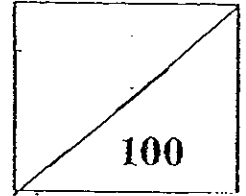


TAO NAN SCHOOL
PRIMARY 5 SCIENCE MID-YEAR EXAMINATION-2008



Name: _____ () Date: 7 May 2008

Class: P 5 ()

Time: 8.00am - 9.45a.m.

Parent's Signature: _____

Section A (30 x 2 marks)

For each question from 1 to 30, four options are given. One of them is the correct answer. Shade its correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

- 1 The table below shows four plants and their reproductive plant parts. Which plant is **not** matched correctly with its reproductive part?

	Plant	Reproductive plant part
(1)	Banana	Sucker
(2)	Hibiscus	Leaf
(3)	Staghorn Fern	Spore
(4)	Water Chestnut	Underground Stem

2. In what way are these plant parts similar?



Papaya



Sweet potato



Onion



Ginger

- (1) They store food.
- (2) They develop from flowers.
- (3) They are underground stems.
- (4) They have buds that will grow into new plants.

Ian observed two cells and recorded his observations in the table below. Study it carefully and answer the questions, 3 and 4.

Cell structure	Cell J	Cell K
Nucleus	Present	Present
Cytoplasm	Present	Present
Cell membrane	Present	Present
Cell wall	Absent	Present
Chloroplast	Absent	Present

Animal

plant

3. What can you infer from this information?

- A: Cell J and Cell K have nuclei of the same size.
- B: Cell J cannot make food but Cell K can make food.
- C: Cell J lives in water but Cell K lives on land.
- D: Cell J does not have a regular shape but Cell K has a regular shape.

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

4. Which of the following does Cell K come from?

(1)



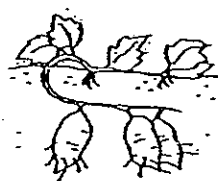
Bee

(2)



Mushroom

(3)



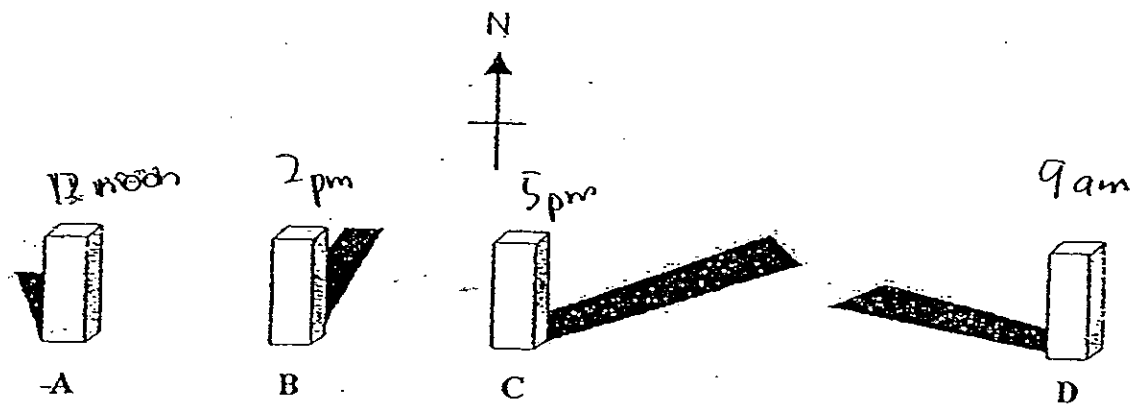
Sweet potato plant

(4)



Rabbit

5. The diagram below shows the positions of the shadow cast by a stick at four different times of a day. Match each shadow to the correct time.



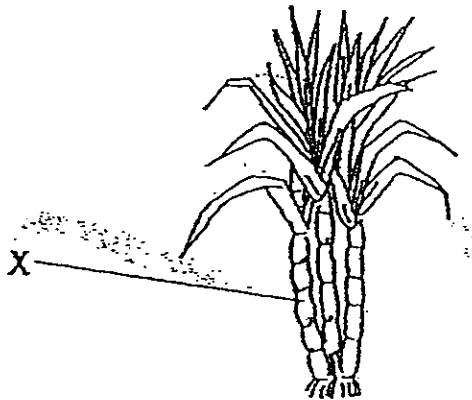
	9am	12 noon	2 pm	5 pm
(1)	A	D	B	C
(2)	B	A	D	C
(3)	C	B	A	D
(4)	D	A	B	C

6. Which of the following statements about chlorophyll are true?

- A: It stores food for the plant.
- B: It helps the plant to make food.
- C: It is found in all parts of the plant.
- D: It helps to trap energy from the Sun.

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

7. A diagram of a plant is shown below.

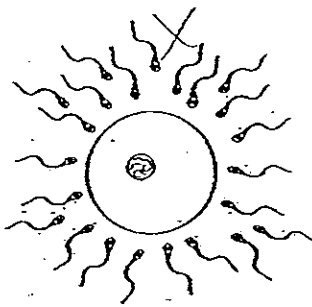


What are the functions of the part marked X?

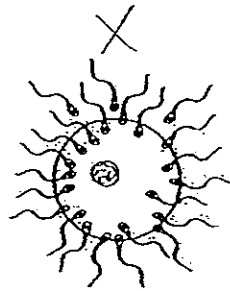
- A: To store food.
- B: To take in water.
- C: To hold and spread out the leaves.
- D: To hold the plant firmly to the ground.

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

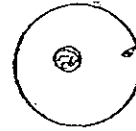
8. In which of the diagrams below has fertilisation already taken place?



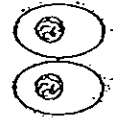
(1)



(2)

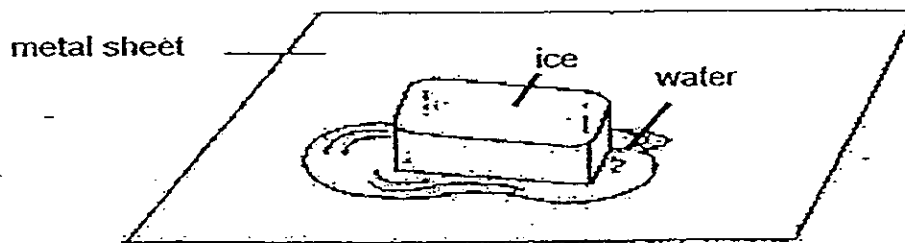


(3)



(4)

9. A block of ice is left to melt on a metal sheet as shown below.



Which of the following statement(s) is/are true when the ice is melting?

- A: The temperature of the ice decreases.
- B: The metal sheet is losing heat to the ice.
- C: The water is gaining heat from the surroundings.

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

10. Joshua drew the moon according to his observation as shown in diagram A. How long after this would he be able to see the shape of the moon as shown in diagram B?



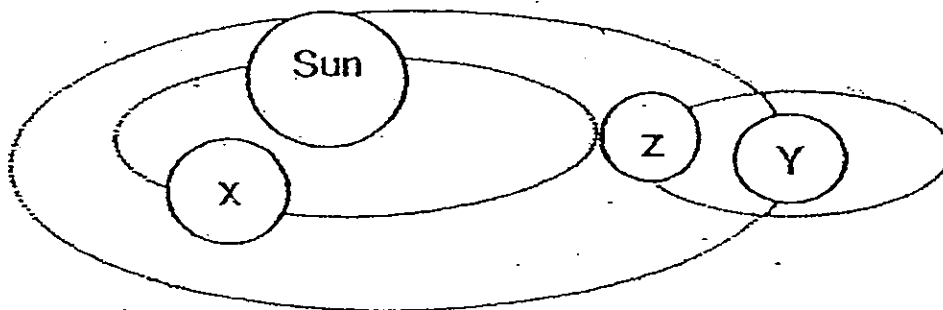
Diagram A



Diagram B

- (1) 14 days
- (2) 28 days
- (3) 365 days
- (4) 366 days

11. The diagram below shows some objects that orbit around the Sun.

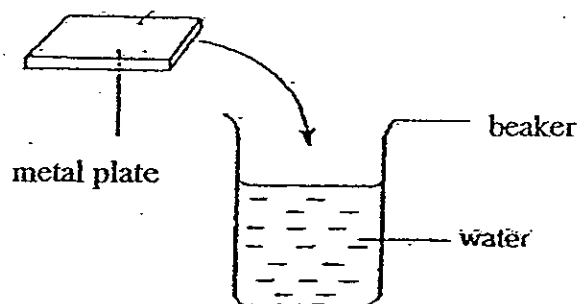


Based on the diagram, which of the following statements are incorrect?

- A: Y is the satellite of Z.
- B: X and Y revolve around the Sun.
- C: The temperature on X is higher than the temperature on Y.
- D: Y will take a shorter time to revolve round the Sun than X.

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

12. The diagram below shows a metal plate at 50°C being put into a beaker of water at 28°C .

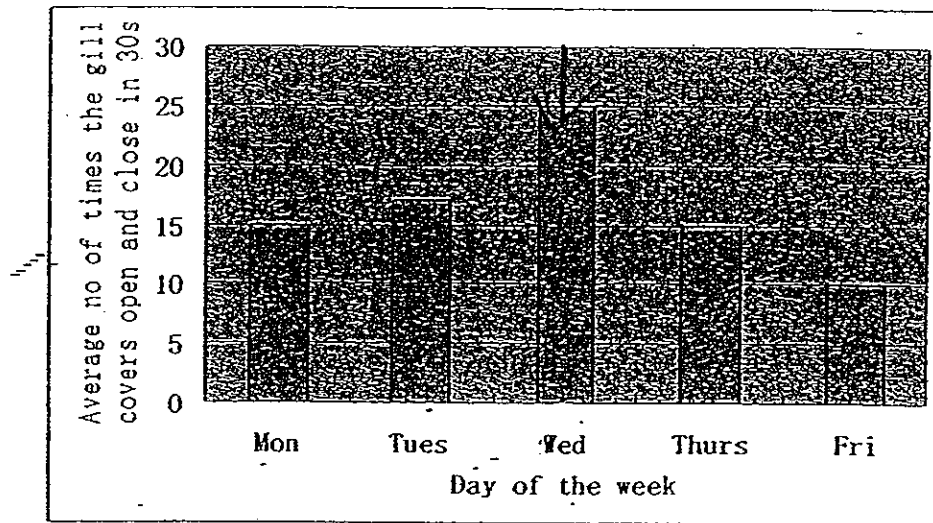


Which of the following changes will happen to the water just after the metal plate is put in it?

- A: The water level will rise.
- B: The volume of water will increase.
- C: The temperature of water will rise above 28°C .

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

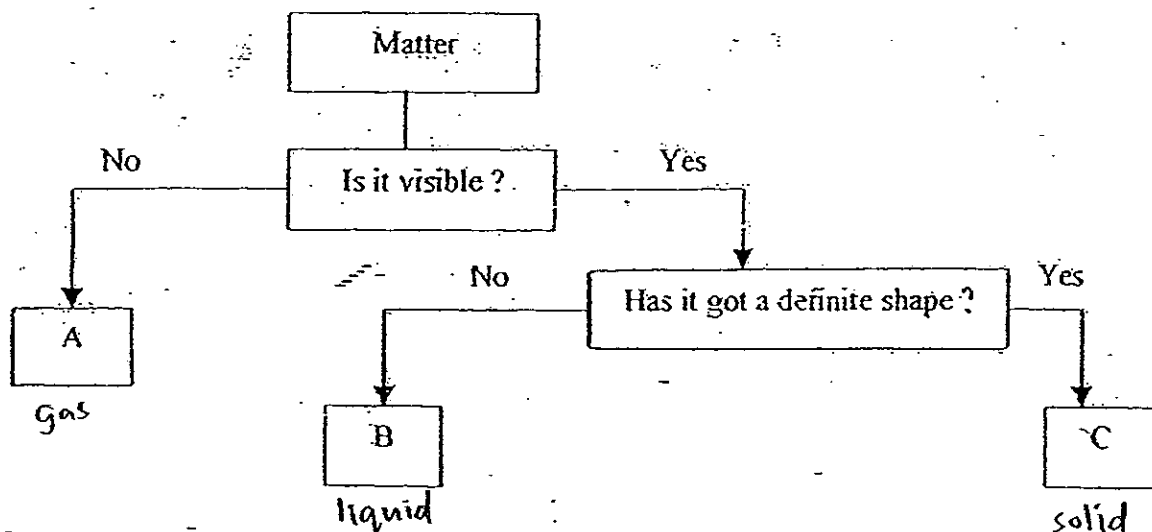
13. Some Science Club members observed a goldfish in a tank. They kept a record of the number of times the gill covers open and close in 30 seconds at the beginning of each day of the week. The graph below shows the results of their observation.



What could the Science Club members have done ~~on~~ Wednesday to cause the results shown in the graph above?

- (1) They put in another fish.
- (2) They added aquatic plants.
- (3) They provided the fish with food.
- (4) They moved the tank to another location.

14. Study the classification of matter below carefully.



What could A, B and C be?

	A	B	C
(1)	Water	Oxygen	Ice-cream
(2)	Hydrogen	Milk	Ruler
(3)	Jelly	Oil	Steam
(4)	Carbon dioxide	Honey	Kerosene

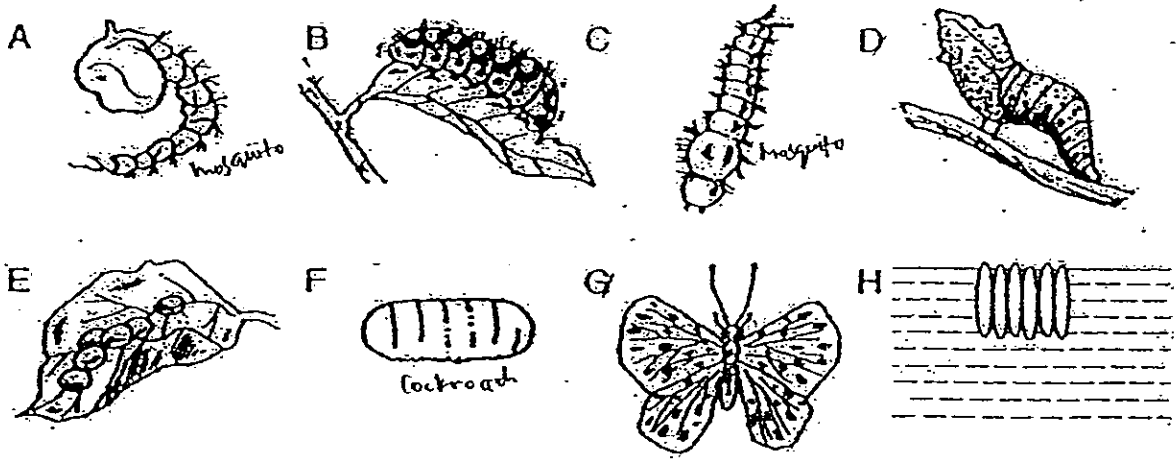
15. Chong Zhe carried out an experiment using the set-ups, A, B, C, D and E, to find out if the temperature of water affects the rate at which salt dissolves in it. He used the same amount of salt and he did not stir the solution. The table below shows the results of his experiment.

Set-up	Amount of water (ml)	Temperature of water (°C)	Time taken for salt to dissolve (sec)
A	100	50	200
B	100	40	240
C	120	40	220
D	100	30	300
E	130	40	210

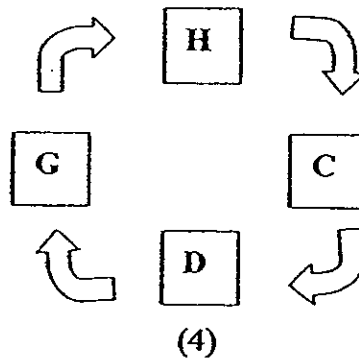
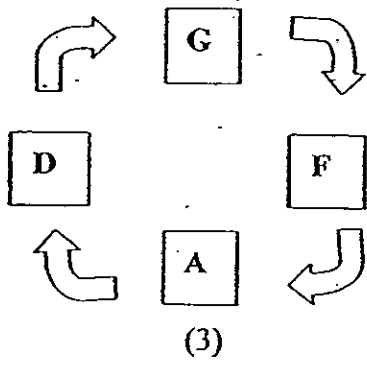
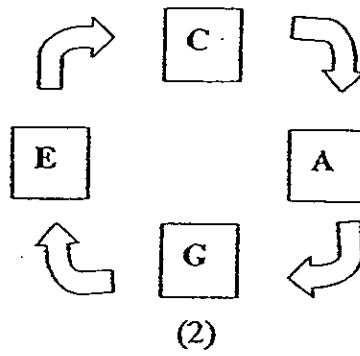
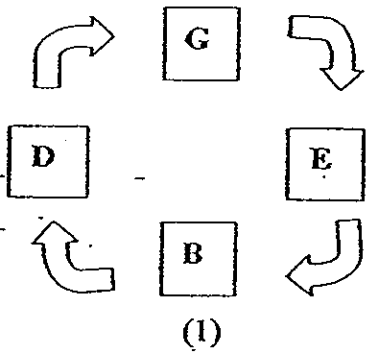
To ensure that a fair test is carried out, which set-ups should he use?

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

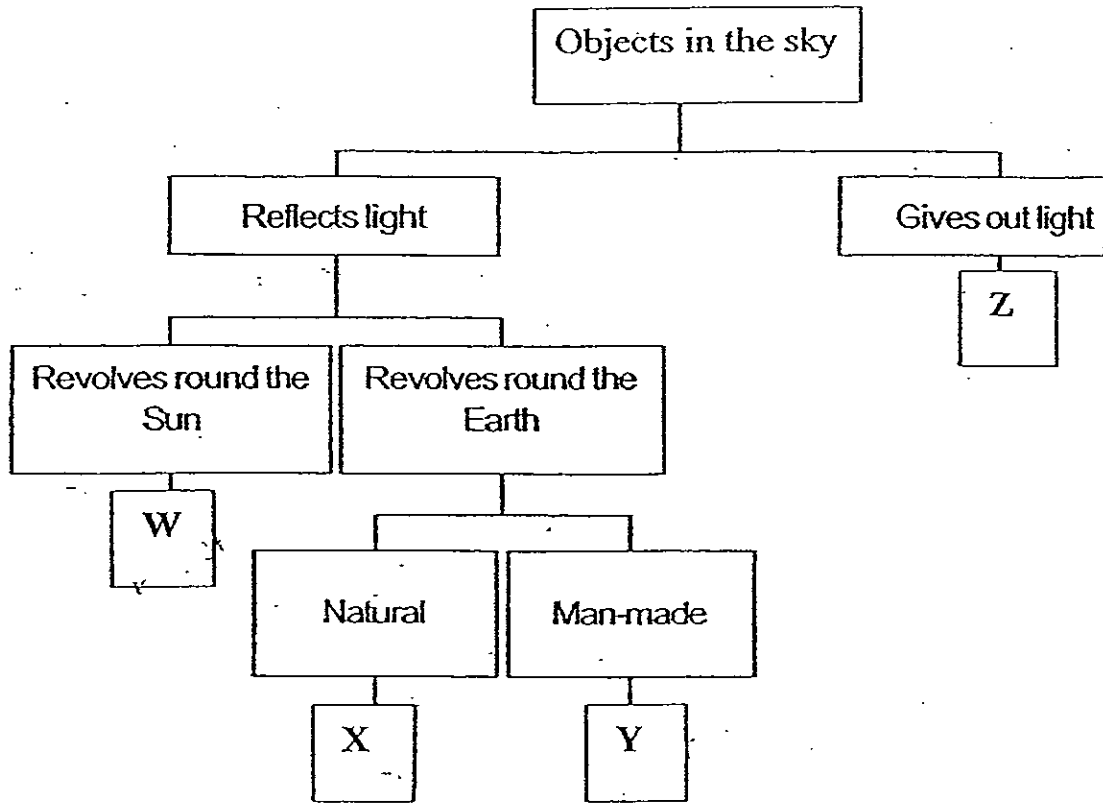
16. The diagrams below show the stages in the life cycles of some animals.



Identify the life cycle of a butterfly in the correct order.



17.



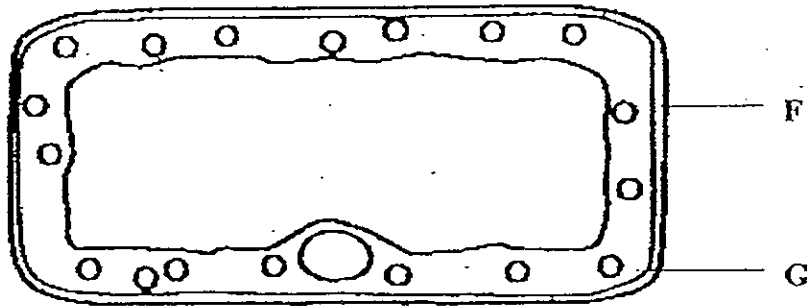
According to the classification chart above, what is W, X, Y and Z?

	W	X	Y	Z
(1)	Moon	Weather satellite	Star	Sun
(2)	Navigation satellite	Mars	Venus	Star
(3)	Mars	Star	Weather satellite	Sun
(4)	Venus	Moon	Communication satellite	Star

18. Which of the following statements about sexual reproduction is true?

- (1) Only animals can reproduce sexually
- (2) Sexual reproduction involves a male parent and a female parent.
- (3) Organisms like bacteria and yeast reproduce through sexual reproduction.
- (4) Plants like banana and heliconia only reproduce through sexual reproduction.

Study the diagram below and answer the questions, 19 and 20.



19. Identify the part labelled F and its main function.

	Part	Function
(1)	Cell membrane	Allows only certain substances to pass through.
(2)	Nucleus	Controls all the activities in the cell.
(3)	Chloroplast	Makes food in the presence of sunlight.
(4)	Cell wall	Supports the cell and gives it a regular shape.

20. Which of the following statements about the part labelled G are true ?

- A: It controls all the activities in the cell.
- B: It holds the cytoplasm inside the cell.
- C: It controls the movement of substances in and out of the cell.
- D: It helps the plant to make food.

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

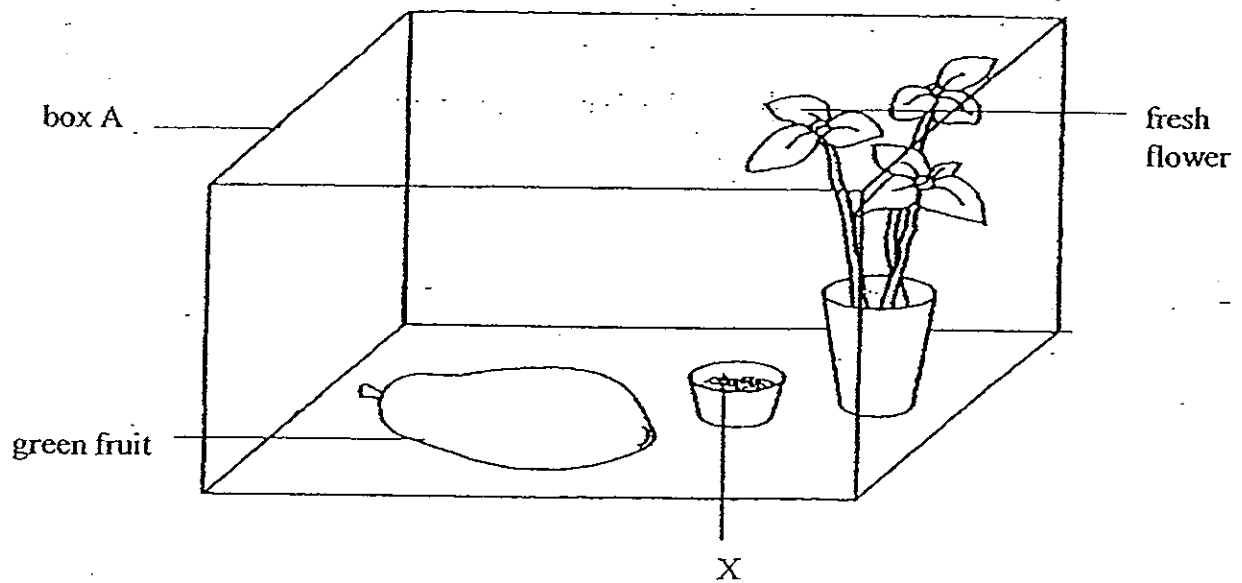
21. Soon Ching left a slice of moist bread in a plastic bag. A few days later, she noticed that there were bluish black patches on the bread. What could these patches be?

- (1) Algae
- (2) Lichen
- (3) Moss
- (4) Mould

22. A certain type of green fruit gives off a gas, Q. When this fruit is stored together with some fresh flowers in a container, gas Q causes the flowers to wither quickly. Without gas Q, the flowers would normally remain fresh for a longer time.

Jenny carried out an experiment to find out if substance X can remove gas Q.

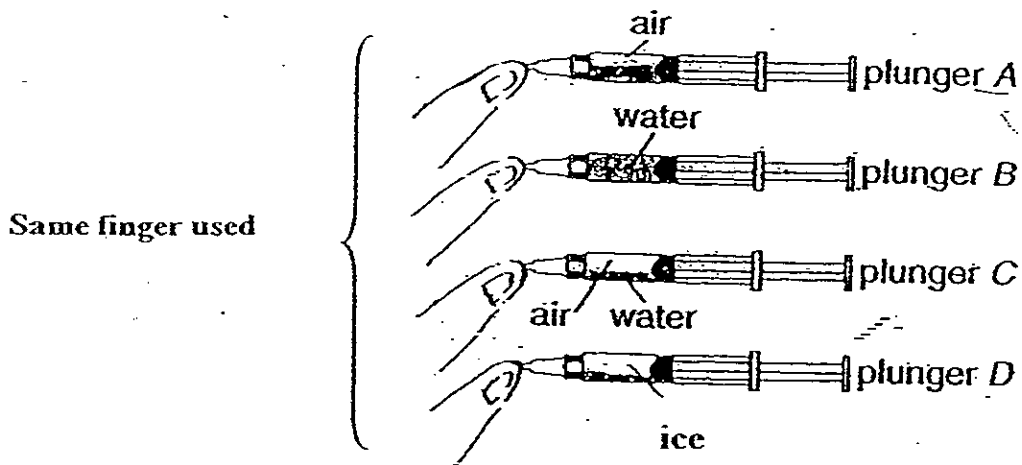
She used 2 similar plastic boxes, A and B, with lids. In box A, she placed some fresh flowers, the green fruit and substances X, as shown below.



In order to carry out the experiment correctly, which of the following should Jenny place in box B?

- (1) green fruit only
- (2) green fruit and fresh flowers only
- (3) green fruit and substance X only
- (4) fresh flowers and substance X only

23. Alex filled four syringes with air, water and ice as shown below.



Which of the plungers cannot be pushed in at all?

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

24. Four children made some statements as shown below.

Willy: Some fungi are actually big enough to be seen by the naked eye. (mushrooms)

John: All fungi look alike and carry out the same function.

Isabel: I think Willy is wrong. All fungi can only be seen using a microscope.

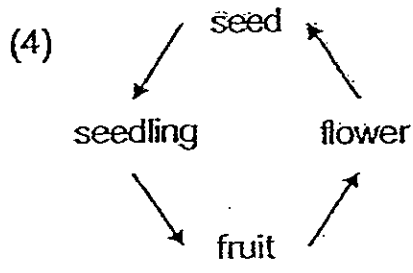
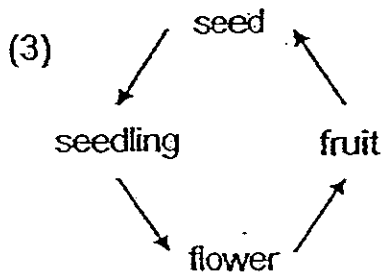
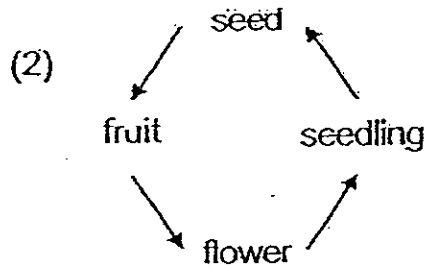
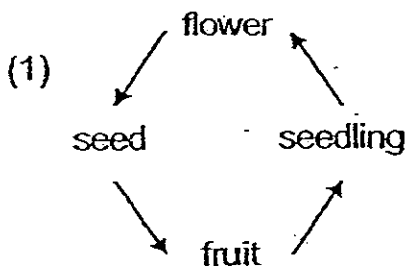
Andrew: All fungi are harmful.

Which child is correct?

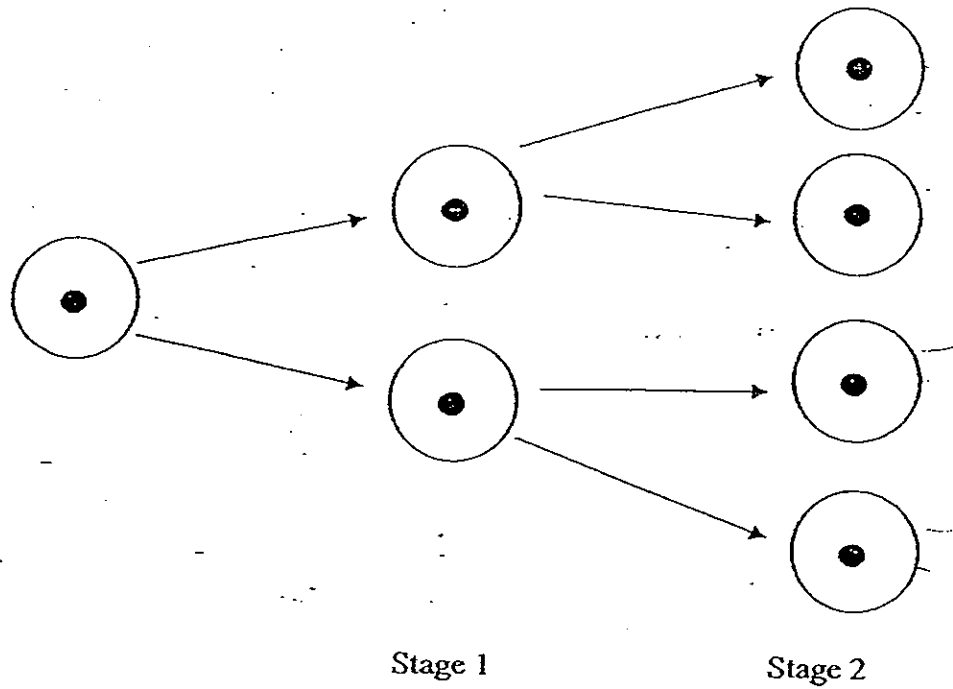
- (1) Andrew
- (2) Isabel
- (3) John
- (4) Willy

(4)

25. Which of the following diagram best shows the life cycle of a plant?



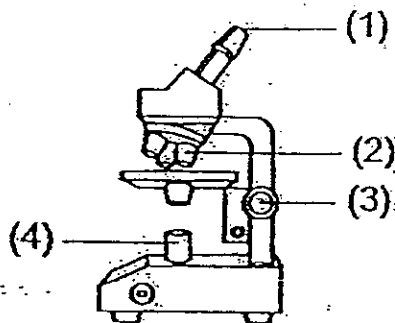
26. The diagram below shows cell division.



At which stage will there be 16 cells?

- (1) Stage 3
- (2) Stage 4
- (3) Stage 8
- (4) Stage 16

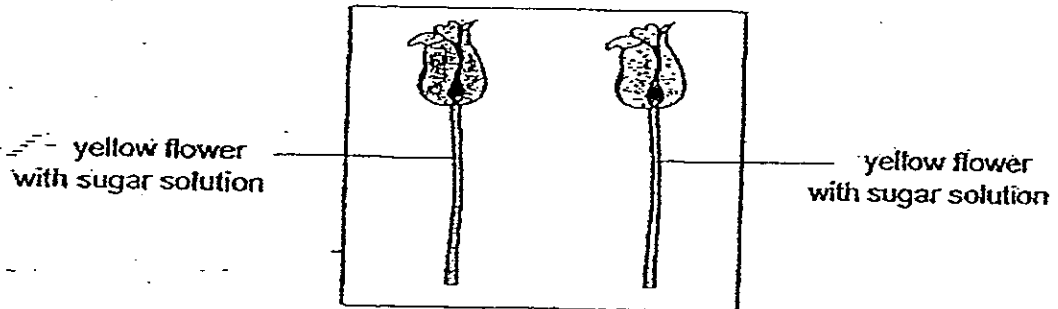
27. Which part of the microscope below can be adjusted to get a sharp and clear image?



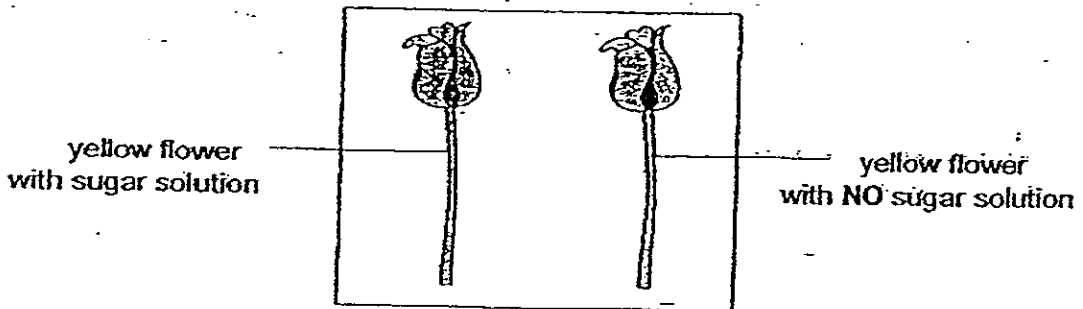
28. Raymond wanted to test if butterflies are attracted to sugar solution. He used flowers made of silk in his experiment and sprayed some of them with 5 ml of sugar solution.

Which set-up should he use?

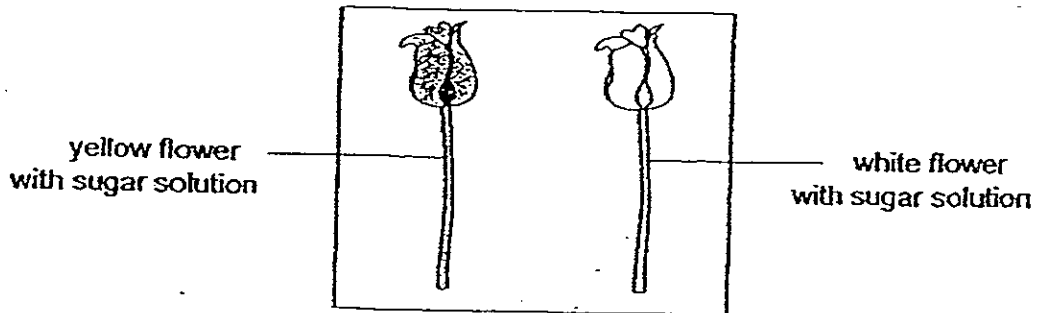
(1)



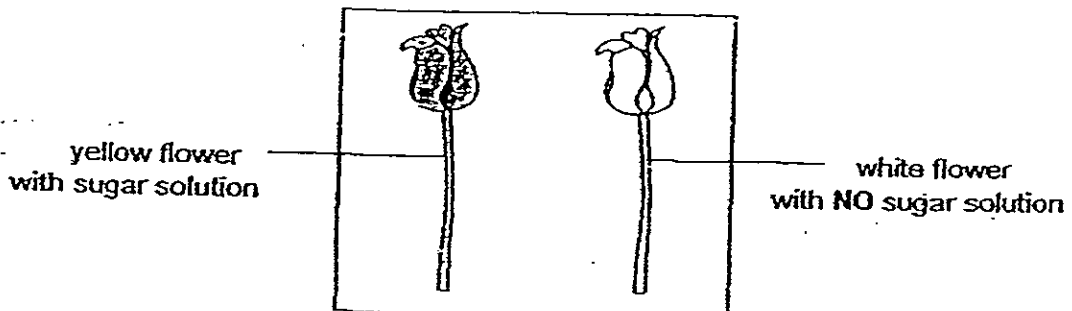
(2)



(3)



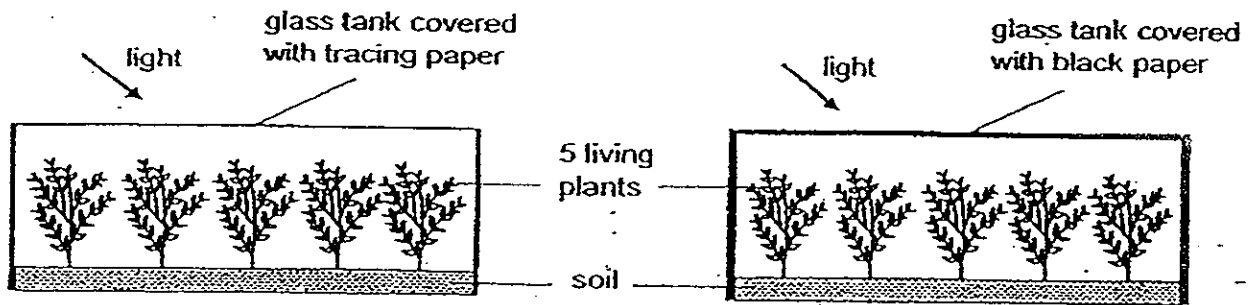
(4)



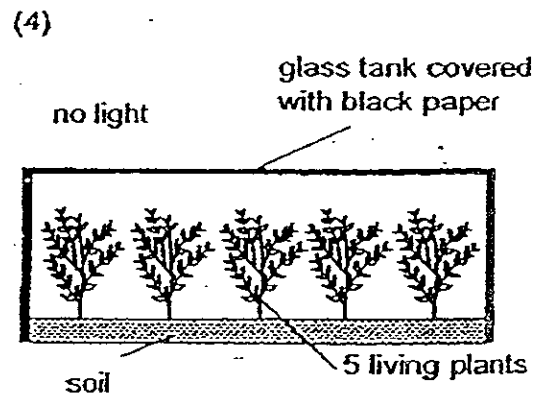
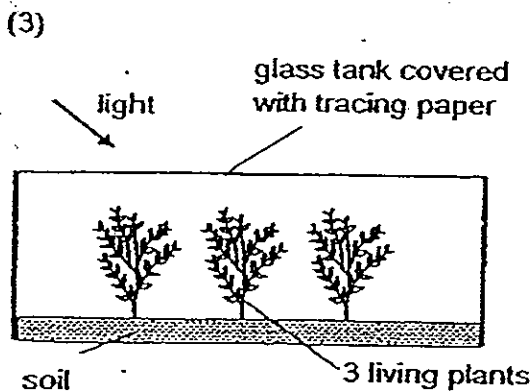
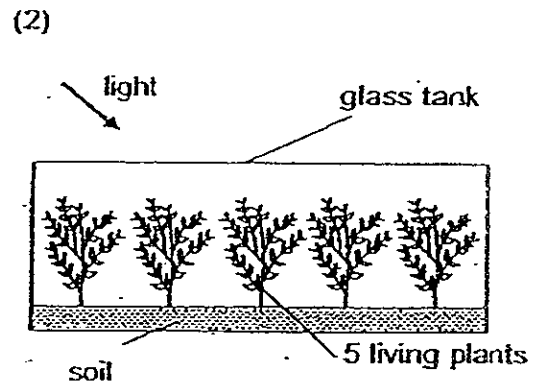
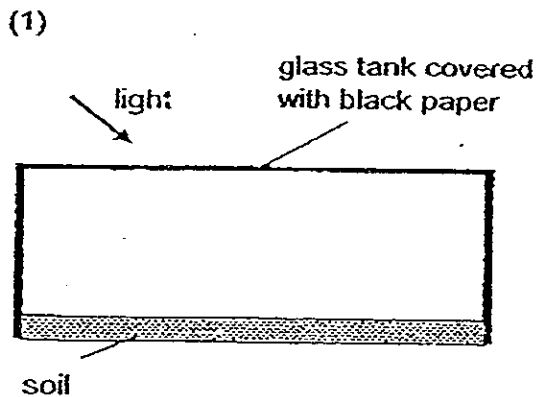
29. Which of the following statements about day and night on Earth is **not** true?

- (1) It repeats every 24 hours.
- (2) It causes the apparent change in the shape of the Moon.
- (3) It is caused by the rotation of the Earth from east to west.
- (4) It causes the daily apparent movement of the Sun across the sky.

30. Celine wanted to investigate how the amount of light affects the growth of a type of plant. The diagram below shows each of his set-ups in a clear glass tank.



Which of the following could be used as a control for his experiment?



TAO NAN SCHOOL
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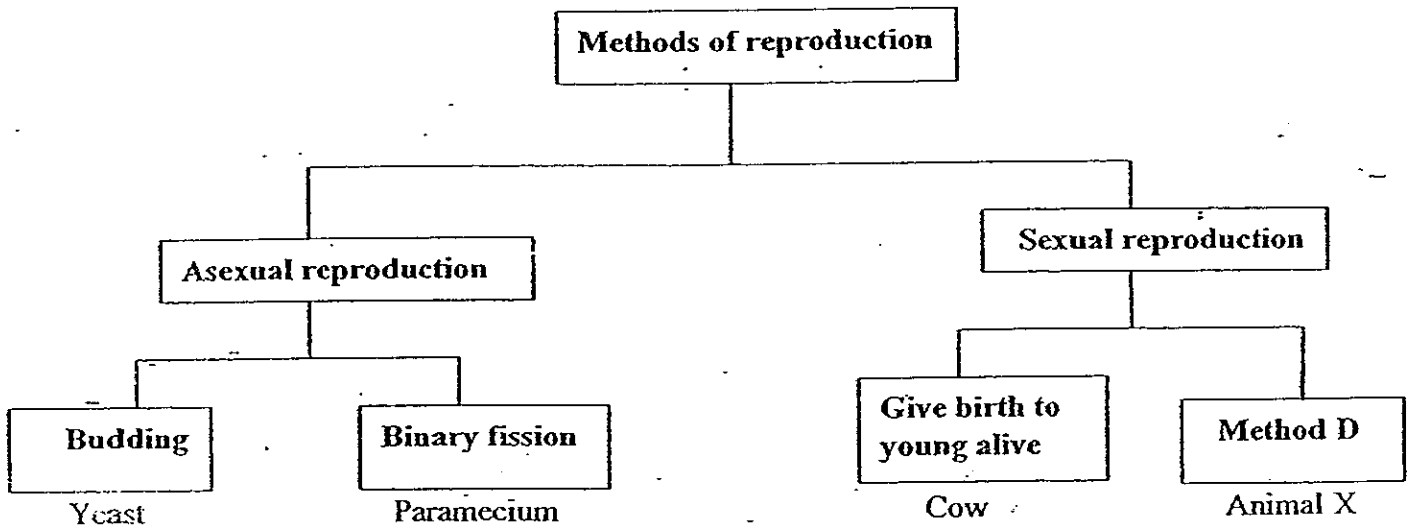
Name: _____ ()
Class : 5 ()

Marks: / 40
Parent's Signature: _____

Section B (40 marks)

For the questions, 31 to 46, write your answers in the spaces provided.

31. Anita drew a chart about reproduction.

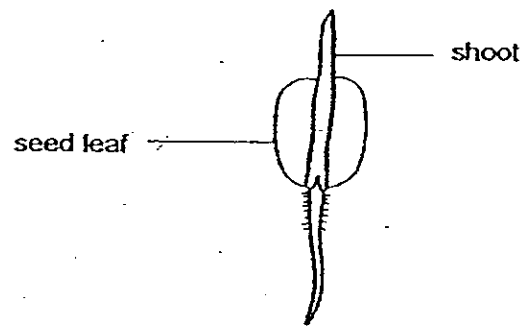


(a) What is the method D? Name Animal X that reproduces by that method (1m)

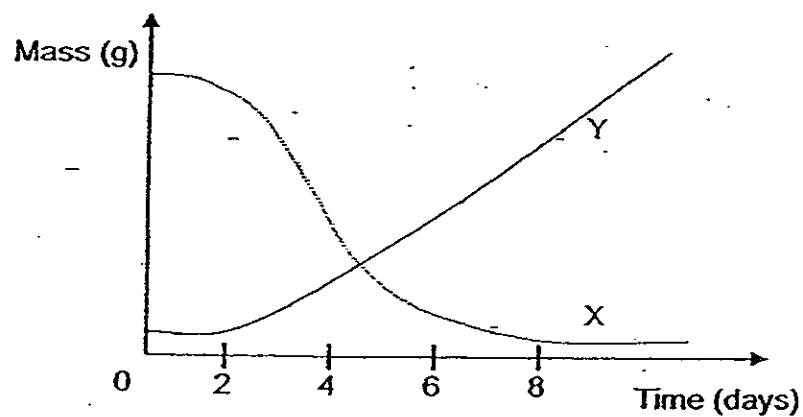
(b) What is asexual reproduction? (1m)

(c) With reference to the chart, name a similarity between "Budding" and "Binary fission". (1m)

32. Jovin carried out an experiment on a seed growing into a seedling as shown below.



In the graph below, the two curves show changes in the mass of the seed leaves and the shoot of the seedling during the experiment.

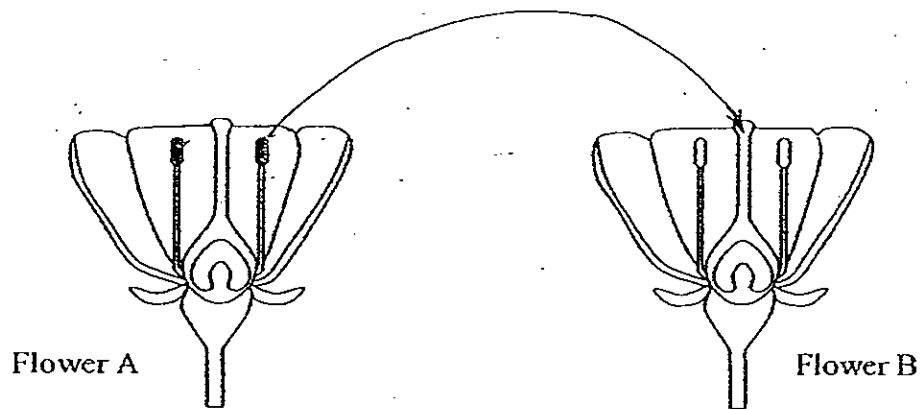


- (a) Which curve, X or Y, shows how the mass of the seed leaf changes during the experiment? Give a reason for your answer. (1m)

- (b) What would happen to the seed if there were no sunlight throughout the first eight days? (1m)

- (c) How did the seedling get its food from day 8 onwards? (1m)

33. The diagram shows a process that occurs in the life cycle of a flowering plant.

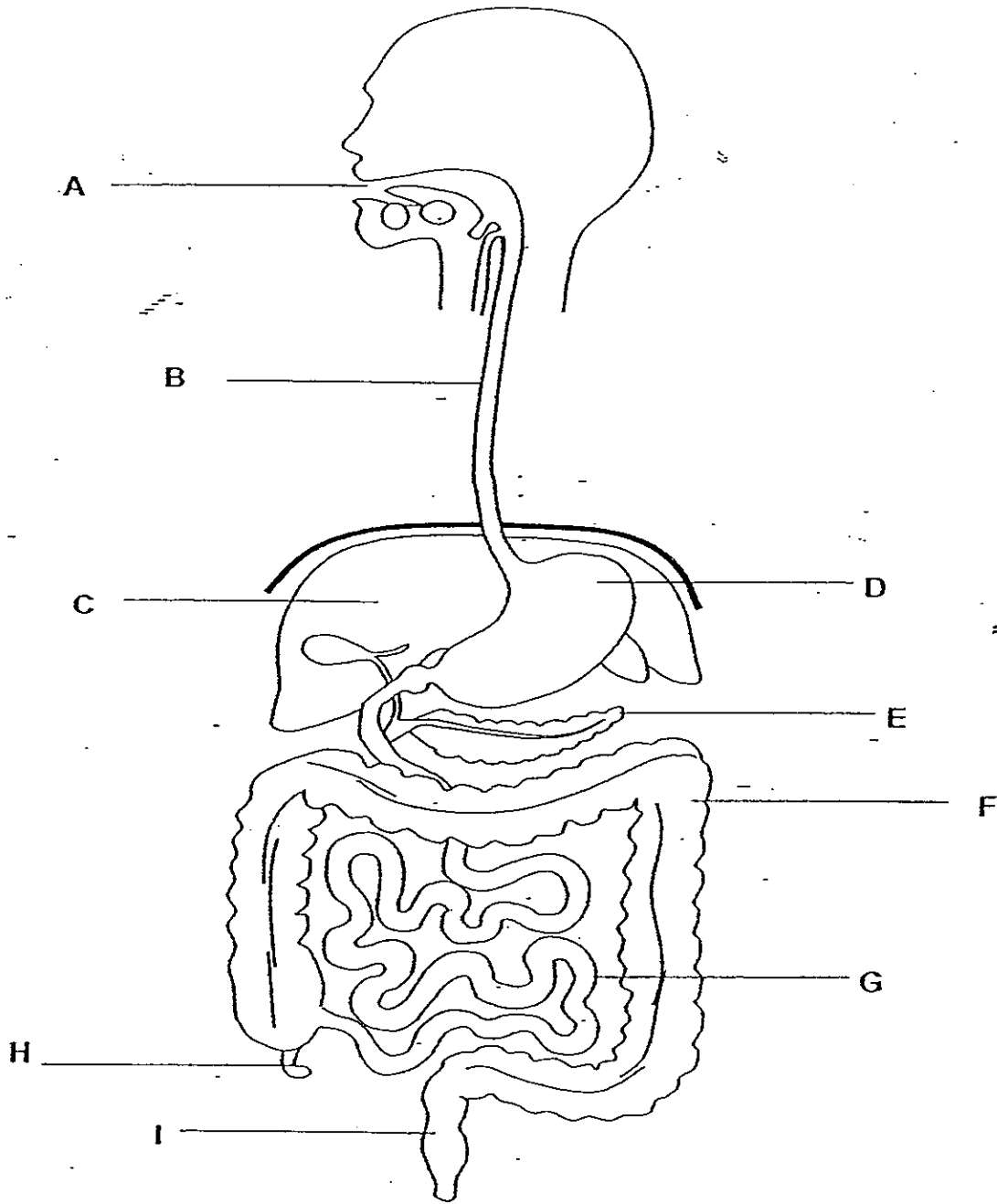


(a) Describe the process that is shown above. Name the process. (2m)

(b) When Flower B is replaced with an Orchid flower, fertilisation did not occur. Explain why. (1m)

(c) Using a pencil, shade the part(s) of the flower that produce(s) pollen grains in Flower A. Label the part(s) of Flower A that produce(s) pollen grains. (1m)

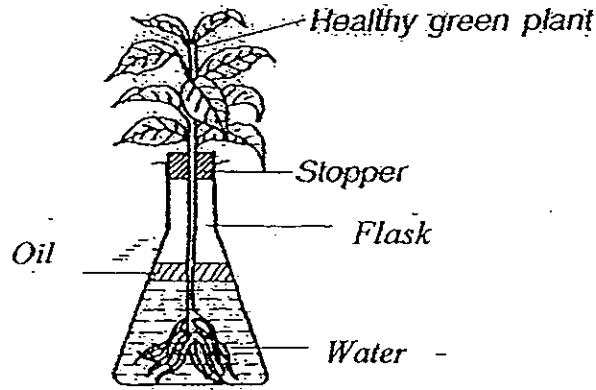
34. The diagram below shows parts of the human body.



Using the appropriate letters (A to I) from the diagram above, list, in order, the organs each mouthful of food or drink passes on its way through the human body. (2m)

→ → → → →

35. Clement placed the set up below near a window.

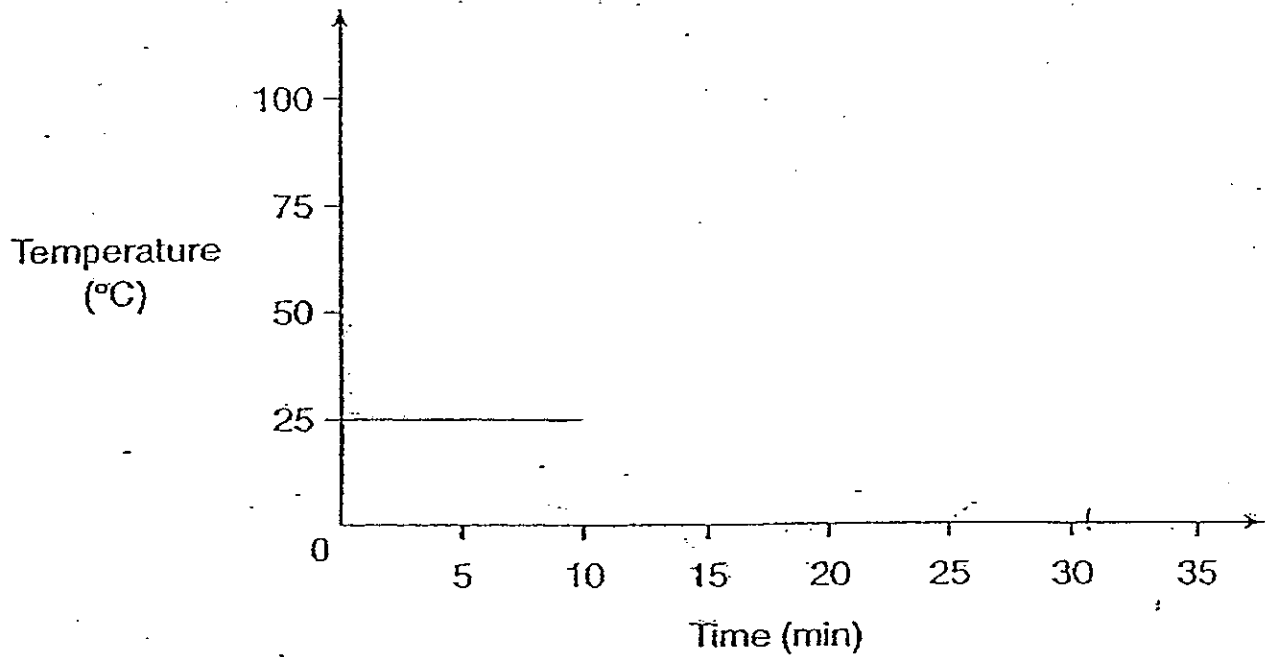


(a) After one day, the water level fell. Explain what had happened. (1m)

(b) What is the function of the oil? (1m)

(c) Clement replaced the water with red coloured water. After 3 days, the whole plant turned red. Was the plant still able to make food? Explain. (1m)

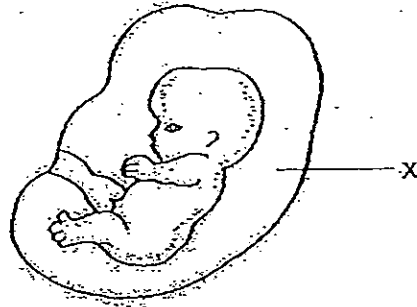
36. Peter filled a flask with 2 litres of water at room temperature and heated it. He recorded the temperature of the water every 5 minutes. He then plotted a graph as shown below.



- (a) How long did the water take to boil? (1m)
-

- (b) Place a cross (X) on the graph where heating has just started. (1m)

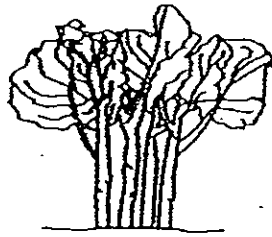
37. The picture below shows a developing foetus.



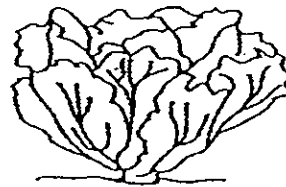
(a) How does it receive its nutrients and oxygen? (1m)

(b) What is the function of X? (1m)

38. A farmer grew two types of green vegetables, A and B.

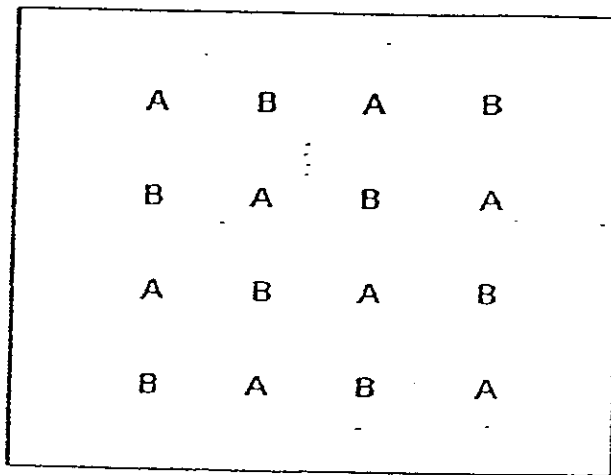


A



B

The vegetables, A and B, are planted in a plot of land as shown below.

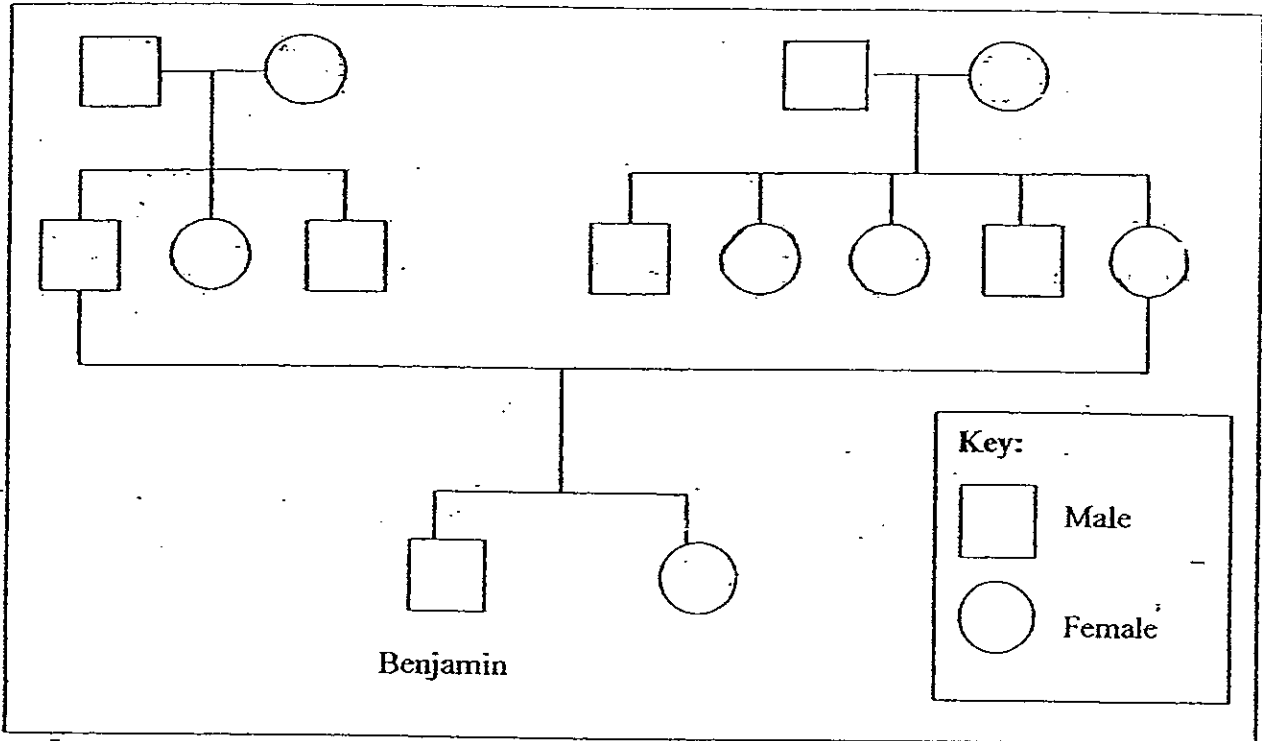


The table below shows the number of vegetables A and B on Day 1 and on Day 30.

Vegetable	Day 1	Day 30
A	8	16
B	8	7

Suggest what may happen to vegetable B if vegetable A continues to grow and reproduce quickly. Give a reason for your answer. (2m)

39. Study Benjamin's family tree below.

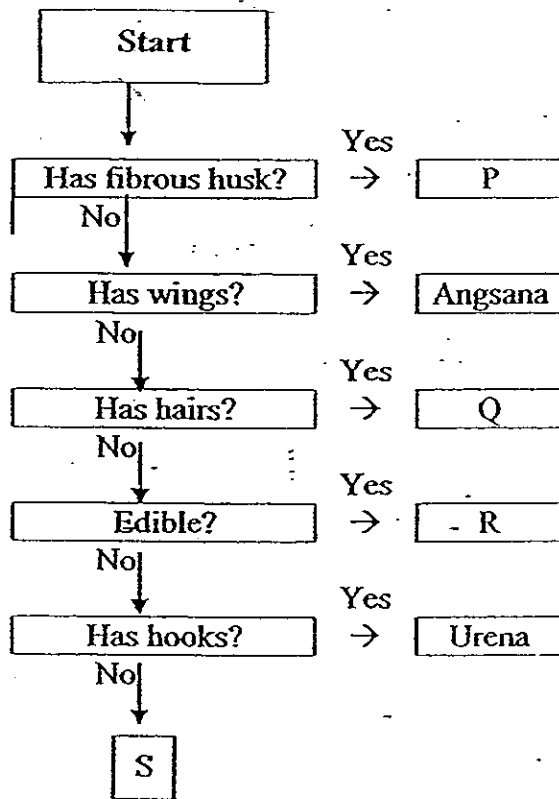


Look at the statements about his family tree below and put a tick (✓) in the appropriate box. (2m)

	Statements	True	False	Not possible to tell
(a)	Benjamin has one sister.			
(b)	Benjamin has four uncles and four aunts.			
(c)	Benjamin's mother has three sisters altogether.			
(d)	Benjamin's father has four nephews and four nieces.			

(e) Shade the or that represents Benjamin's maternal grandfather in the family tree. (1m)

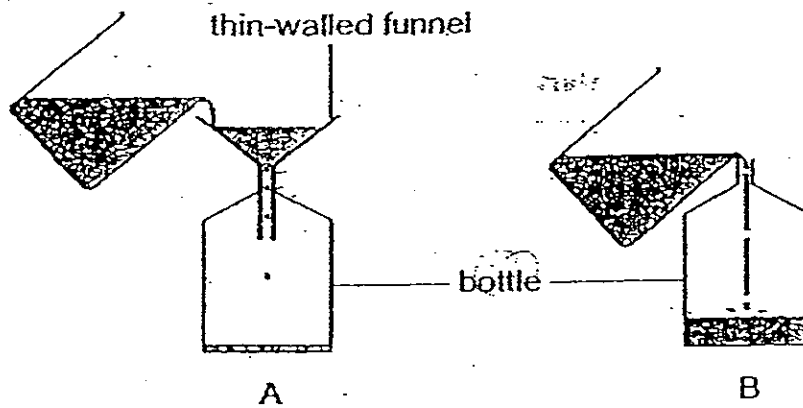
40. In the flow chart below, P, Q, R and S represent 4 different fruits.



Which of the above letters represent the following fruits? Write the letter in the brackets provided. (2m)

- (a) Pong pong ()
- (b) Lalang ()
- (c) Saga ()
- (d) Mango ()

41. Leonardo poured oil into two similar glass bottles using two set-ups, A and B, as shown in the diagram below.



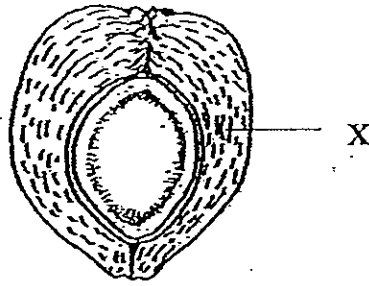
Leonardo noticed that the glass bottle in set-up B filled up faster than that in set-up A. He repeated the experiment a number of times.

- (a) Why did he repeat the experiment a number of times? (1m)

- (b) Give a reason why the bottle in set-up B always filled up faster than that in set-up A. (1m)

- (c) Based on your answer in (b) and using the same apparatus, how could he improve the experiment in set-up A so that the bottle would fill up more quickly? (1m)

42. The diagram below shows the cross-section of a coconut.



(a) How is a coconut dispersed? (1m)

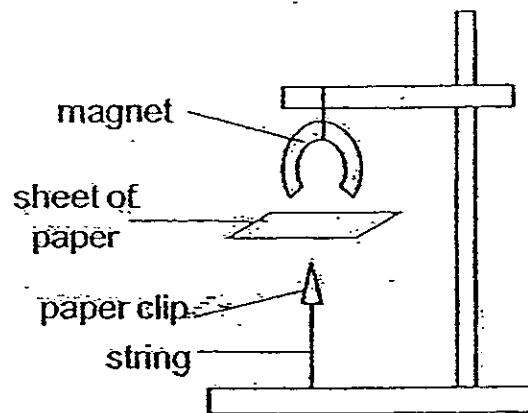
(b) How does part X help the coconut to be dispersed by the method in (a)? (1m)

43. Jie Lyn placed some bean seeds which had been soaked overnight in a container lined with damp cotton wool.

(a) The next day, she noticed that the bean seeds had roots growing downwards. What was the explanation for this? (1m)

(b) A week later, the seed leaves shrivelled and dropped off after the first leaves appeared on the young plant. Explain why. (1m)

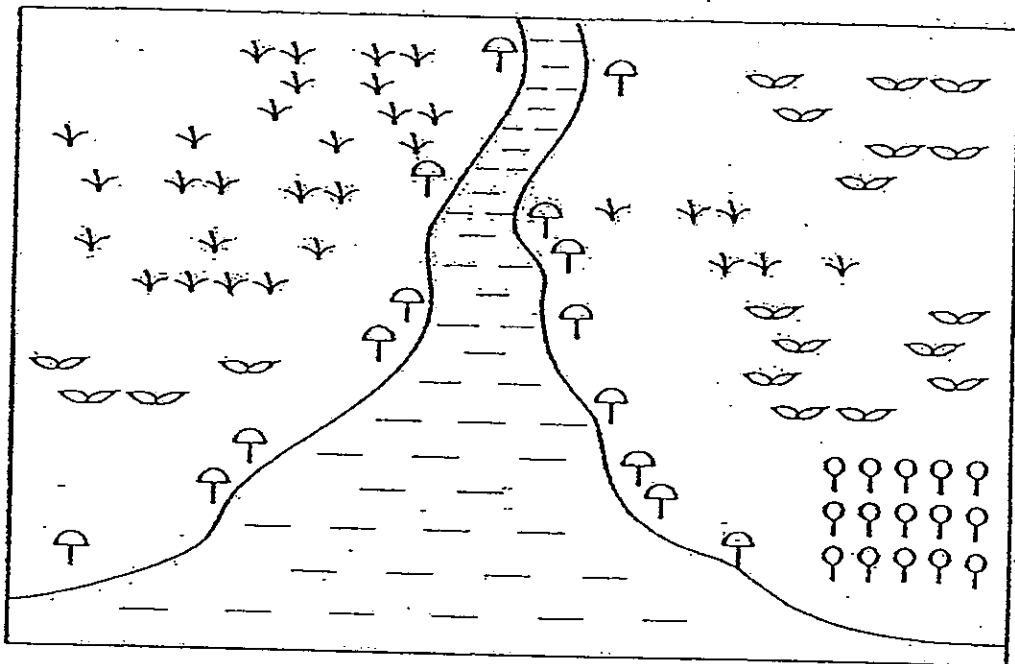
44. The diagram below shows a magnet pulling a paper clip up when suspended above it.






- (a) The paper clip did not fall when the sheet of paper is placed between it and the magnet. Why? (1m)

- (b) The paper clip falls when the piece of paper is replaced by an iron sheet. Why? (1m)

45. The diagram below shows the distribution of four types of plants near a river.

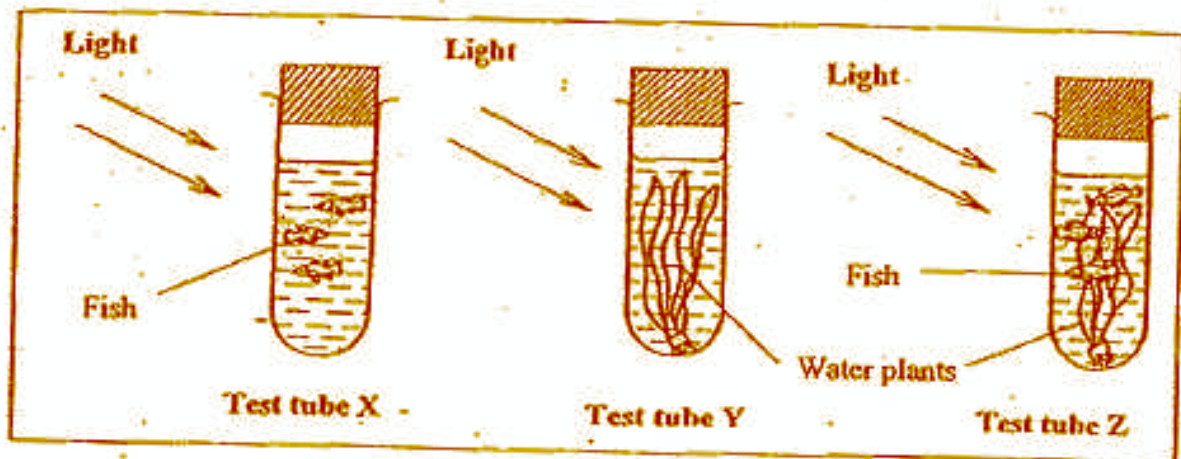


(a) Among the four types of plants, circle the plant that is not dispersed by natural means. (1m)

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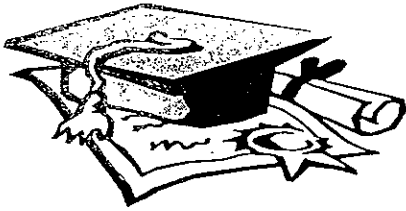
(b) Explain your answer in (a). (1m)

46. Amos set up three test tubes in the morning as shown in the diagram below. A stopper was placed onto each of the test tube.



- (a) Which test tube would have the most carbon dioxide at noon? (1m)
-
- (b) The test tubes were placed in the dark. Which test tube would have the most carbon dioxide after 3 days? (1m)
-
- (c) Explain your answer in (b). (1m)
-
-

200



ANSWER SHEET

EXAM PAPER 2008

SCHOOL : TAO NAN PRIMARY SCHOOL

SUBJECT : PRIMARY 5 SCIENCE

TERM : SA 1

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
2	1	3	3	4	3	1	4	3	1	2	2	2	2	3	1	4

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
2	4	3	4	2	3	4	3	2	3	2	2	2

31) a) Lay eggs/ Animal X is a butterfly.

b) Asexual reproduction requires only one parent cell.

c) They are both forms of asexual reproduction.

32) a) Curve X. The food in the seed leaf has been used up.

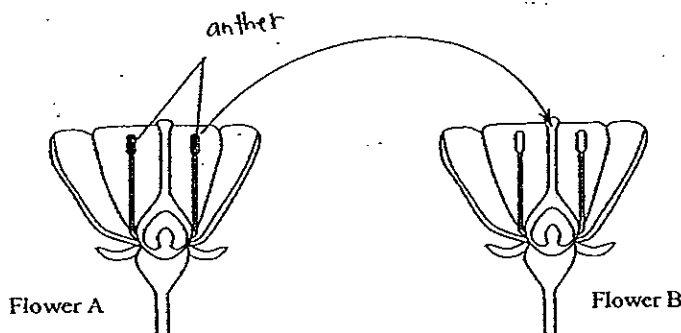
b) The seed will still germinate.

c) The leaves that developed made food for the seedling.

33) a) The pollen from the anther of Flower A is carried by either wind or animals and lands on the stigma of Flower B. This process is called cross-pollination.

b) As the type of flower is now different, fertilization can only occur between the same types of flower.

c)



34) A → B → D → G → F → I

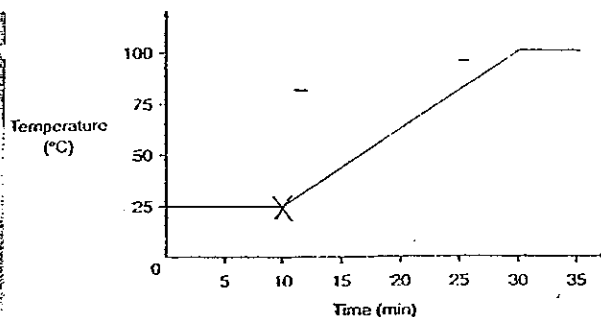
35) a) The roots of the plant absorbed the water to provide for the plant.

b) It is to prevent water in the flask from evaporation.

c) Yes. The change of colour in the plant was due to the red colouring in the water. The chlorophyll is still there and can still make food for the plant.

36) a) The water took 20 minutes to boil.

b)



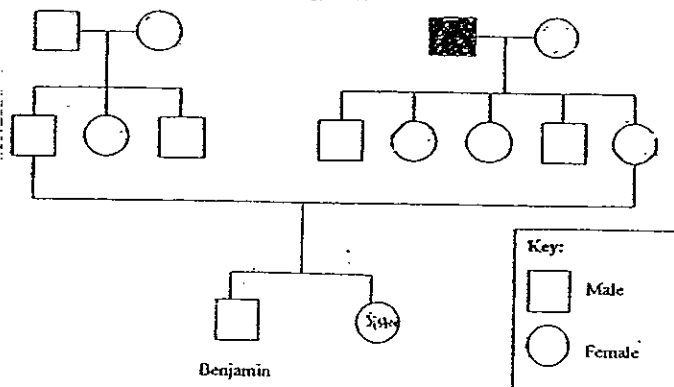
37) a) It receives nutrients and oxygen its umbilical cord.

b) It protects the foetus from harm and shocks.

38) Vegetable B may die. If Vegetable A continues to grow overcrowding will occur and Vegetable B will have to compete with Vegetable A for sunlight. As Vegetable A is already taller than Vegetable B, Vegetable B will not receive sufficient sunlight to make food.

39) a) T b) F c) F d) Not

e)



40) a) P b) Q c) S d) R

41) a) He wanted to make sure his results were accurate.

b) Set-up A has a funnel, air and oil trying to flow through the same funnel. Air cannot escape easily.

c) Life up funnel.

42) a) It is dispersed by water.

b) Part X protects the seed and keeps the seed afloat when it is being dispersed by the water.

43) a) The roots grew downwards because it had to absorb water from the damp cotton wool to provide for the plant.

b) The food in the seed leaves has been used up. The plant can now make food through its leaves.

44) a) magnetic force can pass through non-magnetic material, such as paper.

b) Magnetic force cannot pass through magnetic material, such as iron.

45) a)



b) If the plant circled above was dispersed by natural means. It would not be in straight rows.

46) a) Test tube X.

b) Test tube Z.

c) Both the fish and the plant is taking in oxygen and giving out carbon dioxide as they are both undergoing respiration. Thus, Test tube Z has the most carbon dioxide.