NAME : _____( )

CLASS: PRIMARY 5 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Second Continual Assessment

2010

Primary 5 SCIENCE

(BOOKLET A)

26 August 2010

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

30 questions
60 marks

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

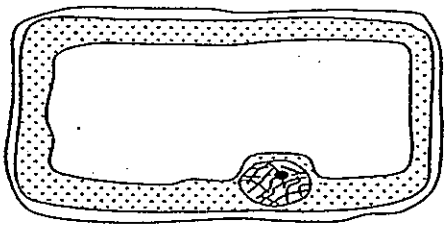
Answer all questions.

This paper consists of 22 printed pages.

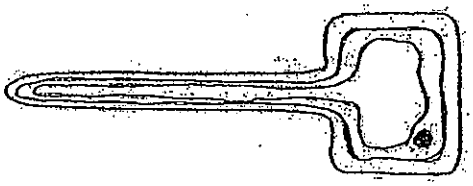
Section A : (30 x 2 MARKS)

For each question from 1 to 30, 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. The diagrams below show parts of an onion cell and a root cell of a plant respectively.



onion cell

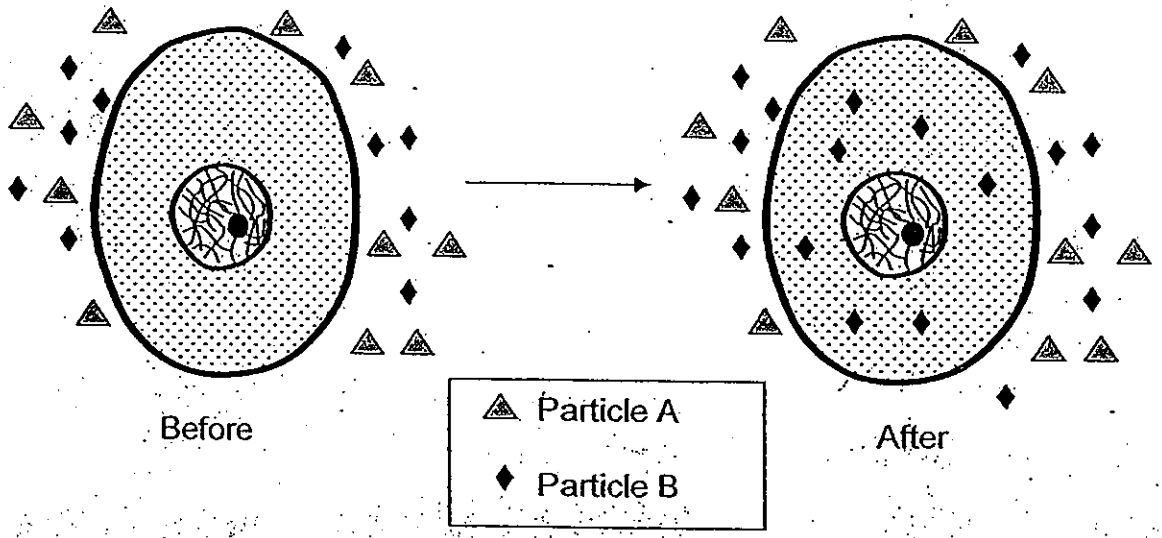


root cell of a plant

Which one of the following shows a correct comparison between the onion cell and the root cell of a plant?

	Onion Cell	Root cell of a plant
(1)	Has a cell wall	Does not have a cell wall
(2)	Has a cell membrane	Has a cell membrane
(3)	Has chloroplast	Has chloroplast
(4)	Does not have a nucleus	Has a nucleus

2. The diagram below shows a cell with particles A and B.



Which one of the following best describes the above observation?

(1) Only particle A can move into the cell.
(2) Only particle B can move into the cell.
(3) Particles A and B can move into the cell.
(4) Particles A and B can move into and out of the cell.

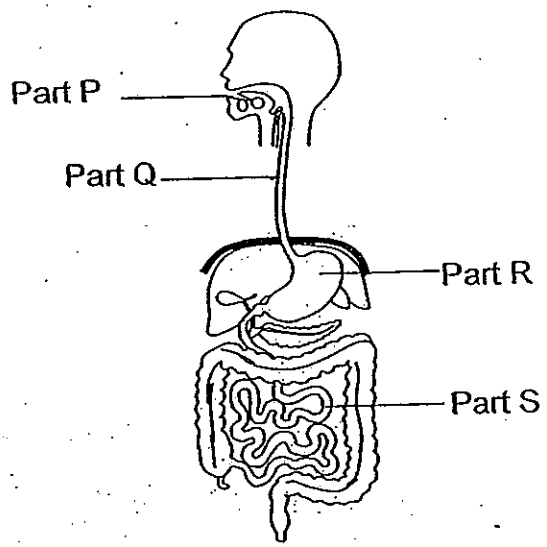
3. Rachel was given some plant cells for observation. She did the following order of steps as shown below.

Step	What Rachel did
A	Placed the slide with an onion skin on the microscope
B	Put a drop of iodine on the specimen
C	Drew what she had observed under the microscope
D	Prepared a slide of an onion skin
E	Adjust the focus knob for a clearer view

Which of the following shows the correct order of the steps needed to observe a specimen under a microscope?

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

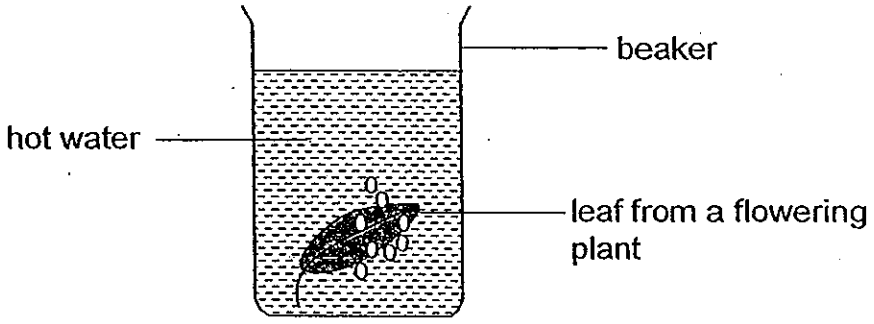
4. The diagram below shows part of the human digestive system.



Which of the following sets of information correctly compares the changes in the amount of digested food found in Parts P, Q, R and S?

	Changes in the amount of digested food found in			
	P	Q	R	S
(1)	Increase	No change	No change	Increase
(2)	No change	No change	Increase	No change
(3)	Increase	Increase	No change	Increase
(4)	Increase	No change	Increase	Increase

5. Dahlia plucked a leaf from a flowering plant and placed it in a beaker of hot water as shown in the diagram below.

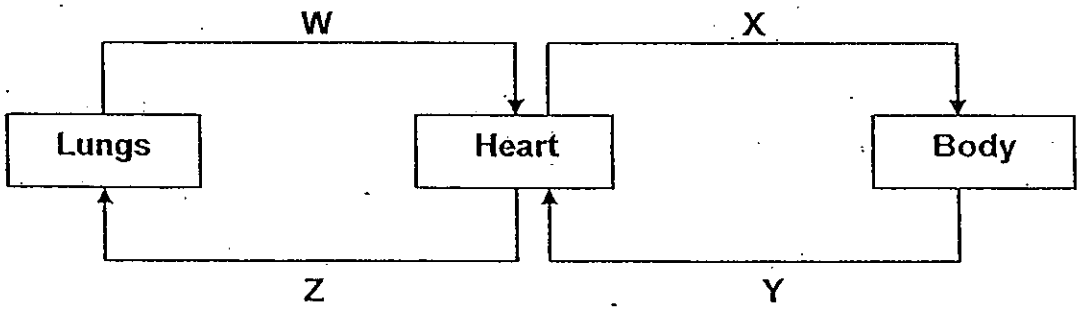


After some time, Dahlia observed that bubbles appear on the lower surface of the leaf.

Which one of the following statements explains Dahlia's observation?

(1) Air in the hot water expanded and escaped to the surrounding.
(2) Air in the hot water caused the bubbles to appear in the water.
(3) Air escaped through the stomata on the lower surface of the leaf.
(4) Air entered through the upper surface of the ~~leave~~ leaf and escaped through the lower surface of the leaf.

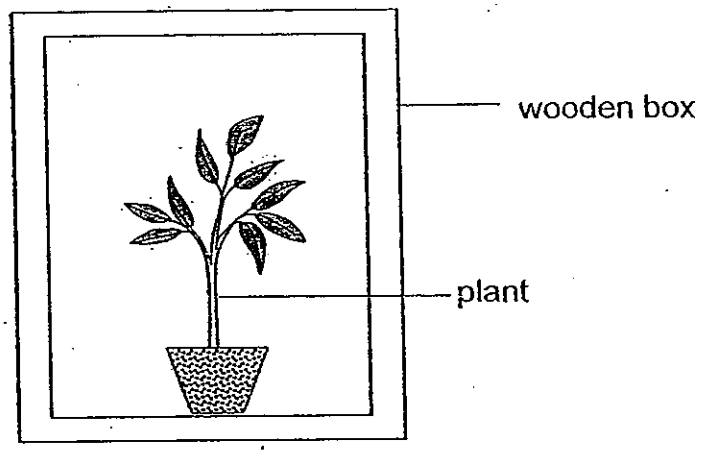
6. The diagram below shows how the blood circulates in the human body.



Which of the following correctly shows the oxygen and carbon dioxide levels of blood in W, X, Y and Z?

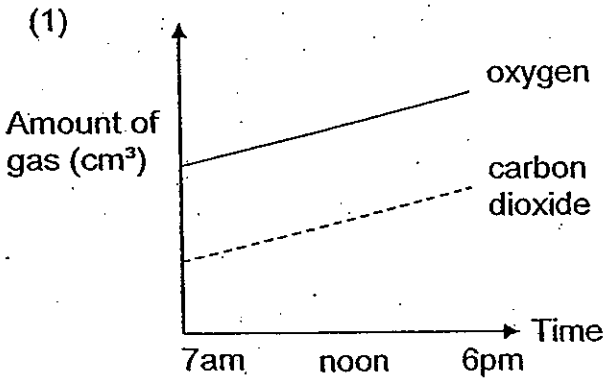
	W	X	Y	Z
(1)	High in oxygen	High in oxygen	High in carbon dioxide	High in carbon dioxide
(2)	Low in oxygen	High in carbon dioxide	High in oxygen	Low in carbon dioxide
(3)	Low in carbon dioxide	Low in carbon dioxide	Low in oxygen	High in oxygen
(4)	High in carbon dioxide	High in oxygen	High in carbon dioxide	Low in oxygen

7. A potted plant with sufficient amount of water was placed in an air-tight wooden box as shown below.

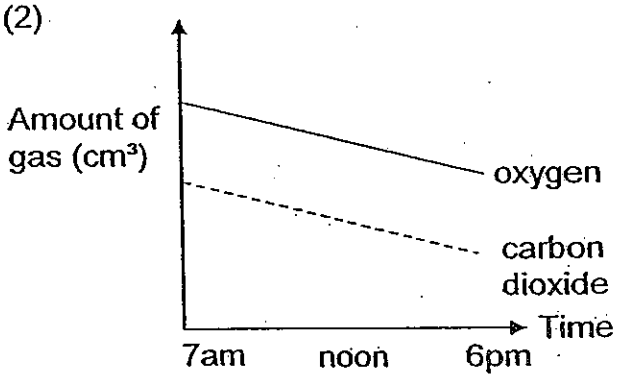


Which one of the following graphs shows the correct amount of oxygen and carbon dioxide present in the box during the day?

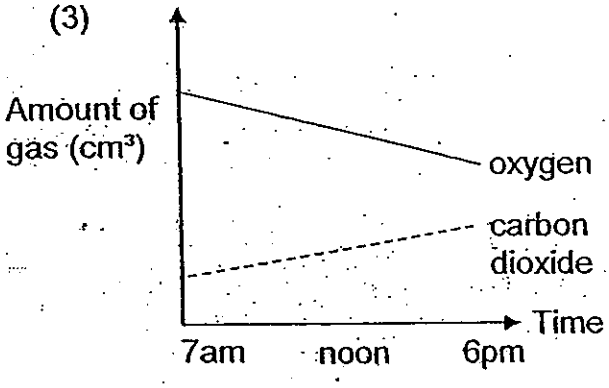
(1)



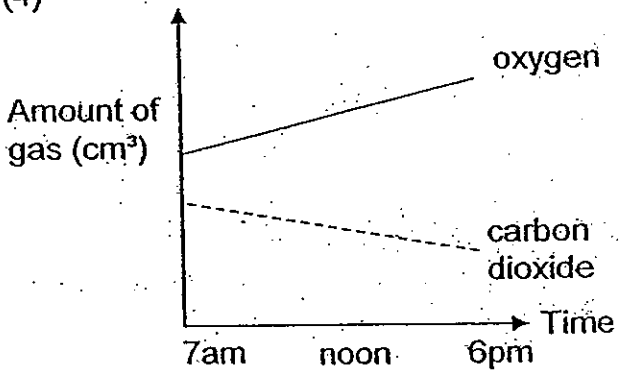
(2)



(3)



(4)



8. Read the following statements below:

A Respiration in plants occurs only at night.
B Plants do not need oxygen in the daytime.
C Photosynthesis can take place even at night as long as there is light.

Which of the above statement(s) is/are true?

(1) C only
(2) A and B only
(3) A and C only
(4) All of the above

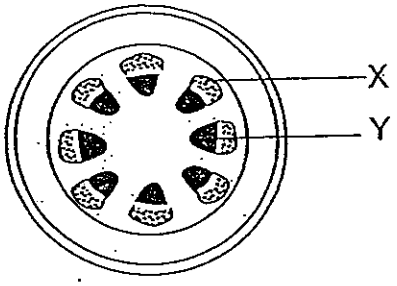
9. The following changes take place in the body of an athlete after running a marathon.

A Breathing rate increases.
B More oxygen is supplied to the muscles.
C More carbon dioxide is found in the blood.
D Movement in the muscles produces carbon dioxide.

In which order do these changes occur in the athlete's body?

	First →			Last
(1)	A	B	D	C
(2)	B	A	C	D
(3)	D	A	B	C
(4)	D	C	A	B

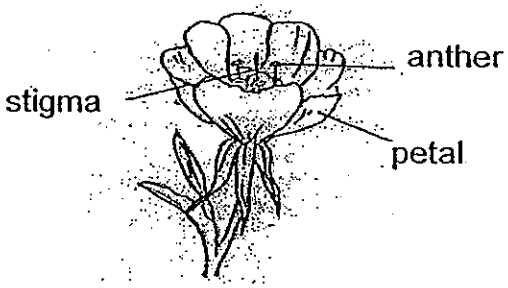
10. The diagram below shows a cross section of a stem.



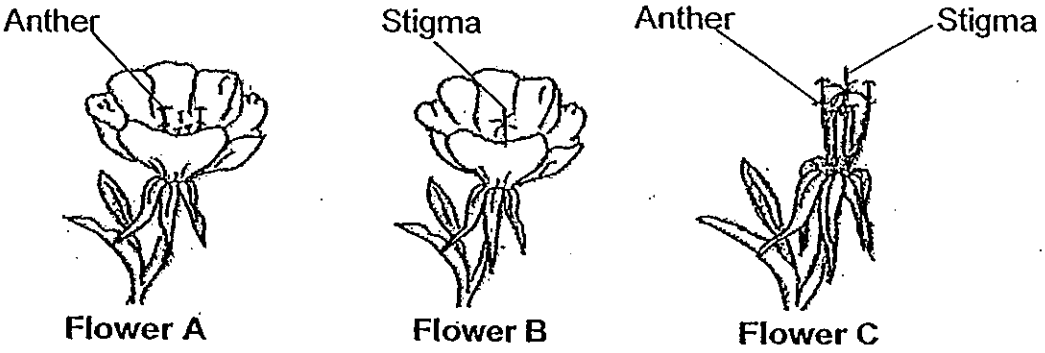
Which of the following shows the correct functions of Part X and Y?

	X	Y
(1)	Makes food for the plant	Absorbs water and minerals for the plant
(2)	Carries water and minerals from the roots to other parts of the plant	Carries food from the leaves to other parts of the plan
(3)	Carries food from the leaves to other parts of the plant	Carries water and minerals from the roots to other parts of the plant
(4)	Takes in oxygen	Gives out carbon dioxide

11. Tze Enn conducted an experiment to find out whether a fruit will develop when certain parts of the flower are removed.



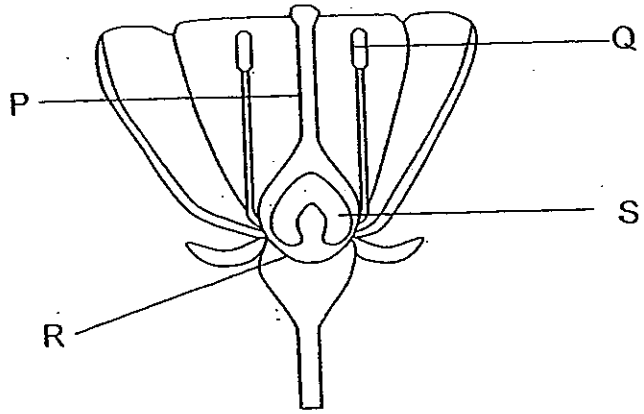
Three identical flowers, A, B and C, are used and different parts of the flowers are removed as shown below.



Tze Enn then dusts some pollen grains from the same type of flower over these three flowers. He observed the flowers for a period of three weeks. Which of the flowers will most likely develop into a fruit?

(1) A only
(2) B and C only
(3) A, B and C
(4) None of the above

12. The diagram below shows a cross section of a flower.



Which of the following statements below is true about the parts P, Q, R, and S of the flower?

A Fertilisation would occur in part S.
B Part R would enlarged and turned into a fruit.
C Part Q attract pollinators like birds and insect.
D Part P is a tube that holds the male part of the flower.

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

13. Study the classification table below.

Plant	Reproduce from spores	Reproduce from seeds	Can photosynthesise
A	√	X	X
B	√	X	√
C	X	√	√

Based on the table above which of the following organisms are placed correctly in the table below?

	A	B	C
(1)	Potato plant	Lady's finger	Mushroom
(2)	Lady's finger	Bird's nest fern	Potato plant
(3)	Mushroom	Potato plant	Lady's finger
(4)	Mushroom	Bird's nest fern	Lady's finger

14. The table below shows the characteristics of four different flowers J, K, L and M.

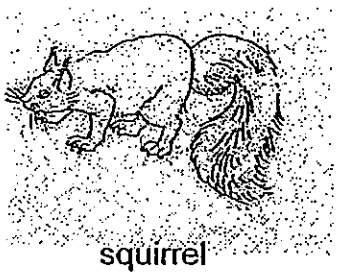
Characteristics	J	K	L	M
Does it have large colourful petals?	Yes	No	No	No
Does it have anthers dangling outside the flower?	No	No	No	Yes
Does it have sticky pollen grains?	Yes	No	Yes	No
Does it have stigma dangling outside the flower?	No	Yes	No	Yes
Does it have a strong scent?	No	No	Yes	No
Does it produce nectar?	Yes	No	Yes	No

Based on the above information, which of the following flower(s) is/are pollinated by insects?

(1) J only
(2) J and L only
(3) K and M only
(4) K, L and M only

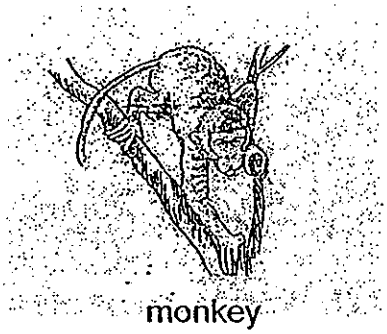
15. Which one of the animals below is most **unlikely** to help in the dispersal of seeds?

(1)



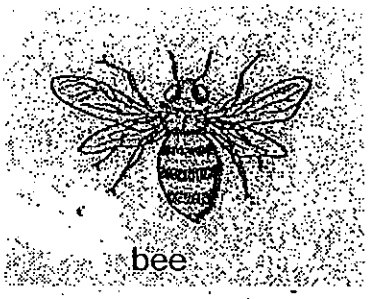
squirrel

(2)



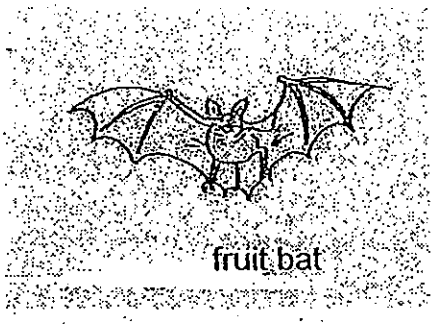
monkey

(3)



bee

(4)

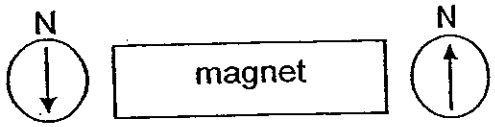


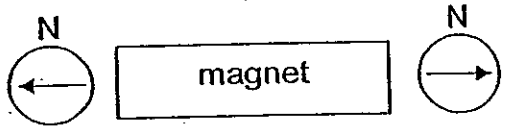
fruit bat

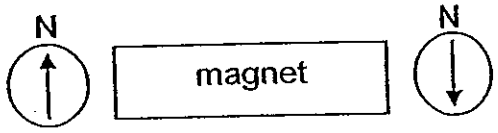
16. Which one of the following statements about magnet is true?

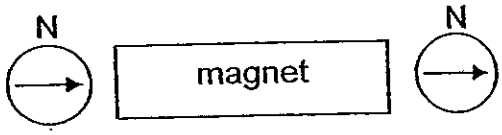
(1) Like poles attract each other.
(2) Unlike poles repel each other.
(3) Magnets cannot exert any force.
(4) Magnetic forces can act from a distance.

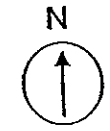
17. Which one of the diagrams below shows the **correct** direction of the compasses when they are put near a bar magnet?

(1)


(2)


(3)


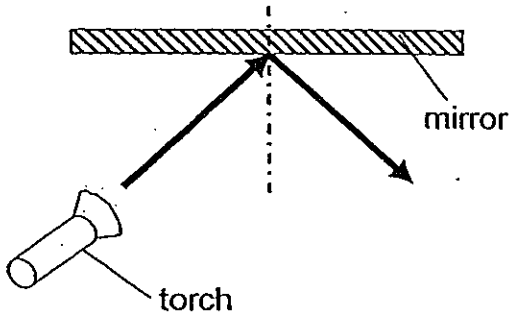
(4)




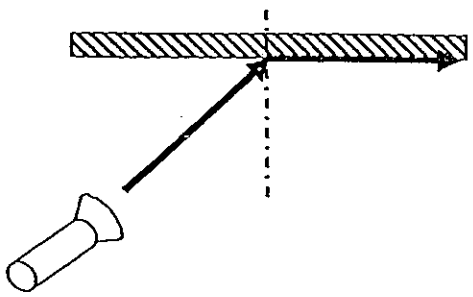
Compass

18. Which one of the following diagrams shows how the ray of light from a torch is reflected by a plane mirror?

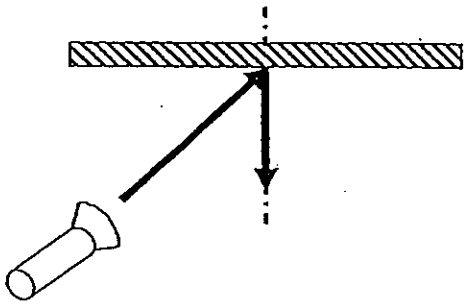
(1)



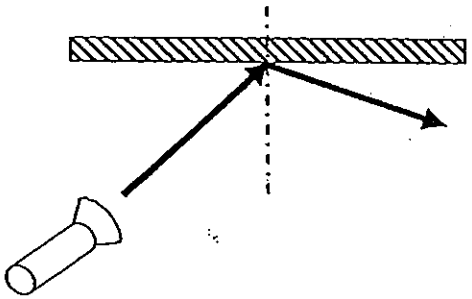
(2)



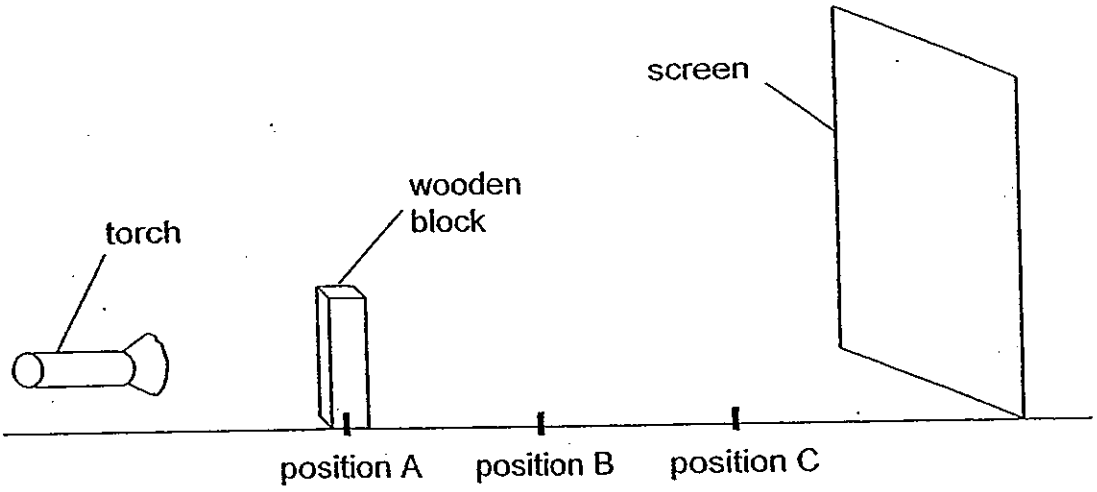
(3)



(4)



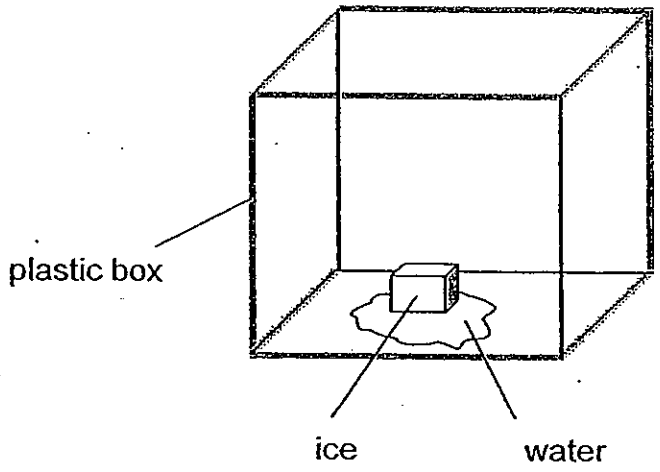
19. Jenny set up an experiment on light as shown in the diagram below. She placed a wooden block at different position A, B and C, away from the screen. At each position, she would measure the height of the shadow cast on the screen.



Which one of the following lists shows correctly the height of the shadow recorded for position A, B and C?

	Height of shadow measured on the screen with block at position		
	A (cm)	B (cm)	C (cm)
(1)	5	9	13
(2)	9	13	5
(3)	13	9	5
(4)	13	13	13

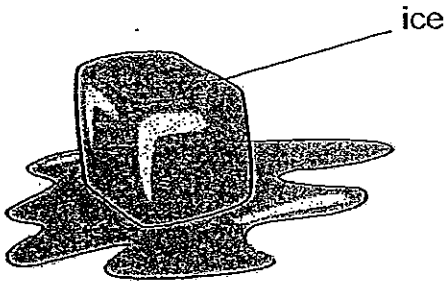
20. Daniel placed a block of ice in a dry enclosed glass box. After 3 seconds, he noticed that the block of ice started to melt as shown in the diagram below. He immediately measured and recorded the temperature changes taking place. He wanted to find out if there were any temperature changes taking place to the ice, water and plastic box.



Which one of the following describes what happened to the temperature of the ice, water and plastic box when the ice was melting?

	Temperature of ice (°C)	**Temperature of water (°C)**	**Temperature of plastic box (°C)**
(1)	No change	Increase	No change
(2)	No change	No change	Decrease
(3)	Increase	Increase	Decrease
(4)	Decrease	Decrease	Derease

21. The diagram below shows a cube of ice melting.

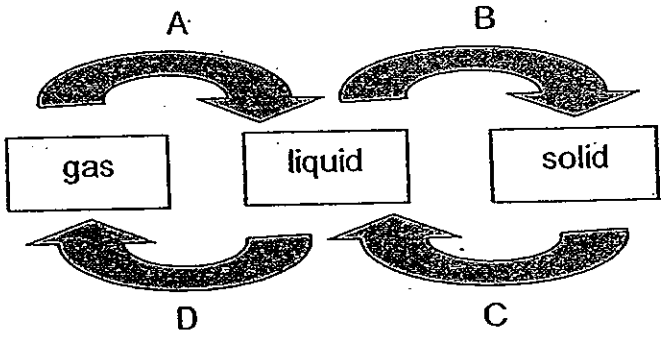


As the ice melt, there is a change in its _____.

A state
B taste
C shape
D colour

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

22. Water may exist in three different states as it undergoes any of the four processes A, B, C and D, depending on its surrounding temperature.



During which two processes will water lose heat to the surrounding?

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

23. The diagram below shows two cubes made of different materials but having the same mass.

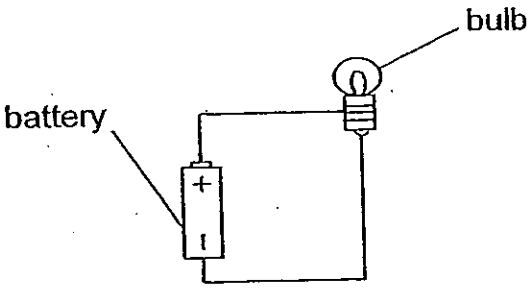
cube R cube S

Which of the following statements are true?

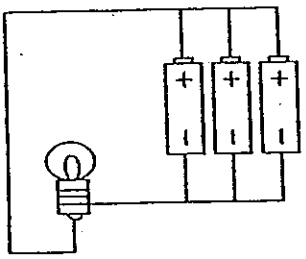
A Cube R is lighter.
B Cube S occupies more space.
C Cube S is made from a lighter material.
D Cube R is more likely to float on water than cube S.

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

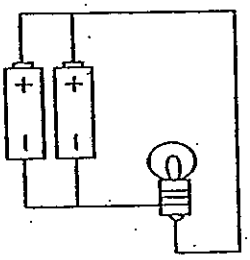
24. David sets up four different electrical circuits using identical batteries, bulbs and wires.



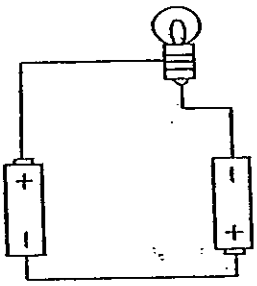
Circuit J



Circuit K



Circuit L



Circuit M

In which of the above circuits will the bulbs be of equal brightness?

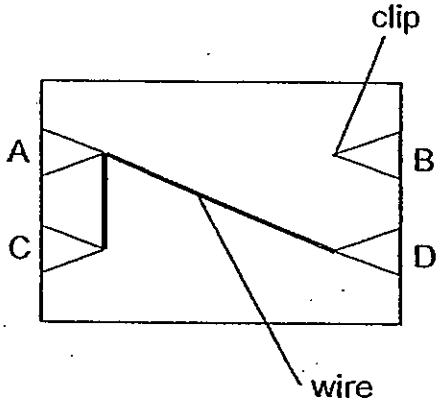
(1) J and K only
(2) L and M only
(3) J, K and L only
(4) K, L and M only

25. In an experiment, Jenny tested a circuit card for possible connections and recorded her results in the table below.

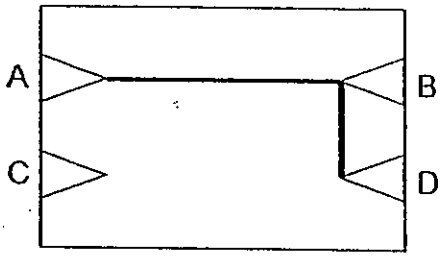
Clips tested	Did the bulb light up?
A and C	No
A and D	Yes
B and C	No
B and D	Yes

Which one of the following circuit card shows a possible connection of the clips?

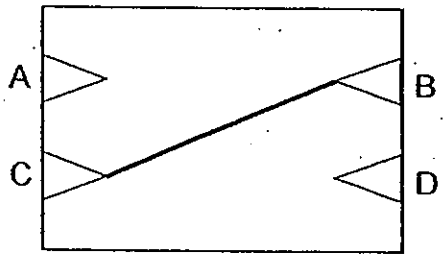
(1)



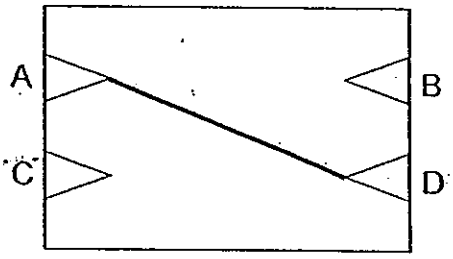
(2)



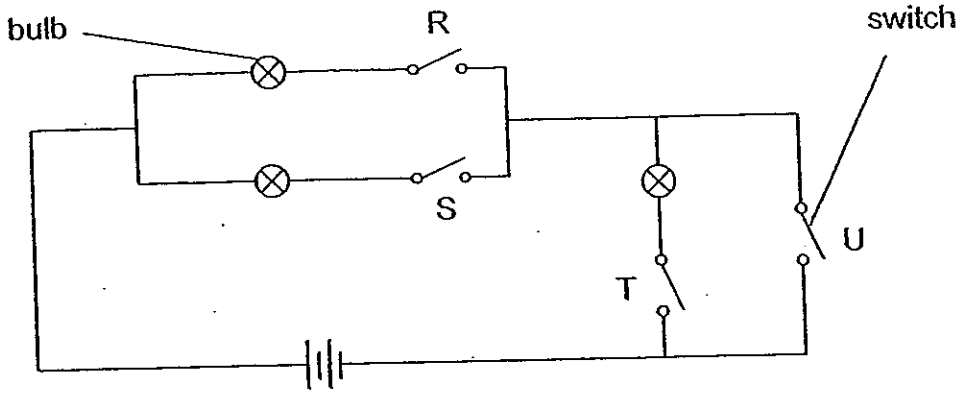
(3)



(4)



26. Study the electrical circuit below carefully.

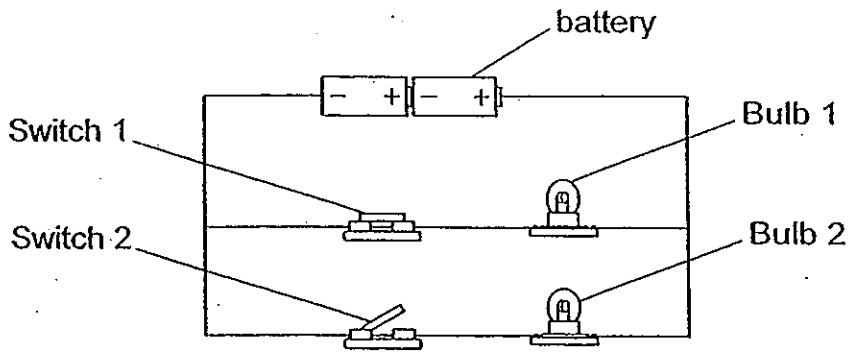


In the circuit diagram above, which switches must be closed for 2 bulbs to light up?

A Switch T and U
B Switch R and S
C Switch R and T
D Switch S and T

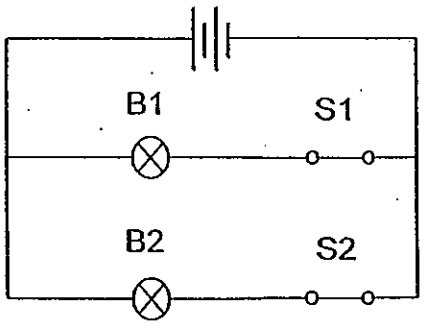
(1) A and B only
(2) B and C only
(3) C and D only
(4) A and D only

27. Study the electrical circuit below.

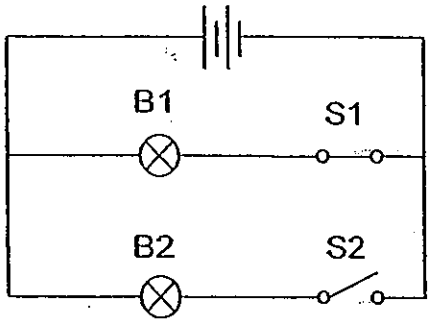


Which one of the following circuit diagrams below best represent the electrical circuit shown above?

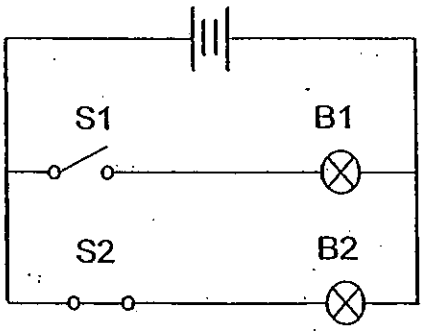
(1)



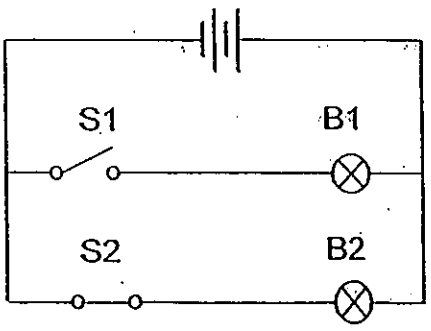
(2)



(3)



(4)



28. Which of the following statements are true about water?

A Water freezes at 0°C.
B When ice melts, its temperature remains constant.
C When water is allowed to boil for a long time, its temperature will rise higher than 100°C.

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

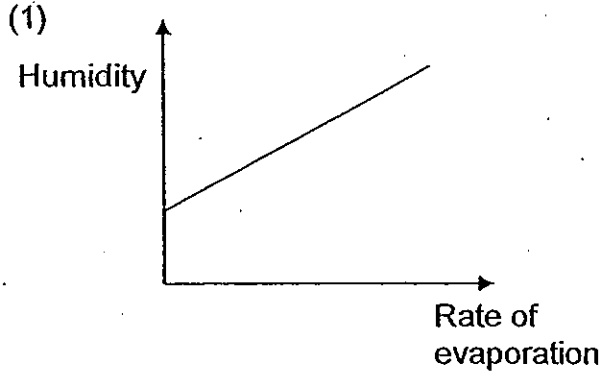
29. Which of the following actions could cause water pollution?

A Dye factory set up near a river
B Throwing rubbish at the beach
C Oil spills from sinking ship vessels
D Dumping waste in dumping ground

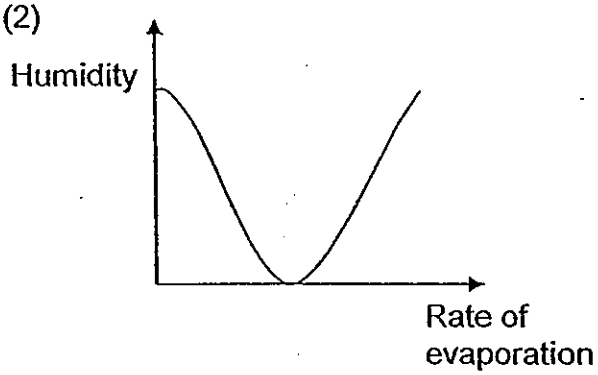
(1) A and B only
(2) C and D only
(3) B, C and D only
(4) A, B and C only

30. Study the following graphs carefully. Humidity is the measurement of the amount of water vapour in the air. Which one of the graphs best shows the relationship between the humidity level in the air and the rate of evaporation of water?

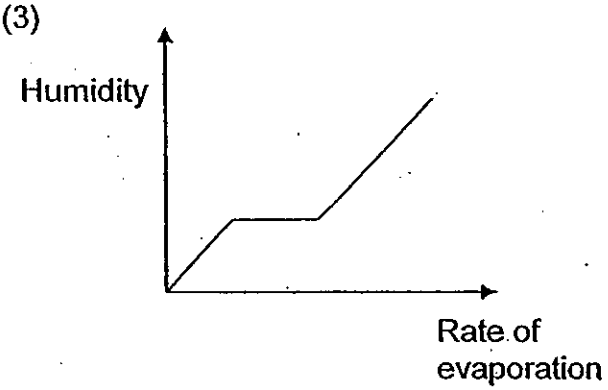
(1)



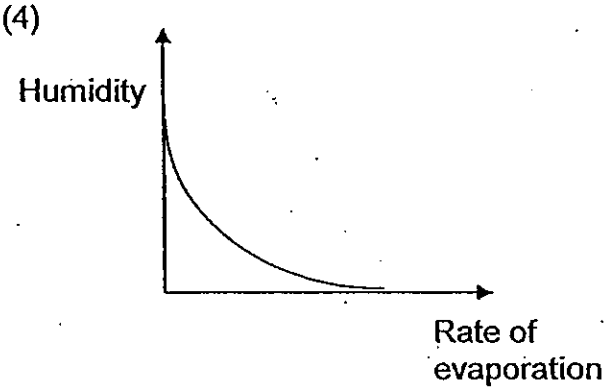
(2)



(3)



(4)



End of Section A

NAME : _____ ( )

CLASS: Primary 5_____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Second Continual Assessment

2010

Primary 5 SCIENCE

(BOOKLET B)

26 August 2010

Booklet A	60
Booklet B	40
Total	100

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

14 questions
40 marks

INSTRUCTIONS TO CANDIDATES

Do not open this booklet until you are told to do so.

Follow all instructions carefully.

Answer all questions.

_____
Parent's Signature/Date

This paper consists of 15 printed pages.

Section B: 40 marks

For questions 31 to 44, write your answers in this booklet.

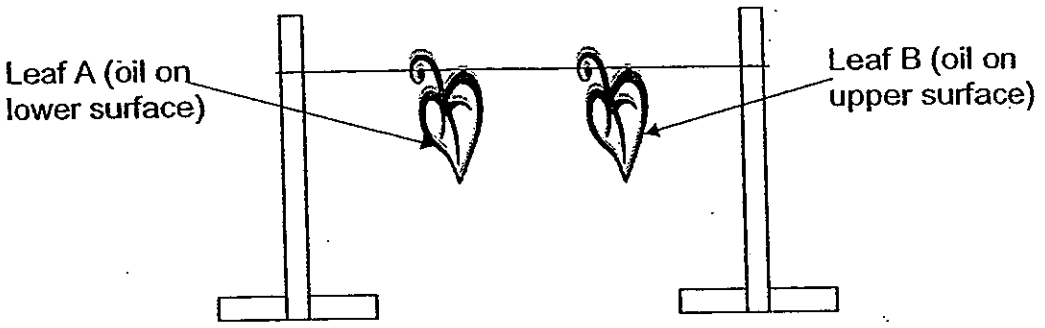
The number of marks available is shown in the brackets [ ] at the end of each question or part question.

---

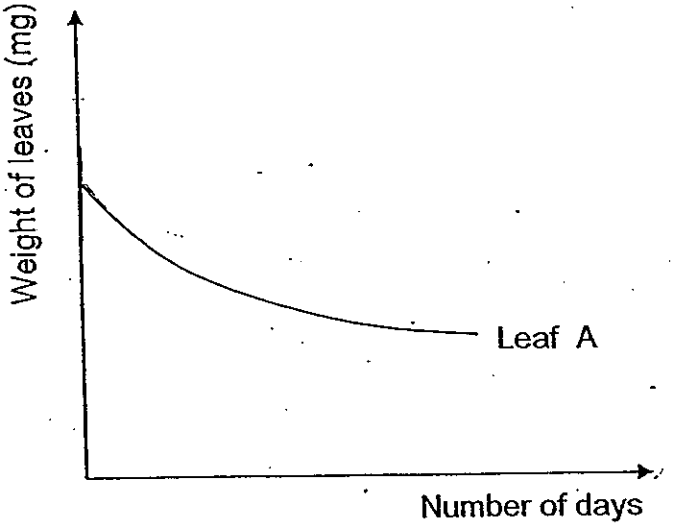
31. The statements below are about the blood circulatory system. Indicate whether each of the statement is true with the letter T and false with the letter F. [2]

	Statement	T/F
(a)	The white blood cells help to fight germs.	
(b)	The red blood cells help to transport oxygen and food.	
(c)	The platelets help blood to clot when an injury occurs.	
(d)	The veins carry oxygen-rich blood from the heart to the other parts of the body.	

32. Salimah plucked two leaves from her vegetable plot and decided to conduct an experiment with them. She weighed the two leaves and found them to have the same weight. She smeared different surfaces of two identical leaves with oil and hung them in a windy place as shown below. She then weighed the leaves every day for 3 days.



(a) The change in the weight of leaf A is shown in the graph below. **Draw** another graph to indicate the change in the weight of leaf B. [1]



(b) Salimah went on to smear all the leaves of a plant completely with oil and she noticed that the plant wilted after 2 days. Suggest 2 reasons why this happened. [2]

(i) _____

(ii) _____

33. Rebecca conducted an experiment with two shorea fruits, X and Y as shown below. The wing-like parts in fruit Y were cut off.

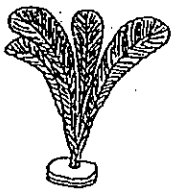
Fruit X

Fruit Y

She dropped both fruits from the same height and recorded the time each took to land on the ground. She did this twice to make sure that her results were accurate.

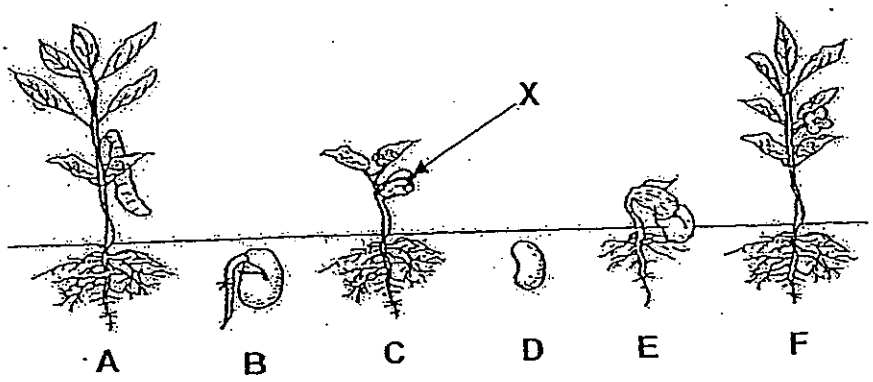
(a) What was the aim of her experiment? [1]

A chapteh as shown below has a similar structure as the shorea fruit.

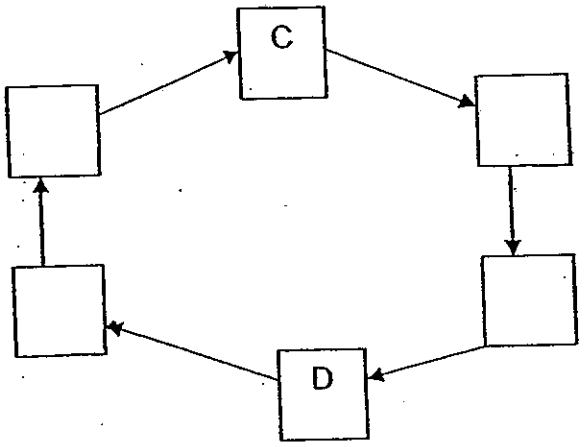


(b) Explain why the chapteh is made in this manner. [1]

34. The diagram below shows the stages of growth of a bean plant.



(a) Arrange the stages of growth of the bean plant in the correct sequence by writing the letters A, B, C, D, E and F in the boxes below. [1]



(b) (i) Name the part labelled X in the diagram C. [1]

_____

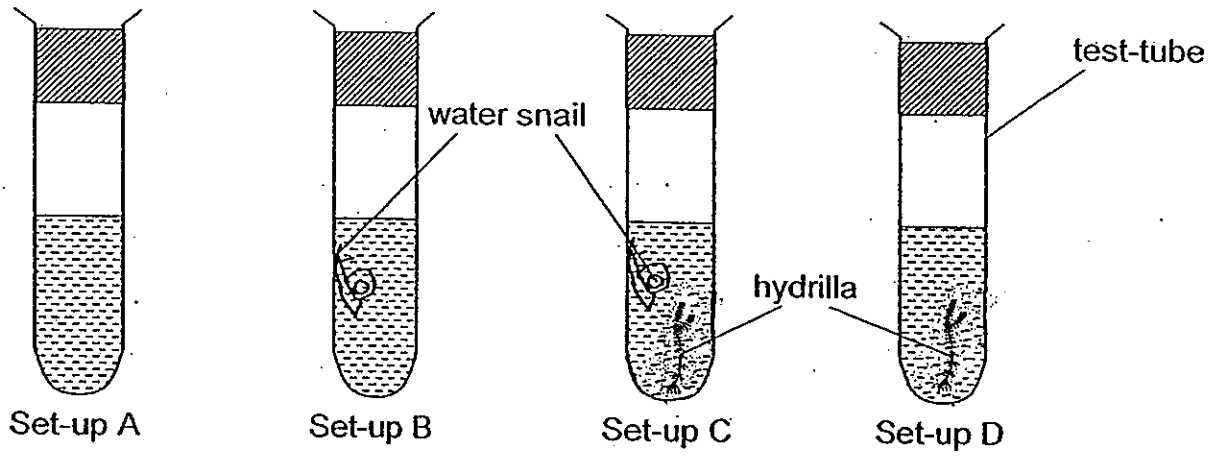
(ii) What happens to part X as the seed continues to grow? [1]

_____

(iii) Explain your answer in (ii). [1]

_____

35. Four test-tubes containing different organisms with the same amount of identical pond water were set up as shown below.

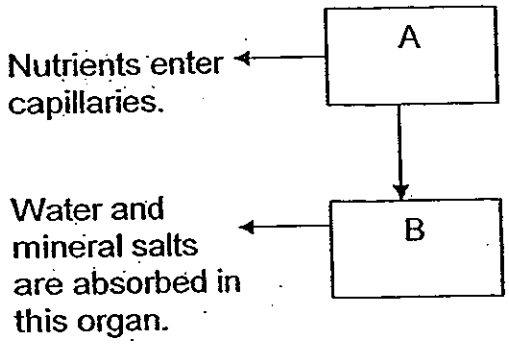


The four test tubes were placed on a test-tube rack in a dark room.

(a) Based on the set-ups above, which of the set-ups, A, B, C or D would have the highest amount of dissolved oxygen after six hours? [1]

(b) Explain your answer in (a). [2]

36. Boxes A and B represent two organs in our digestive system.



(a) Name the two organs, A and B. [1]

(i) Organ A : _____

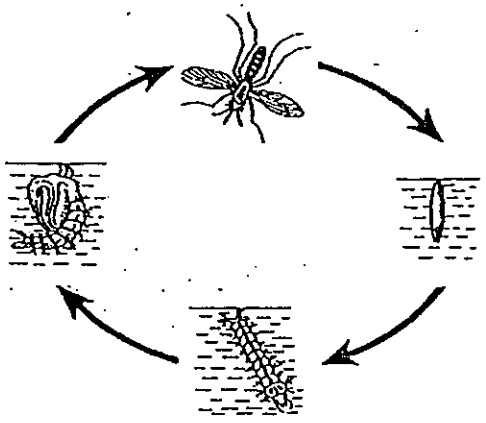
(ii) Organ B : _____

(b) Explain what happens to the food as it goes from Organ A to B. [2]

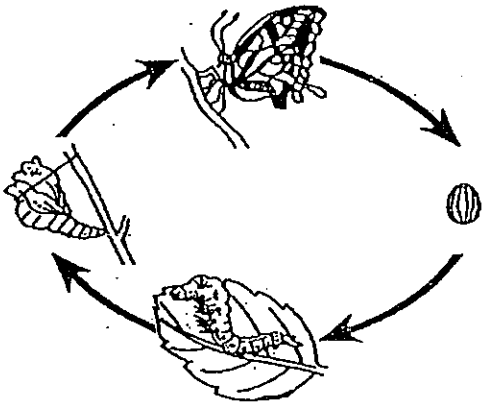
_____

_____

37. Study the life cycle below carefully.



Life cycle of a mosquito



Life cycle of a butterfly

(a) State one difference between the larval stages of the two life cycles. [1]

_____

_____

(b) State one similarity between the life cycles of the mosquito and the butterfly. [1]

_____

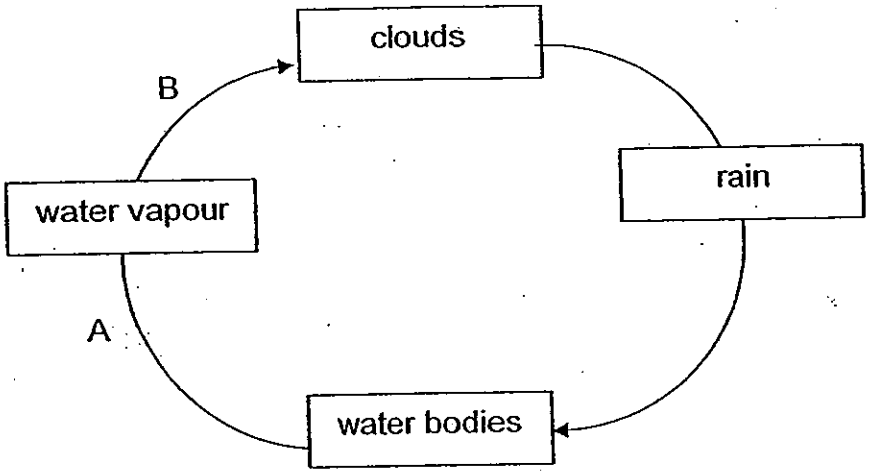
_____

38. (a) Why is water cycle important to living things on Earth? [1]

_____

_____

(b) The diagram below shows the water cycle.



(i) Write down the processes of A and B below: [1]

Process A: _____

Process B: _____

(ii) Explain clearly how Process B takes place. [2]

_____

_____

39. Alex heated a beaker of water for 15 minutes and recorded his observations in the table below.

Time (min)	0	3	6	9	12	15
Temperature of water (°C)	26	49	73	85	100	100

(a) Based on the table above, how long had the water been boiling? [½]

_____

_____

(b) Based on the table above, how long did it take for the water to boil? [½]

_____

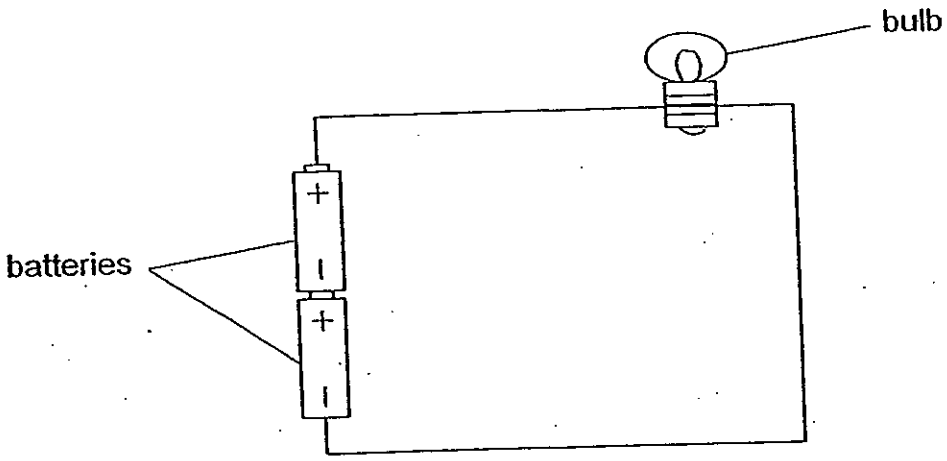
_____

(c) Name 2 factors that help to increase the rate of evaporation of water. [1]

(i) _____

(ii) _____

40. In the experiment set-up shown below, John noticed that the bulb did not light up. His friend told him that he had made a mistake.



(a) What was the mistake that John had made in the above set-up? [1]

_____

_____

(b) After correcting his mistake, the bulb still did not light up. State one possible reason for this. [1]

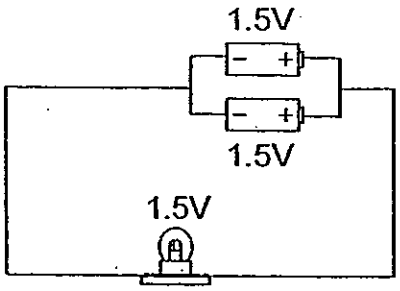
_____

_____

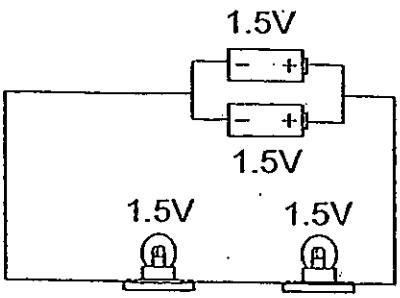
(c) State whether each of the following statements is true (T) or false (F). Write your answers in the space provided. [1]

	Statement	T/F
(i)	The number of bulbs arranged in parallel does not affect the brightness of the bulb.	
(ii)	Good conductors of electricity are generally good conductors of heat.	

41. Study the two circuits A and B carefully.



circuit A



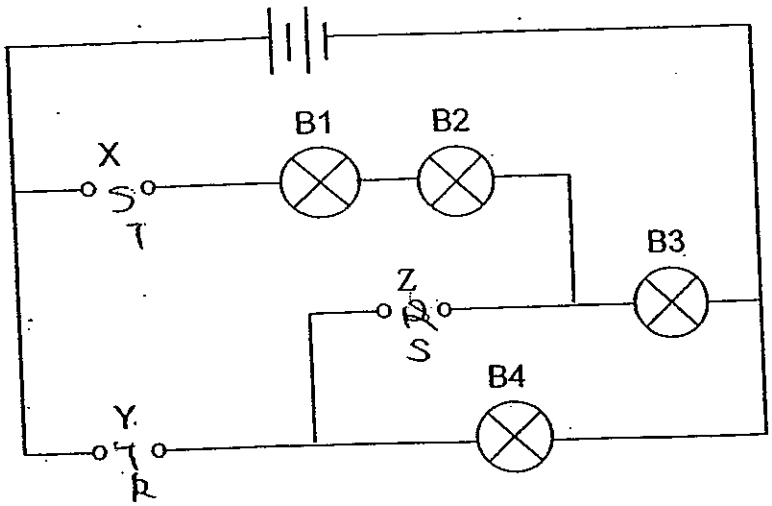
circuit B

(a) Write down the similarity in the arrangement of the batteries between the two circuits. [1]

(b) In what way is the brightness of the bulbs different in circuit A and B? [1]

(c) What will happen to the brightness of the bulb(s) if one battery is removed from each of the circuit? [1]

42. Albert had three rods, R, S and T, made of unknown materials. He placed them in various positions, X, Y and Z, in the circuit diagram shown below.



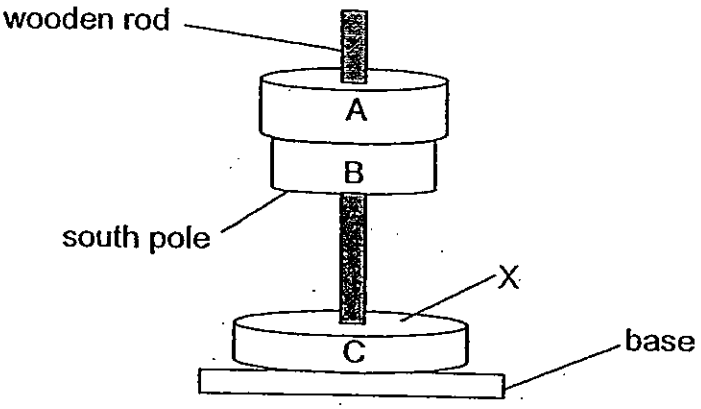
The results of Albert's experiment were recorded in the table below. A tick (✓) in box shows the bulb that was lighted up.

Positions at which the rods were placed			Lamps			
X	Y	Z	B1	B2	B3	B4
R	S	T	✓	✓	✓	

Using the information above, which bulb(s) will be lighted up when the rods were placed at the different positions indicated in the table below? Indicate with a tick (✓) in the correct boxes to show the bulb(s) which will light up. [3]

Positions at which the rods were placed			Lamps			
X	Y	Z	B1	B2	B3	B4
R	T	S				
S	T	R				
T	R	S				

43. Mary has 3 rings made of different materials. The diagram below shows what happens when Mary slots the 3 rings through a wooden rod.

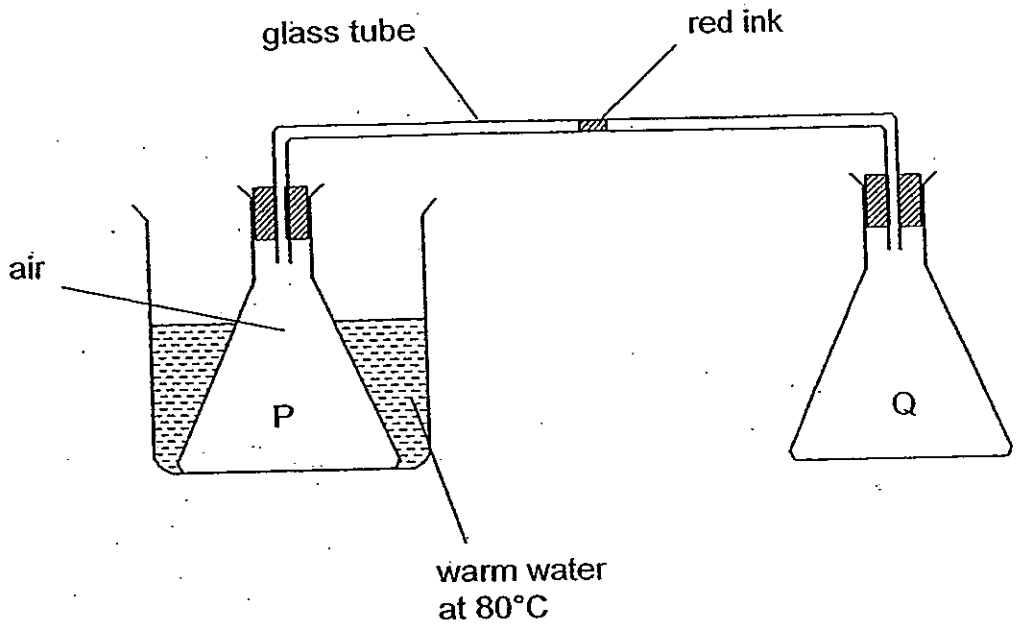


(a) State whether each of the following statements is true (T), false (F) or not possible to tell (NP). [2]

	Statement	Answer
(i)	Ring A is a magnet.	
(ii)	Ring B is a magnet.	
(iii)	Ring A is made of aluminium.	
(iv)	Ring C is a made of magnetic material.	

(b) Identify the pole at X. Explain your answer. [1]

44. In the experiment set-up, a drop of red ink is placed in a glass tube connecting two identical flask, P and Q. Flask P is then placed in a basin of water of warm water as shown below.



(a) What will happen to the drop of red ink after 10 minutes? [1]

(b) Explain your answer in part (a). [2]

End of Paper

ANSWER SHEET

EXAM PAPER 2010

SCHOOL : CHIJ PRIMARY
SUBJECT : PRIMARY 5 SCIENCE

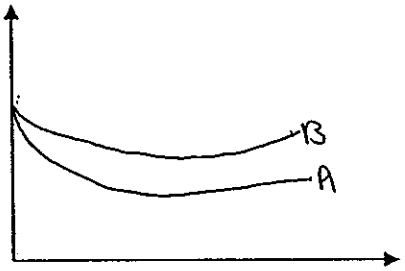
TERM : CA2

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

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
1	**3**	**2**	**1**	**1**	**2**	**3**	**2**	**3**	**2**	**1**	**4**	**4**

31)a)T b)F c)T d)F

32)a)



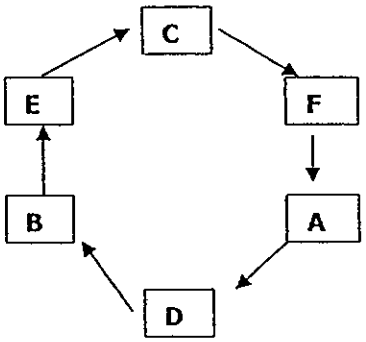
b)i)The oil blocked the stoma on the underside of the leaf and it will not be able to respire, so it will die.

ii)The plants is unable to take in carbon dioxide and photosynthesis.

33)a)She wanted to test whether wing-like structures will help the plant to stay in the air for a longer period of time.

b)So that when you kick it, it will not lose its balance in the air for a longer period of time before falling onto the ground.

34)a)



34)b)i)The seed leaf.
ii)It will shrink in size and soon it will wither and drop off the stem of the plant.
iii)The stored food has been used up by the seed.

35)a)A.
b)It does not have any living things in it, so the amount of carbon dioxide and oxygen remains constant. However, there are living things in other tubes. As they are placed in a dark room, the hydrilla will not be able to make food so it will respire. The snail will give out dissolved carbon dioxide and dissolved oxygen. Thus, there will be the most dissolved oxygen in A.

36)a)i)Small intestines ii)Large intestines
b)After nutrients are being absorbed by the body, the undigested food moves to the large intestines and water and mineral salts in the undigested food are absorbed in the large intestines.

37)a)The larva of the butterfly lives on land but the larva of the mosquito lives in water.
b)Both life cycles have four stages.

38)a)It ensures the continuous supply of water for survival of living things.
b)i)A: Evaporation B: Condensation
ii)The water vapour loses heat as it touches the cooler surface of the atmosphere and condenses from tiny water droplets.

39)a)The water had been boiling for 3 minutes.
b)It took 12 minutes.
c)i)There must be wind. ii)That day must be sunny.

40)a)He did not connect one end of the wire to the metal tip of the bulb.
b)The bulb has fused.
c)i)F ii)T

41)a)In both circuits, the batteries are arranged in parallel.
b)In circuit A, the brightness of the bulb is greater than each of the bulbs in circuit B.
c)The brightness of the the bulbs remains constant.

42)R T S→B1, B2, B3
S T R→
T R S→ B4

43)a)i)NP ii)T iii)NP iv)T
b)The south pole. Only like poles repel each other and in the experiment, B and C are repelling.

44)a)It will more towards the direction where Q is.
b)Heat from the warm water expanded the air in P, pushing the expanded air into the tube and the expanded air than pushes the red ink towards the direction of Q.