TAO NAN SCHOOL 道南学校

SINCERITY & PERSEVERANCE

PRIMARY 5 END-OF-YEAR EXAMINATION 2014

Name: _____ ( ) Date: 27 October 2014

Class: Primary 5 ( ) Time: 8.00 a.m. to 9.15 a.m.

Duration: 1h 15min

Booklet A marks: _____ / 50

Parent's Signature: _____ Total marks: _____ / 80

SCIENCE

BOOKLET A

INSTRUCTIONS TO CANDIDATES

Write your name, class and register number.

Do not turn over this page until you are told to do so.

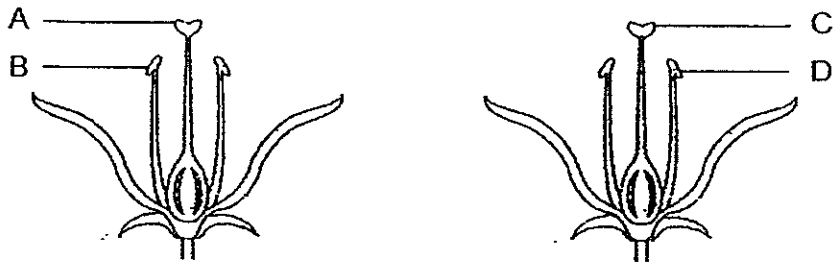
Follow all instructions carefully.

Answer all questions.

Section A (25 × 2 marks)

For each question from 1 to 25, 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.

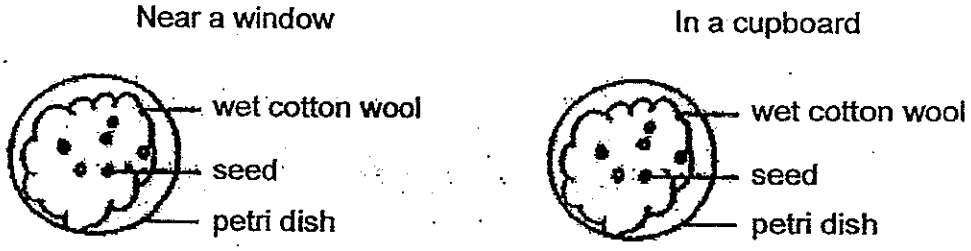
1. The diagrams below show two flowers from the same plant with the parts labelled A, B, C and D.



Pollination occurs when pollen grains are transferred from _____.

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

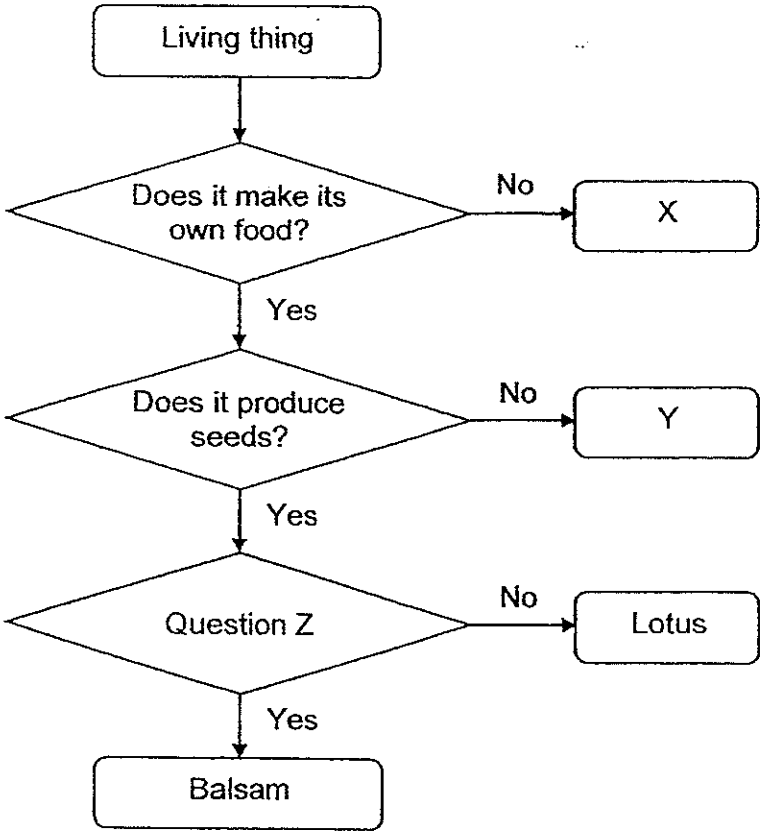
2. In an experiment, Amy prepared two set-ups and placed one near a window and another in a cupboard as shown in the diagrams below.



At the end of the experiment, Amy observed that the seeds from both petri dishes grew into seedlings. What was the aim of her experiment?

(1) To find out if the seeds need water to grow into seedlings.
(2) To find out if the seeds need oxygen to grow into seedlings.
(3) To find out if the seeds need warmth to grow into seedlings.
(4) To find out if the seeds need sunlight to grow into seedlings.

3. Study the flow chart below.



Which of the following represents X, Y and Question Z respectively?

	X	Y	Question Z
(1)	Fern	Mushroom	Are the seeds dispersed by explosive action?
(2)	Mushroom	Mould	Are the seeds dispersed by animals?
(3)	Mould	Moss	Are the seeds dispersed by explosive action?
(4)	Moss	Fern	Are the seeds dispersed by animals?

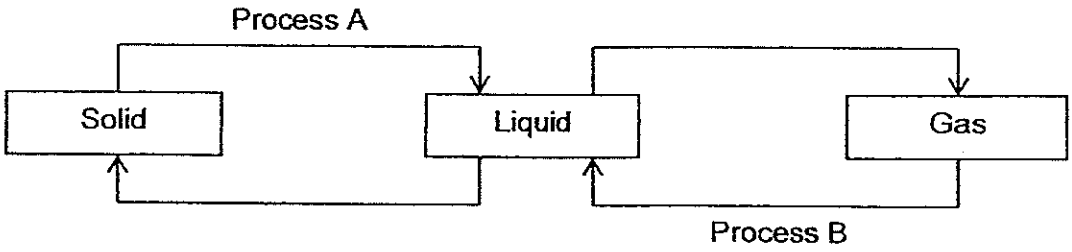
4. Which of the following is true about reproduction in humans?

(1) A human can reproduce with one parent.
(2) A baby is formed in the mother's stomach.
(3) Fertilisation takes place inside the body of a female.
(4) The testes of a mature male produce one sperm at a time.

5. Identify the parts of the plant reproductive system that are similar to the testis, sperm and egg of the human reproductive system.

	Testis	Sperm	Egg
(1)	Anther	Pollen	Ovule
(2)	Filament	Anther	Pollen
(3)	Stigma	Ovule	Ovary
(4)	Ovary	Stigma	Style

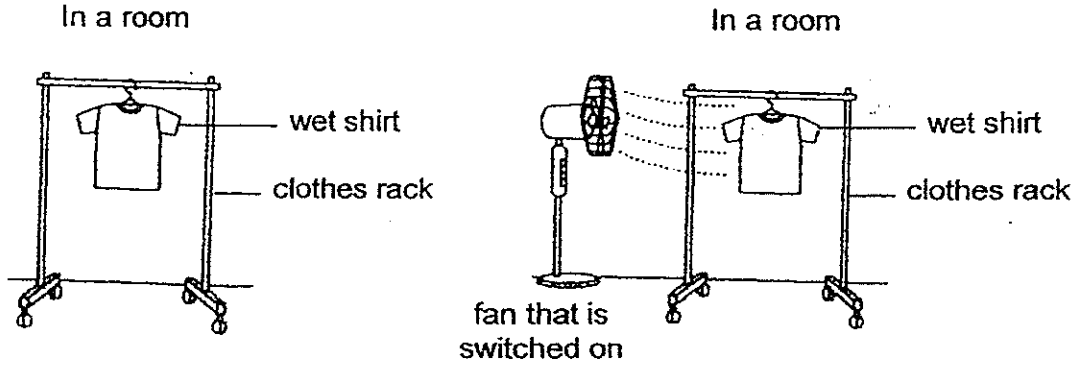
6. The diagram below represents the change of state of water.



Which of the following are represented by Process A and Process B?

	Process A	Process B
(1)	Freezing	Evaporation
(2)	Melting	Evaporation
(3)	Freezing	Condensation
(4)	Melting	Condensation

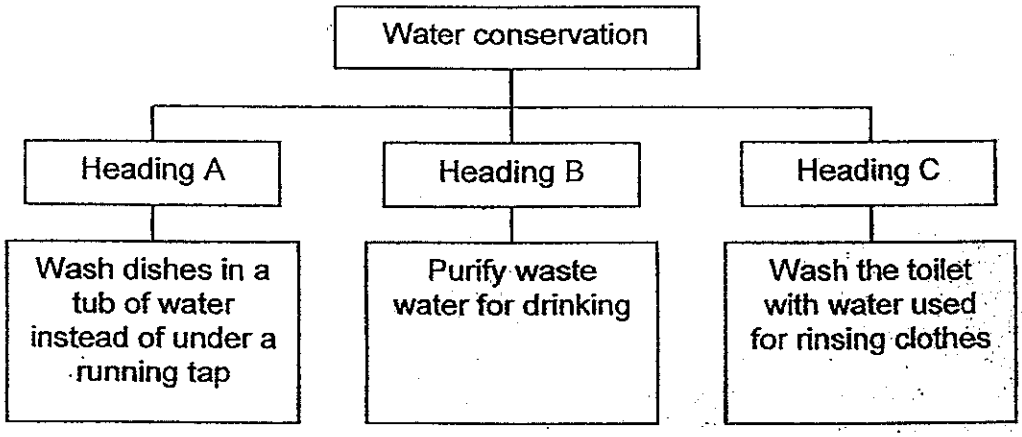
7. Benson used the two set-ups below to find out whether a fan that is switched on helps to dry a wet shirt faster.



Which of the following has Benson changed to ensure a fair test?

(1) The presence of wind
(2) The location of the set-up
(3) The amount of water in the shirt
(4) The exposed surface area of the shirt

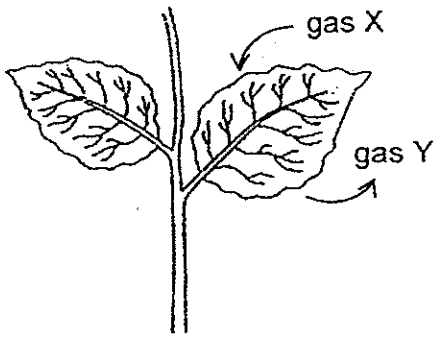
8. Study the classification chart below.



Which of the following represents Heading A, Heading B and Heading C?

	Heading A	Heading B	Heading C
(1)	Reduce	Reuse	Recycle
(2)	Recycle	Reduce	Reuse
(3)	Reuse	Recycle	Reduce
(4)	Reduce	Recycle	Reuse

9. The diagram below shows the leaves of a plant at night.

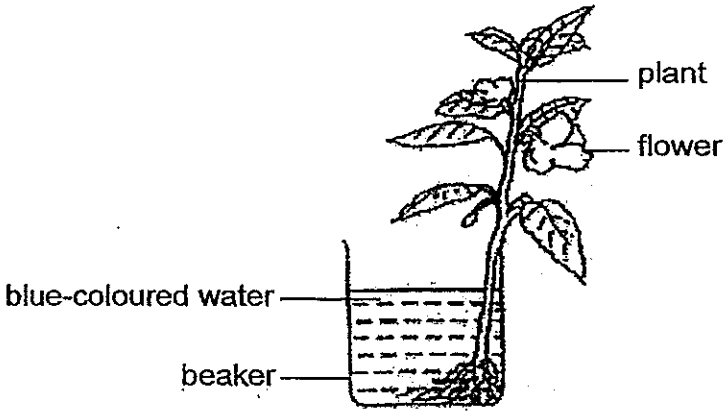


At night

Which of the following represents gas X and gas Y?

	Gas X	Gas Y
(1)	Carbon dioxide	Oxygen
(2)	Oxygen	Carbon dioxide
(3)	Oxygen	Water vapour
(4)	Water vapour	Carbon dioxide

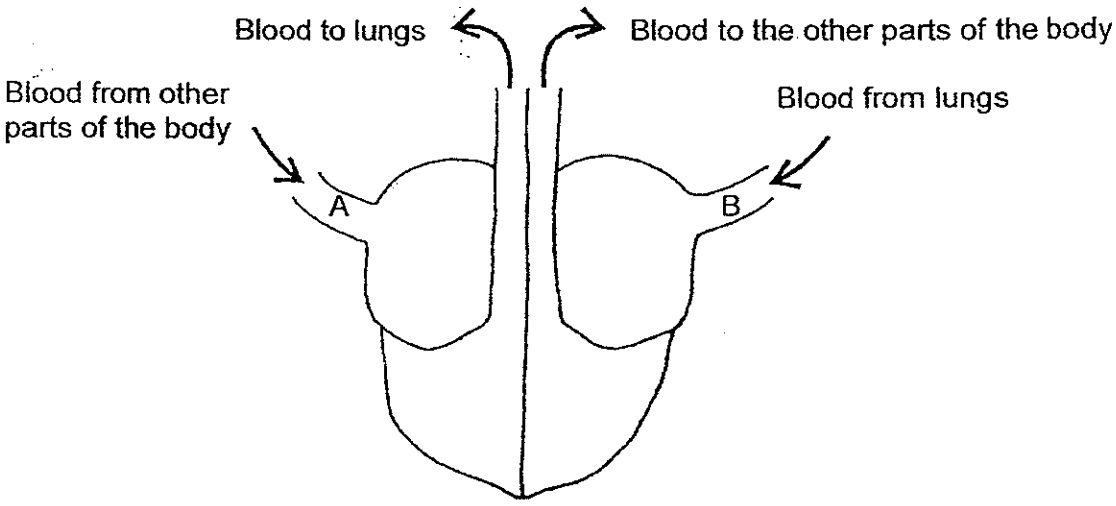
10. In an experiment, David put a plant into a beaker of blue-coloured water. A few hours later, he observed that the flowers of the plant had turned from white to blue.



Based on his observation, what could David conclude?

(1) Water from the roots is lost through the leaves.
(2) Water from the roots is used to make food by the leaves.
(3) Water from the roots is transported to the flower by the stem.
(4) Water from the roots is absorbed by the plant during photosynthesis.

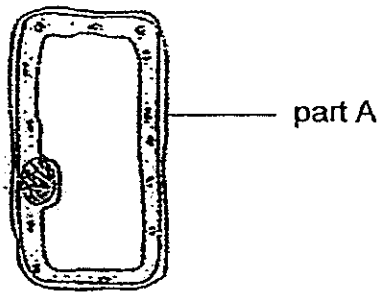
11. The diagram below shows the movement of blood to and from a human heart.



Which of the following about the blood in blood vessels A and B is correct?

	A	B
(1)	Rich in carbon dioxide	Rich in oxygen
(2)	Poor in carbon dioxide	Poor in oxygen
(3)	Rich in carbon dioxide	Poor in oxygen
(4)	Poor in carbon dioxide	Rich in oxygen

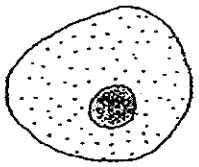
12. The diagram below shows a plant cell.



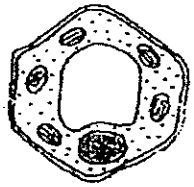
What is the function of part A?

(1) It helps the cell to trap sunlight.
(2) It controls all the activities in the cell.
(3) It contains the genetic material of the cell.
(4) It supports and gives the cell its fixed shape.

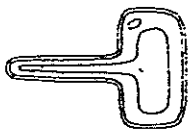
13. The diagrams below show four different types of cells, A, B, C and D.



A



B



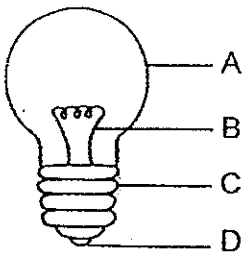
C

D

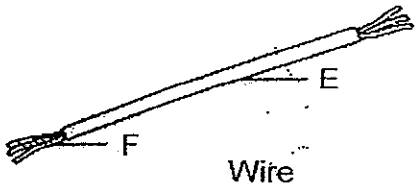
Based on the diagrams above, which of the following is a correct classification of the cells?

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

14. The diagrams below show a bulb with the parts, A, B, C and D, and a piece of wire with the parts, E and F.



Bulb

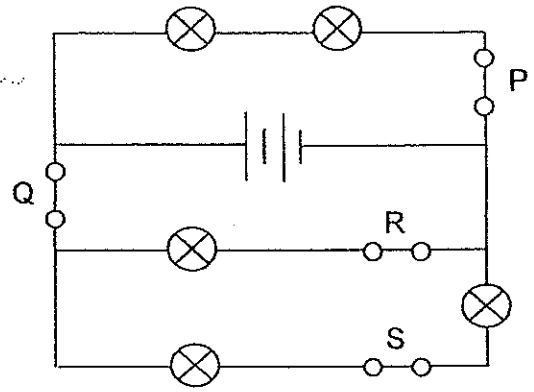


Wire

Which of the following shows the correct classification of the parts labelled A to F?

	Electrical conductor	Electrical insulator
(1)	A and E	B, C, D and F
(2)	B, D and F	A, C and E
(3)	A, B and F	C, D and E
(4)	B, C, D and F	A and E

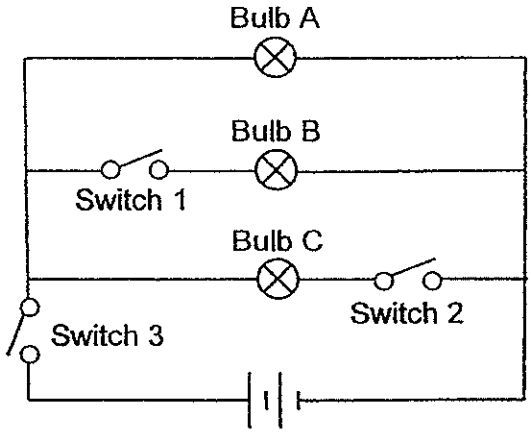
15. Farah set up a circuit with the switches, P, Q, R and S, as shown below.



All five bulbs were lit when all four switches were closed. Farah wanted the fewest number of bulbs to be lit by opening only one switch. Which switch should she open?

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

16. The diagram below shows an electrical circuit.



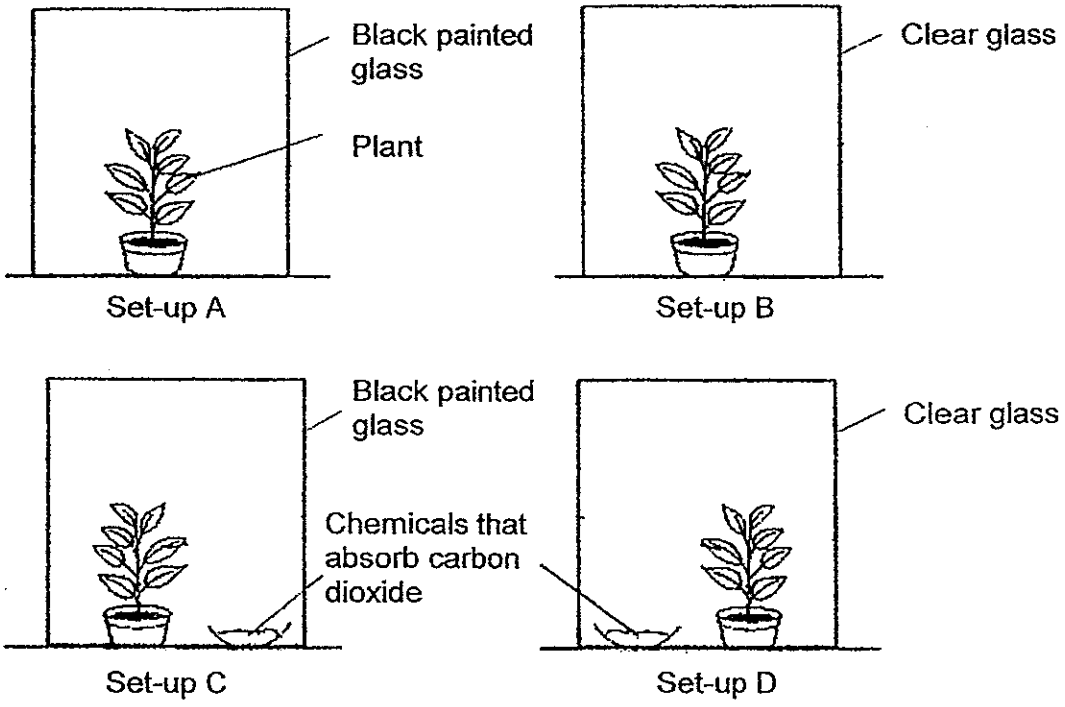
In which order must the switches be closed so that Bulb A lights up first, followed by Bulb B and lastly Bulb C?

	1st switch to close	2nd switch to close	3rd switch to close
(1)	1	2	3
(2)	2	3	1
(3)	3	1	2
(4)	3	2	1

17. Which of the following conserves electricity?

(1) Turn on an air-conditioner instead of a fan.
(2) Leave the lights switched on when sleeping.
(3) Use filament bulbs instead of energy saving bulbs.
(4) Use electrical equipment that switches off automatically

18. Mandy wants to find out if plants need carbon dioxide for photosynthesis. She prepares four set-ups as shown below. She uses the same type of plant in each set-up and places the set-ups near a window.

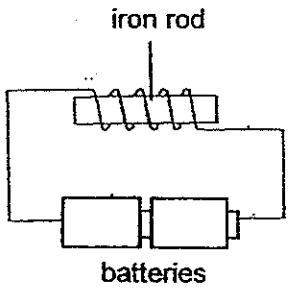


Which two set-ups should Mandy use to find out if plants need carbon dioxide for photosynthesis?

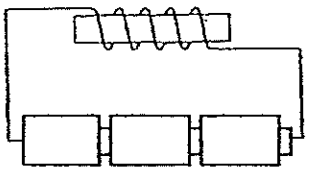
(1) Set-up A and Set-up B
(2) Set-up A and Set-up C
(3) Set-up B and Set-up C
(4) Set-up B and Set-up D

19. The iron rods and batteries in each set-up below are identical. In which set-up will the iron rod be able to attract the most number of iron nails?

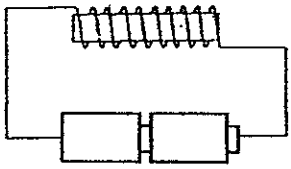
(1)



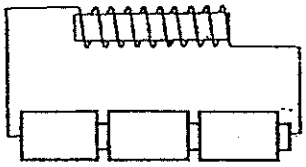
(2)



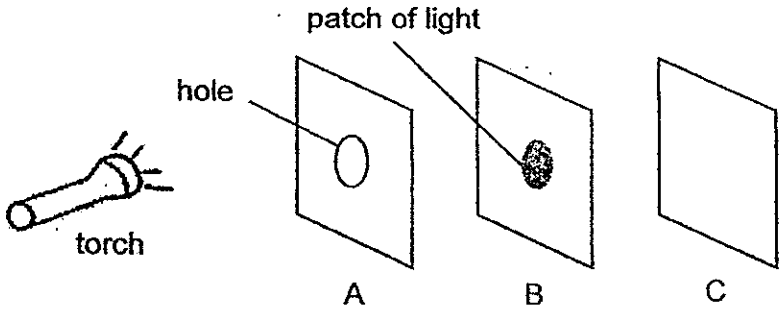
(3)



(4)



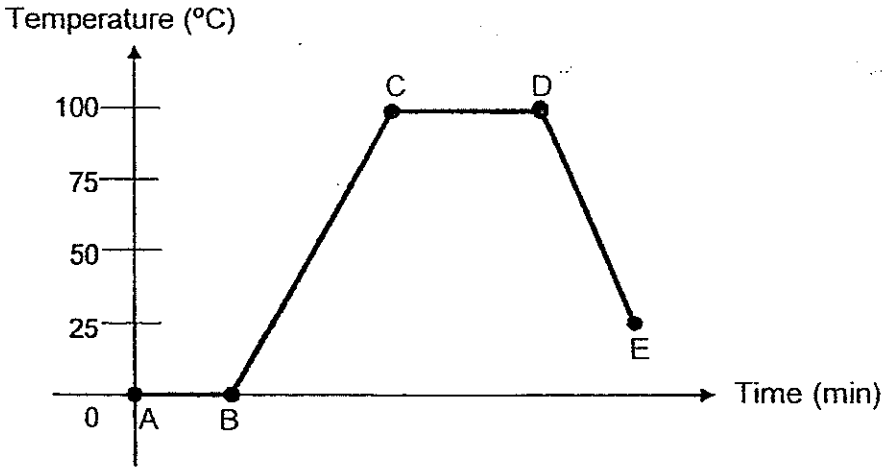
20. The experiment shown below is carried out in a dark room. The sheets, A, B and C, are arranged in a straight line. When the torch is switched on, a bright circular patch of light is seen on the sheet, B, only.



Which of the following are the materials that the sheets, A, B and C, are made of respectively?

	A	B	C
(1)	Rubber	Wood	Clear plastic
(2)	Clear plastic	Wood	Rubber
(3)	Wood	Clear plastic	Rubber
(4)	Clear plastic	Rubber	Wood

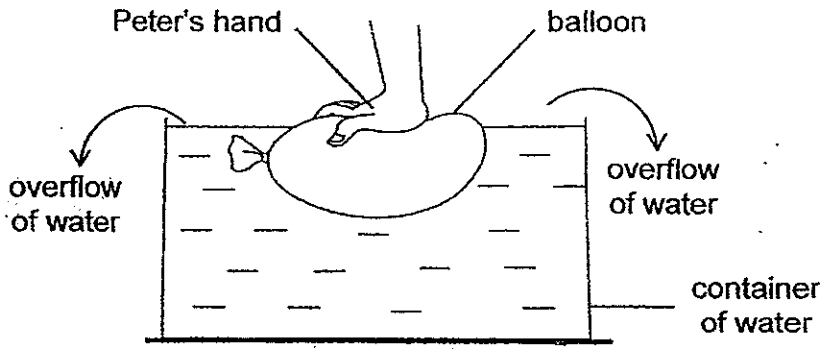
21. A beaker of ice cubes was heated and left to cool to room temperature. The graph below shows its temperature over time.



Based on the graph above, which of the following shows the time period(s) of heat gain?

(1) BC only
(2) DE only
(3) AB and CD only
(4) AB, BC and CD only

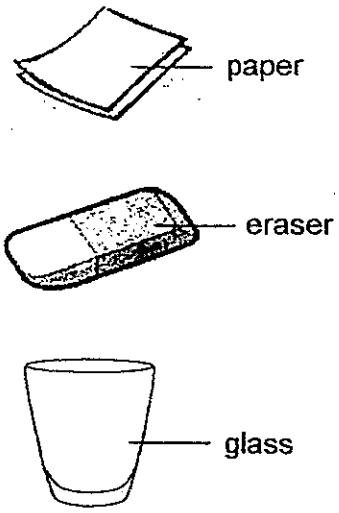
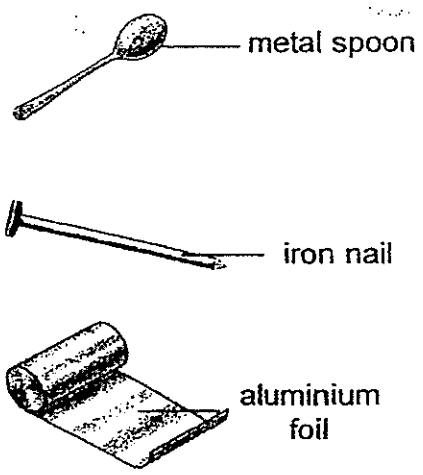
22. Peter filled a balloon with air and put it in a container of water. When he pushed the balloon downwards, he observed that some water in the container overflowed as shown below.



Based on Peter's observation, what could he conclude about air?

(1) Air occupies space.
(2) Air is a mixture of gases.
(3) Air has no definite shape.
(4) Air has no definite volume.

23. Six objects are classified into two groups as shown below.

Group X	Group Y
	

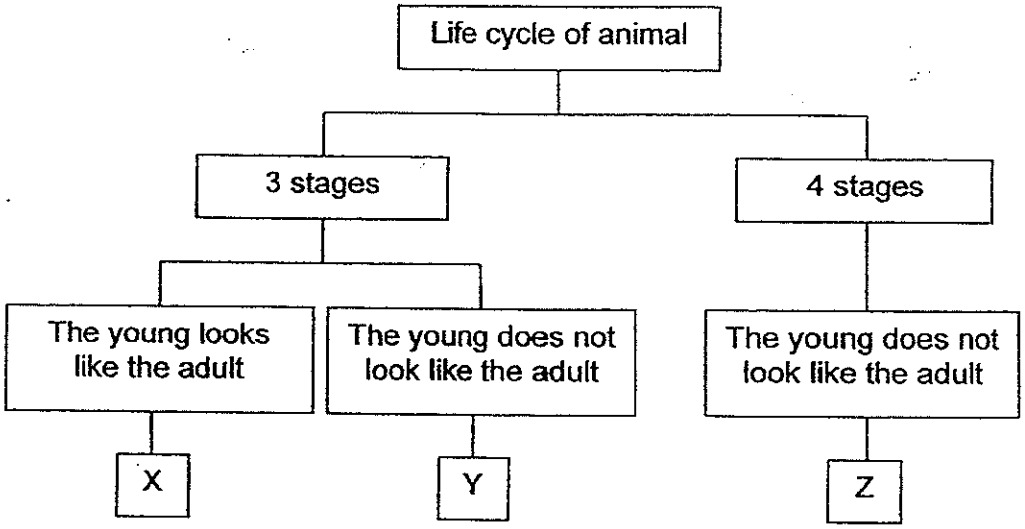
How are the objects grouped?

(1) By the material the objects are made of
(2) By whether the objects float or sink in water
(3) By the ability of the objects to allow light to pass through
(4) By whether the objects are conductors or insulators of electricity

24. Which of the following about the digestive system is correct?

	Organ involved in the digestion of food	**Organ involved in the absorption of food**
(1)	Mouth	Large intestine
(2)	Stomach	Small intestine
(3)	Small intestine	Stomach
(4)	Large intestine	Mouth

25. Study the classification chart below. X, Y and Z represent three different animals.



Which of the following are the animals represented by X, Y and Z?

	X	Y	Z
(1)	Cockroach	Beetle	Mosquito
(2)	Chicken	Frog	Butterfly
(3)	Grasshopper	Chicken	Butterfly
(4)	Cockroach	Mosquito	Frog

TAO NAN SCHOOL 道南学校

SINCERITY & PERSEVERANCE

PRIMARY 5 END-OF-YEAR EXAMINATION 2014

Name: _____ ( ) Date: 27 October 2014

Class: Primary 5 Time: 8.00 a.m. to 9.15 a.m.

Duration: 1h 15min

Parent's Signature: _____ Marks: _____ / 30

SCIENCE

BOOKLET B

INSTRUCTIONS TO CANDIDATES

Write your name, class and register number.

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Section B (30 marks)

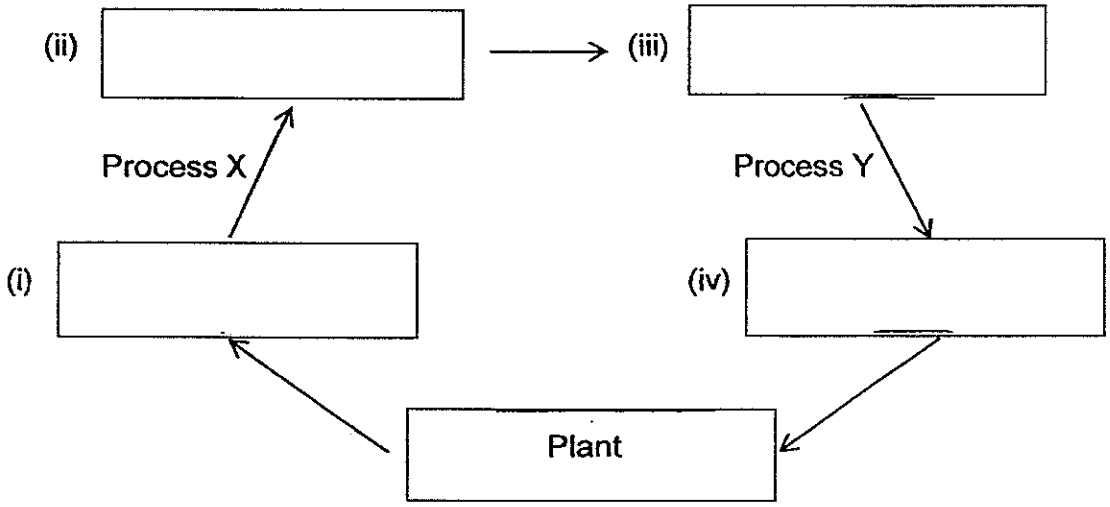
For the questions, 26 to 35, write your answers in the spaces provided.

26. A life cycle of a tomato plant is shown below.

(a) Use the Helping Words given below to complete the life cycle of a tomato plant. [2]

Helping Words

Seed	Seedling	Flower	Fruit

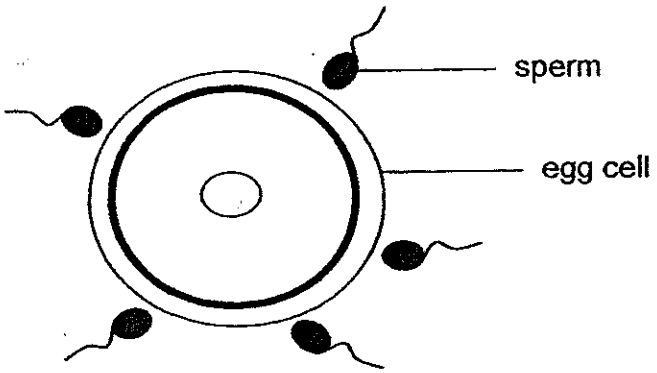


(b) Name Process X and Process Y. [1]

Process X: _____

Process Y: _____

27. Look at the diagram below.



(a) What must happen for fertilisation to take place? [1]

_____

(b) Which animal, chicken or frog, has its eggs fertilised the same way as humans? [1]

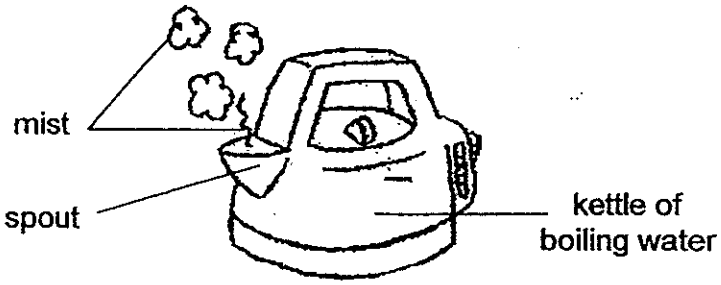
_____

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

_____

_____

28. Three boys, Ali, Bala and Charles, observed a kettle of boiling water as shown below.



Each of the boys made a statement about what he thought was happening.

Ali:	There is more water vapour in the air now.
Bala:	The mist coming out from the spout is a gas.
Charles:	The temperature of the boiling water is rising.

(a) Which boy made the correct statement? [1]

_____

(b) Rewrite the other two statements to make them correct. [2]

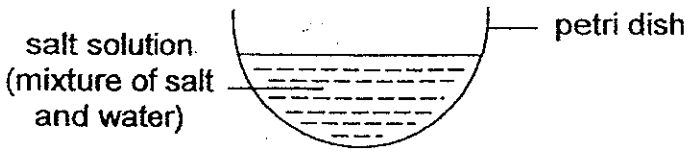
_____

_____

_____

_____

29. Zoe set up an experiment as shown below in an open field on a hot day.



(a) After a few hours, salt was found in the petri dish. Explain how salt was obtained in the petri dish. [1]

_____

_____

(b) Identify another factor in the open field besides temperature which would affect the time taken for salt to be obtained in the petri dish. Describe how it affects the time taken for the salt to be obtained. [2]

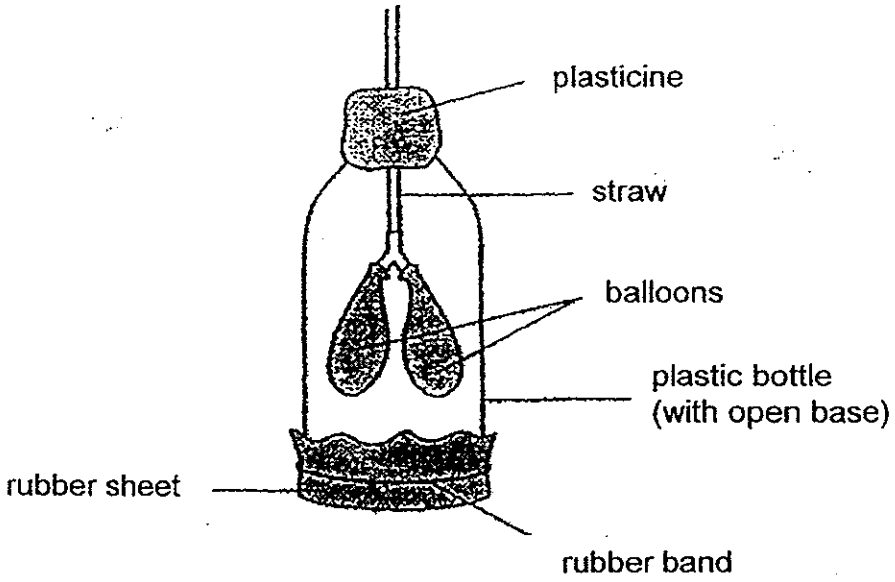
_____

_____

_____

_____

30. Jim made a model of a human respiratory system as shown below.



(a) Which parts of our respiratory system do the parts of the model represent? [2]

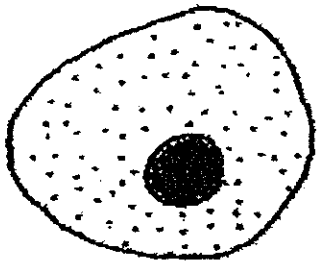
Parts of the Model	Respiratory System
straw	
balloon	
rubber sheet	
plastic bottle	

(b) What would happen to the balloons when Jim pulled the rubber sheet downwards and when he pushed it upwards? [1]

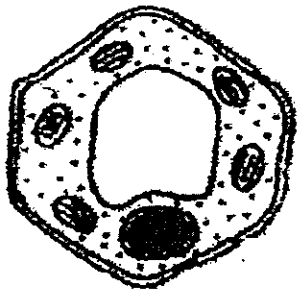
Rubber sheet	Balloons
Pulled downwards	
Pushed upwards	

31. Observe the diagram of an animal cell and a plant cell below.

Animal Cell



Plant Cell



(a) Name two parts of a plant cell and an animal cell that can be found in both cells. [1]

_____

(b) Name two parts of the cell that can be found in a plant cell only. [1]

_____

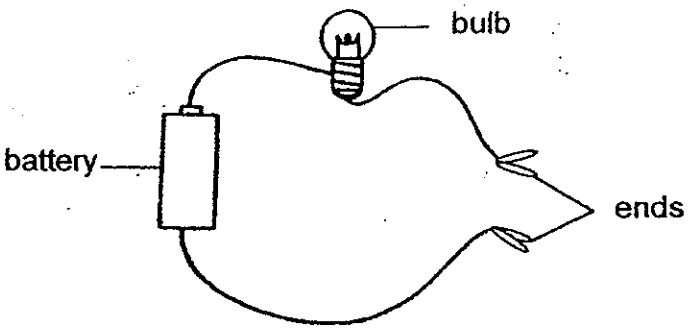
(c) State the function of each cell part given in (b) [1]

_____

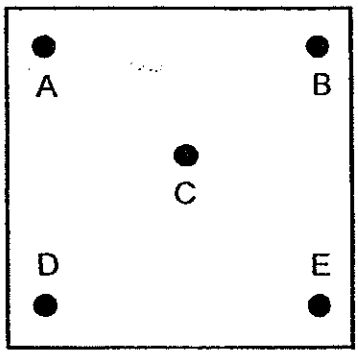
_____

_____

32. The circuit card below has a metal thumbtack at each of the points, A, B, C, D and E. Some of the thumbtacks are connected by two wires behind the card.



Circuit Tester

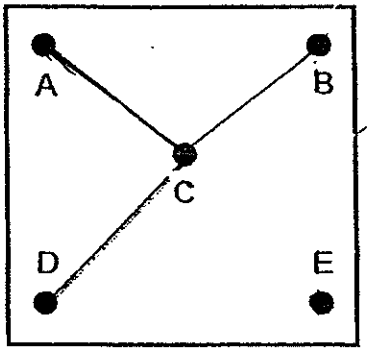


Circuit Card

To find out how these thumbtacks are connected, the two ends of the circuit tester are connected to two different thumbtacks at a time. The results are in the table below.

Circuit tester connected to circuit card at the points	**Does the bulb light up?**
A and C	Yes
A and E	No
B and C	No
B and E	No
C and D	Yes

(a) Based on the table above, draw the arrangement of the two wires behind the circuit card in the diagram below. [1]



(b) Will the bulb light up if the circuit tester is connected to the thumbtacks, A and D? [1]

_____

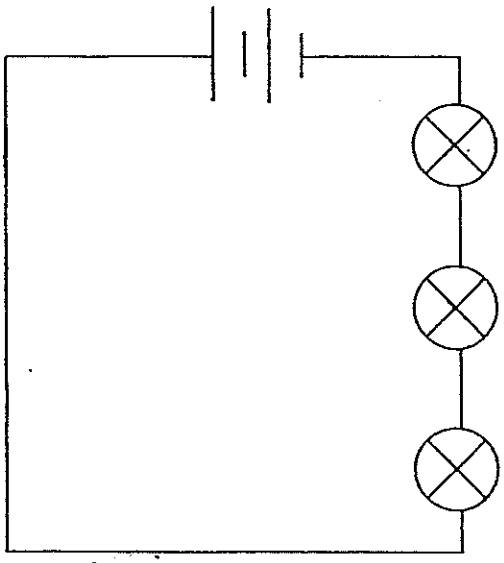
(c) After a while, the bulb will become dim. Suggest a way to increase the brightness of the bulb. [1]

_____

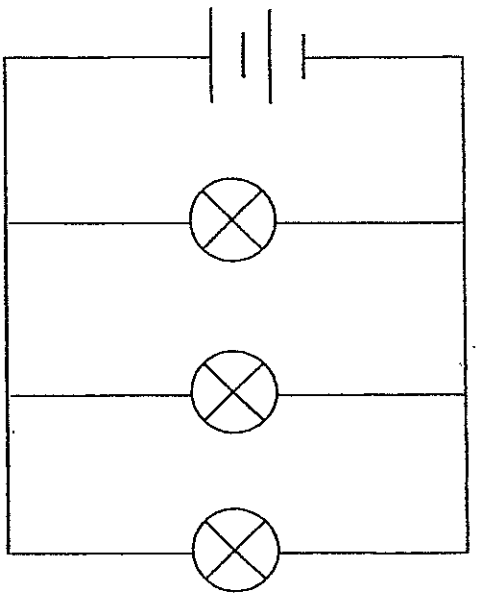
_____

33. Study the circuits below.

Circuit X



Circuit Y



(a) State two advantages of arranging the bulbs in parallel in Circuit Y compared with arranging the bulbs in series in Circuit X. [2]

Advantage 1: _____

_____

_____

Advantage 2: _____

_____

_____

(b) Draw a switch (O——O) which can switch on or switch off the three bulbs together in Circuit Y above. [1]

34. (a) For each of the following statements, write "T" for "True" or "F" for "False" in the boxes provided. [2]

(i) Only the Sun provides energy for photosynthesis. ☐

(ii) Plants that are not green cannot photosynthesise. ☐

(iii) The stem of the cactus can photosynthesise. ☐

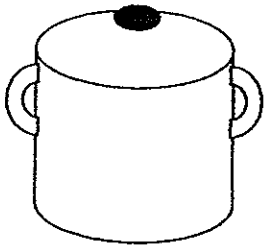
(iv) Plants take in mineral salts from the soil for photosynthesis. ☐

(b) What is the function of chlorophyll in plants? [1]

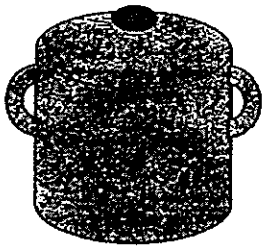
_____

_____

35. Ashley ~~Ashton~~ conducted an experiment using three similar pots, A, B and C, as shown below. Pot A had a yellow surface, Pot B had a red surface and Pot C had a blue surface. ~~He~~ she poured an equal volume of water at room temperature into each pot. ~~He~~ she then started to boil the water in the pots at the same time.



Pot A (Yellow)



Pot B (Red)

Pot C (Blue)

The table below shows the time taken for the water in each pot to start boiling.

Pots	Time taken for the water in each pot to start boiling (min)
Pot A (Yellow)	15
Pot B (Red)	10
Pot C (Blue)	5

(a) What was the aim of Ashley's experiment? [1]

_____

_____

(b) What were the variable(s) which Ashley had to keep unchanged? Put a tick (✓) in the correct box(es) to show these variables. [1]

Variable	
Size of pot	
Colour of pot	
Material of pot	
Thickness of pot	

(c) Based on the result given in the table, what could Ashley conclude about the experiment? [1]

_____

_____

_____

— End of Paper —

EXAM PAPERS 2014

SCHOOL: TAO NAN SCHOOL
SUBJECT: SCIENCE
LEVEL: PRIMARY 5
TERM: SA 2

BOOKLET A

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
3	4	3	3	1	4	1	4	2	3
Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	4	2	4	2	3	4	4	4	1
Q21	Q22	Q23	Q24	Q25					
4	1	4	2	2					

BOOKLET B

Q26 a) (i) Flower (ii) Fruit (iii) Seed (iv) Seedling
b) Process X: fertilisation. Process Y: germination

Q27 a) The sperm must fuse with the egg.
b) Chicken
c) Fertilisation takes place inside the body of the female chicken and human.

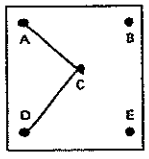
Q28 a) Ali
b) Bala: The steam coming out from the spout is a gas.
Charles: The temperature of the boiling water remains constant.

Q29 a) The water has evaporated, leaving the salt behind as salt cannot evaporate.
b) If wind is present, the time taken for the salt to be otained is shorter.

Q30 a) windpipe, lungs, diaphragm, chest.
b) inflate, deflate

Q31 a) Nucleus and cell membrane.
b) Chloroplast and cell wall.
c) Chloroplast contains chlorophyll to photosynthesis.

Q32 a)



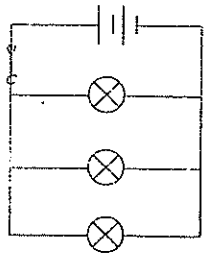
Circuit Card

b) Yes
c) Add more batteries.

Q33 a) Advantage1: The bulbs in circuit Y would be brighter than the bulbs in circuit X.

Advantage 2: In circuit Y, if one bulb fuses, the other two would still be lighted. But for circuit X, if one bulb fuses, none of the other two can stay lighted.

Circuit Y



Q34 a) (i) F (ii)F(iii)T(iv)F

b) It helps to trap sunlight to photosynthesis.

Q35 a) She wanted to find out if colour of the pots affects the time taken for the water in each pot to start boiling.

b) Size of pot, Material of pot, Thickness of pot

c) The colour of the pots effects the time taken for the water to start boiling.