NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2 – 2012

PRIMARY 5

SCIENCE

BOOKLET A

20 Multiple Choice Questions (40 marks)

Total Time for Booklets A and B : 1 hour ~~45 minutes~~ 30 minutes

INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the space provided.
2. Do not turn over the page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answers in the Optical Answer Sheet (OAS) provided.

Marks Obtained

Booklet A		/ 40
Booklet B		/ 40
Total		/80

Name:_____ **Class: P 5** _____

Date : 27 August 2012 **Parent's Signature:** _____

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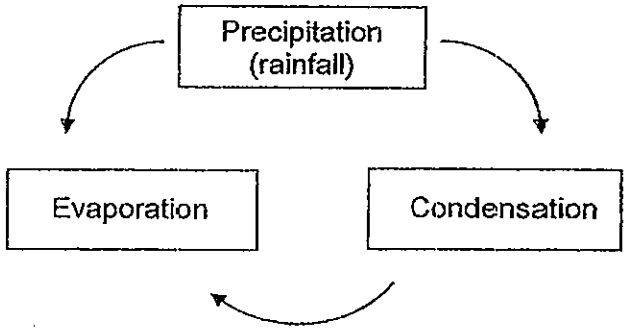
Section A: (20 x 2marks = 40marks)

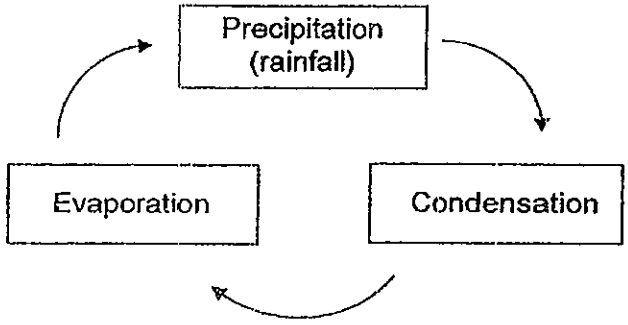
For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which one of the following diagrams shows the correct order of stages in the water cycle?

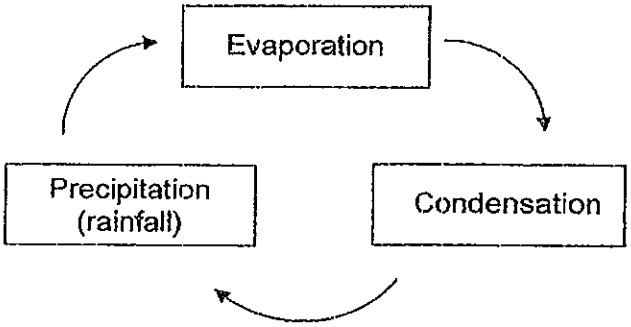
(1)



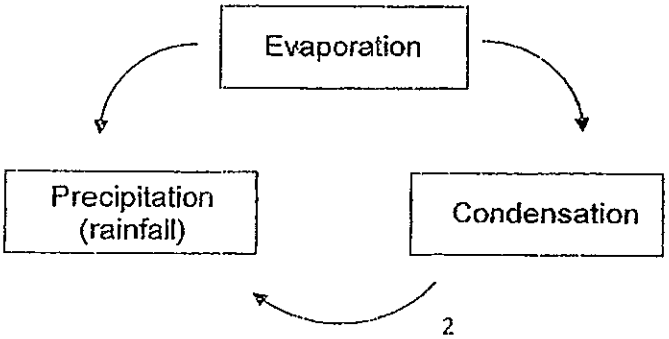
(2)



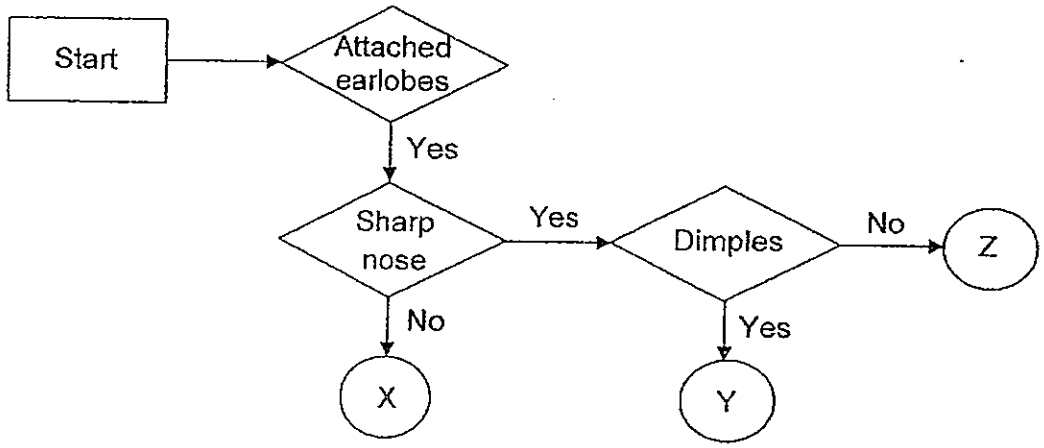
(3)



(4)



2. The flow chart below shows the traits of Mr and Mrs Yeo's three children. They are represented by X, Y and Z. Every child has inherited at least one trait either from Mr Yeo or Mrs Yeo. These three physical characteristics are observable in either Mr Yeo or Mrs Yeo.



The table shows the traits of Mr Yeo.

	Traits
Mr Yeo	Sharp nose Dimples absent Detached earlobes

Based on the information above, what is/are the trait(s) that Mrs Yeo will definitely have?

A Dimples
B Sharp nose
C Attached earlobes

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

3. Which statement(s) about reproduction in human is/are **true**?

A Reproduction is necessary to ensure survival of its own kind.
B The human embryo usually develops inside the womb of the mother.
C The male and female reproductive cells have to meet in the womb for fertilization to occur.

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

4. The mixture of gases that we inhale is shown in the box below.

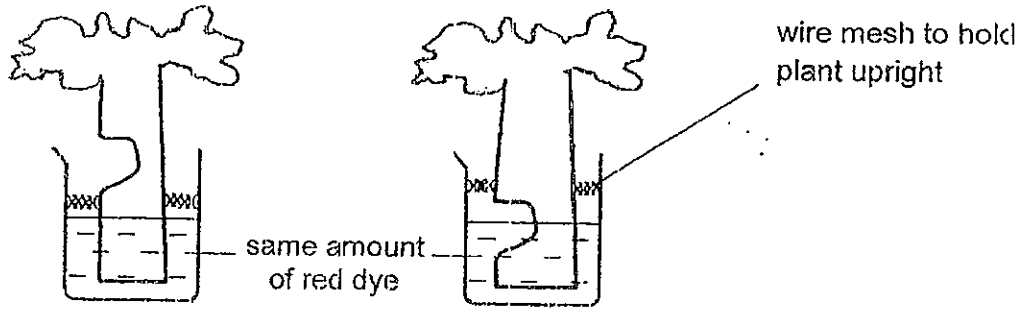
nitrogen	oxygen	carbon dioxide	water vapour

Which of the following **correctly** shows the mixture of gases that we exhale?

A oxygen
B nitrogen
C water vapour
D carbon dioxide

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

5. In a brightly lit room, Tom put two identical stalks from the same celery plant, each with a part removed, into two separate beakers of water mixed with red dye as shown below. He left the set-up undisturbed for an hour.



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

A Both celery stalks can photosynthesise.
B There will be red dye found in both celery stalks.
C There will be no red dye found in the celery stalk in set-up A.
D There will be no red dye found in the celery stalk in set-up B.
E Both celery stalk cannot photosynthesise because the stalk cannot take in water.

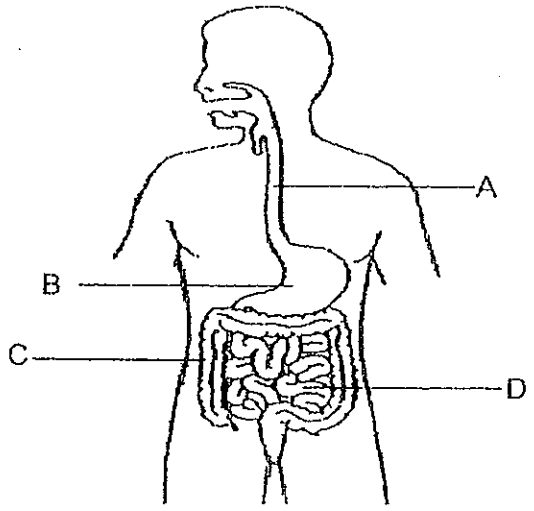
(1) A and B
(2) B and E
(3) C, D and E
(4) A, C and D

6. Which of the following statement(s) about cells is/are **true**?

A A cell is a basic unit of life in all living things.
B All living things are made up of more than one cell.
C New cells are reproduced to replace old and dead cells.
D A large organism will have bigger cells than a small organism.

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

7. The diagram below shows the different parts of the human digestive system.



Which parts of the digestive system shown above do absorption of either water or digested food take place?

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

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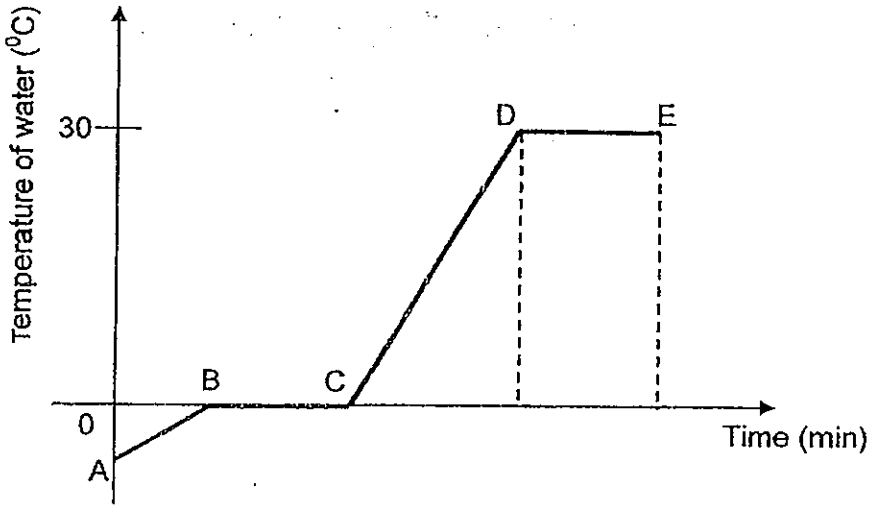
8. Susan put a bottle of water in a freezer. After 12 hours, she took out the bottle of frozen water and its temperature is measured at regular intervals. She plotted a graph using the data collected.

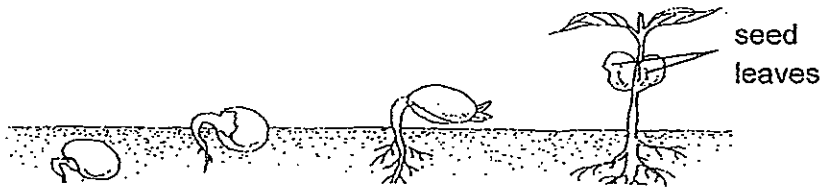


Based on the graph shown above, which of the following statement(s) is/are true?

A Evaporation is occurring at DE.
B There is a change in state from B to C.
C The ice has stopped gaining heat from part B to C.

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

9. The diagram below shows the stages in the growth of a green bean seedling.



Stage A Stage B Stage C Stage D

Which stages **correctly** show that the seed leaves are definitely needed to provide food for the growing seedling?

	Seed leaves definitely needed to provide food			
	Stage A	**Stage B**	**Stage C**	**Stage D**
(1)	Yes	Yes	No	No
(2)	Yes	Yes	Yes	No
(3)	No	Yes	Yes	No
(4)	No	Yes	No	No

10. The table below shows the comparison between sexual reproduction in plants and humans.

	Plants	**Humans**
Female reproductive cell	A	B
Male reproductive cell	C	D

What do A, B, C and D represent?

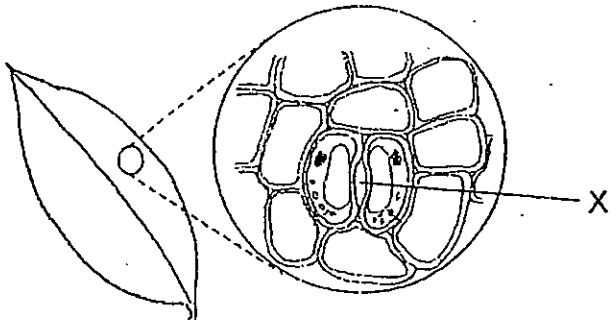
	A	B	C	D
(1)	egg	ovum	sperm	pollen grain
(2)	ovum	ovary	anther	sperm
(3)	egg	ovum	pollen grains	sperm
(4)	ovary	egg	filament	sperm

11. Which of the following statement(s) of the respiratory system is/are **true**?

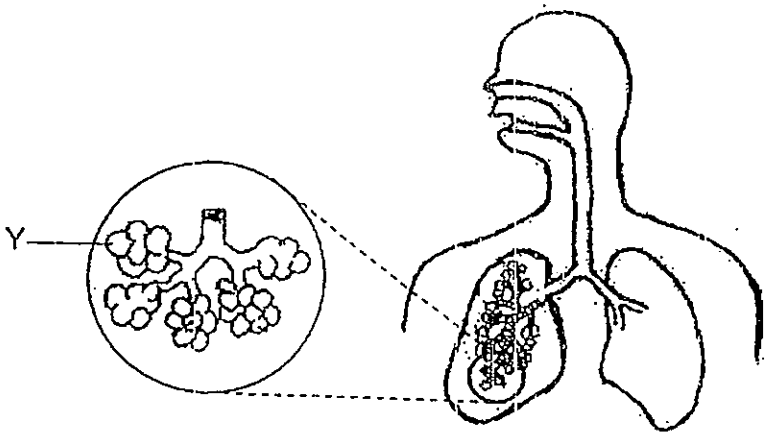
A It helps to remove carbon dioxide from the body.
B It takes in oxygen from the air and passes it to the blood.
C The main organs in the respiratory system consist of the nose, windpipe, lungs, diaphragm and heart.

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

12. The diagrams below show a part of a leaf and a human respiratory system.



A part of leaf

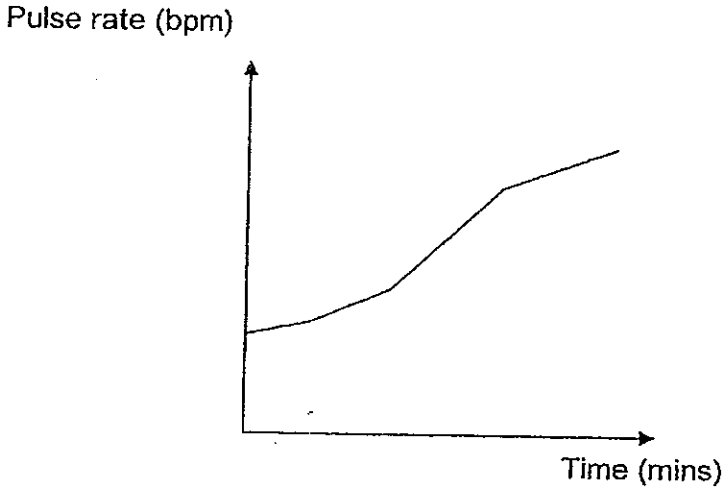


A human respiratory system

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

(1) Air is stored in Part X and Part Y.
(2) Gaseous exchange occurs at Part X and Part Y.
(3) Part X helps the plant to make food while Part Y helps in gaseous exchange.
(4) Part X helps the plant to respire while Part Y helps the human to inhale and exhale.

13. The graph below shows the pulse rate at the start and during an exercise.



Based on the graph, which of the following statement(s) is/are **true**?

A Carbon dioxide is removed faster from the body during the exercise.
B The oxygen is supplied at a constant rate to the body throughout the exercise.
C The heart is pumping air rich in oxygen faster to the body during an exercise.

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

14. Mr Chong runs every morning before having his breakfast.

Which of the following system(s) is/are working more actively during Mr Chong's run?

A The Digestive System
B The Muscular System
C The Circulatory System
D The Respiratory System

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

15. Which of the following statement(s) about the transportation of water in plants and humans is/are **true**?

A There are tubes in both the plant and the human system to carry water.

B The transportation of water in plants and humans is necessary for the removal of waste material.

C The transportation of water is carried in the blood in plants and human system.

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

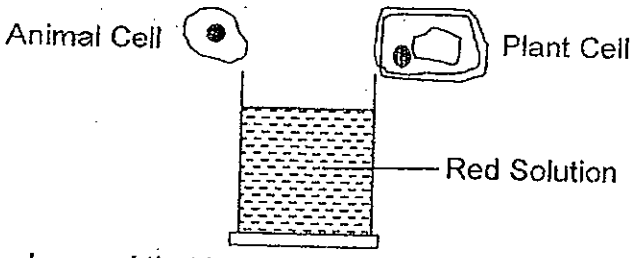
16. Jamie was given cells, A, B, C and D from different parts of a plant and an animal. She recorded her observations in the table below.

	Cell A	Cell B	Cell C
Nucleus		√	√
Cell Wall			√
Cytoplasm	√	√	√
Chloroplast			√
Cell membrane	√	√	√

Based on her observation, which one of the following classifications is correct?

	Animal cell	Plant cell
(1)	B and C	A
(2)	A and B	C
(3)	B	A and C
(4)	A	B and C

17. Mr Azmi placed an animal cell and a plant cell into a beaker of red solution as shown in the diagram below.



It was observed that both cells turned red. Mr Azmi told the students in his class to give a reason based on the observation. The statements below are reasons from his students.

Gibby Both the animal and the plant cells have cell membranes that allow the red solution to enter the cell.

Carly Both the animal and the plant cells have a jelly-like substance called the cytoplasm that sucks the red solution into the cells.

Sam Both the plant cell and animal cells have cell walls that will become thinner to allow the red solution to enter the cell.

Who gave the correct reason based on the observation?

(1) Gibby only
(2) Gibby and Carly only
(3) Sam and Carly only
(4) Freddy and Sam only

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18. Study the table below carefully.

	Part of the cell that is removed	Obervations
A	Nucleus	The cell will not be able to reproduce.
B	Chloroplasts	The cell will not be able to trap light.
C	Cytoplasm	Transportation of substances cannot occur within the cell.

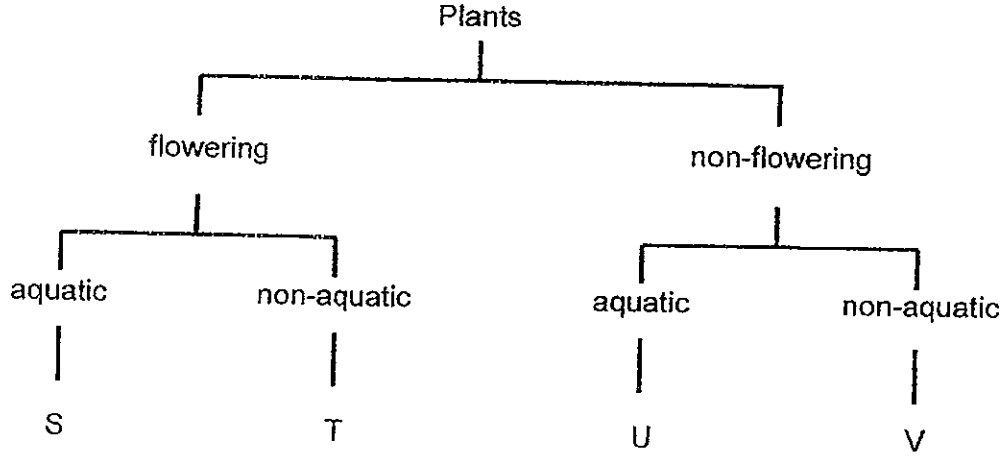
Which of the above correctly show(s) what happens to the cell when part of it has been removed?

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

19. Study the information on four plants, A, B, C and D, based on two characteristics.

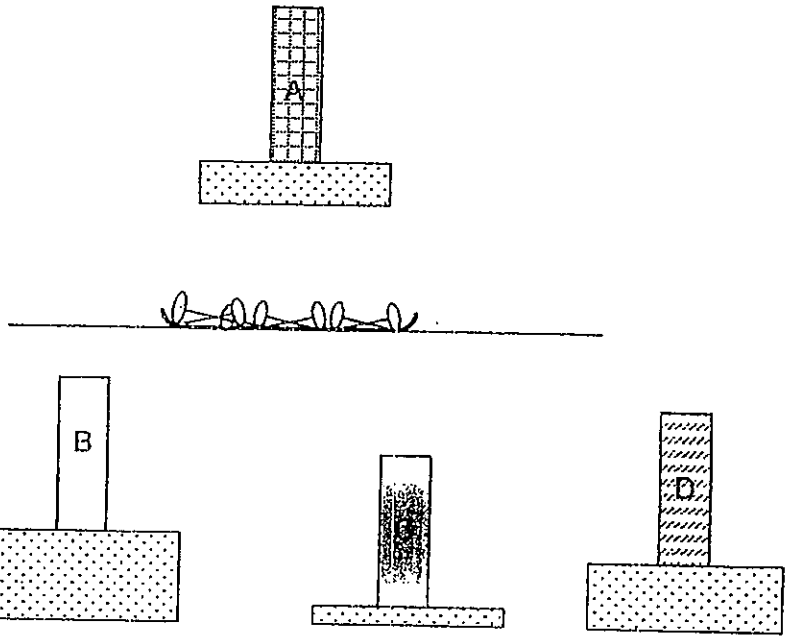
Characteristics \ Plant	A	B	C	D
Bears fruit	√	√		√
Grows in water	√			

Where do plants B and C belong in the classification table?



	Plant B	Plant C
(1)	S	U
(2)	T	V
(3)	U	T
(4)	V	S

20. Tom conducted an experiment to compare the magnetic strength of four magnets. He put each of the magnets on a wooden block of different thickness and placed the set-up over a tray of new pins at a certain distance. He repeated the experiment with the other three set-ups ensuring that the distance between the set-up is kept constant. A tray of new pins of the same number was prepared for each set-up.



Tom recorded his observations as shown in the table below.

Magnet	Number of pins attracted
A	4
B	3
C	6
D	4

Which one of the following statement(s) is/are **most likely** to be the conclusion for the experiment?

A Magnet B has the weakest magnetic strength.
B Magnet C has the strongest magnetic strength.
C Magnet A has the same magnetic strength as Magnet D.
D Magnet A has a weaker magnetic strength than Magnet D.

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

NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2 2012
PRIMARY FIVE
SCIENCE

Name : _____ ( )

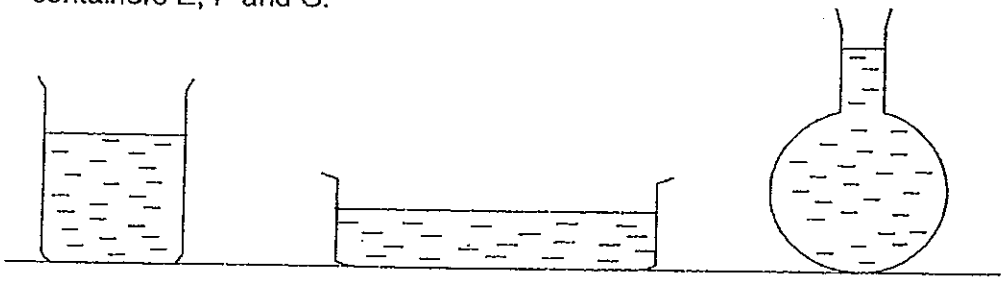
Class : Primary 5 / ____

Date : 27 August 2012

MARKS
Sect B: _____ 40

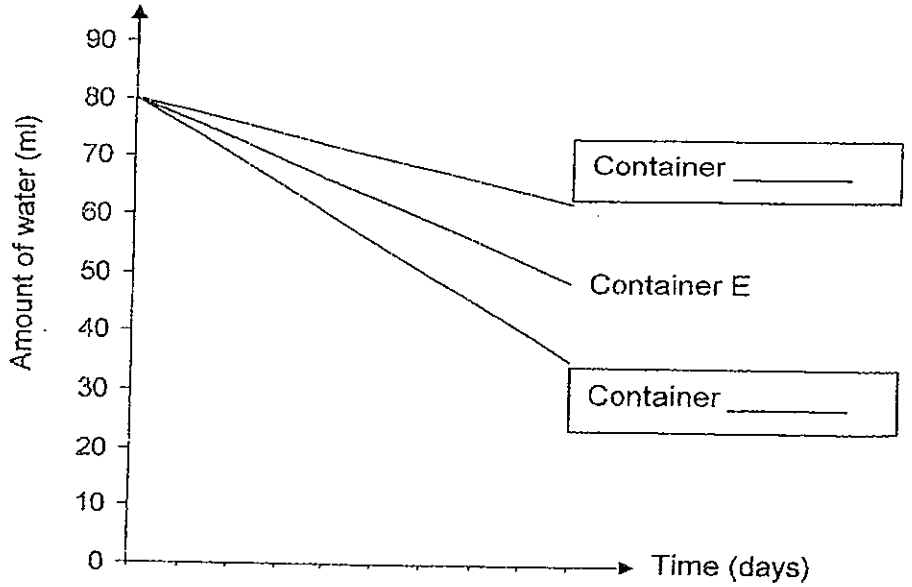
Section B: (40marks)
Write your answers to question 21 to 34.
The number of marks available is shown in brackets [ ] at the end of each question or part question.

21. Darby conducted an experiment to study the rate of evaporation of water placed in different containers. She poured 80 ml of water into each of the three containers E, F and G.



Container E Container F Container G

She placed the three containers on a table beside a window. She recorded the amount of water left in each container at regular intervals and plotted a graph as shown below.



(a) Fill in the blanks in the line graph above, with F or G, which represent the amount of water left in each container respectively. [1]

1

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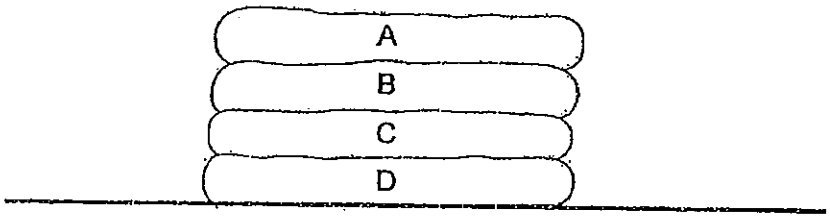
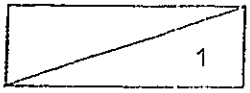
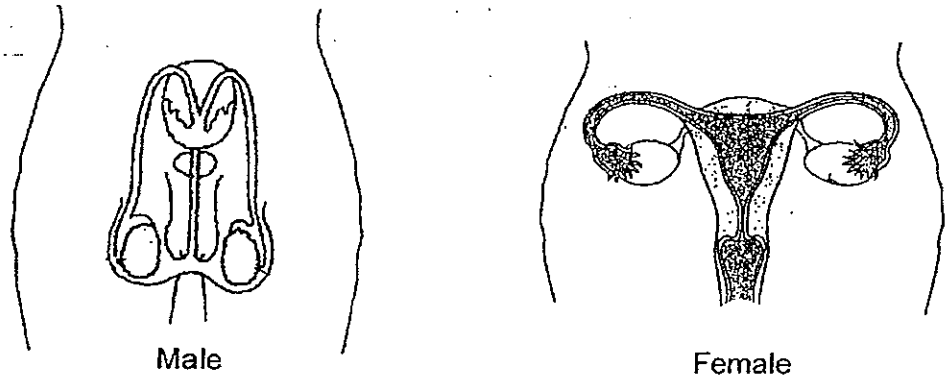
In a washing machine, four towels of the same material, thickness and size were washed and spun to rid of excess water. These four towels were folded the same way and put to dry on the table as shown in the diagram below. Not all the towels dry at the same time.



(b) Which one of the towels will dry first? Give a reason for your answer. [1]



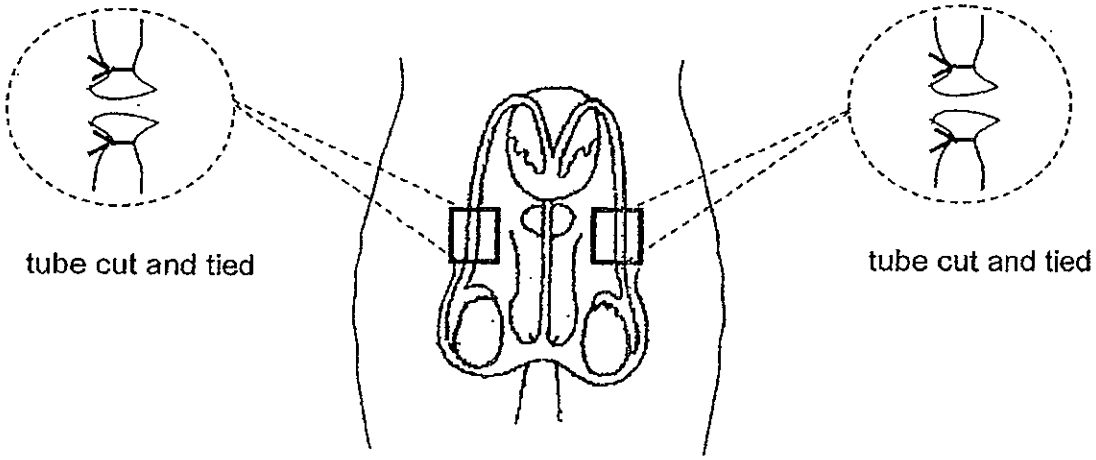
22. The diagrams show the reproductive organs of a male and female.



Male

Female

(a) **Label** and **name** the male and female reproductive parts that produce the reproductive cells in the diagrams above. [2]



For the purpose of family planning, a medical procedure was carried out on the male such that the tubes were cut and tied.

(b) Explain clearly how the medical procedure done above will prevent pregnancy from occurring? [2]

_____

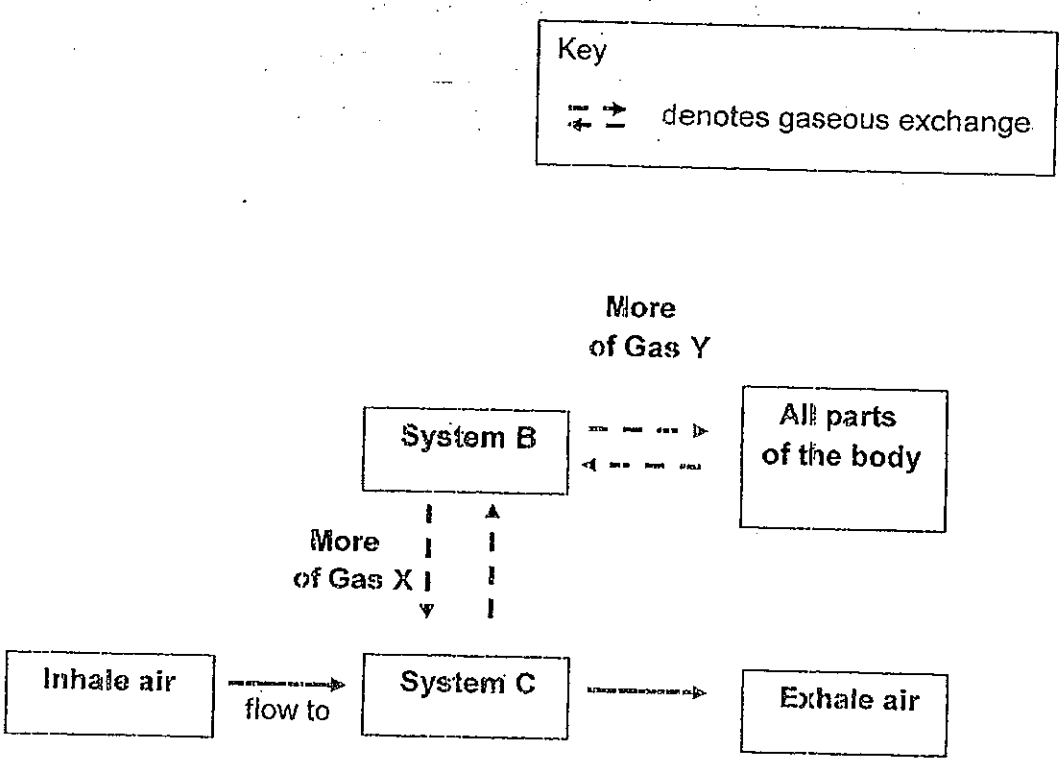
_____

_____

4

81

23. The chart below shows how the human body receive air.



(a) Identify System B. [1]

System B : _____

(b) Identify Gas Y and explain why it is important for System B to deliver Gas Y to all parts of the body. [2]

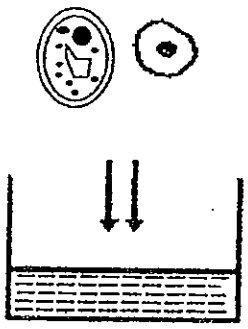
_____

_____

_____

3

24. Krishnan carried out an investigation with a pair of cells, a plant cell and an animal cell. He placed one plant cell and one animal cell in pure water as shown in the diagram below.



Pure water

After 30 minutes, he recorded his observations in the table below.

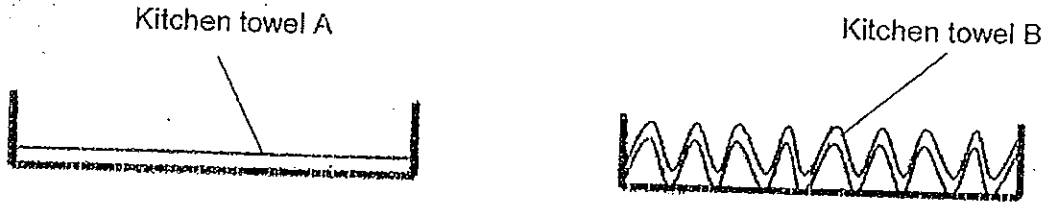
Pure water	
Animal cell	**Plant cell**
Burst	Cell remained the same shape and did not burst

Explain the difference in his observations when the two cells were placed in pure water. [2]

2

83

25. Ali laid two identical kitchen towels, A and B, in a container each.



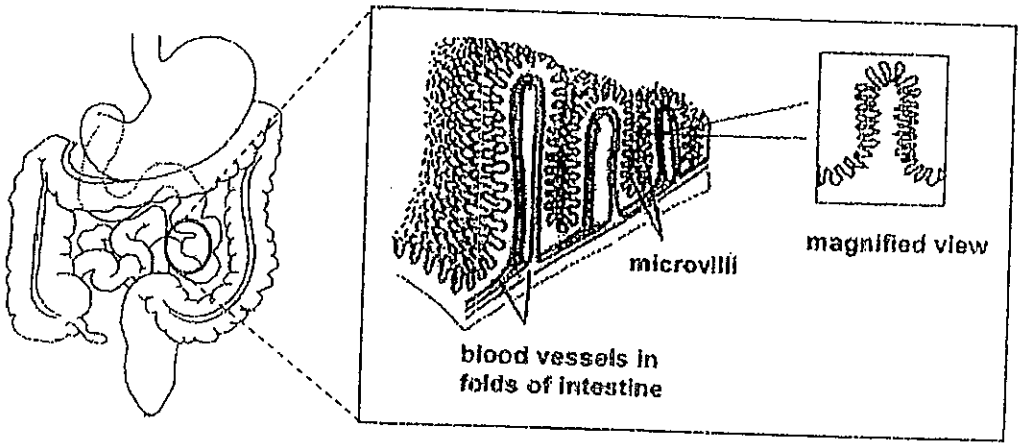
(a) Ken poured 500ml of water onto each kitchen towel and found out that kitchen towel B absorbed more water than towel A.

Give a reason for his observation for kitchen towel B. [1]

_____

_____

The diagram below shows part of a small intestine.



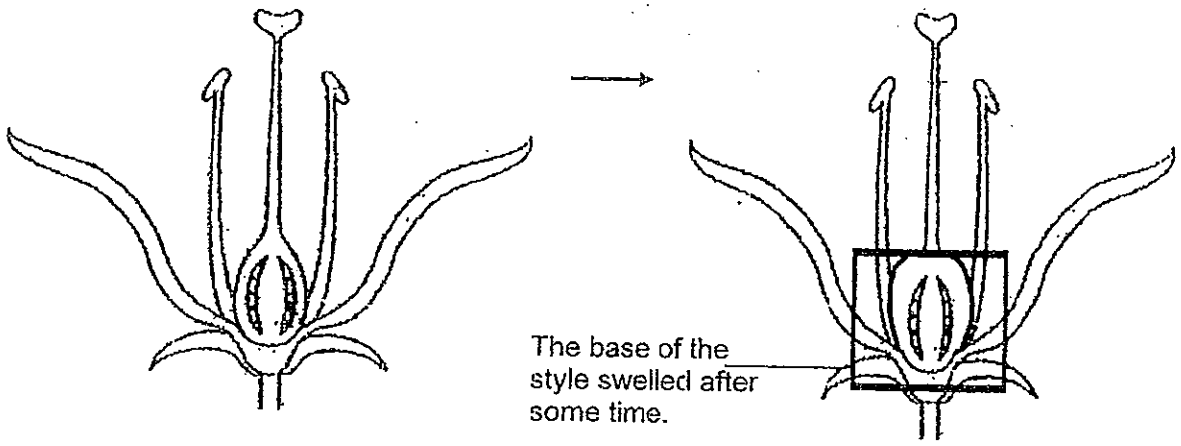
The foldings seen in towel B resemble microvilli.
Microvilli are finger-like structures found in the small intestine.

(b) Based on the information above, suggest a reason how having so many tiny structures, microvilli, help in the process of absorption in the human body. [1]

_____

_____

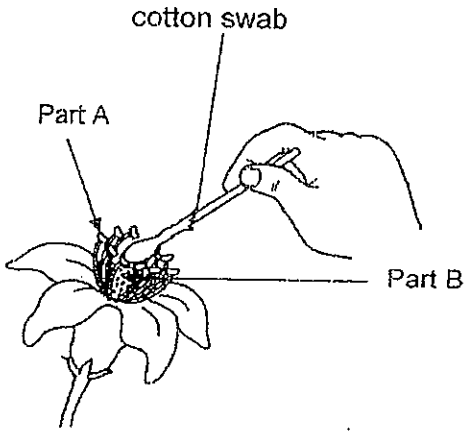
26. The diagram below shows the changes of a Flower X.



(a) Name the part that had swelled and the process that must occur right before the swelling occur. [1]

Part - _____

Process - _____



(b) What is the purpose of farmers using cotton ~~swap~~ swab to rub against Part A then Part B of a flower? [1]

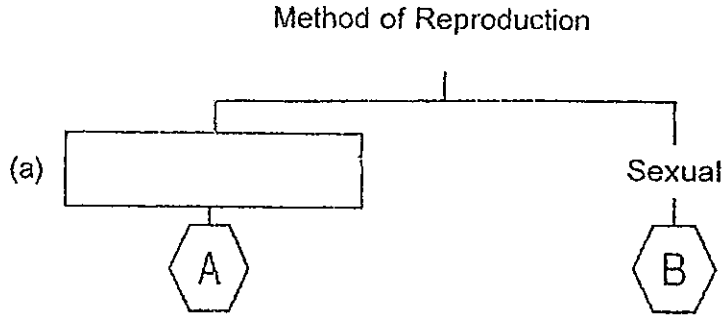
_____

_____

2

85

27. Organism A and Organism B are classified according to the type of reproduction they undergo.



(a) Write down the heading for the classification chart. [1]

(b) Which of the organisms, A or B, is definitely a human?
Explain your answer. [2]

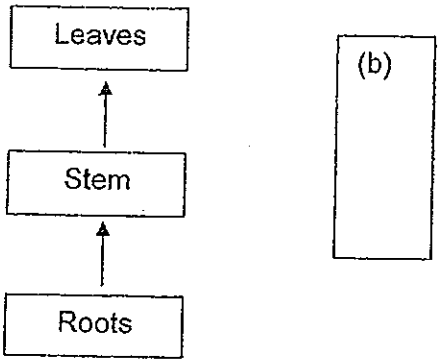
_____

_____

_____

3

28. The diagram below shows the movement of water in a plant.



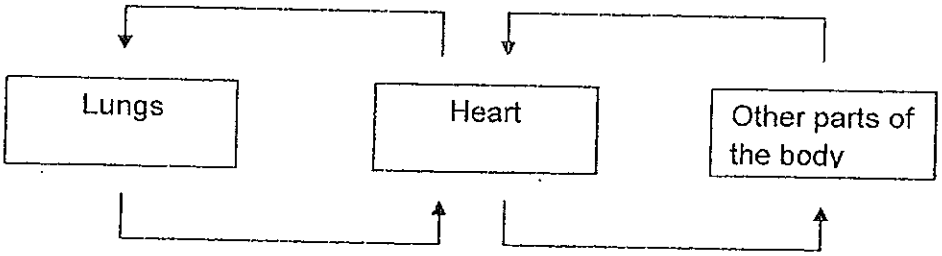
(a) What happens to the water after it reaches the leaves? [1]

_____

_____

(b) Draw an arrow, ↑ or ↓, to represent the movement of food in a plant. [1]

The arrows below show the flow of blood in a human body.



(c) State one difference between the direction of movement of water in plants and the direction of blood in the human body. [1]

_____

_____

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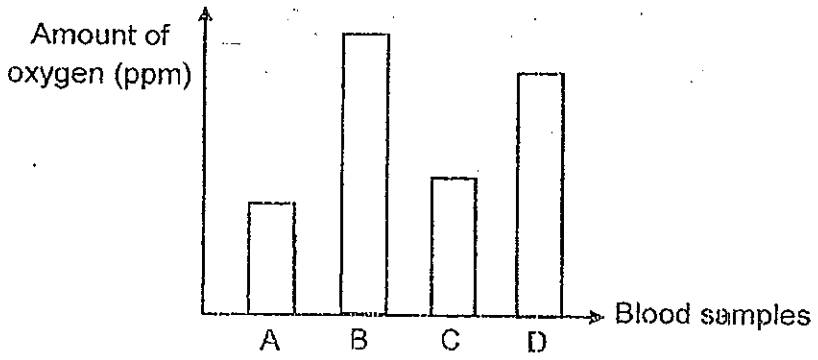
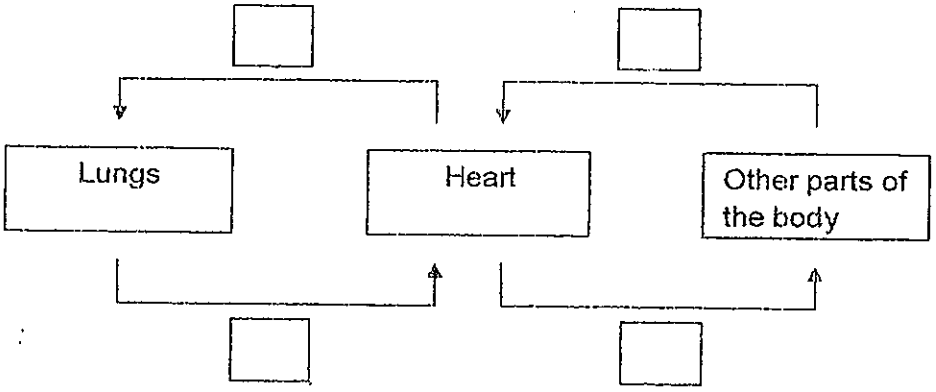
29. The graph below shows the amount of oxygen in blood samples, A, B, C and D.



Below is a simplified diagram of the circulatory system of man.



(a) Blood samples, A, B, C and D, are taken from vessels from different pathways in the circulatory system.

In the boxes on the lines in the diagram above, label the pathway with **A**, **B**, **C** and **D**, to indicate where each of the blood samples was taken. [1]

(b) Explain why blood sample in A contains a greater amount of carbon dioxide. [2]

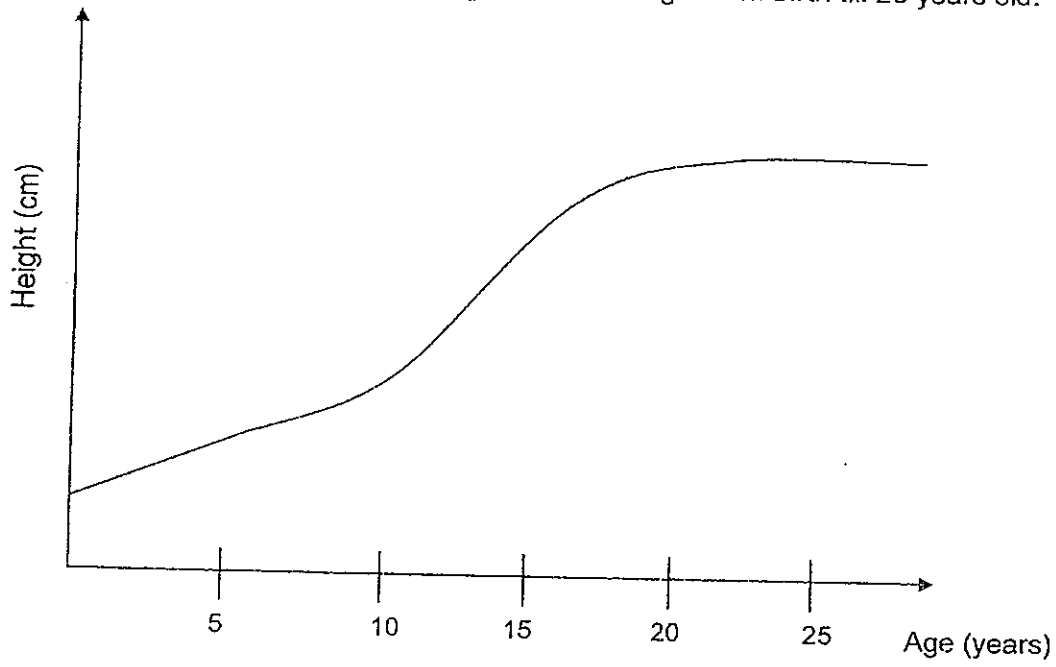
_____

_____

_____

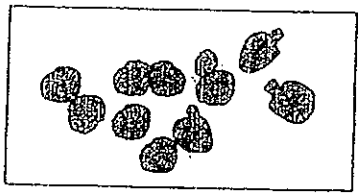
3

30. The graph below shows the change in Siva's height from birth till 25 years old.



(a) Jona looked at the graph and made the statement below.
Siva's cells stop dividing at the age of 20 years old.
Is Jona's statement correct? Explain your answer. [2]

(b) Jona observed some yeast cells under a high magnification. The diagram below shows her observation.

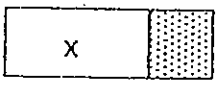


She observed that yeast cells, X, Y and Z, are different from the rest.

What process is taking place in yeast cells, X, Y and Z? [1]

31. Siti is given two types of cell, Specimen A and Specimen B. She wanted to conduct an experiment to identify the plant cell from the animal cell.

glass slide X with Specimen A



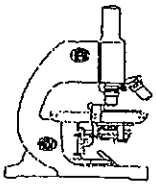
glass slide Y with Specimen B

The diagram below shows the materials which may be useful for her experiment.

a bottle of iodine solution

a bottle of limewater

microscope



dropper

(a) Which materials should she choose for the experiment? [1]

_____

_____

_____

(b) Describe how she should conduct her experiment to identify the plant cell. [2]

_____

_____

_____

_____

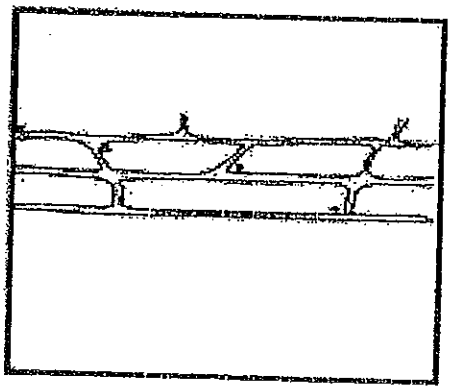
_____

(c) What observation would help her to identify the plant cell? [1]

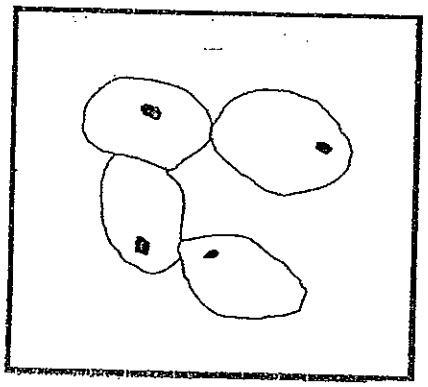
_____

4

32. Halim observed two different types of cells, Cell X and Cell Y. He made drawings of his observation.



Drawing of Cell X



Drawing of Cell Y

(a) Name the two types of cells that Halim has observed. [1]

Cell X _____

Cell Y _____

(b) Do you think Cell X and Cell Y are able to make food?
Explain your answer. [2]

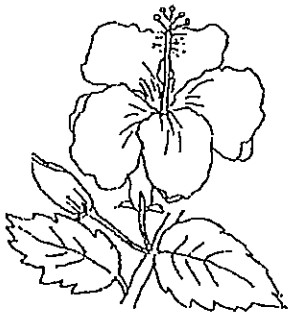
_____

_____

_____

9/

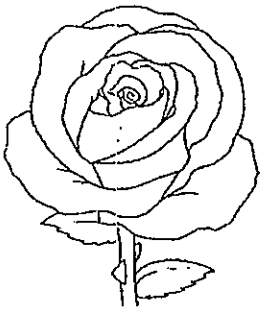
33. Study the pictures of flowers from different types of plants, A, B, C, D, and E.
Some of these flowers grow in clusters while others grow singly.
Solitary flower is a single flower on a single stalk or branch, while flowers that grow in clusters has flowers that grow in groups on a stalk or branch.



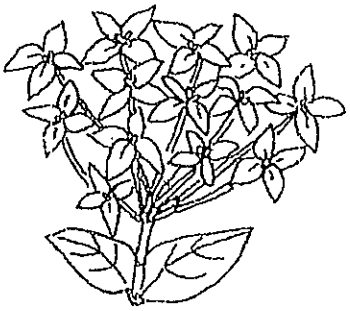
A

B

C



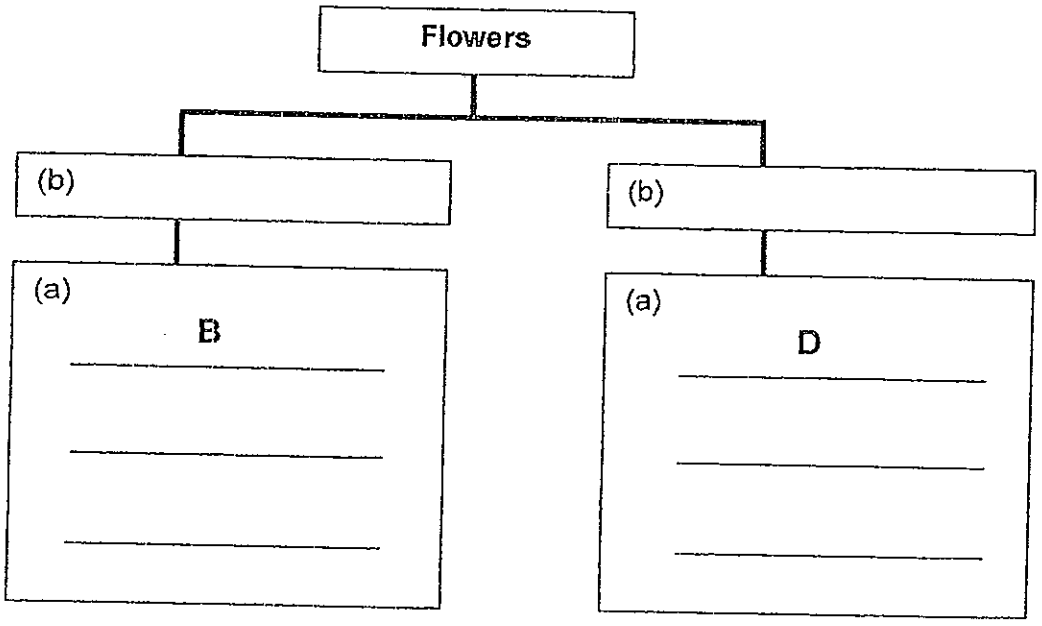
D



E

(a) Classify all the flowers from the 5 different types of plants into the classification chart below. Two of the flowers have been grouped for you.
Do not group them base on size and shape. [1]

(b) Give proper headings for each group. [1]



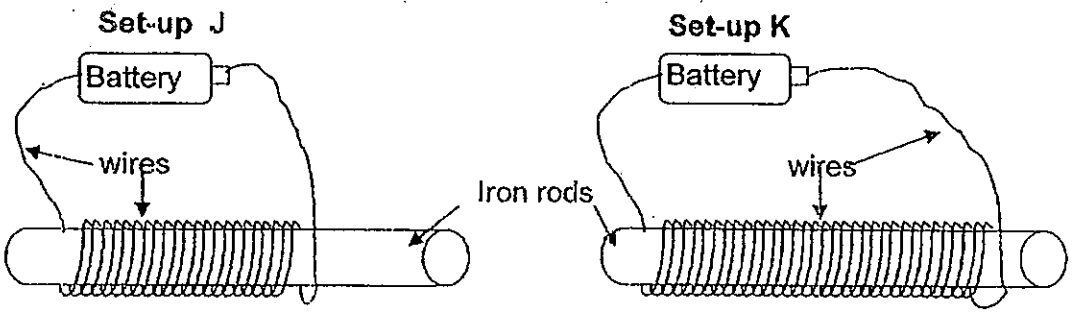
(c) Plant, A, C, D and E can also be classified by the characteristics of their leaves. What characteristics of the leaves can be used to classify the plants into two groups? Do not group them base on size. [1]

_____

93

3

34. Yu Han uses some wires, two identical batteries and two identical iron rods to make two electromagnets shown below. She then tested the strength of her electromagnets with some paper clips.



(a) What is the aim of Yu Han's experiment? [1]

_____

(b) Yu Han tested the strength of her electromagnets with some paper clips and the results of her test are shown in the table below.

	Number of paper clips picked up
Electromagnet in Set-up J	3
Electromagnet in Set-up K	10

What can you conclude from the results above? [1]

_____

_____

(c) What can Yu Han do to Set-up J so that the electromagnet will pick up more paper clips than the electromagnet in Set-up K? [1]

_____

_____

~ End of Paper ~

ANSWER SHEET

EXAM PAPER 2012

SCHOOL : NAN HUA
SUBJECT : PRIMARY 5 SCIENCE

TERM : CA2

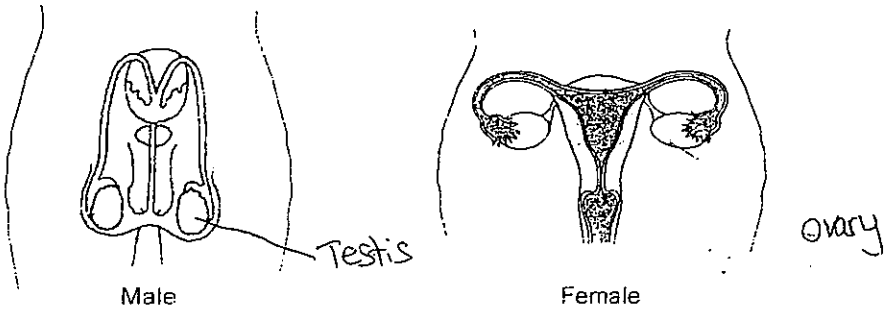
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
3	3	2	4	1	2	3	3	2	3	2	2	1	3	1	2	1

Q18	Q19	Q20
4	2	1

21)a)G , F

b)Towel A will dry first Towel A has the exposed surface area so the rate of evaporation is the greatest.

22)a)



Male Female

b)The sperm produce by the testes will not be able to move into the female reproductive organ to fuse with the egg.

95

23)a)System B: Circulatory system.
b)Oxygen. Oxygen is needed to break down digested food into energy which we need.

24)Excessive amount of water entered the animal and plant cell, the animal cell did not have a cell wall to prevent it from bursting while plant cell has a cell wall to prevent the cell from bursting.

25)a)Kitchen towel B had a greater exposed surface area for more water to be absorbed.
b)It creates a greater surface area to increase the rate of the absorption of digested food.

26)a)Part: Ovary. Process: Fertilisation
b)It is to let the pollen grains onto the stigma.

27)a)Asexual
b)Sexual. Humans need a female sex cell and a male sex cell to reproduce which means we need to humans of different gender to reproduce and form a new human.

28)a)The water is used by the plant to make food.
b) 
c)The water moves in one direction but the blood flows in double direction.

29)a)A C
B D

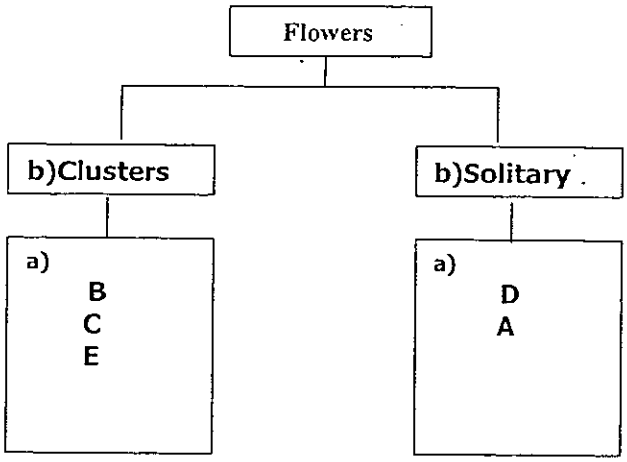
b)Carbon dioxide is produce respiration the carbon dioxide during is curried away by the blood to be removed at the lung.

30)a)No. Siva stopped growing taller but his cells continue to division through out his live to replace old and damaged cells.
b)Budding.

31)a)A bottle of iodine solution, microscope and a dropper.
b)Apply a few drops of iodine solution on the glass slide X. Using the droppers put same number of drops of iodine solution on the glass slide Y using the dropper to observe the cell using the microscope.
c)The present of cell wall and whether the cell has a regular shape or not.

32)a)Cell X: Plant cell
Cell Y: Animal cell
b)No. They both have no chloroplast which contains chlorophyll to trap light to make food during photosynthesis.

33)a)b)



c)Edge of the leaves.

34)a)To find out if the number of coils around the iron rod affect the strength of the electromagnet.
b)The more the number of coils around the iron rod, the stronger the electromagnet.
c)She can add more batteries.

97

end