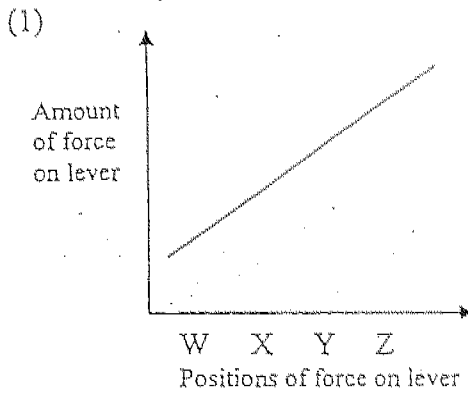
Pushes	Pulls
Poking	Squeezing
Stepping	Pressing
Dragging	Stretching

- (1) 1
- (2) 2
- (3) 3
- (4) 4

23. A force is applied at points W, X, Y or Z one at a time to balance a load on the lever shown below.

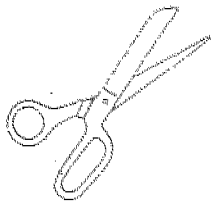


Which one of the following graphs shows the correct relationship between the amount and positions of the force on the lever?

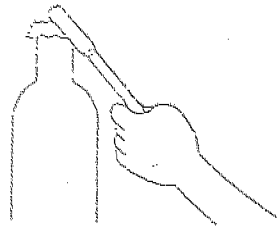


24. Which of the following are examples of levers?

A Scissors



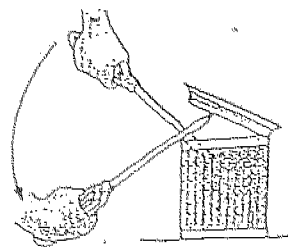
B Bottle Opener



C Ice Tongs



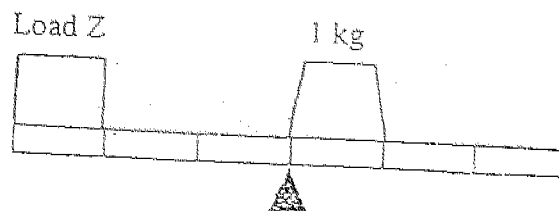
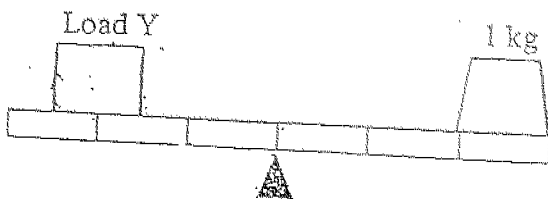
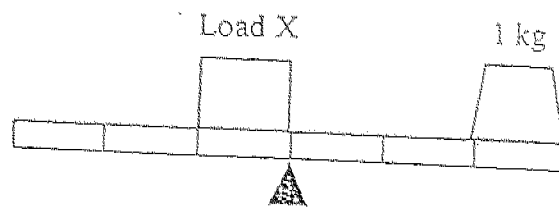
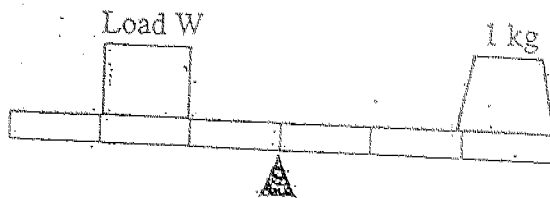
D Screwdriver



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



25. Ravi set up an experiment as shown below to find out the different weights of the loads W, X, Y and Z. Arrange the loads W, X, Y, and Z in an ascending order according to their weights.

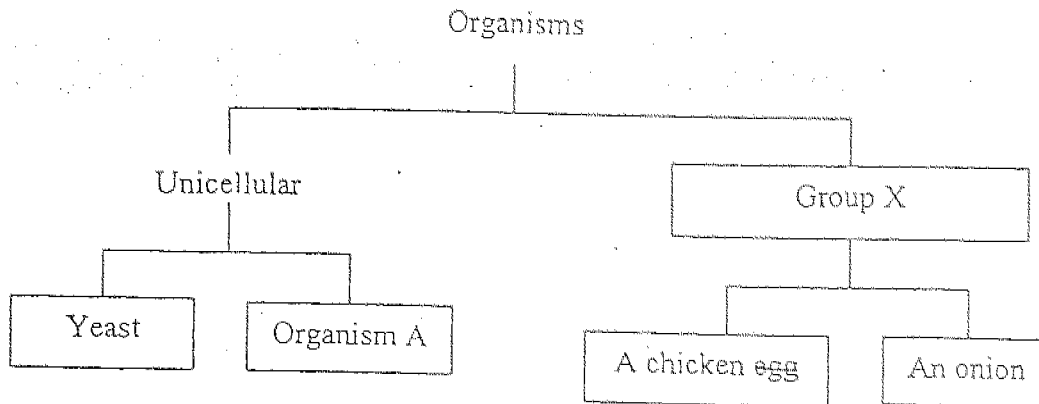


- (1) W, Y, Z, X
- (2) X, W, Y, Z
- (3) Y, W, X, Z
- (4) Z, Y, W, X

Section B: Open-Ended Questions (30 marks)

Read the following questions carefully and write your answers in the space provided. The maximum marks that can be awarded are shown at the end of each question or part-question.

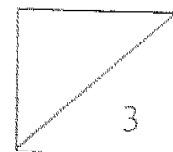
26. Study the chart below.



- a) Give an appropriate subheading for Group X. [1m]

- b) Give an example of Organism A. [1m]

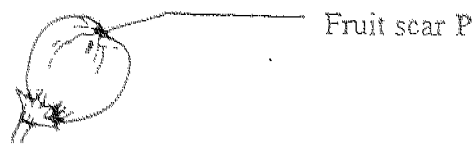
- c) How does a yeast cell reproduce? [1m]



27. Fill in the blanks with a suitable word. [3m]

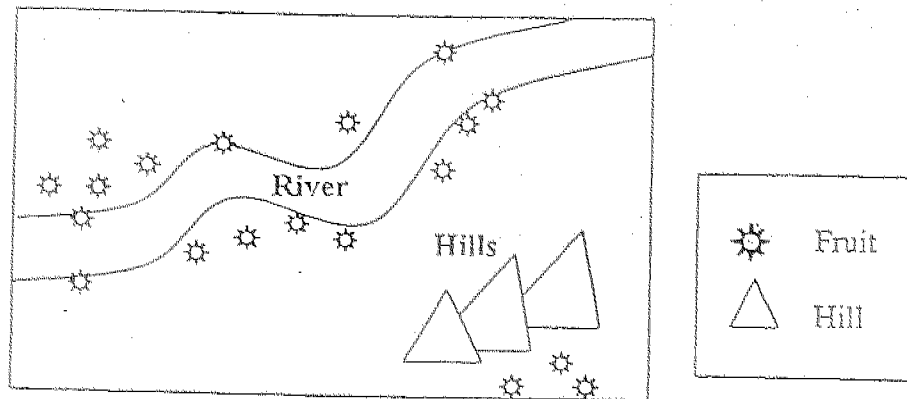
Most mammals reproduce by _____ reproduction where a sperm from the male fertilizes an _____ from the female. The sperm usually meets the female egg cell in the _____. It will then fuse with the egg to form a _____. After fertilization, the fertilized egg undergoes numerous _____ before the cells are grouped to form different parts of the body.

28. The diagram below shows a fully developed fruit.



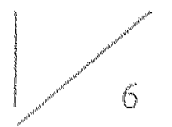
a) What was found at P before the fruit had enlarged? [1m]

b) The map below shows where the fruit of a plant can be found along a river.



i) How is this fruit normally dispersed? [1m]

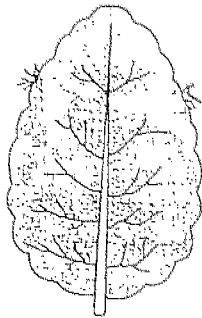
ii) Explain why some of this fruit can be found behind the hills. [1m]



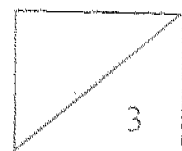
29. Fill in the blanks with a suitable word. [2m]

a) There are some advantages of vegetative propagation in plants. It does not depend on insects or wind for _____ and dispersal. It also does not need any _____ or fruits. It involves only one _____ and the quality of the young plant is identical to the parent plant. It takes a _____ time to produce flowers and fruits.

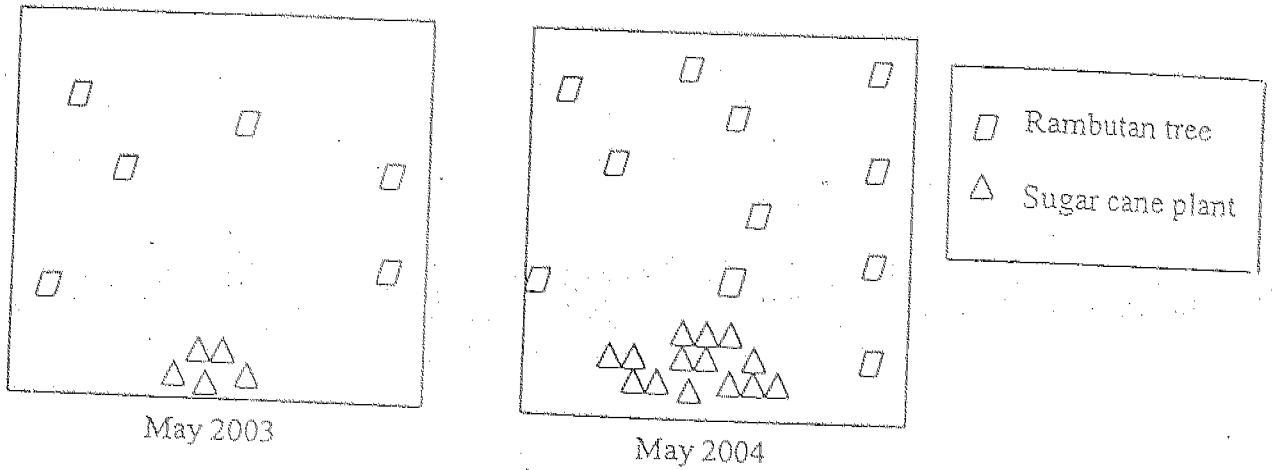
b) In the diagram below, use the letter "X" to label the part of the leaf, from which a new plant may emerge. [1m]



Bryophyllum leaf



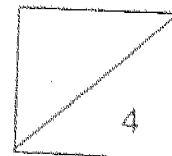
30. The diagram below shows the number of sugar cane plants and rambutan trees in an area over a period of one year.



a) Which of the two plants will be healthier? Give a reason for your answer.

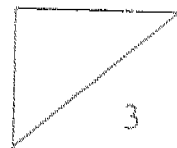
b) From the diagram above, why do you think the young sugar cane plants were growing round the parent plants? [1m]

c) What is one disadvantage with the way the sugar cane plant reproduces? [1m]

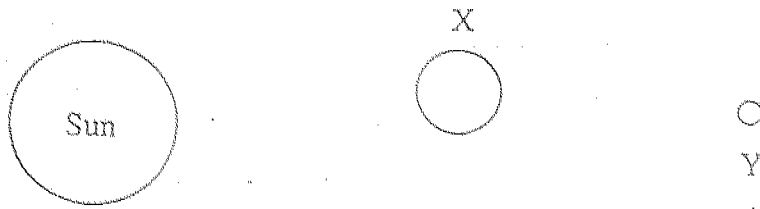


31. The table below shows some statements made by some pupils about respiration and photosynthesis. State whether the statements are True, False or Not Possible to tell. Put a tick (✓) in the appropriate box. [3m]

	Statements	True	False	Not possible to tell
(i)	Respiration takes place only at night.			
(ii)	Photosynthesis takes place only when there is sunlight.			
(iii)	The products of respiration are carbon dioxide and water.			
(iv)	Respiration is the process of taking air into our bodies and breathing it out.			
(v)	The plants in a park are undergoing photosynthesis. The rate of photosynthesis is higher at 9 a.m. than at 4 p.m.			
(vi)	The raw materials required for photosynthesis are water and carbon dioxide.			



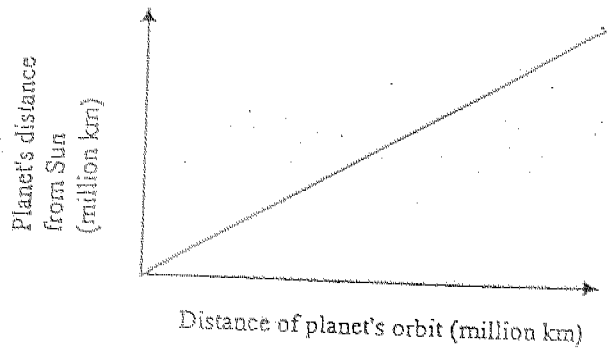
32. The diagram below shows two planets, X and Y, found in the Solar System.



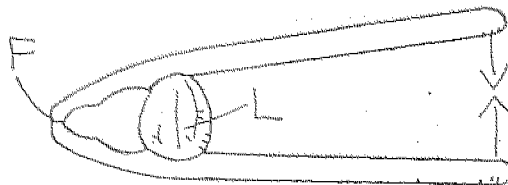
- a) Which planet has a lower surface temperature? Why? [1m]

- b) Which one of these planets has a longer orbit? [1m]

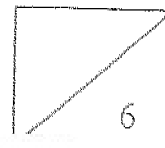
- c) Draw a straight line in the graph below to show the relationship between a planet's distance from the Sun and the distance of its orbit. [1m]



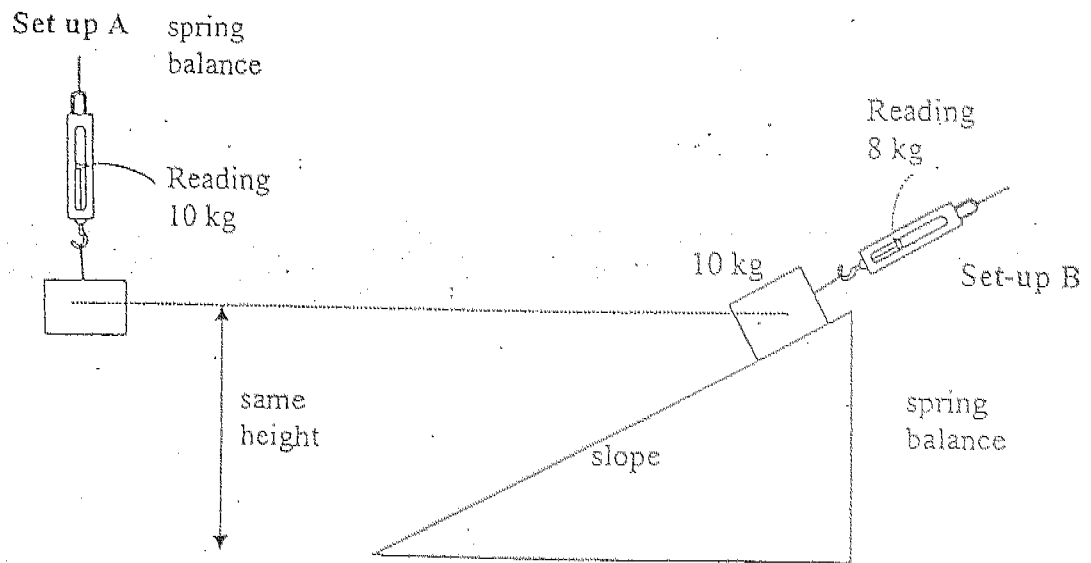
33. a) In the following diagram of a nutcracker, label the fulcrum with the letter 'F' and the load with the letter 'L'. [1m]



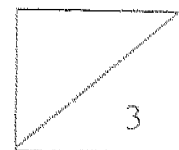
- b) Using two arrows, show on the diagram where the least effort should be applied to crack the nut. [1m]
- c) Name another simple machine that works on the same principle as the nutcracker. [1m]



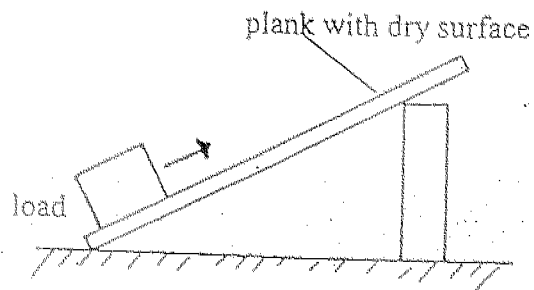
34. The diagram below shows how a 10kg load is lifted to the same height in Set-ups A and B. A spring balance is used to measure the effort needed.



- a) Based on the diagram, what can we conclude about the effort needed to lift the same load in both Set-ups? [1m]
-
- b) Name one force that is present in both Set-ups A and B. [1m]
-
- c) What is the disadvantage of using Set-up B? [1m]
-



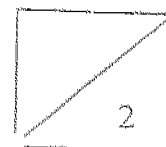
35. Benny wanted to find out how the surface of a plank affects the effort needed to move the same load up a certain height. He set up the experiment as shown below.



The results of his experiment is shown in the following table.

Surface	Angle of slope	Effort
A	30°	25 kg
B	30°	40 kg
C	45°	45 kg

- a) What was wrong with Benny's experiment? [1m]
-
- b) Name one substance that can be added to the surface to reduce the effort needed. Why? [1m]
-



CA 2

01. (2)	11. 1	21. 1
02. 1	12. (3)	22. 3
03. 1	13. 3	23. 2
04. 3	14. 2	24. 4
05. 3	15. 3	25. (4)
06. 4	16. 1	
07. 3	17. 4	
08. 1	18. 4	
09. 4	19. 1	
10. 2	20. 4	

26) a) Multicellular b) Amoeba c) They reproduce by budding.

27) sexual 28) a) The style

egg

b) i) It is normally dispersed by water.

womb

ii) They are carried there by some animals/human beings.

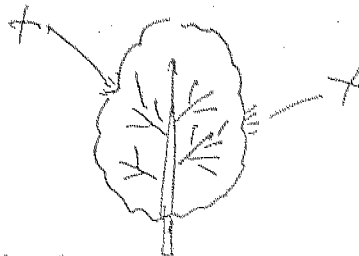
foetus

cell division

29a) pollination

b)

flower



parent

shorter

30) a) The rambutan tree will be healthier. They are well dispersed.

b) The sugar cane plants use suckers to reproduce.

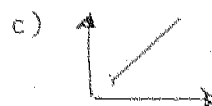
c) It will overcrowd.

31)

	✓	
	✓	
✓		
	✓	
✓		✓

32) a) Planet Y. It is further away from the sun.

b) Planet Y



33) a)
b)



c) Bottle opener

34) a) When the load goes up, it uses more effort and when it goes up with slope, it uses less effort. b) Pull

c) The effort has to move a longer distance.

35) a) He should not have change the angle of the slope.

b) It is oil. It reduces friction.