SINGAPORE CHINESE GIRLS' SCHOOL

FIRST SEMESTRAL ASSESSMENT 2007

NAME: _____ ( ) DATE: _____

CLASS: PRIMARY 5(SY)/ C / G / SE / P

SCIENCE

BOOKLET A

30 questions

60 marks

Total time for Booklets A & B: 1 h 45 min

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

FOLLOW ALL INSTRUCTIONS CAREFULLY.

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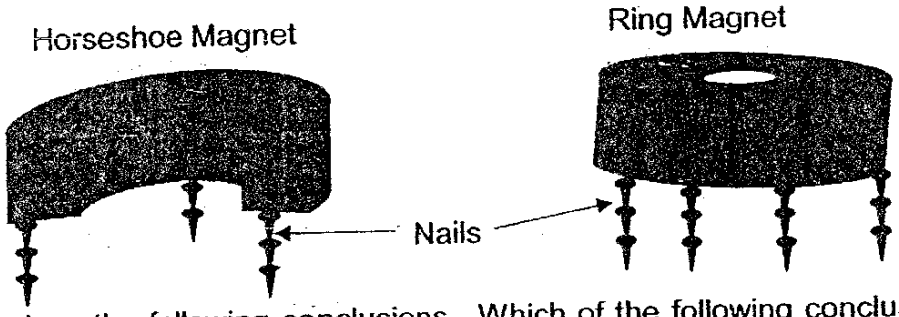
Part 1 (60 marks)
For each question from 1 to 30, 4 options are given. One of them is the correct answer. Make your choice, (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.**

1. Jennifer conducted the following experiment using a horseshoe magnet and a ring magnet. She wanted to find out the number of nails the two magnets can attract.

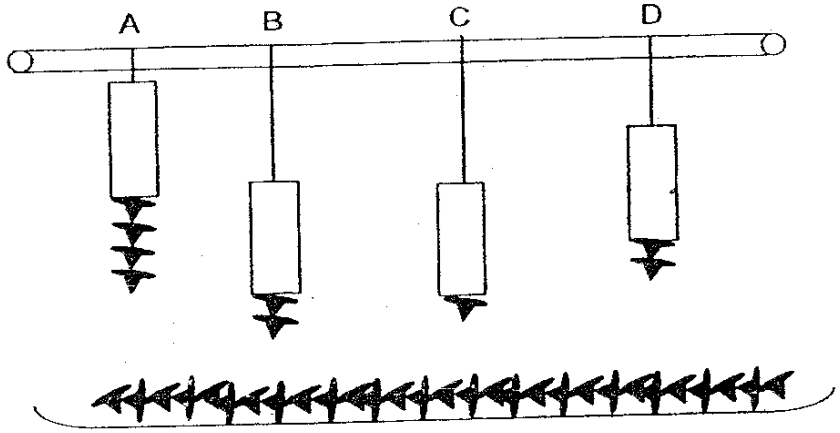


She drew the following conclusions. Which of the following conclusions are **correct**?

A: The ends of the horseshoe magnet are stronger than the centre.
B The horseshoe magnet has a greater magnetic strength than the ring magnet.
C: The magnetic strength is the same at the four different points tested for the ring magnet.

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

2. Kelvin set up an experiment as shown below. He hung four magnets, A, B, C and D on a rod and placed a tray of pins below them.



Which one of the following statements on the above experiment is **false**?

1) Magnet C is the weakest magnet.
2) Magnet A is the strongest magnet.
3) Magnet D is weaker than Magnet B.
4) Magnet D is stronger than Magnet C.

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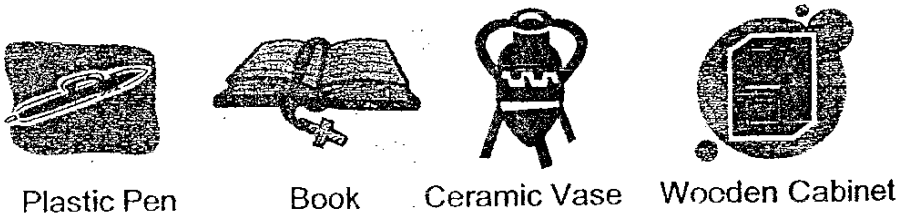
3. What are the common properties among the objects shown below?



Plastic Pen Book Ceramic Vase Wooden Cabinet

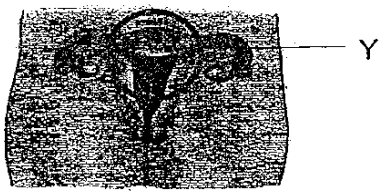
A: They are flexible.
B: They are non-magnetic.
C: They are poor conductors of heat.
D: They are non conductors of electricity.

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

4. Mrs Quek took out a glass of water from the refrigerator and placed it on the table. Five minutes later, she noticed drops of water on the outer surface of the glass. This is because _____.

1) water from the glass leaked out
2) water vapour from the glass condensed on the outer surface of the glass
3) cool water vapour from the surrounding air condensed on the warm surface of the glass
4) warm water vapour from the surrounding air condensed on the cool surface of the glass

5. The diagram below shows the reproductive system of a woman.



What is the function of the part labelled Y?

1) To produce eggs.
2) To fertilise the eggs.
3) To hold the egg before release.
4) Place where the fertilized egg develop.

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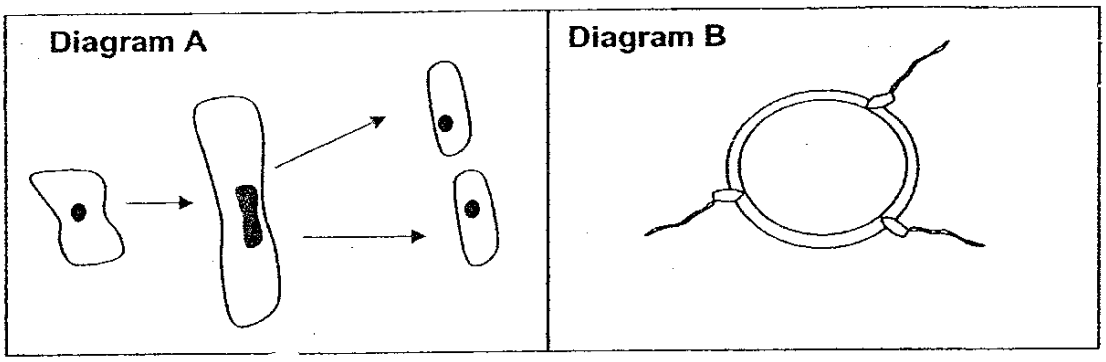
6. Study the diagram below.



Which of the following organisms reproduce the same way as Diagrams A and B?

	Diagram A	Diagram B
1)	Hydra	Human
2)	Bacteria	Amoeba
3)	Yeast	Bacteria
4)	Paramecium	Dogs

7. Ming Hui classified the following animals based on the development of the egg and ways the different organism gets its nutrients in the table below. Which of the following has the **wrong** information?

	Animal	Development of Egg	Sources of Nutrients
1)	Platypus	Outside the body	Egg Yolk
2)	Human	Inside the body	Mother's Body
3)	Penguin	Outside the body	Egg Yolk
4)	Guppy	Outside the body	Egg Yolk

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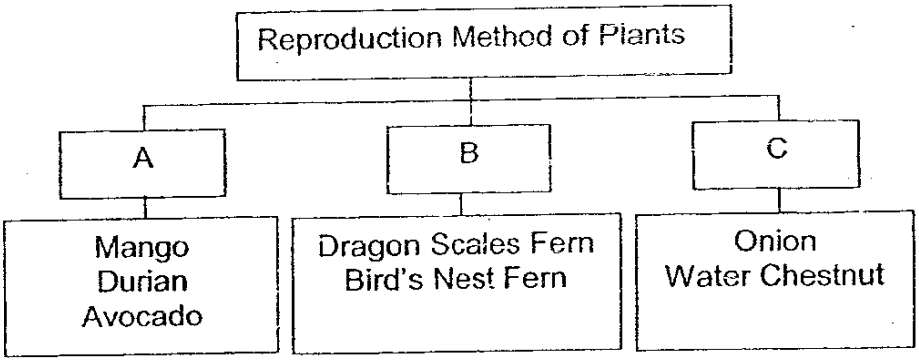
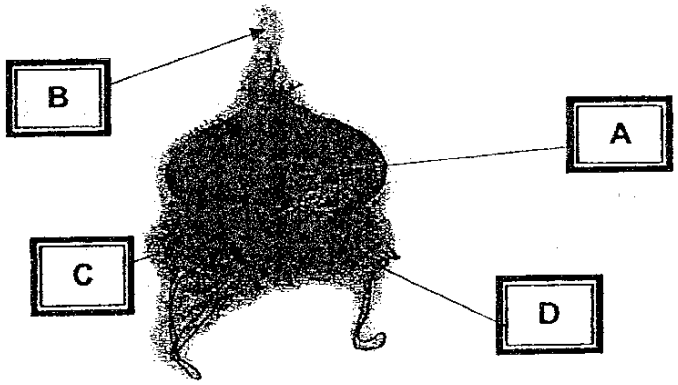
8. Study the chart below.



Which of the following sub-headings best represent A, B and C?

	A	B	C
1)	Spores	Seeds	Underground Stem
2)	Seeds	Spores	Underground Stem
3)	Seeds	Underground Stem	Spores
4)	Underground Stem	Spores	Seeds

9. Study the diagram below.



Which of the following **correctly** label the parts of the onion?

	A	B	C	D
1)	Shoot	Fleshy leaves	Root	Underground Stem
2)	Fleshy leaves	Shoot	Underground Stem	Root
3)	Underground Stem	Root	Shoot	Fleshy leaves
4)	Root	Underground Stem	Fleshy leaves	Shoot

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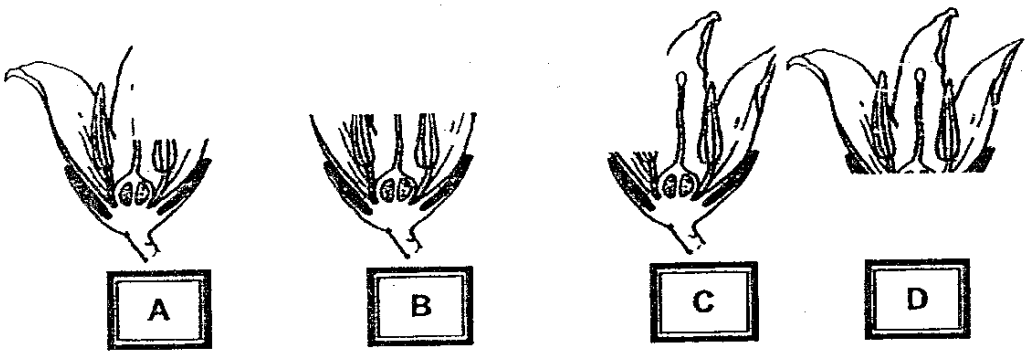
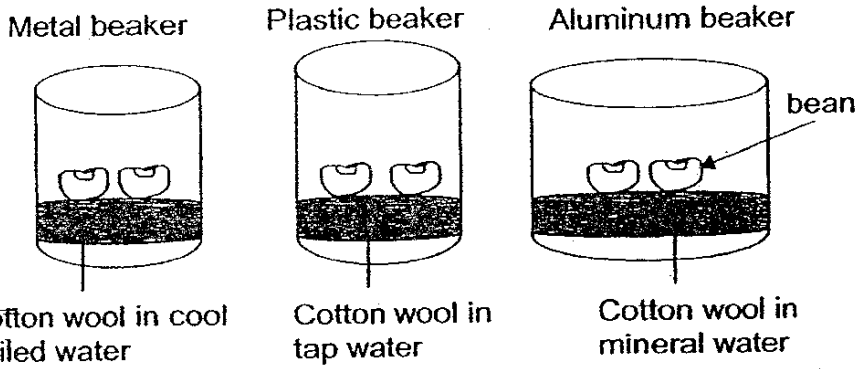
10. Gopal, the gardener, accidentally snipped off part of some flowers while trimming the plants. Assuming that fertilisation had taken place, which of the following flower can still be developed into a fruit?



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

11. Kenny wanted to germinate some beans. He wanted to find out if the beans will germinate when placed in different types of water. He placed two beans into each of the three different beakers as shown below. His teacher told him that his experiment is not a fair one. What are the variables that he had to keep the same?



A: Type of water
B: Type of beans
C: Size of container
D: Type of container

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

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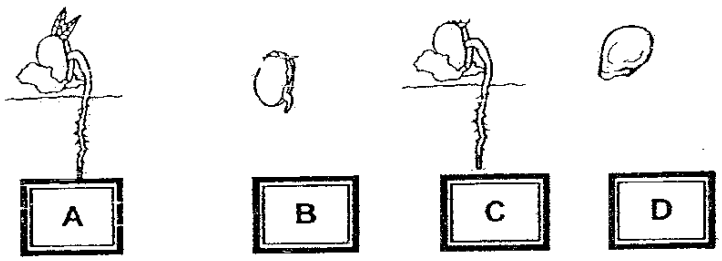
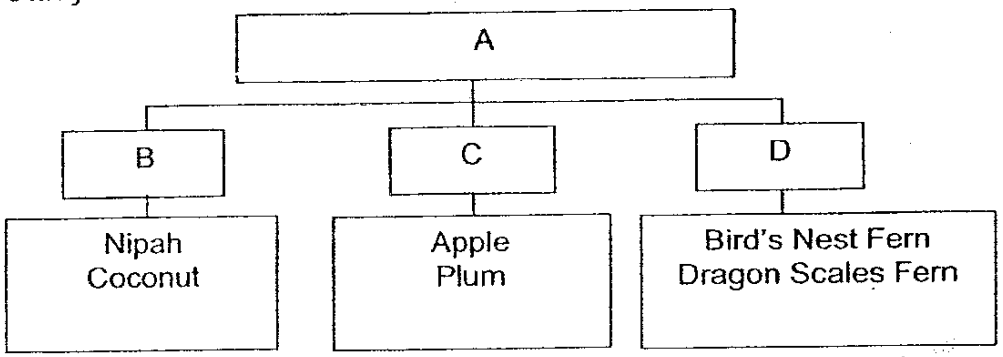
12. Genevieve was told to label the process of the growth of a plant from a seed. Which of the following **correctly** states the process of growth?



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

13. Study the chart below.



Which of the following sub-headings best represent A, B, C and D?

	A	B	C	D
1)	Types of Fruits	Water	Land	Land
2)	Methods of Reproduction	One Seed	Many Seeds	Spores
3)	Methods of Dispersal	Water	Animals	Wind
4)	Agents of Pollination	Wind	Insects	Wind and Insects

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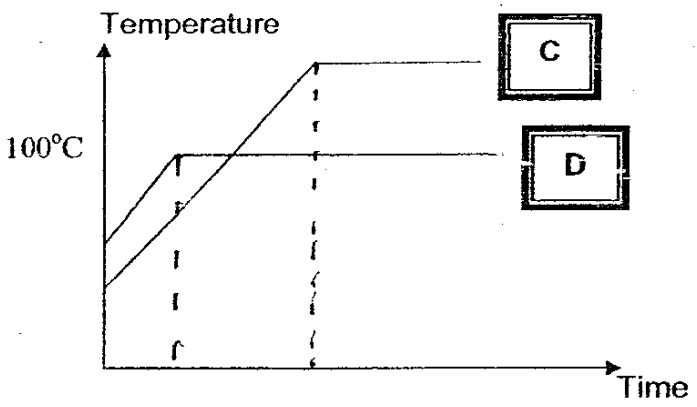
14. Lendon heated two beakers of liquid, C and D, until they reached their boiling temperature. The results are shown in the graph below.

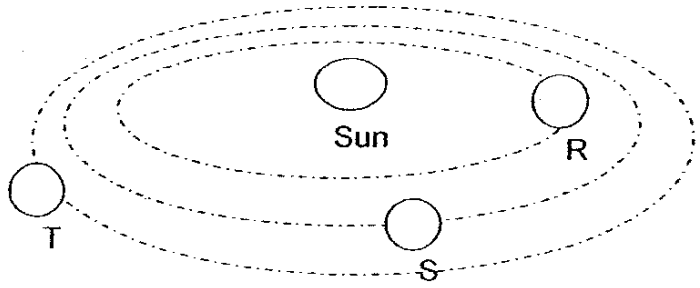


Based on the graph above, which of the following statements are **true**?

A: Liquid C and D is the same type of liquid.
B: Liquid D has a lower boiling point than C.
C: Liquid C takes a longer time to reach boiling point.
D: Liquid D has a lower initial temperature than liquid C.

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

15. Magdelina made a model of part of the solar system as shown below. There are three objects R, S and T revolving around the Sun. The dotted lines show the paths taken by the three objects.



Magdelina has to do a little presentation for the class. She noted the following points. Which of the following statements are **true**?

A: The hottest object should be T.
B: The Sun is in the centre of the Solar System.
C: Object R takes a shorter path around the Sun than Object T.
D: Objects R, S and T are the moons that revolve around the Sun.

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

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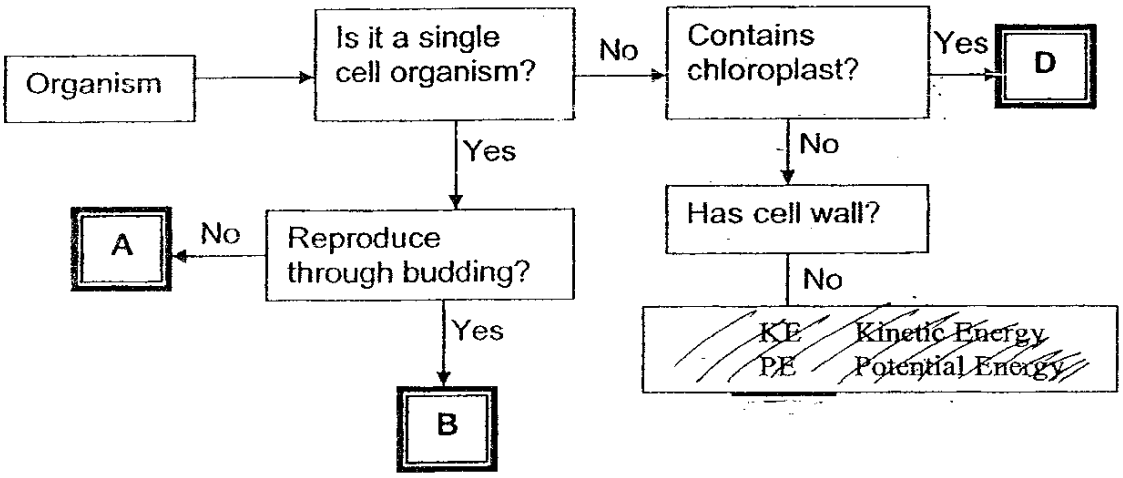
16. Jacky is very intrigued by the Planet Earth. He had learnt from his teacher that Earth is the only planet that supports life. He gave the following reasons why this is so in a quiz. Which one of the following reasons is **incorrect**?

1) The Earth is just about the right distance away from the Sun.
2) There are water and suitable air composition for living things to live.
3) The atmosphere which is a layer of gas prevents harmful rays from the Sun from reaching us.
4) The Earth is surrounded by a layer of atmosphere so sound waves can reach us and we can hear each other.

17. Study the flowchart shown below.



Which organisms do the letters A, B, C and D represent?

	A	B	C	D
1)	Yeast	Amoeba	Cheek cell	Onion
2)	Amoeba	Yeast	Cheek cell	Elodea Leaf
3)	Yeast	Amoeba	Cheek cell	Elodea Leaf
4)	Amoeba	Yeast	Elodea Leaf	Cheek cell

(4)

Study the table to answer Question 18 and 19.

A	B	C	D
cytoplasm	cell membrane	cell wall	chloroplasts

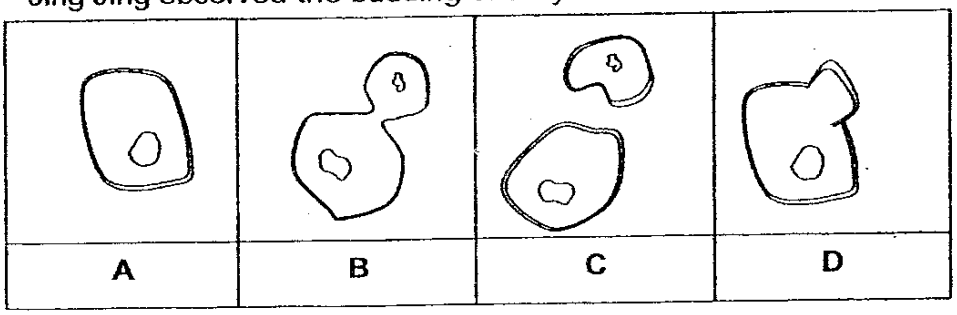
18. Which of the above is/are **not** found in amoeba?

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

19. Which of the following is not found in all parts of a flowering plant?

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

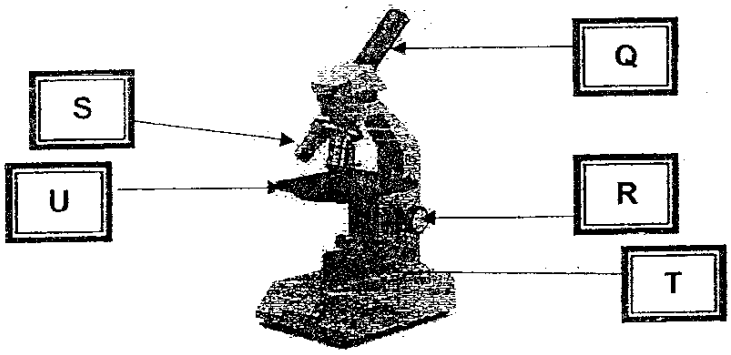
20. Jing Jing observed the budding of a hydra as shown below.



However, she has forgotten the sequence in which budding takes place. Which of the following shows the **correct** sequence on the process of budding?

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

Study the microscope below and answer questions 21 and 22



21. What are the names of the parts labeled Q, R, S and T?

	Q	R	S	T
1)	Eye Piece	Fine focusing Knob	Light source	Objective lenses
2)	Objective lenses	Coarse focusing Knob	Eye Piece	Light source
3)	Eye Piece	Coarse focusing Knob	Objective lenses	Light source
4)	Light source	Fine focusing Knob	Eye Piece	Objective lenses

22. Which one of the following **correctly** states the functions of parts S, U and R?

	S	U	R
1)	Magnifies the specimen	Focuses the image	Where specimen is placed
2)	Focuses the image	Where specimen is placed	Magnifies the specimen
3)	Where specimen is placed	Focuses the image	Magnifies the specimen
4)	Magnifies the specimen	Where specimen is placed	Focuses the image

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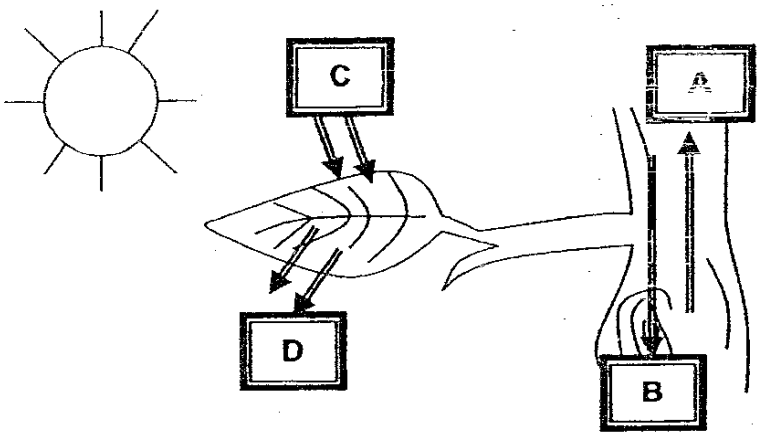
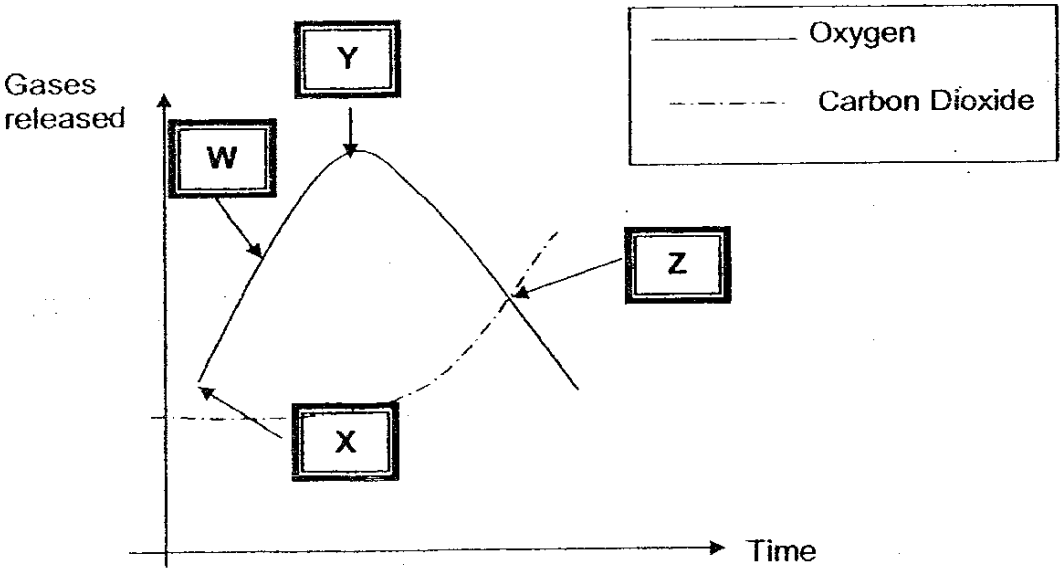
23. The picture below shows a process that plants go through.



What do the substances A, B, C and D represent respectively?

	A	B	C	D
1)	water	glucose	oxygen	carbon dioxide
2)	glucose	water	oxygen	carbon dioxide
3)	water	glucose	carbon dioxide	oxygen
4)	glucose	water	carbon dioxide	oxygen

The graph below shows the amount of oxygen and carbon dioxide released by some green plants at a certain area over a period of one day. Use it to answer questions 24 and 25.



24. What do you think is the time at point Y?

1) Dusk
2) Dawn
3) Midnight
4) Afternoon

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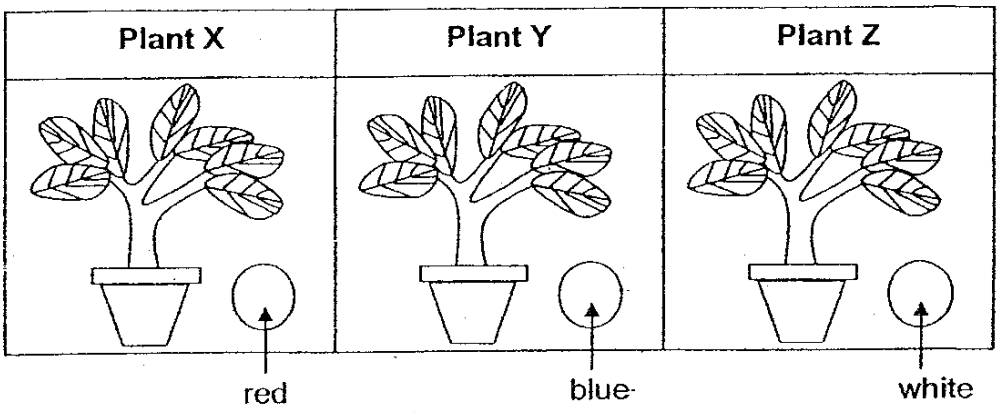
25. At which point is the rate of photosynthesis the same as the rate of respiration?

1) W
2) X
3) Y
4) Z

26. Jing Jing carried out the experiment as shown below. She placed three similar plants into an air tight container. She also inserted a chemical to find out the amount of carbon dioxide present.



The chemical will change colour according to the the amount of carbon dioxide present and this was recorded in the table as shown below.

Colour of Chemical	Amount of Carbon Dioxide present
Red	More carbon dioxide than in the air
White	Same amount of carbon dioxide as in the air
Blue	Less carbon dioxide than in the air

Jing Jing plucked a leaf from each plant and tested them with iodine solution. Which one of the following shows the **most likely** result?

	X	Y	Z
1)	Iodine solution turned blue	Iodine solution turned dark blue	Iodine solution remained unchanged
2)	Iodine solution remained unchanged	Iodine solution turned dark blue	Iodine solution turned blue
3)	Iodine solution turned dark blue	Iodine solution remained unchanged	Iodine solution turned blue
4)	Iodine solution remained unchanged	Iodine solution turned blue	Iodine solution turned dark blue

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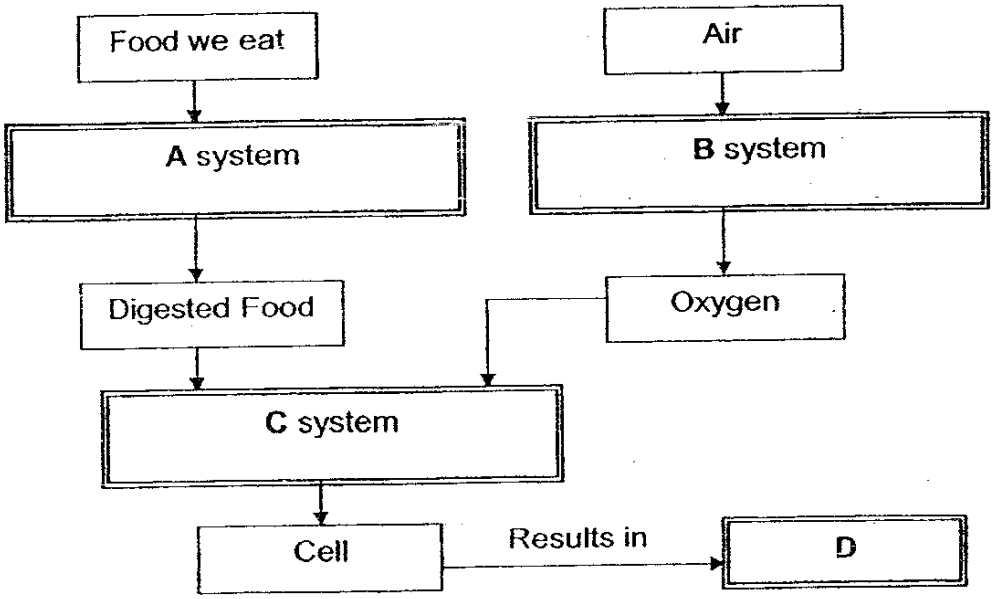
27. Peter wanted to find out the effects of iodine solution on some items. He tabulated his results in the table below. Which of the following shows the **correct** results?

	Cookie Dough	Fish Meat	Egg	Potato
1)	Brown	Brown	Blue	Blue
2)	Brown	Blue	Brown	Brown
3)	Blue	Brown	Brown	Blue
4)	Blue	Brown	Blue	Blue

28. Study the flow chart below.



Which of the following best represent A, B, C and D?

	A	B	C	D
1)	Digestive	Respiratory	Circulatory	Respiration
2)	Respiratory	Digestive	Circulatory	Digestive
3)	Digestive	Circulatory	Respiratory	Respiration
4)	Circulatory	Respiratory	Respiration	Digestive

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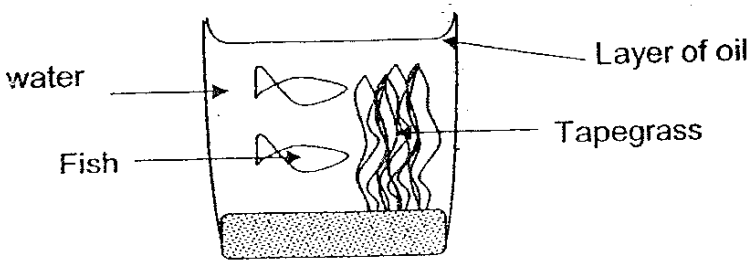
29. Which of the following statements about respiration and photosynthesis in plants are **true**?

A: Respiration takes place at all times.
B: Respiration in plants only takes place at night.
C: Photosynthesis can only take place in day time.
D: Photosynthesis and Respiration can occur at the same time in one plant.

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

30. Stella set up an experiment as shown below. She poured in some water into the beaker and added some tape grass and fish. Next, she poured in some oil and placed the beaker under the Sun.



Stella was told that the tapegrass and fish in the beaker will still be able to survive even though air outside the beaker cannot enter it. Why is this so?

1) The plant can still carry out photosynthesis and respire at night.
2) The tapegrass and the fish can still carry out photosynthesis during the day.
3) The fish will take in carbon dioxide during the day and give out oxygen at night.
4) There is an air cycle within the beaker so the tapegrass and the fish can still survive.

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SINGAPORE CHINESE GIRLS' SCHOOL
FIRST SEMESTRAL ASSESSMENT 2007

NAME: _____ ( ) DATE: _____

CLASS: PRIMARY 5(SY)/ C / G / SE / P

Booklet A	60
Booklet B	40
Total	100

Parent's Signature

_____

SCIENCE

BOOKLET B

16 questions

40 marks

Total time for Booklets A & B: 1 h 45 min

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

FOLLOW ALL INSTRUCTIONS CAREFULLY.

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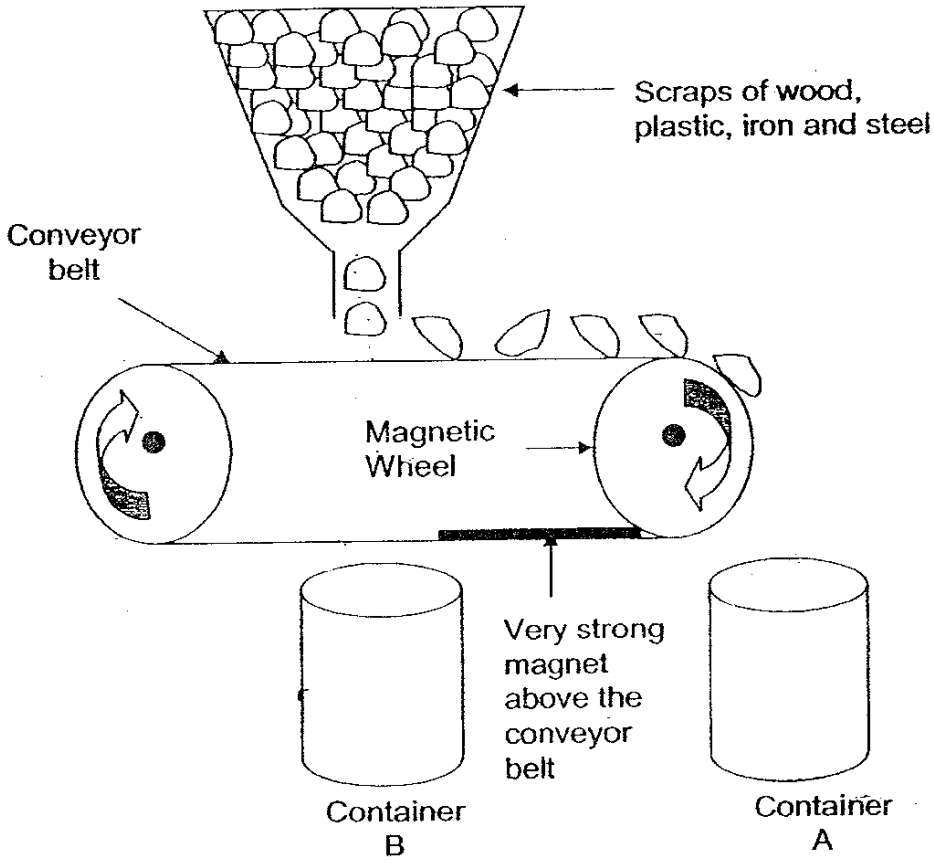
Name: _____( ) Date: _____

Class: Primary 5(S) / C / G / SE / P

Part II (40 marks)

Answer all the following questions.

31. In a recycling factory, a machine is used to separate wood and plastic chips from steel and iron scraps. The diagram below is an example of such a machine.



31a. In which container will the iron and steel scraps fall into? (1 mark)

_____

_____

31b. Why is a magnetic wheel and a strong magnet used in this machine to separate wood and plastic from iron and steel scraps? (1 mark)

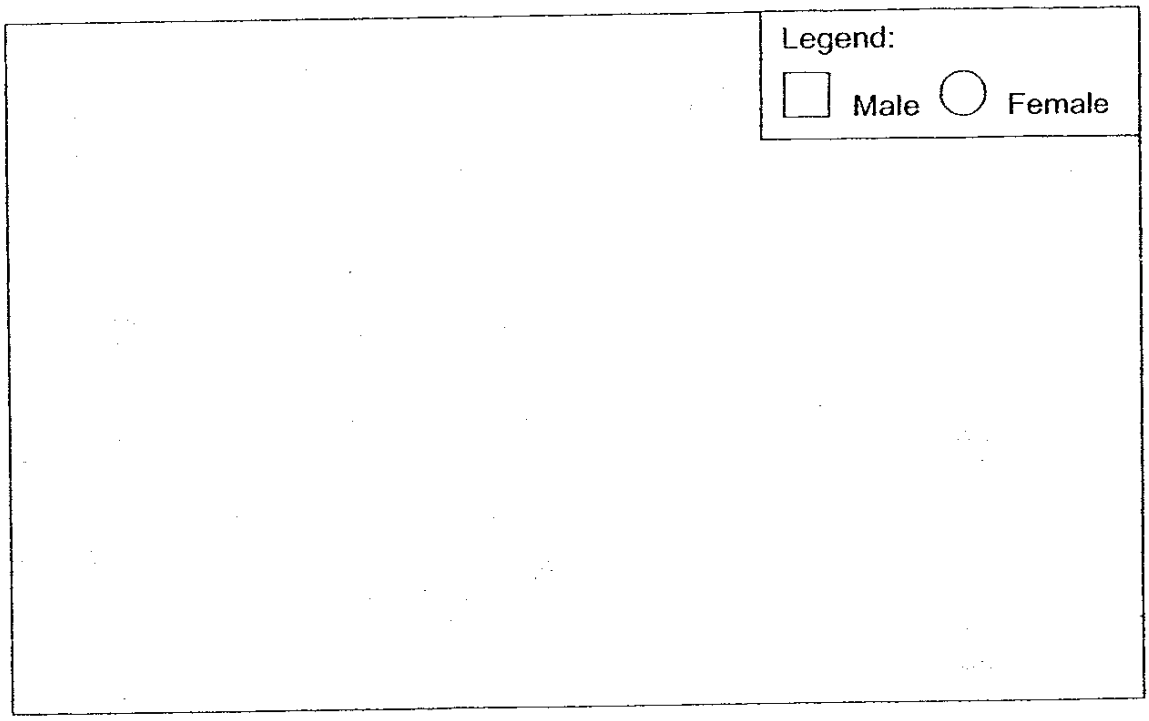
_____

_____

(48 = 9) 2

32. Raymond has two cats. Their names are Stripes and Ginger. Stripes is a male and Ginger is a female. Stripes is grey with black stripes and Ginger is brown. Both mated and produced four kittens. Out of the four of them, three are male and one is a female. One of the males is brown with black stripes and the other two are brown. The female is grey.

32a. Using the information above, draw the family tree of Stripes and Ginger using the symbols indicated in the legend (2 marks)



32b. One of the male kittens is brown with black stripes. How is this possible since none of its parents has this combination? (1mark)

_____

_____

3

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33. The stomata and the gills are organs from plants and fish respectively.

33a. Which system of living processes do these organs belong to? (1 mark)

_____

33b. How do these two organs help the fish and plant to live? (1 mark)

_____

_____

33c. Which organ in the human body perform the same function as the two organs above? (1 mark)

_____

_____

34. Magnus measured the length of 5 string bean pods from the same plant and counted the number of seeds in each pod. He recorded the results in the table below.

String bean pod	Length (cm)	No of Seeds
A	12	5
B	15	7
C	20	14
D	22	15
E	25	16

Based on the information above, what is the relationship between the length of the string bean pod and the number of seeds? (2 marks)

_____

_____

5

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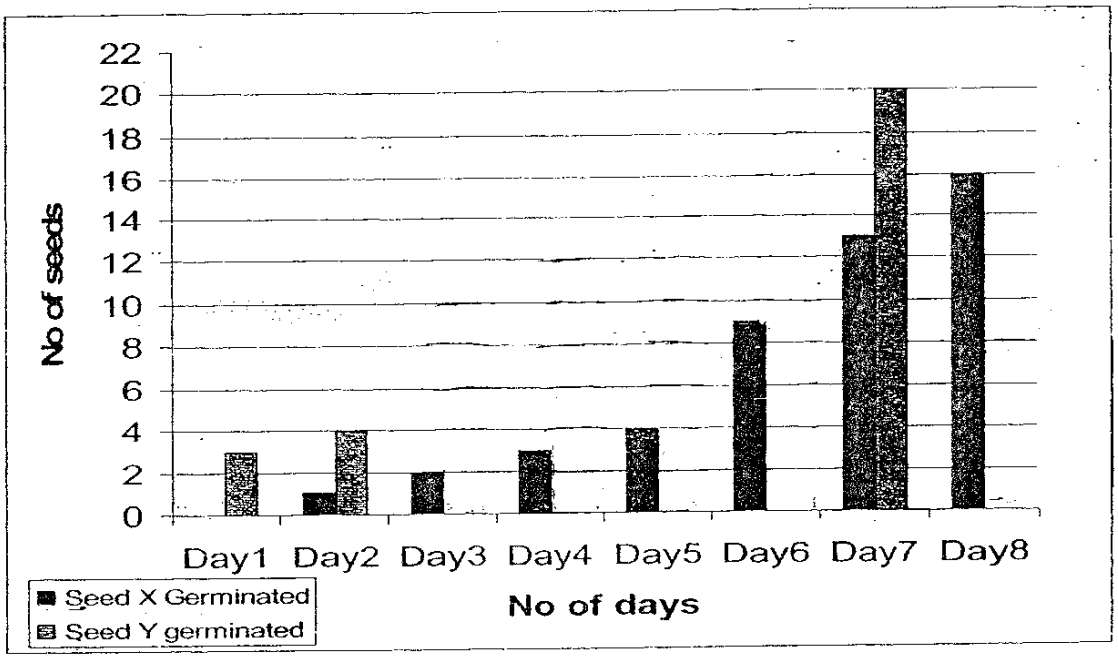
35a. Kelvin wanted to compare the rates of germination between Seed X and Seed Y. He planted 20 of each type of seed and recorded his observation in the table below.

Day	Number of Seed X that germinated	Number of Seed Y that germinated
1	0	3
2	1	4
3	2	10
4	3	13
5	4	15
6	9	18
7	13	20
8	16	0

He wanted to tabulate his results in the graph below. There is some missing information. Help him to draw in the missing bars to complete the graph. (2 marks)



35b. Kelvin noticed that the pot used for Seed X is smaller than the one used for Seed Y. He also noticed that the plants that germinated from Seed X are not as healthy as the plants germinated from Seed Y. Give one possible reason why this is so. (1 mark)

_____

_____

3

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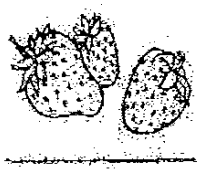
36a. The table below shows a key that you can follow to classify a fruit.

1.	Fruits with many seeds Fruits with one or two seeds	Go to 2 Go to 6
2.	Fruits with seeds on the outside Fruits with seeds on the inside	Aggregate fruit Go to 3
3.	Fruits with spine like protections on skin Fruits with relatively smooth skin	Multiple fruit Go to 4
4.	Fruits soft with seeds inside a central paper core Seeds not in core	Pome Go to 5
5.	Seeds in a pod Seeds not in a pod	Legume Berry
6.	Fruits that have seeds with wings Fruits that have seeds with no wings	Samara Go to 7
7.	Soft fruit with a single seed in the middle Dry fruit	Drupe Go to 8
8.	Thick hard shell around seed Very thin papery fruit so that fruit looks like seed	Nut Achene

Based on the key above, how should the following fruit be classified? (2 marks)

	Strawberry: _____
	Angsana: _____

36b. Fruit C has been classified as a 'Pome'. Does it have one or two seeds or many seeds? (1 mark)

_____

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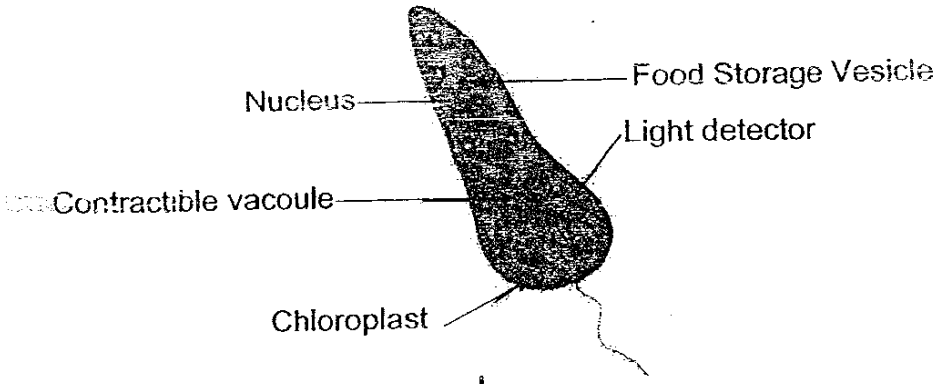
37. The following shows a Euglena. It is a single-celled organism that is usually found in freshwater ponds.



37a. State one possible way by which this organism obtain its food. (1 mark)

_____

_____

37b. The flagellum can be likened to the tail of a sperm cell. What do you think is the function of the flagellum? (1mark)

_____

_____

38. Gabriel looked at some cell specimens under the microscope. The specimens that he looked at are shown below.

Cell A Cell B Cell C Cell D

38a. Which two cells are plant cells? (1 mark)

_____

38b. Give a reason to support your answer. (1 mark)

_____

_____

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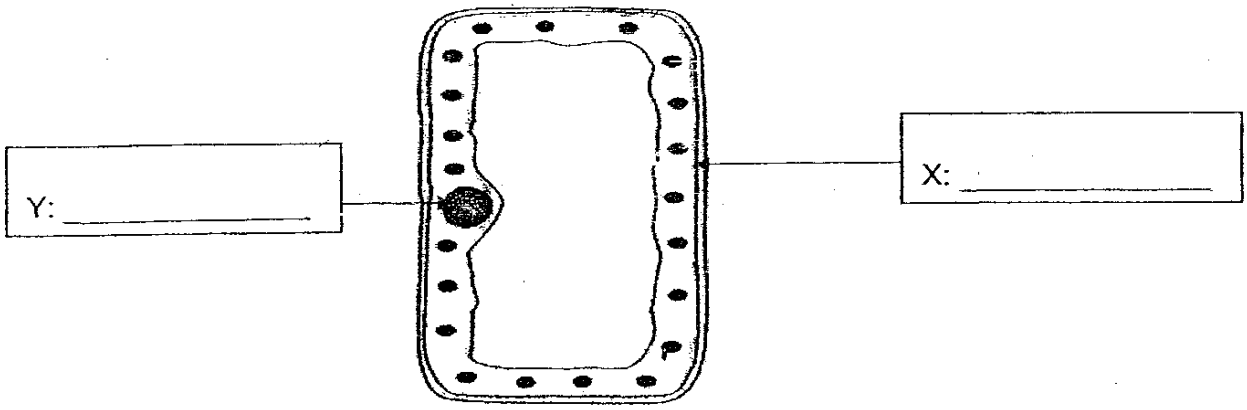
4

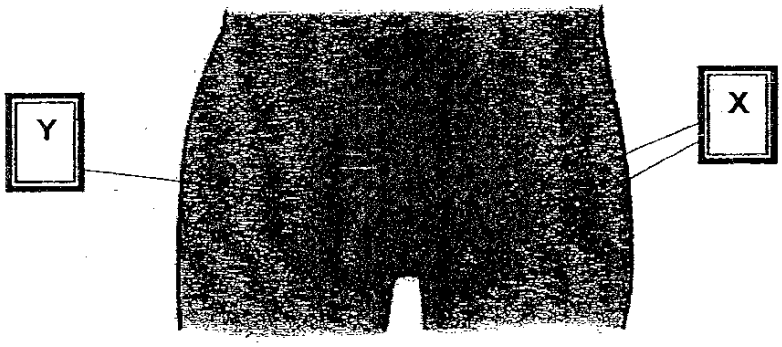
39a. The following is a picture of a plant cell. Name the parts labeled X and Y. (2 marks)



39b. Adeline was taught that paramecium multiply through a process known as binary fission. How many paramecium cells will there be after five divisions? (1 mark)

_____

40. Below is a diagram of a male reproduction system. Complete the blanks with the correct terms.



40a. Name the part labeled X: _____(1/2 mark)

Name the part labeled Y: _____(1/2 mark)

40b. What is the function of the part labeled X? (1 mark)

_____

15½

5

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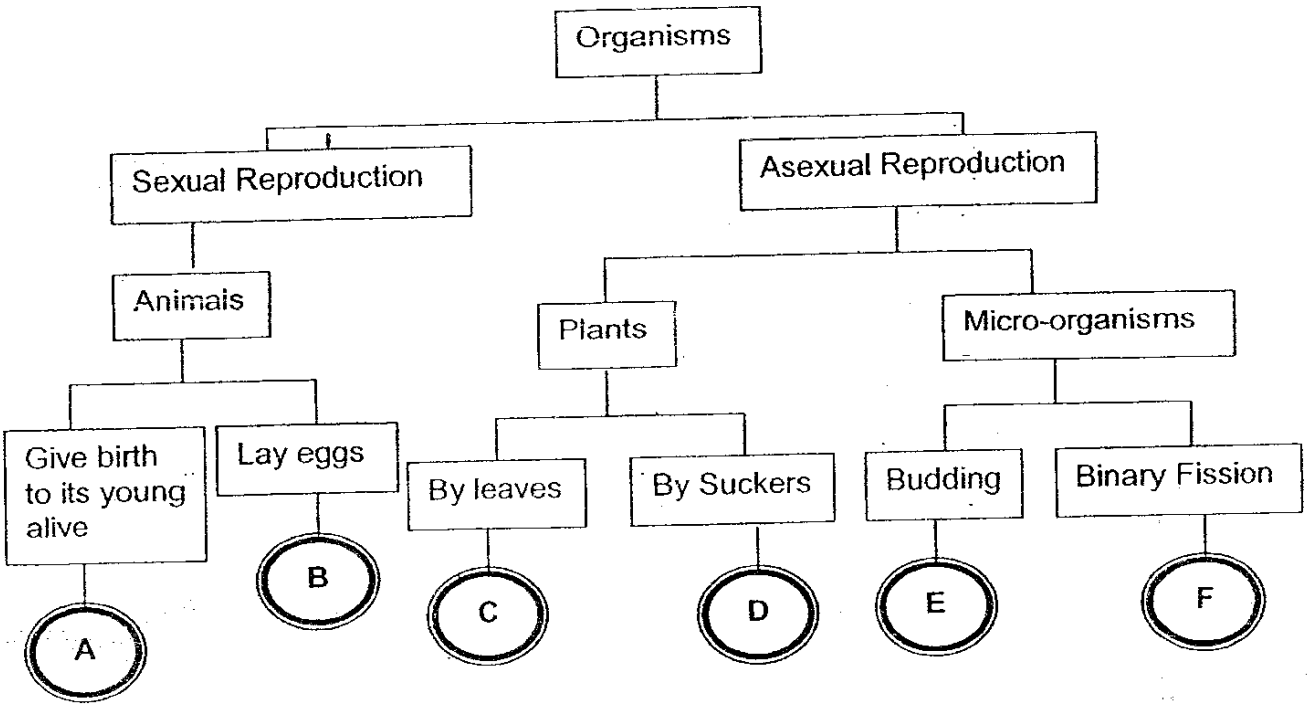
41. Abigail wanted to classify the organisms stated below according to their method of reproduction as shown in the chart. (3 marks)

Hydra	African Violet	Gorilla
Toad	Amoeba	Pineapple plant



Complete the blanks below.

A: _____

B: _____

C: _____

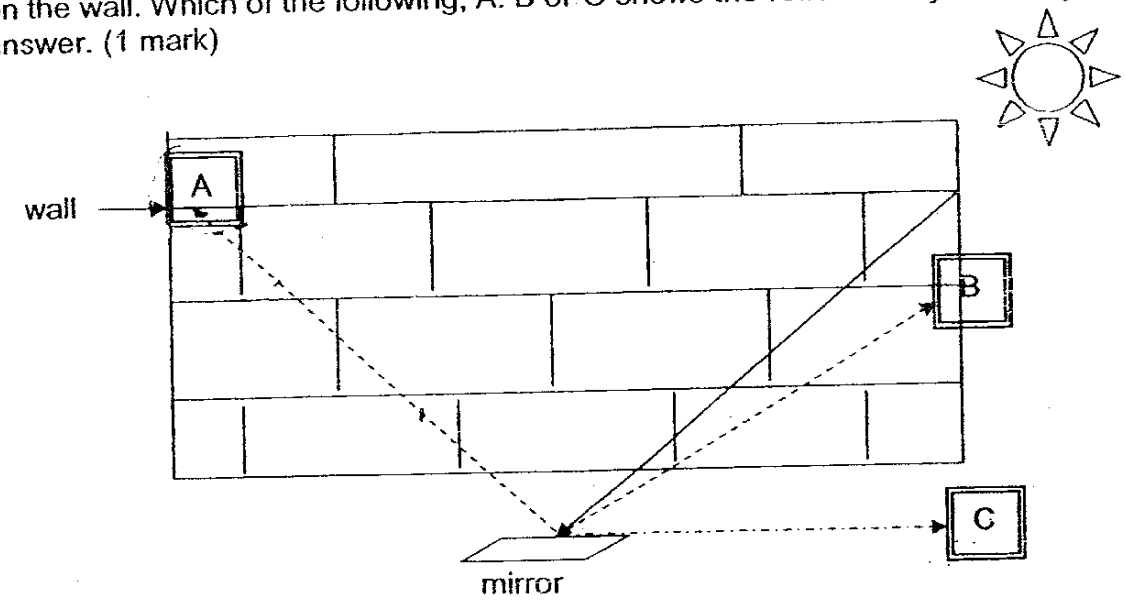
D: _____

E: _____

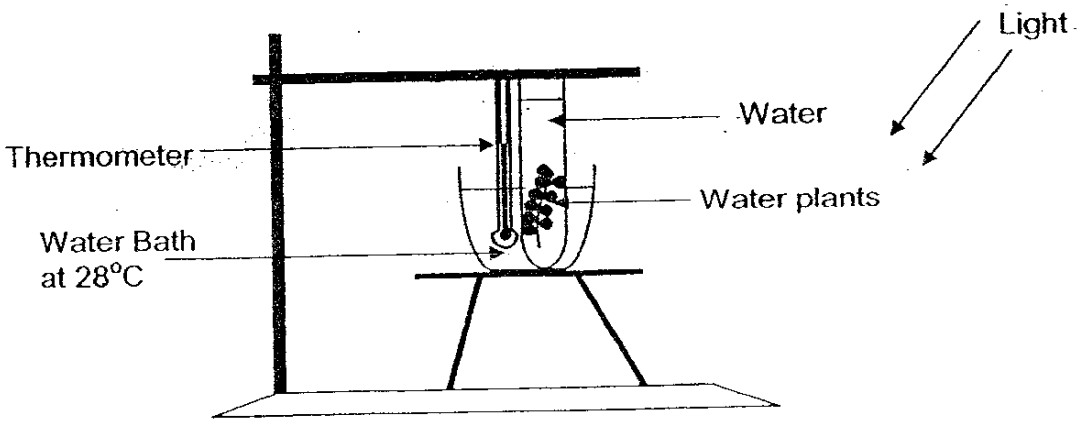
F: _____

3

42. Betty was told that a mirror could reflect light and it can illuminate (light up) a spot on the wall. Which of the following, A. B or C shows the reflected ray? Circle your answer. (1 mark)



43. Timothy wanted to find out if the temperature of water will affect the rate of photosynthesis of water plants. He set up the experiment as shown below.



43a. Timothy noticed some bubbles released by the water plant. What does the bubble contain? (1 mark)

_____

_____

43b. What variable must Timothy measure to determine his result? (1 mark)

_____

43c Name 1 variable that Timothy must not change in his second experimental set-up to ensure a fair test. (1 mark)

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_____

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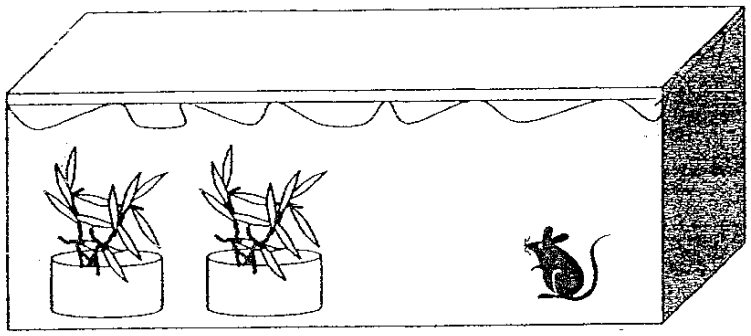
44. Maxine and Gerald set up a terrarium which is a closed environment with living things placed in it. They placed some green plants and a little mouse into the terrarium. They also put in some food for the mouse and sealed up the terrarium as shown below.

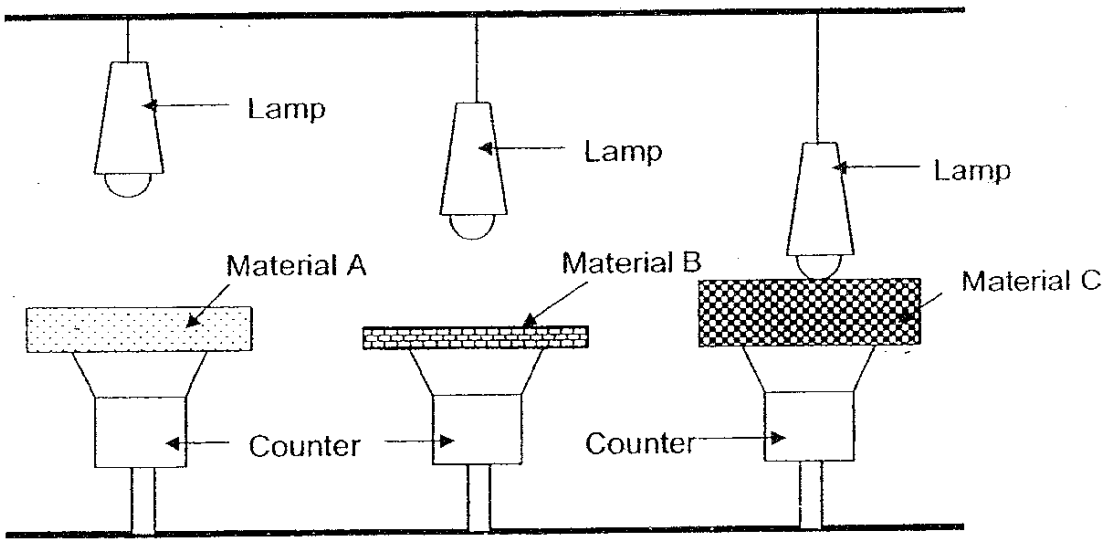


Maxine placed the terrarium near the window where there is light. Gerald thinks that mouse will die of suffocation within a day. Maxine told him that the mouse will not suffocate. Why did she say so? (2 marks)

_____

_____

45. Henry wanted to find out the amount of light that can pass through Material A, B and C. He set up the experiment as shown below. He placed each of the material on top of a counter used for detecting the amount of light. He ensured that the same kind of light detectors and similar lamps with bulbs of the same power were used.



His teacher told him that his experiment was not a fair one. What is/are the variable/s that he needs to keep constant to ensure that his experiment is a fair one? (2 marks)

_____

_____

46. Taylor wanted to set up an experiment to find out which colour, black or white, absorbs heat better. He took eight similar cans of the same size and prepared a few set-ups as shown in the table below.

Set-up	Objects	Places
1	Black aluminium can	Under the tree
2	White plastic can	Under the Sun
3	White glass can	In the classroom
4	Black aluminium can	Under the Sun
5	Black steel can	Under the Sun
6	White aluminium can	In the classroom
7	Black plastic can	Under the Sun
8	White aluminium can	Under the Sun

46a. His partner, Hudson, told him that he did not need so many set-ups. He cleared all the set-ups except two. Which set-ups did Hudson keep? (1 mark)

_____

46b. Other than the pair of set-ups that Hudson kept in question 46a, what is the other pair of set-ups that Hudson can keep to conduct the same experiment? (1 mark)

_____

46c. What instrument must they use to measure heat absorption? (1 mark)

_____

46d. Taylor wanted to set up another experiment to find out whether aluminium or plastic absorbs heat better. Which two set-ups can he use? (1 mark)

_____

4

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SCGS Primary School

Primary 5 Science SA1 Exams (2007)

Answer Keys

SECTION A : (60 MARKS)

Qn no.	Ans
1	3
2	2
3	4
4	4
5	4
6	4
7	4
8	2
9	2
10	3

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

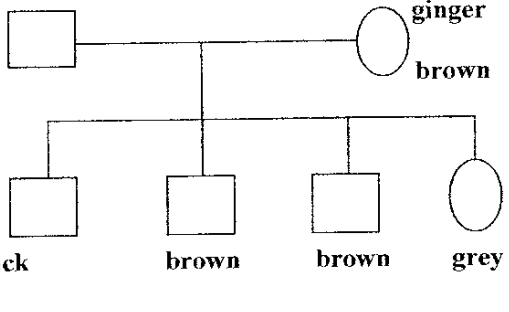
Qn no.	Ans
21	3
22	4
23	3
24	4
25	4
26	2
27	3
28	1
29	2
30	4

SECTION B (40 MARKS)

31a. **Container B**

31b. **The strong magnet is used for attracting the steel and iron scraps.**

32a. **strips**



32b. **The young inherited the brown fur the mother and the black strips from the father.**

33a. **Respiratory system.**

33b. **It helps them to breathe.**

33c. **Lungs.**

34. **The more the number of seeds, longer it is.**

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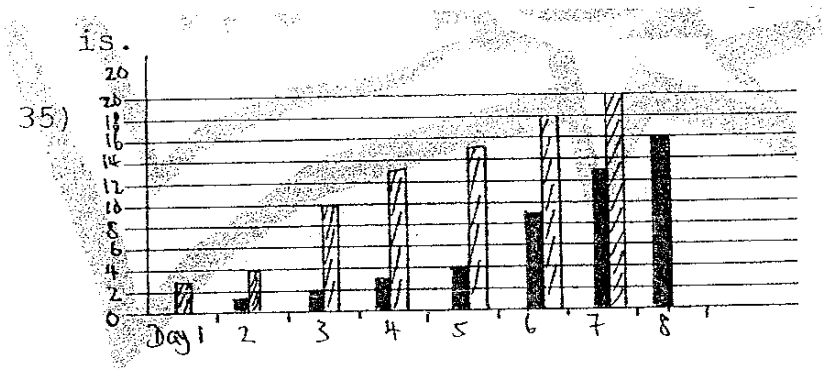
35a.



35b. Plants from seed X did not grow well due to overcrowding.

36a. Strawberry : Aggregate fruit
Angsana : Samara

36b. Many seeds.

37a. It makes its own food.

37b. Help the cell to move.

38a. Cell A and D

38b. They have cell wall.

39a. Y: nucleus X: Cell membrane

39b. 32

40a. X: testes Y: Penis

40b. To produce sperms

41. A: Gorilla
B: Toad
C: African Violet
D: Pineapple plant
E: Hydra
F: Amoeba

42. A

43a. Oxygen.

43b. Number of bubbles

43c. Type of plant

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44	The plants will photosynthesize and give out oxygen for the mouse to breathe.
45(1)	Thickness of material
45(2)	Distance between the lamp and the material.
46a	Set-ups 4 and 8
46b	Set-ups 2 and 7
46c	Thermometer
46d	Set-ups 4 and 7

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