NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2 - 2015
PRIMARY FIVE
SCIENCE

MARKS	
Sect A:	/ 40
Sect B:	/ 40
Total :	**/ 80**

Name : _____( )

Class : Primary 5 / ____

Date : 25 August 2015

Section A: (20 x 2 marks = 40 marks)
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. Why do living things reproduce?

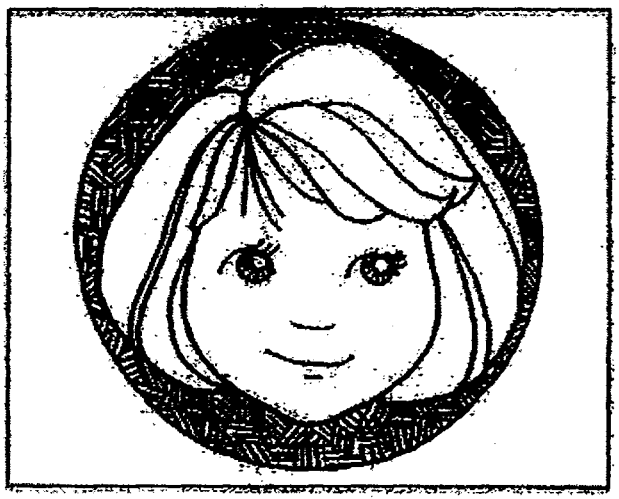
(1) To ensure a great diversity of living things.
(2) To ensure that the species will not become extinct.
(3) To increase the chances of survival of their young.
(4) To allow the number of living things to remain the same.

2. Which of the following is/are plant(s) that reproduce from spores?

A Moss
B Tomato
C Banana
D Pineapple

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

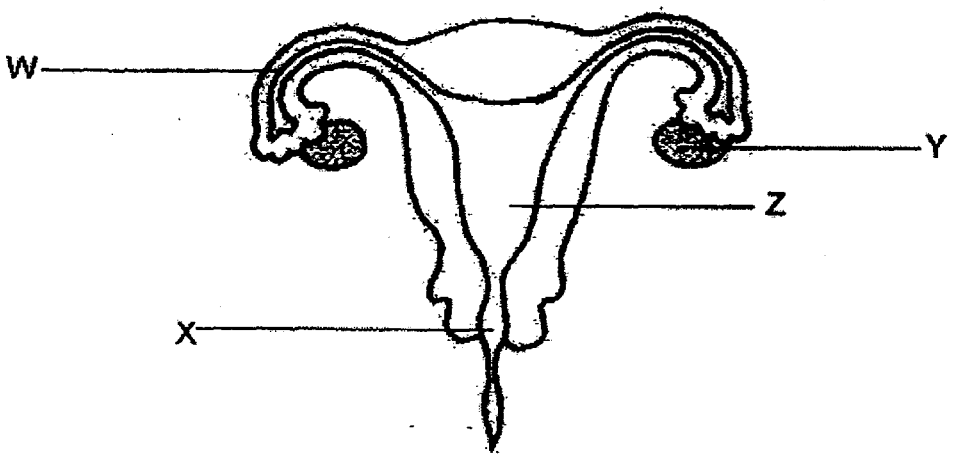
3. The picture below is a photograph of Jane. She has short hair, big eyes and pointed chin.



Which member of her family has passed on one of his/her characteristics to Jane?

	Family member	Characteristics
(1)	Jane's father	short hair and square chin
(2)	Jane's mother	long hair and small eyes
(3)	Jane's grandfather	big eyes and square chin
(4)	Jane's grandmother	small eyes and short hair

4. The diagram below shows parts of the female reproductive system.



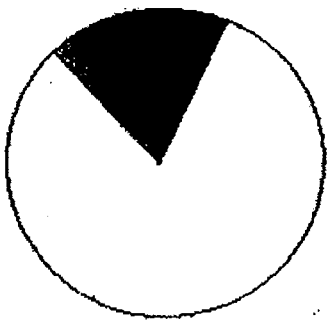
The part _____ is where the fertilised egg develops into a baby.

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

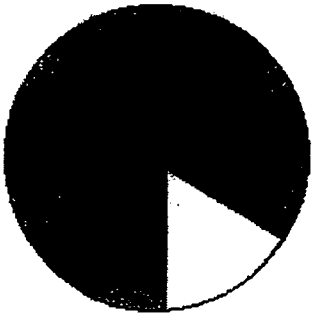
5. Mrs Lee had four pupils in her Science remedial class. She gave each of them a compact disc and three tubes of poster paint of different colours. The 3 different colours represented the different types of gases as shown in the table below.

○	white colour	Oxygen
●	grey colour	Nitrogen
●	black colour	carbon dioxide and other gases

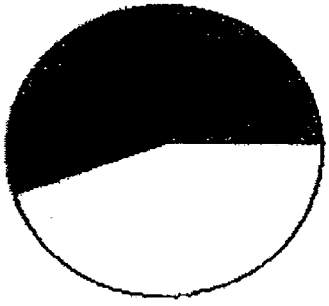
They used the poster paint to paint the compact discs in order to show the approximate volume of the different types of gases in the surrounding air as shown below.



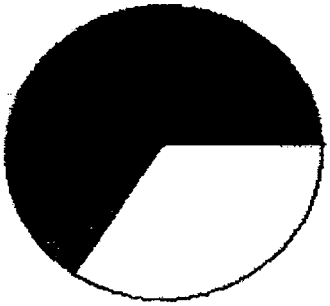
compact disc A



compact disc B



compact disc C

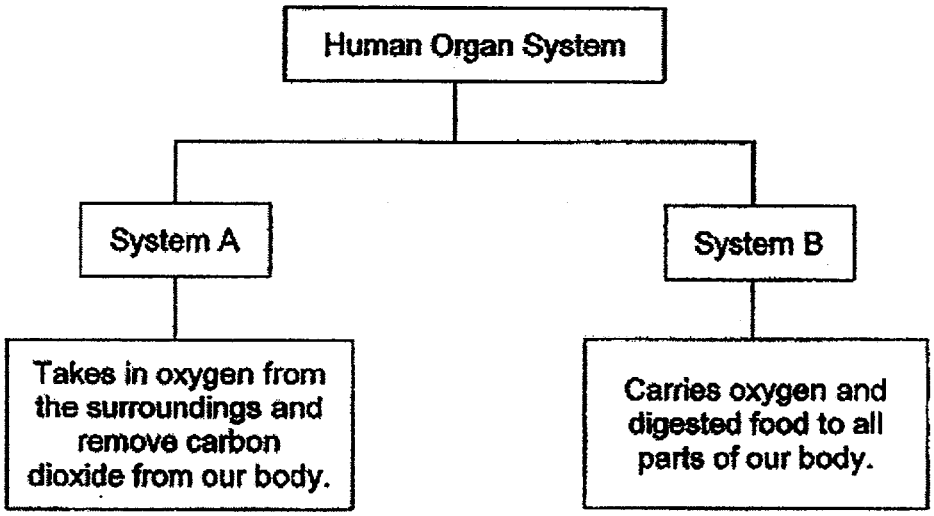


compact disc D

Which one of the following compact discs best represents the approximate volume of the different types of gases in the surrounding air?

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

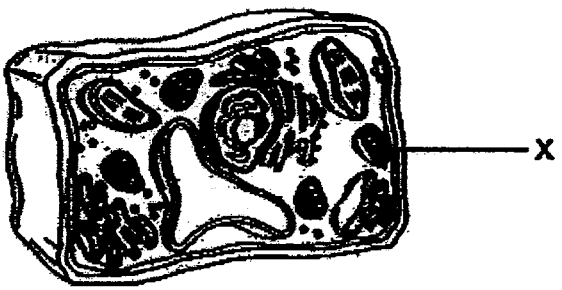
6. Study the classification chart below carefully.



Which of the following shows correctly what systems A and B are?

	System A	System B
(1)	Respiratory System	Digestive System
(2)	Respiratory System	Circulatory System
(3)	Digestive System	Circulatory System
(4)	Circulatory System	Respiratory System

7. The diagram below shows the cell of an organism. Three pupils, Jack, Tom and Mary, made some statements on the function of part X, which contains a green pigment.

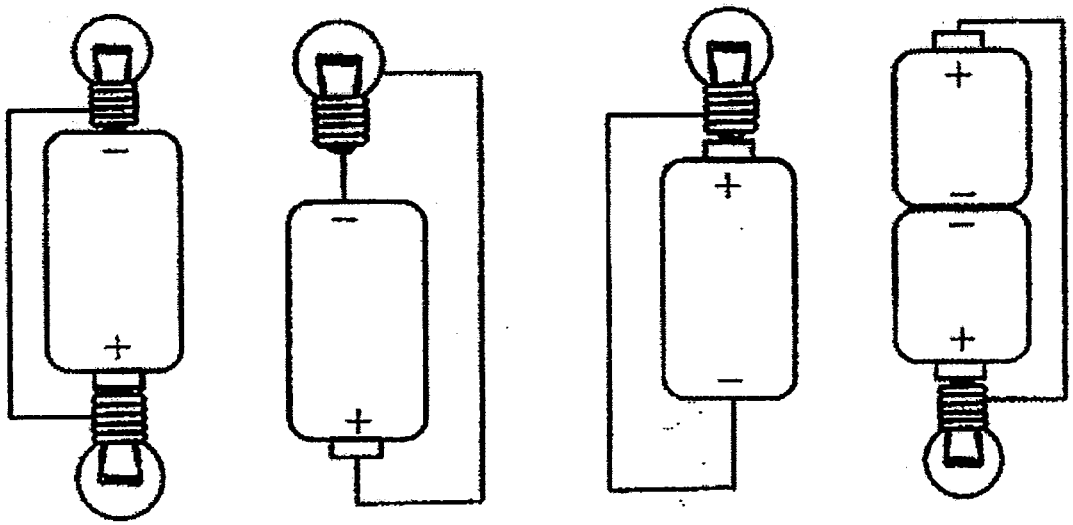


Jack: "It contains chlorophyll."
Tom: "It allows the organism to exchange gases."
Mary: "Without it, the organism cannot make food."

Which pupils have made a correct statement about the function of X?

(1) Jack and Tom
(2) Jack and Mary
(3) Tom and Mary
(4) Jack, Tom and Mary

8. Study the four circuits below carefully.



Which circuit(s) will <u>not</u> allow electric current to flow through to light up the bulb(s)?

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

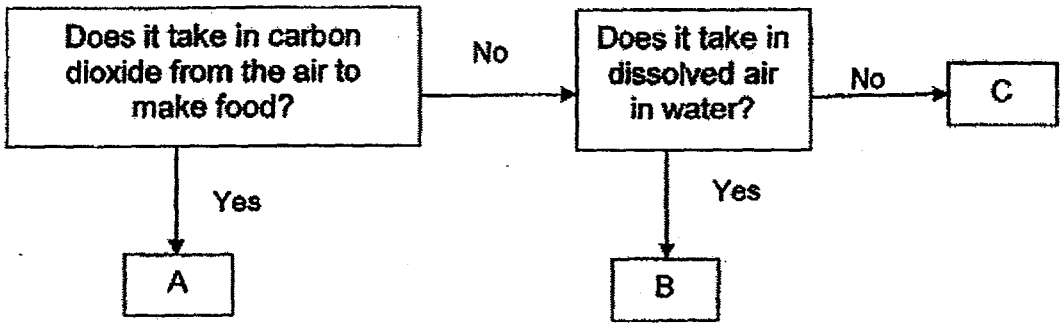
9. Ben carried out an investigation to find out how the number of wings of the shorea fruit affects the time it stays in the air. The table below shows the number of wings he removed from four similar shorea fruits, P, Q, R and S.

Shorea fruit	Number of wings removed
P	1
Q	0
R	3
S	2

Then he dropped the fruits, P, Q, R and S, from the same height and measured the time taken for each fruit to reach the ground. He recorded the time taken and arranged the fruits in order starting from the fruit that took the longest time to reach the ground. Which of the following shows the correct order?

(1) P, S, R, Q
(2) R, S, P, Q
(3) P, Q, R, S
(4) Q, P, S, R

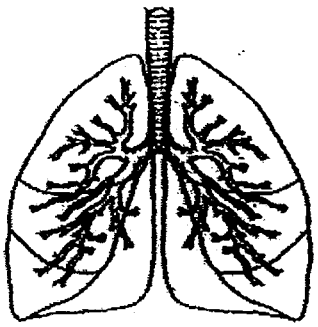
10. Study the flow chart below carefully.



What could living things A, B and C be?

	A	B	C
(1)	Mushroom	Guppy	Eagle
(2)	Hydrilla	Goldfish	Pigeon
(3)	Bacteria	Whale	Dolphin
(4)	Fern	Duckweed	Seahorse

11. The organ below is found in a human.



Which of the statements about its function is true?

A It continues to work when the human sleeps.
B It has a muscular organ to transport materials to all parts of the body.
C It stops working immediately when the digestive system is not working well.
D It works together with the digestive and circulatory system to enable human to do work.

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

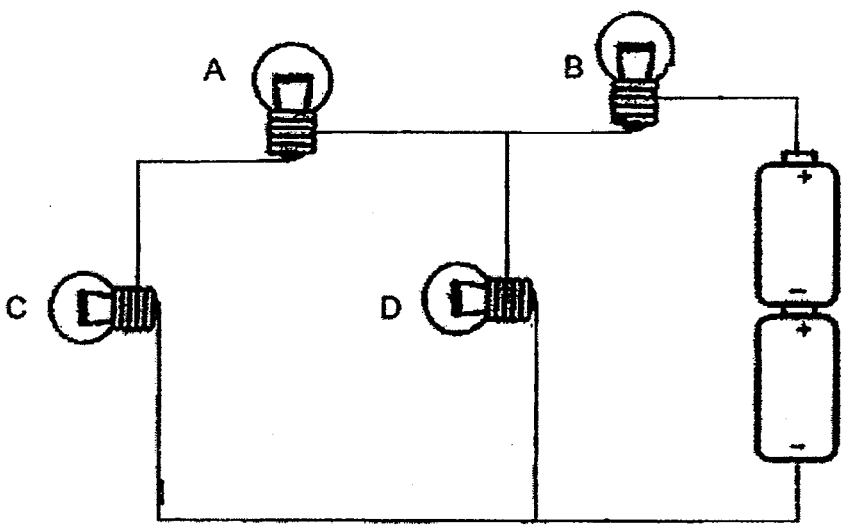
12. The table below shows the characteristics of two cells, X and Y.

Parts of the cell	Cell X	Cell Y
Cell membrane	✓	✓
Cell Wall	✓	
Chloroplast		
Nucleus	✓	✓

Which of the following best represents X and Y?

	Cell X	Cell Y
(1)	Nerve cell	Leaf cell
(2)	Leaf cell	Nerve cell
(3)	Root Cell	Cheek cell
(4)	Cheek Cell	Root Cell

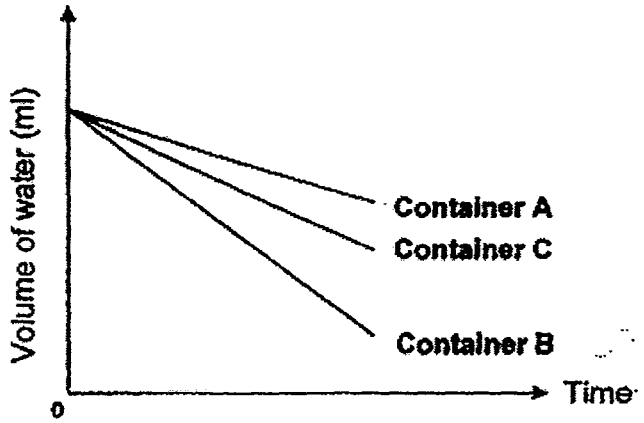
13. The diagram below shows an electric circuit.



Which bulbs will still light up if bulb C fuses?

(1) A and B only
(2) B and D only
(3) A, B and D only
(4) None of the bulbs

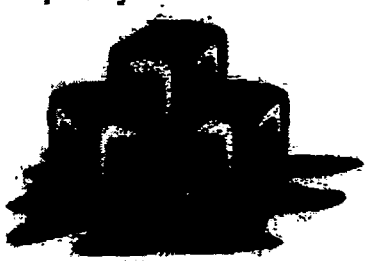
14. Vera used three different containers, A, B and C, of different sizes to find out how the exposed surface area of the water affects the rate of evaporation. She poured equal amount of water into each of the container and placed them at the same location with direct sunlight. She plotted a graph showing the volume of water in each container over time.



Which of the following best represents the size of the exposed surface area of the water in the three different containers?

	Exposed surface area of water		
	A	B	C
(1)	80 cm^2	50 cm^2	25 cm^2
(2)	80 cm^2	25 cm^2	50 cm^2
(3)	25 cm^2	50 cm^2	80 cm^2
(4)	25 cm^2	80 cm^2	50 cm^2

15. Corrine wants to find out if the surrounding temperature affects the time taken for the ice cubes to melt completely.

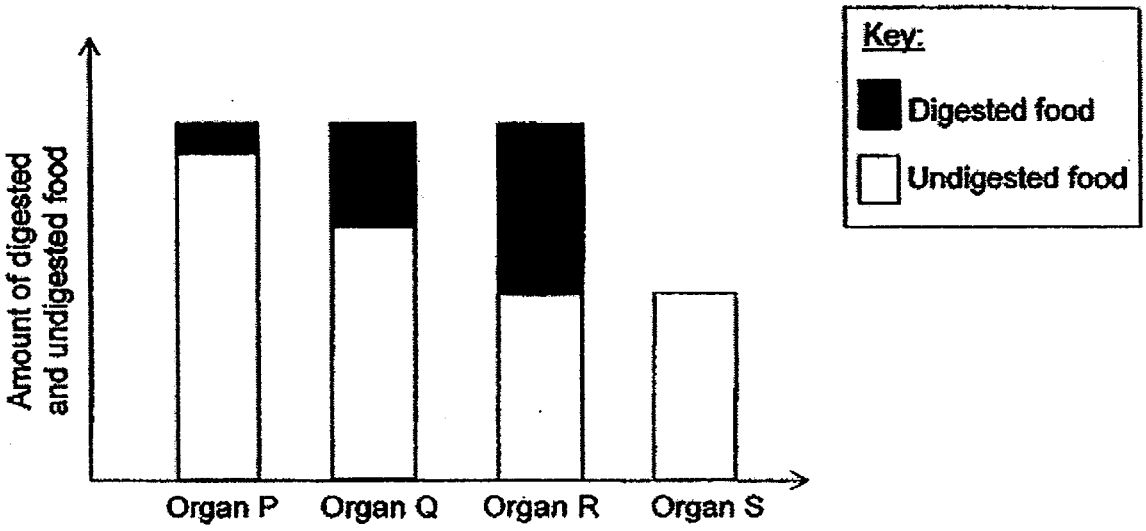


What variables should she keep the same when setting up the experimental set-up and the control set-up ?

A size of ice cubes
B number of ice cubes
C temperature of the location
D duration of the experiment

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

16. The bar graph below shows the amount of digested and undigested food in 4 organs, P, Q, R and S, of the digestive system over four hours.



Which one of the following organs will most likely represent the large intestine?

(1) Organ P
(2) Organ Q
(3) Organ R
(4) Organ S

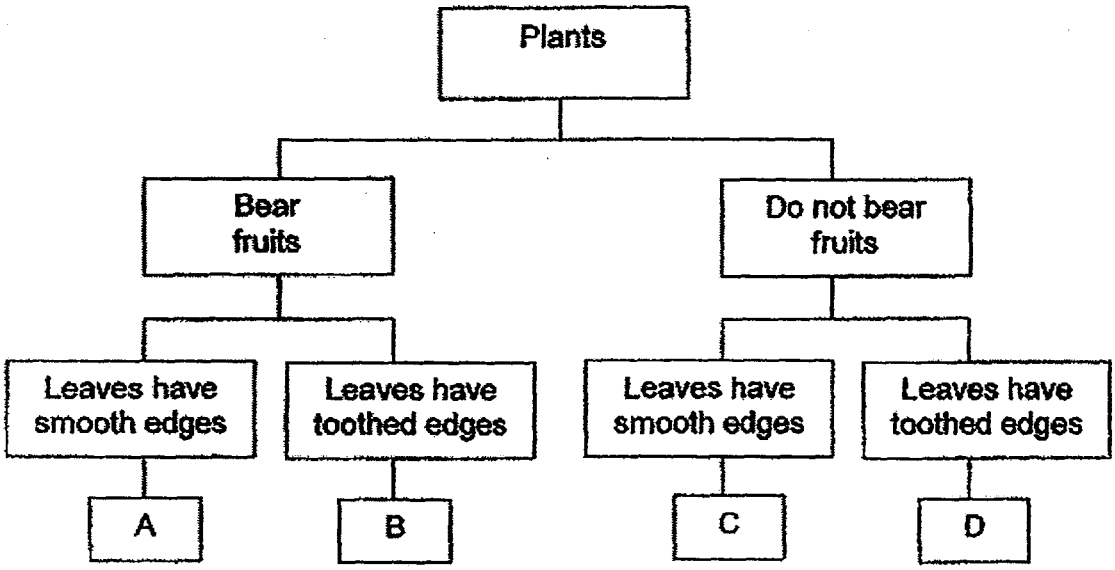
17. Tom recorded the characteristics of four animals in the table below.

Animal	Can fly	Lays eggs	Has beak	Live on land
A	✓			✓
B		✓		
C		✓	✓	✓
D	✓	✓		✓

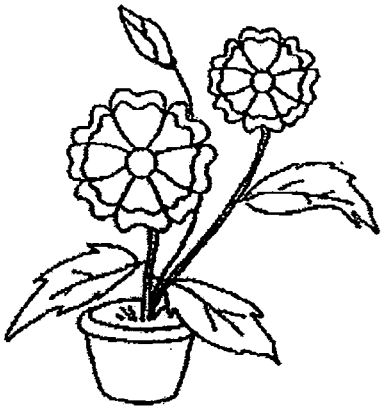
Which of the animals, A, B, C or D, is most likely a bird?

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

18. Study the classification chart below carefully.



Tom took a picture of plant Y as shown below during his field trip to the Singapore Botanic Gardens.

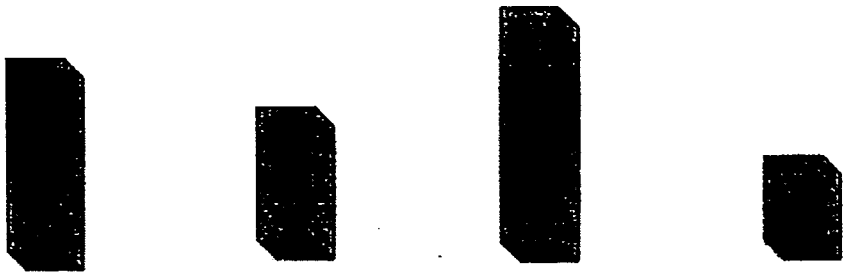


Plant Y

In which group, A, B, C or D, should plant Y be classified under?

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

19. Jay conducted an experiment with four different magnets as shown below.



Magnet A Magnet B Magnet C Magnet D

He brought them close to some paper clips and recorded the number of paper clips attracted by each magnet in the table below.

	Magnet A	Magnet B	Magnet C	Magnet D
Number of paper clips attracted	18	13	15	25

What can he conclude from the results in the table?

(1) The size of the magnets affects the magnetic strength of the magnets.
(2) The magnetic strength of bigger magnets is more than smaller magnets.
(3) The magnetic strength of smaller magnets is more than bigger magnets.
(4) The size of the magnets does not affect the magnetic strength of the magnets.

20. Kerrie carried out the activity below to magnetise an iron rod. She stroked the rod about 30 times. After the activity, the iron rod was able to attract some paper clips.

Besides stroking the rod 30 times, which of the following must she do in order to magnetise the iron rod?

A Stroke the ends of the rod only.
B Stroke the entire length of the rod.
C Stroke the rod in different directions.
D Stroke the rod with only the North-pole of the magnet.

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

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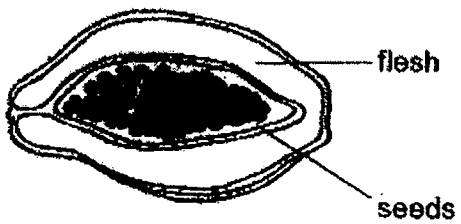
CONTINUAL ASSESSMENT 2 2015
PRIMARY FIVE
SCIENCE

Name : _____ ( ) Class : Primary 5 / ____

Date : 25 August 2015

Section B: 14 Questions (40 marks)
Write your answers to questions 21 to 34.The number of marks available is shown in brackets [ ] at the end of each question or part question.

21. Tina recorded her observations of fruit X as shown in the diagram below.



Fruit X

- is juicy and fleshy
- has many seeds

(a) Based on the information above, identify the dispersal method of the seeds of Fruit X. [1]

_____

_____

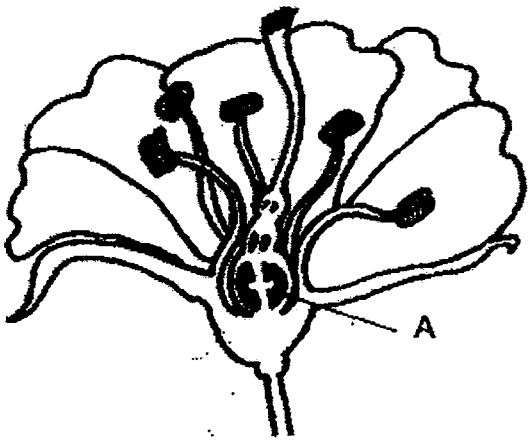
(b) How does having many seeds help the plant of fruit X to ensure the continuity of its own kind? [1]

_____

_____

Score	
	2

22. Mrs. Lee noticed that some bees were attracted to the big and brightly-coloured flower in her balcony as shown in the diagram below.



(a) A few days later, her daughter told her that the petals of the flower had dropped off and part A had swelled.

State 2 reproductive processes that took place in the flower before part A swelled. [1]

i) _____

ii) _____

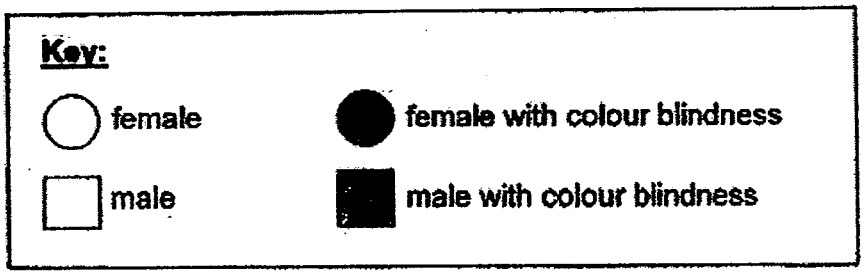
(b) Give a reason why the petals of the flower are brightly-coloured. [1]

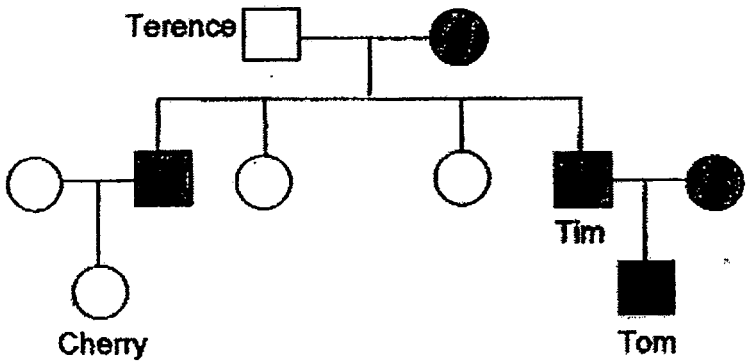
_____

_____

Score	2 / 2

23. Study Tom's family tree below.





(a) How is Tom related to Terence? [1]

_____

(b) Explain why Tim has colour blindness. [1]

_____

_____

(c) Tom's cousin, Cherry, is married to John. John has colour blindness.

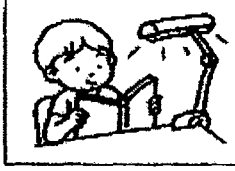
Use the symbols provided in the box to add and label John to the family tree. [1]

Score	
	3

24. Kenneth received a heart rate monitoring device from his father. He measured his heartbeat when he was walking, reading and sleeping.

The pictures below show the three activities which he was engaged in.

(a) Draw lines to match Kenneth's heart rate to the correct activity. [1]

Activity		Heart rate (bpm)
 walking	•	70
 sleeping	•	80
 reading	•	65

(b) When Kenneth was walking, would his breathing rate be faster or slower than when he was sleeping? Explain your answer. [2]

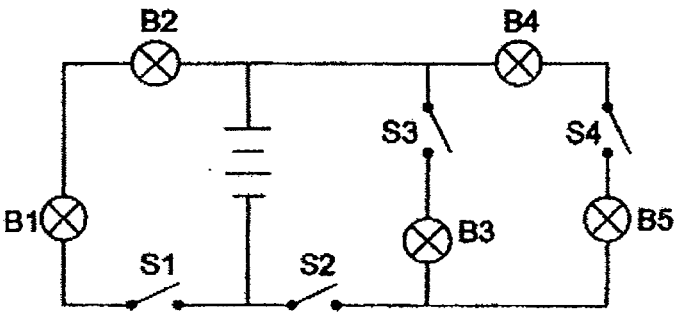
_____

_____

_____

Score	
	3

25. Study the circuit diagram below carefully. The bulbs are labelled B1, B2, B3, B4 and B5. The switches are labelled S1, S2, S3 and S4.



(a) What is the least number of switch(es) that need(s) to be closed in order to light up the number of bulbs as indicated in the table below.
Write down the switches, S1, S2, S3 and/or S4. [2]

Number of bulbs lit	The switch(es) to be closed
1	
2	

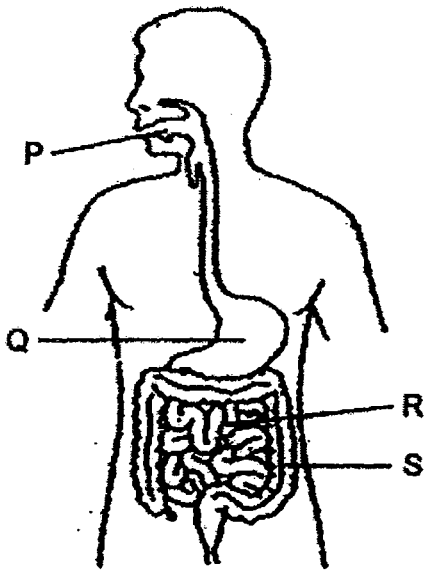
(b) When only switch S2 is closed, what happen to the bulbs?
Explain your answer. [1]

_____

_____

Score	
	3

26. The diagram below shows a human digestive system.



The parts P, Q, R and S are organs in the digestive system.

However, one part of the digestive system is not identified in the diagram.

(a) On the diagram above, label the missing part that belongs to the digestive system. [1]

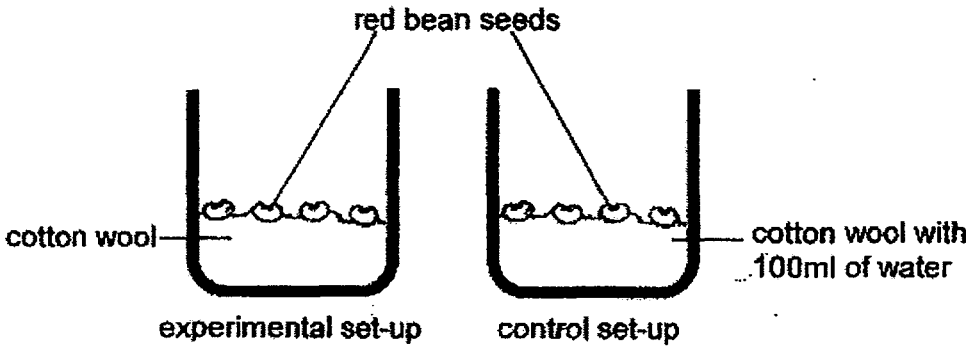
(b) What is the function of the part identified in part (a) above? [1]

_____

_____

Score	
	2

27. George set up an experiment as shown below. He wanted to find out if the red bean seeds need water to germinate. He placed four red bean seeds each in the experimental set-up and the control set-up in a room of 26°C. Then, he poured 100 ml of water in the control set-up.

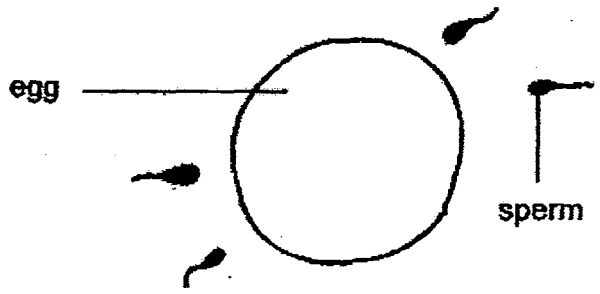


(a) What is the purpose of the control set-up in George's experiment? [2]

(b) Suggest two changes that George should make to the experimental set-up if he wants to find out if the red bean seeds need warmth to germinate. [2]

Score 4

28. Study the diagram below.



(a) Based on the diagram, describe what must happen for fertilisation to take place. [1]

_____

_____

In-vitro fertilisation (IVF) is a process by which an egg is fertilised by a sperm outside the body. This process is used for the treatment of infertility, a condition when the female is unable to reproduce naturally. Once the egg is fertilised outside the body, the fertilised egg is transferred to the female reproductive system.

(b) In which part of the female reproductive system is the fertilised egg transfer to? [1]

_____

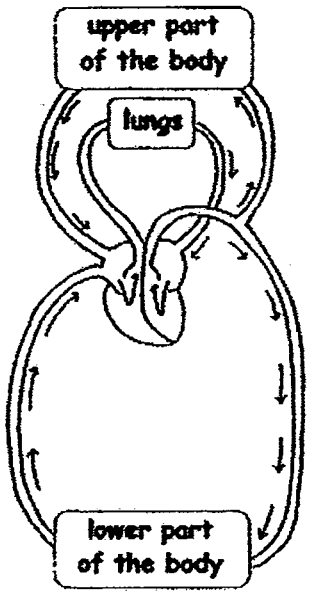
(c) Give a reason for your answer in (b). [1]

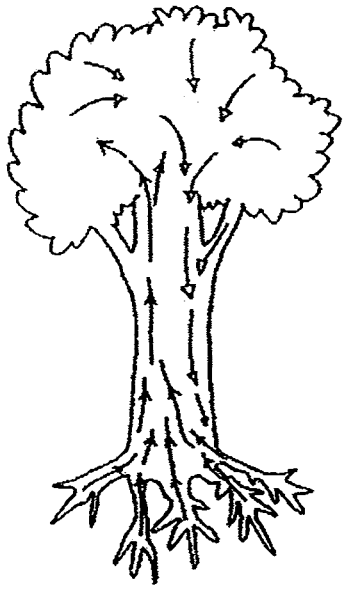
_____

_____

Score	
	3

29. The diagrams below show the plant and human transport systems.





The arrows in both diagrams show the flow of materials that are being transported in both systems.

(a) Write down three materials that are transported round the human transport system (do not mention blood). [1]

_____

(b) Write down one material that is transported: [1]
i) upwards from the roots in the plant transport system.

_____

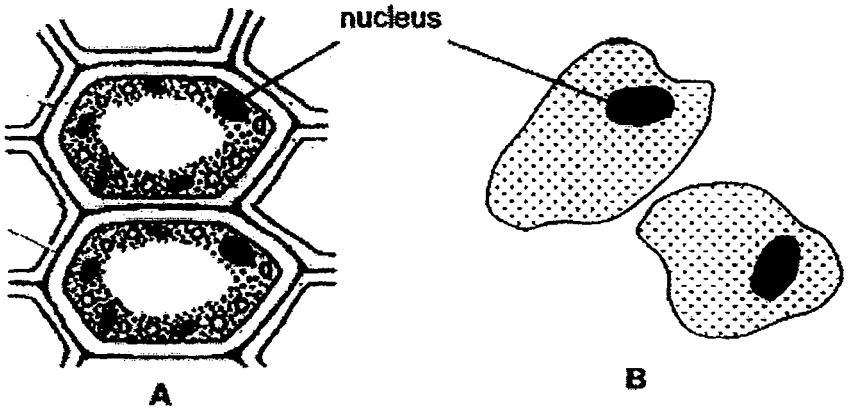
ii) downwards from the leaves in the plant transport system.

_____

(c) When a branch of a tree is cut, the plant transport system continues to function with no risk of the plant dying. However, if the human suffers a deep cut and keeps bleeding, there is a risk that the entire human transport system could fail and the human might die.
Explain why this is so. [2]

Score	
	4

30. Jamie observed two cells, A and B, under the microscope as shown in the diagrams below.



Jamie could clearly identify the nucleus of both cells as labelled in the diagrams. However, she observed that the shapes of both cells were different.

(a) Based on the shapes of the cells observed, how can she tell that A is a plant cell and not B? [1]

_____

_____

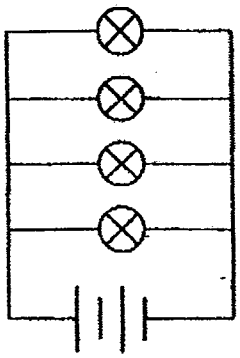
(b) Jamie removed a part from both cells A and B which caused the cells to be unable to reproduce.
What is the part that was removed and what is its function? [1]

_____

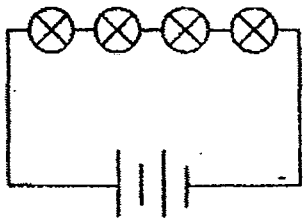
_____

Score	
	2

31. (a) Study the circuit diagrams, P and Q, below. All the bulbs are lit.



Circuit P



Circuit Q

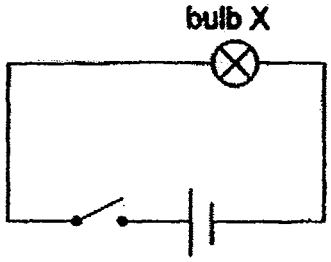
In the table below, write down the number of bulbs that would remain lit when one of the bulbs in each circuit is blown. [1]

	Circuit P	Circuit Q
Number of bulbs remaining lit		

(b) You are given two switches, two batteries, four bulbs and some wires. Draw a circuit diagram that will allow two bulbs to be switched on or off at any one time. [2]

Score	
	3

32. Amir conducted an experiment using the setup shown below.
He measured the brightness of bulb X.



Amir added one battery at a time to the circuit and measured the brightness of the bulb X. He recorded the measurements in the table below.

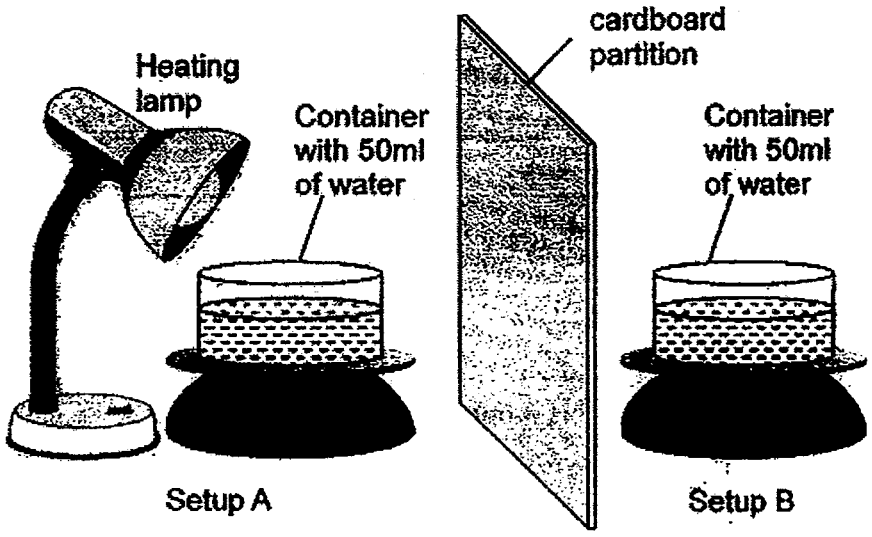
Number of batteries	**2**	**3**	**4**	**5**	**6**
Brightness of the bulb X (lux)	1000	1500	2000	0	0

(a) What is the relationship between the number of batteries and the brightness of bulb X? [2]

(b) What do you think happened to bulb X when the 5th battery was added to the circuit? Give a reason. [1]

Score	
	3

33. Study the experimental setup shown below.



Azmi wanted to find out if heat increases the rate of evaporation. Two setups, A and B, were placed in the same room with a cardboard partition between them. He filled two identical containers with 50ml of water and placed them on two identical weighing machines as shown above.

(a) What data should Azmi collect and record over the duration of the experiment? [1]

_____

(b) Explain how he could use the data collected in part (a) to help him to reach a conclusion? [2]

_____

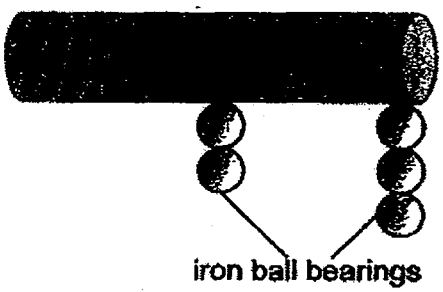
_____

Score	
	3

34. Chang brought Magnet Q close to Object R and found that they were attracted as shown below. He then concluded that Object R is made of a magnetic material.

(a) Using only Magnet Q and Object R, what could Chang do to confirm whether Object R is a magnet or not? [2]

Using the same Magnet Q, Chang added identical iron ball bearings one at a time at two different parts of the magnet as shown in the diagram below. He added iron ball bearings until the two different parts of the magnet could not attract anymore iron ball bearings.



(b) From the observation made by Chang above, what can you conclude about the magnetic strength of Magnet Q? [1]

Score	
	3

Answer Key

EXAM PAPER 2015

SCHOOL : NAN HUA

SUBJECT : P5 SCIENCE

TERM : CA2

ORDER CALL : MR GAN @ 92998971 92475053 86065443

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
1	1	3	4	2	2	2	4	4	2
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
2	3	2	4	1	4	3	2	4	2

21)a)By animals.

b)To increases the chance of its kind to be dispersed.

22)a)i)Pollination ii)Fertilisation

b)To attract insects to pollinate the flower.

23)a)Terence is Tom's grandfather.

b)Terence's wife passed the trait to Tim.

24)a)walking-----80 sleeping----65 reading-----70

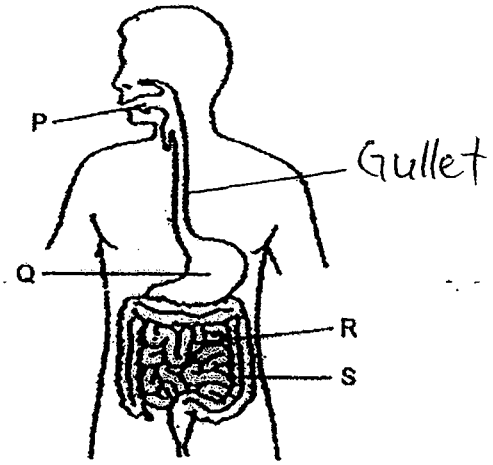
b)Faster. His body needs the energy to walk so his heart pumps more blood rich in digested food and oxygen to all parts of his body.

25)a)1)S2 and S3

2)S2 and S1

b)No bulbs will light-up, S1, S3 and S4 are open so the circuit is open and current cannot flow through the circuit.

26)a)



b)The gullet brings the food from the mouth to the stomach.

27)a)It is to confirm that red bean seeds require water to grow.

b)Place the experimental set-up in the freezer and leave the control set-up in the room. Pour 100ml of water into the experimental set-up.

28)a)A sperm must enter the egg and reach its nucleus.

b)Womb.

c)It is where the fertilized egg will become a baby.

29)a)Oxygen, digested food and waste materials.

b)i)Water. ii)Food

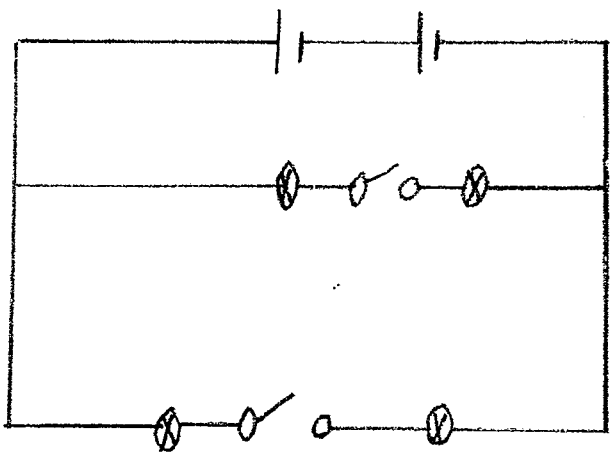
c)Excessive bleeding will result in the loss of blood and there will not be enough blood to carry food to the other parts of the body.

30)a)Cell A has a regular shape nut not cell B.

b)Nucleus. To control the cell's actives and transfer genes when reproducing.

31)a)3 0

b)



32)a)As the number of batteries increased, the brightness of the increased until 4 batteries were added to the circuit. When more than 4 batteries were added, the bulb did not light up.

b)The bulb fused. Too much electric current is passing through as the filament, thus, melting it.

33)a)The mass of the container with the water at fixed time intervals.

33)b)Set-up will contain less water as the heat energy from the lamp increases the rate of evaporation of the water. Thus, the set-up with the least amount of water will show that heat increases the rate of evaporation.

34)a)Turn object R or magnet Q to see if magnet Q repels object R or if object R repels magnet Q.

b)The magnetic strength of Magnet Q is stronger at its poles than in its center.