

PRIMARY 3 END-OF-YEAR EXAMINATION 2016

Name : _____ ()

Date: 25 October 2016

Class : Primary 3 ()

Time: 8.00 a.m. – 9.30 a.m.

Parent's Signature : _____

Marks: _____ / 46

**SCIENCE
BOOKLET A**

INSTRUCTIONS TO CANDIDATES

Write your name, register number and class.

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

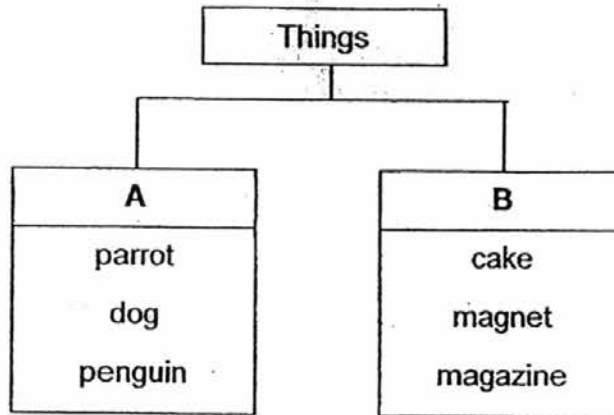
Follow all instructions carefully.

Answer all questions.

Section A (23 x 2 marks)

For each question from 1 to 23, 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.

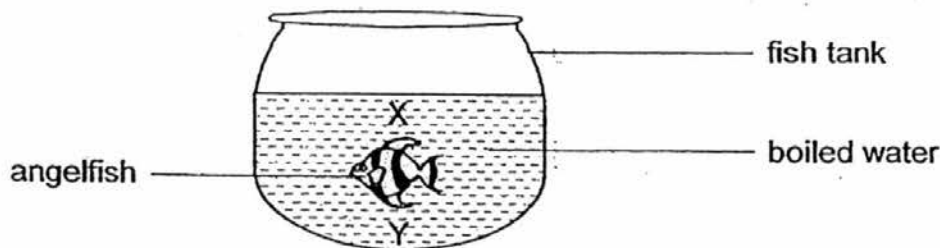
1. Study the classification chart below.



Which of the following is correctly represented by A and B?

	A	B
(1)	Can swim	Cannot swim
(2)	Can reproduce	Cannot reproduce
(3)	Cannot be eaten	Can be eaten
(4)	Can make its own food	Cannot make its own food

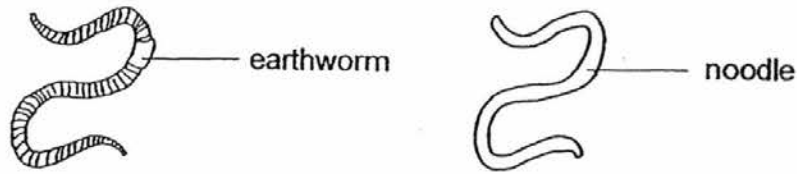
2. Study the diagram below.



A healthy and well-fed angelfish was placed in the fish tank above. At which position would it be found after 30 minutes and why?

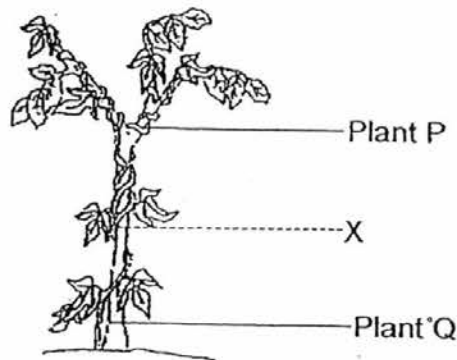
- (1) X because it had died due to lack of food.
- (2) X because it wanted to take in oxygen from the surrounding air.
- (3) Y because it could easily take in more water.
- (4) Y because it needed wet gills to take in oxygen from the water.

3. The pictures below show an earthworm and a strand of noodle.



Which of the following observations show that only the earthworm is a living thing?

- (1) The earthworm has a moist surface while the noodle has a dry surface.
 - (2) The earthworm feels rough while the noodle feels smooth when touched.
 - (3) The earthworm coils up while the noodle remains the same shape when touched.
 - (4) The earthworm is made up of many parts while the noodle is made up of only one part.
4. Plant P climbs up another plant, Plant Q, to get more sunlight to make food.



The stem of Plant P was cut at X. The part above X died after some time. Why?

- (1) It did not get enough water.
 - (2) It had no support from Plant Q.
 - (3) It did not have enough sunlight.
 - (4) It had no support from the roots.
5. Study the classification table below carefully.

P	Q	R	S
bat	turtle	frog	duck
dolphin	snake	newt	goose
spiny anteater	crocodile	salamander	ostrich

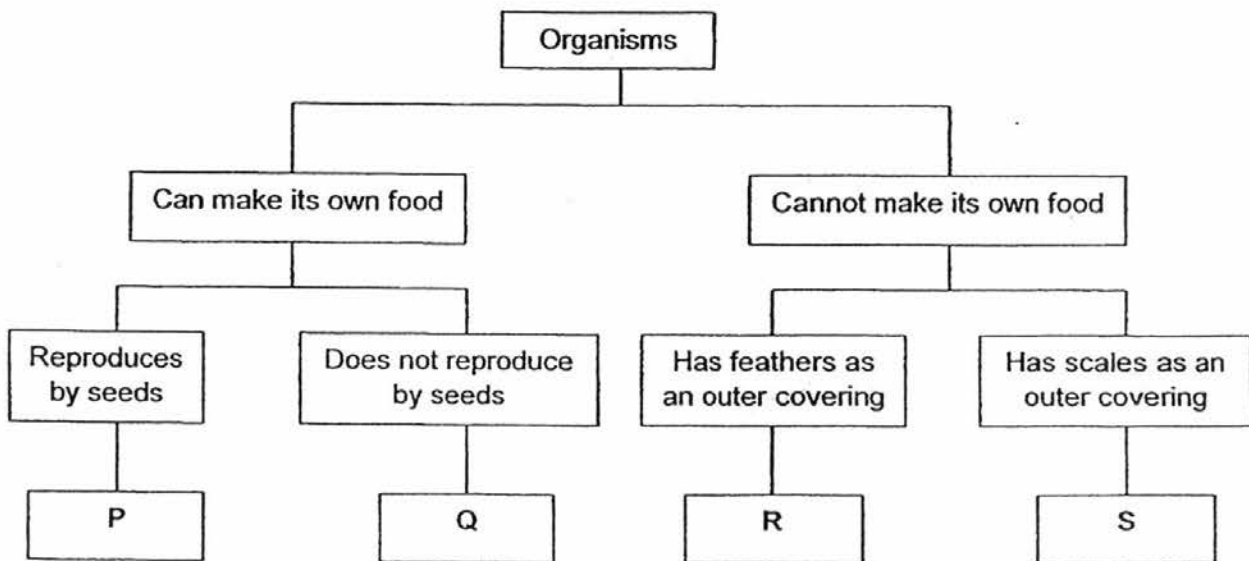
Which groups of animals, P, Q, R or S, lay eggs?

- (1) P and S only
- (2) Q and R only
- (3) Q, R and S only
- (4) P, Q, R and S

6. Which of the following statements about all non-flowering plants and fungi is correct?

- (1) Both have chlorophyll.
- (2) Both reproduce by spores.
- (3) Both feed on other living things.
- (4) Both do not make their own food.

7. Four organisms, P, Q, R and S, are classified according to the flow chart below.



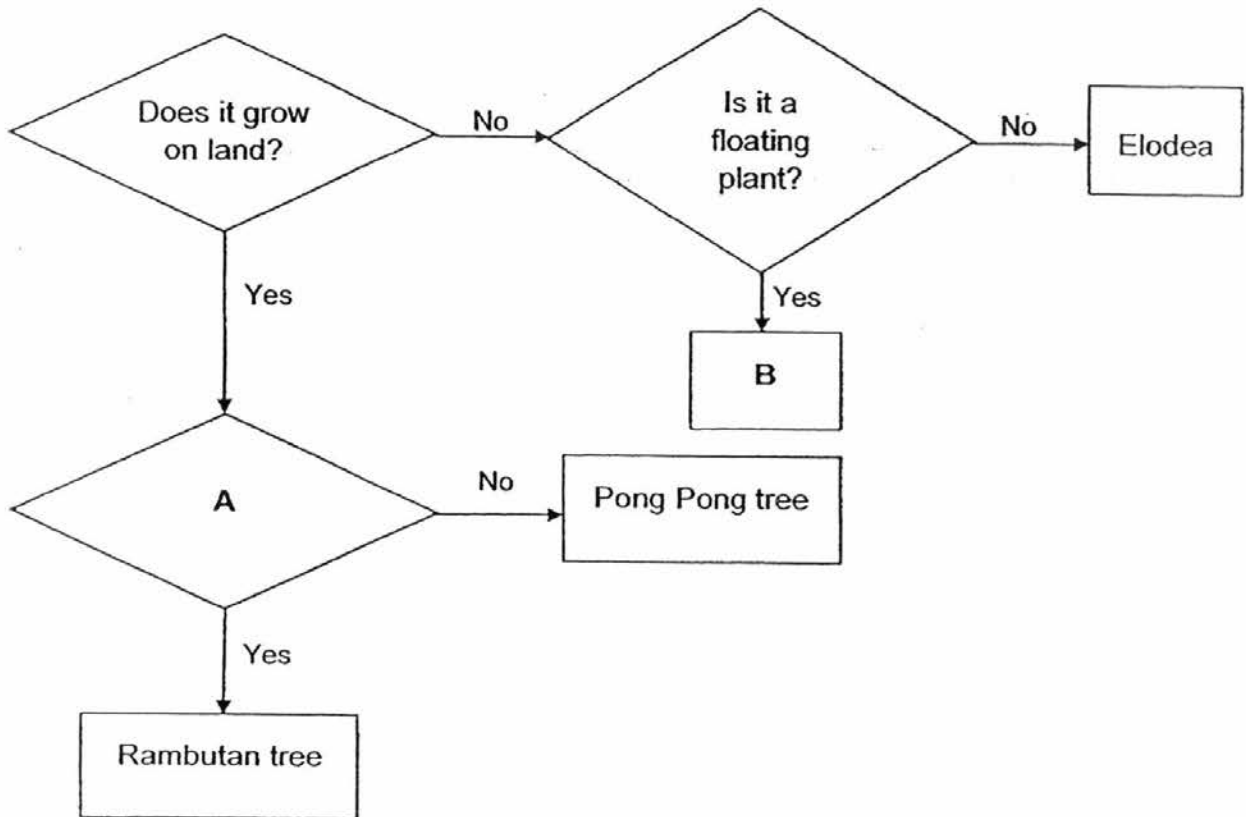
Based on the flow chart above, which of the following statements about P, Q, R and S, is definitely true?

- (1) Both P and Q are plants.
- (2) P is a plant while Q is a fungi.
- (3) R could be a platypus while S could be a fish.
- (4) Q could be a mushroom while S could be a turtle.

8. What is the similarity between insects and reptiles?

- (1) The young look like the adults.
- (2) They reproduce by laying eggs.
- (3) They eat the same type of food.
- (4) They have the same type of outer covering.

9. The flowchart below can be used to identify some types of plants.



What do A and B in the flowchart represent?

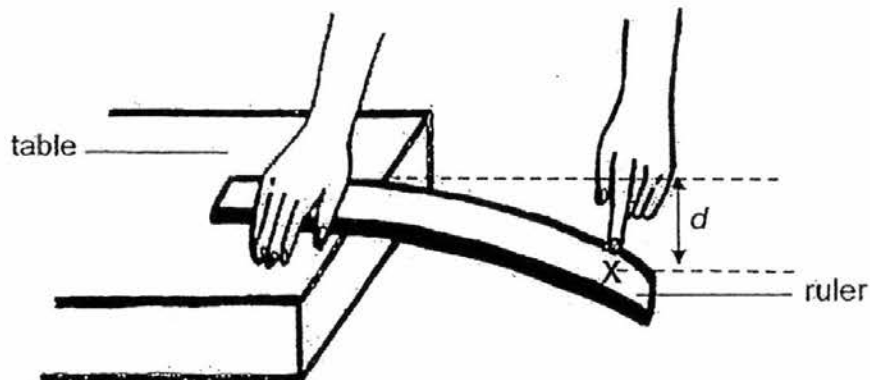
	A	B
(1)	Is it a flowering plant?	Moss
(2)	Is the fruit edible?	Water hyacinth
(3)	Does the fruit have a rough texture?	Bird's nest fern
(4)	Does the fruit have only one seed?	Water lily

10. Joy conducted an experiment with 3 objects, Q, R and S. Her observations of their properties are shown in the table below.

Object Property	Q	R	S
Flexible	Yes	No	Yes
Magnetic	No	No	No
Waterproof	No	Yes	No
Transparent	No	Yes	No

Which property should she use to group objects Q, R and S together?

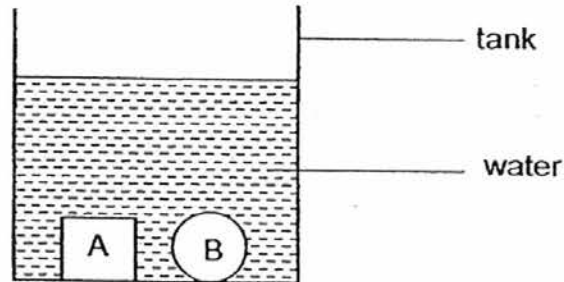
- (1) Flexibility
 - (2) Magnetism
 - (3) Ability to absorb water
 - (4) Ability to allow light to pass through them
11. Joshua conducted an experiment using the set-up below.



He bent 4 rulers made of different materials by pressing at point X. Then, he measured the distance, d , moved by one end of the rulers before they broke. What property of the ruler is he testing?

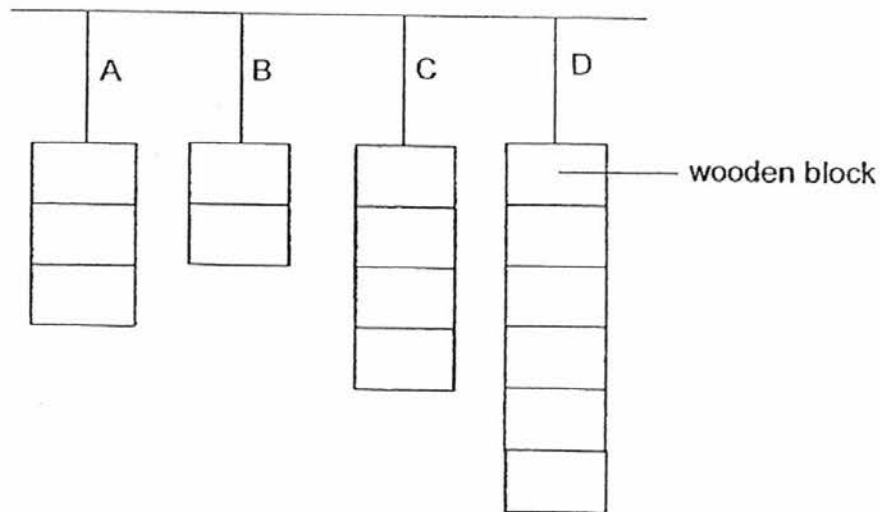
- (1) Flexibility
- (2) Transparency
- (3) Ability to float or sink
- (4) Whether it is waterproof

12. Timothy placed two objects, A and B, into a tank of water. The diagram below shows what happened.



Based on the results of the experiment, what can he conclude about the two objects?

- (1) Both sink in water.
 - (2) Both are waterproof.
 - (3) Both have the same shape.
 - (4) Both are made of the same material.
13. Strings A, B, C and D are made of different materials. The diagram below shows the greatest number of identical wooden blocks each string can support without breaking.



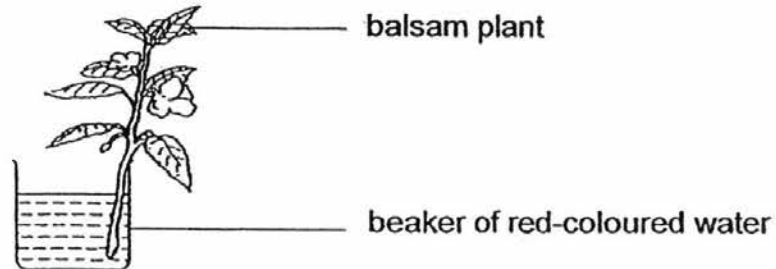
Which string/(s) can support 4 wooden blocks without breaking?

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

14. What is the function of the tiny openings in the leaves?

- (1) Trap light energy from the sun to make food.
- (2) Allow exchange of gases between plant and surroundings.
- (3) Hold the leaves up so that they can get sunlight to make food.
- (4) Climb up other plants for support to get sunlight to make food.

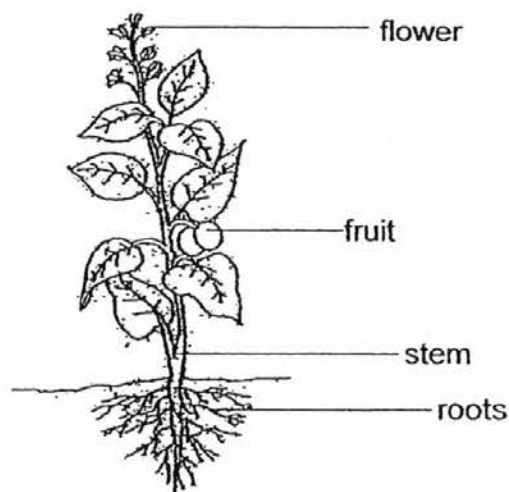
15. Mary puts a balsam plant in a beaker of red-coloured water. A few hours later, she observes that its flowers have turned from white to red.



What does this experiment show?

- (1) The flowers take in water for the plant.
- (2) The plant takes in water through the roots.
- (3) The stem carries water from the stem to the rest of the plant.
- (4) The leaves use the water from the plant to make food to stay alive.

16. The diagram below shows a plant growing in a garden.



Which part of the plant allows it to get maximum amount of sunlight to make food?

- (1) Fruit
- (2) Stem
- (3) Roots
- (4) Flower

17. Which of the following systems of the human body is correctly matched to its function?

	System of the human body	Function
(1)	Skeletal system	Protects organs in the body
(2)	Circulatory system	Carries waste materials to all parts of the body
(3)	Respiratory system	Pumps blood around our body
(4)	Muscular system	Supports our body

18. Which of the following organ systems work together to allow us to run?

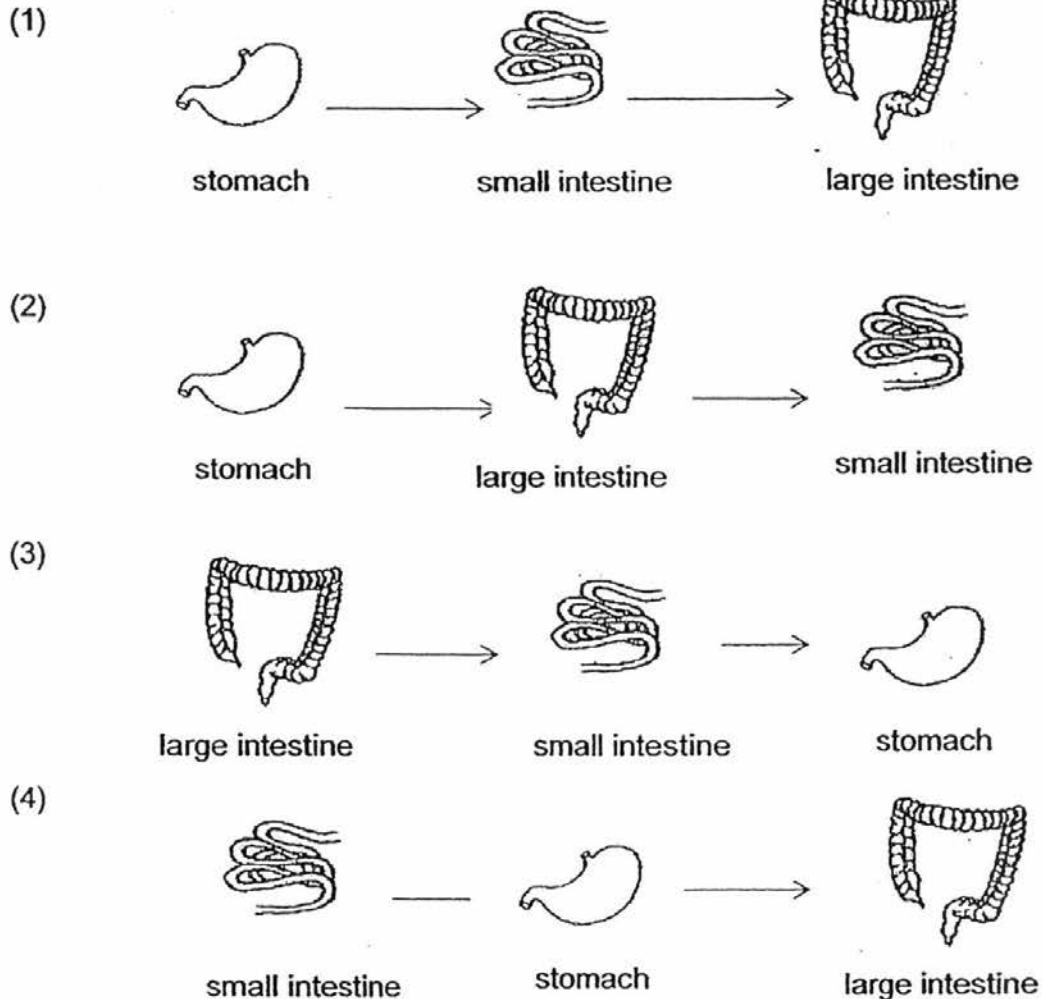
A : Skeletal system
 B : Muscular system
 C : Digestive system
 D : Circulatory system
 E : Respiratory system

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

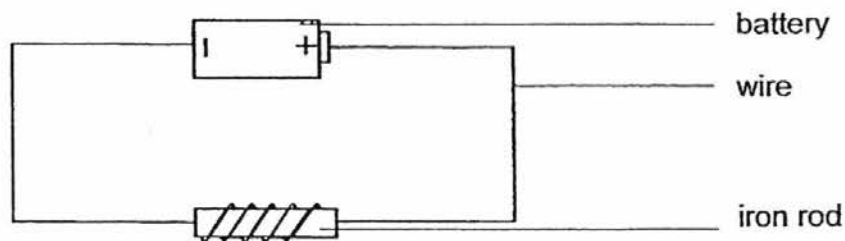
19. What is the function of the large intestine in the human digestive system?

- (1) It digests food.
 (2) It passes the digested food to the blood.
 (3) It removes water from the undigested food.
 (4) It passes the digested food out of the body.

20. Which of the following shows the correct order when food moves through some parts of the human digestive system?



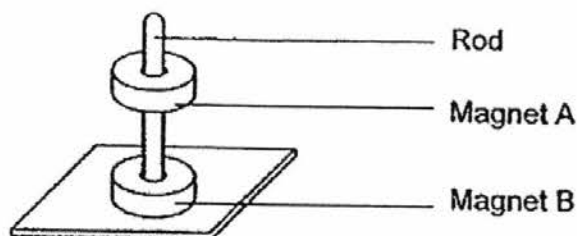
21. May Ling made an electromagnet with 5 coils of wire around an iron rod as shown below.



What can May Ling do to increase the strength of the electromagnet?

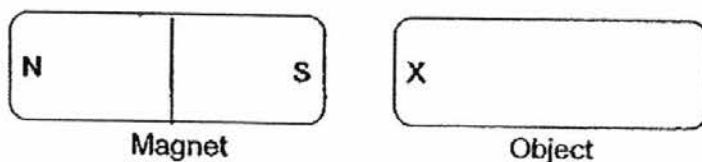
- (1) Change the battery to a magnet.
- (2) Increase the number of batteries.
- (3) Change the iron rod to a glass rod.
- (4) Decrease the number of coils of wire around the iron rod.

22. Two ring magnets, Magnet A and Magnet B, are put through a rod as shown below.



Why is Magnet A suspended above Magnet B?

- (1) Both magnets attract the rod.
 - (2) Magnet B is stronger than Magnet A.
 - (3) Like poles of both magnets repel each other.
 - (4) N-pole of Magnet A repels S-pole of Magnet B.
23. Minghao conducted an experiment using the set-up shown below to find out if two objects, object A and object B, are magnets. He placed part X of the object near the S-pole and N-pole of the magnet respectively.



The results of his experiment are shown in the table below.

		When Part X of Object A is placed near the magnet	When Part X of Object B is placed near the magnet
Part of magnet	S-pole	No reaction	Attracted to it
	N-pole	No reaction	Attracted to it

Based on his observations, which of the following conclusions is definitely correct?

- (1) Object A is a magnet
- (2) Object B is a magnet.
- (3) Object B is made of aluminium.
- (4) Object A is a non-magnetic object.



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Name : _____ ()

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Parent's Signature : _____

**SCIENCE
BOOKLET B**

INSTRUCTIONS TO CANDIDATES

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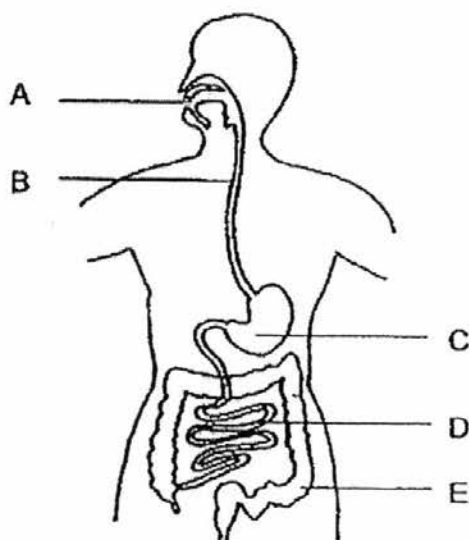
Answer all questions.

Booklet A	46
Booklet B	34
Total	80

Section B (34 marks)

For questions 24 to 34, write your answers in the spaces provided.

24. The diagram below shows the human digestive system.



- (a) At which parts of the digestive system, A, B, C, D or E, do digestion take place?

[1]

Part/ (s) : _____

- (b) At which part of the digestive system, A, B, C, D or E, does digestion end? Identify this part.

[1]

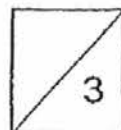
Part _____

Name of part : _____

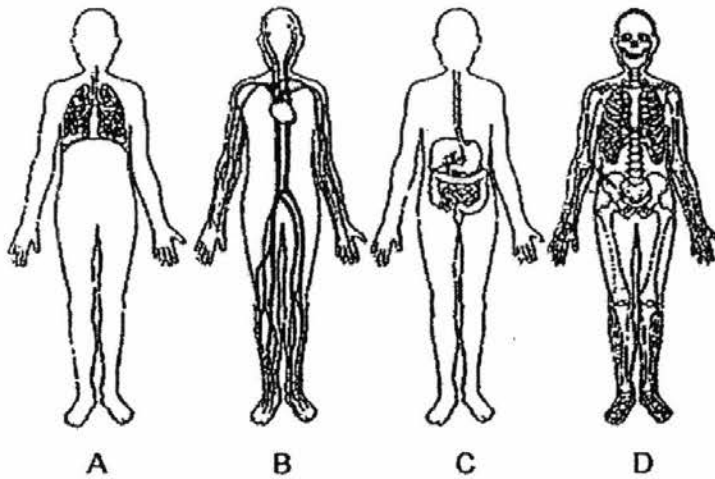
- (c) At which part of the digestive system, A, B, C, D or E, is the digested food absorbed into the bloodstream? Identify this part.

[1]

Part _____



25. The following diagrams show 4 human systems, A, B, C and D.



(a) Identify the 4 systems shown above.

[2]

	Systems	Name of system
(i)	A	
(ii)	B	
(iii)	C	
(iv)	D	

(b) Which system, A, B or D, collects digested food from system C and transports it to the rest of the body?

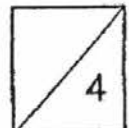
[1]

System _____

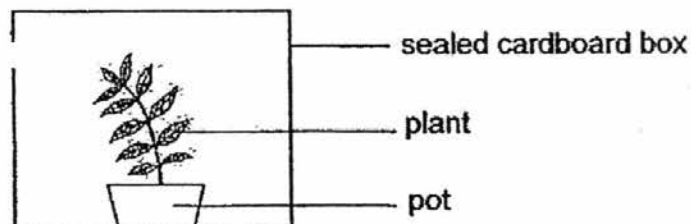
(c) Which system, B, C or D, collects oxygen from system A and transports it to the rest of the body?

[1]

System _____



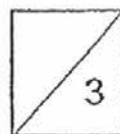
26. Swee Choo wanted to find out how light would affect the growth of a plant. She watered the plant before leaving it in a sealed cardboard box. She then cut a hole in the box and left it in a field. After a few days, she observed that the plant grew towards one side as shown in the diagram below.



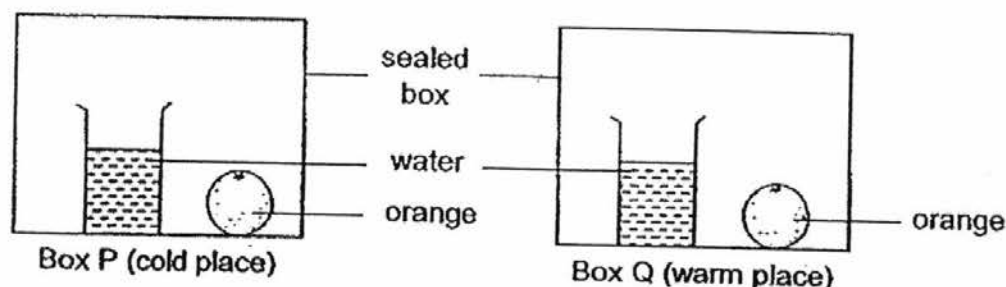
- (a) On the diagram above, draw an $\otimes$ to show a possible position of the hole made by Swee Choo. [1]

- (b) What can Swee Choo conclude about the characteristic of the plant from this experiment? [1]

- (c) Swee Choo then covered the hole with a piece of frosted glass. She watered the plant daily. Would her observation of the plant be the same a few days later? Explain your answer. [1]



27. Rafi placed 2 similar oranges in 2 identical sealed boxes. He placed Box P in a cold place and Box Q in a warm place.



- (a) In which box, Box P or Box Q, would green patches first appear on the orange? Explain your answer.

[1]

- (b) What are the green patches on the orange?

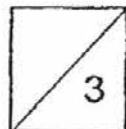
[1]

- (c) Rafi carried out another experiment with 3 similar oranges. He wanted to find out if the amount of water affects the growth of the green patches. He recorded his observations in the table below.

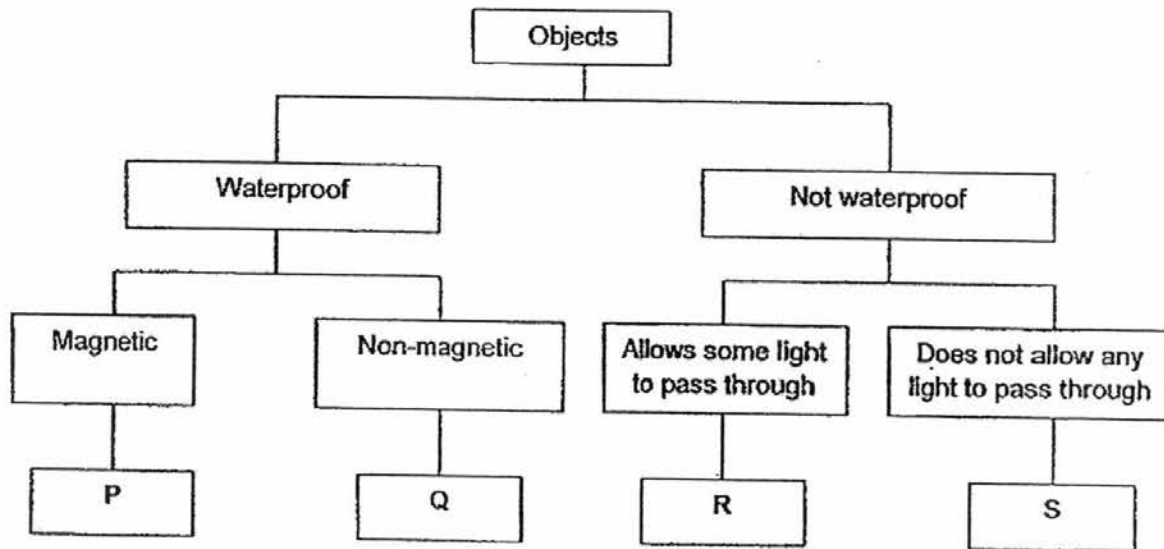
Set-ups	A	B	C
Amount of water added to the orange (ml)	0	1	5
Number of days before green patches appeared on the orange	6	4	2

State the relationship between the amount of water added to the orange and the number of days before the green patches appeared?

[1]



28. Study the flow chart below carefully.



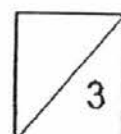
(a) Based on the flow chart above, write the letter, P, Q, R or S, that represents each of the objects below.

[2]

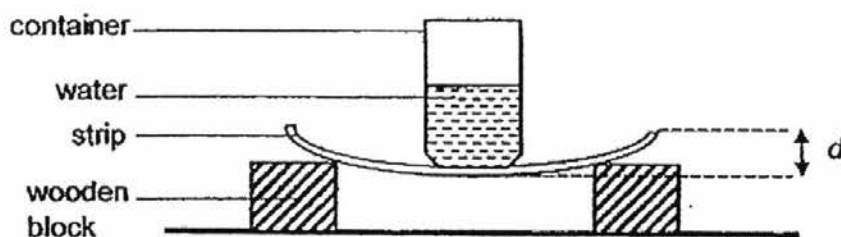
	Object	Letter that represents the object
(i)	Steel pipe	
(ii)	A piece of tissue paper	
(iii)	Copper coin	
(iv)	A stack of newspaper	

(b) Based on the flow chart above, what are 2 characteristics of the object, S?

[1]



29. Ling Ling set up an experiment as shown below to compare 2 strips made of different materials, P and Q.



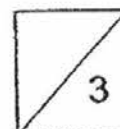
For each strip, she added 100 ml of water into the container. She measured the distance, d , which is the distance between the highest point and lowest point of the strip. The table below shows her results.

Strip	Amount of water added into the container (ml)	d (cm)
P	100	3
Q	100	2

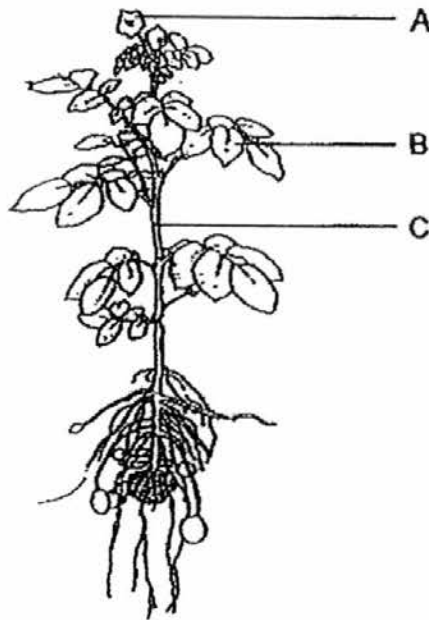
- (a) State a variable of the strip that was fixed so that it would be a fair test for the experiment. [1]

- (b) What can she conclude about Strip P and Q, from this experiment? [1]

- (c) Explain your answer in (b). [1]



30. The diagram below shows a potato plant.



(a) Which part of the plant, A, B or C, helps it to make food?

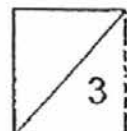
[1]

(b) (i) Name the plant part which A represents.

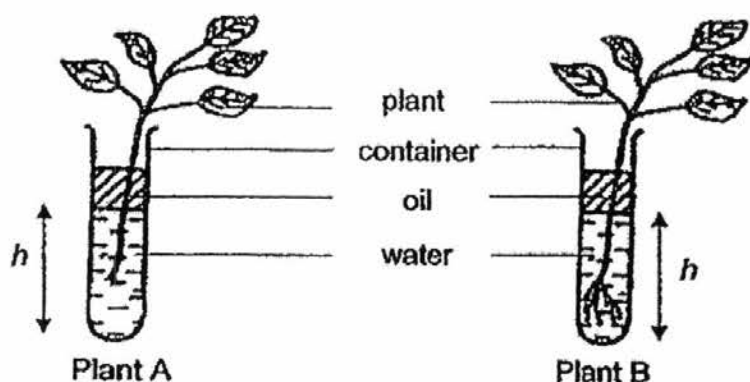
[1]

(ii) What can this plant part mentioned in b(i) develop into?

[1]



31. Ivy conducted an experiment using similar plants, plant A and plant B, in the set-ups shown below. She removed the roots from plant A. She then recorded the water level, h , at regular intervals for both set-ups.



- (a) What is the changed variable in this experiment?

[1]

The results of her experiment are shown below.

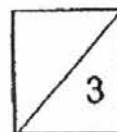
	Amount of water at the start of the experiment (ml)	Amount of water at the end of the experiment (ml)
P	100	80
Q	100	70

- (b) She concluded that Q represents the results obtained for Plant B. What is the evidence she obtained from the results above?

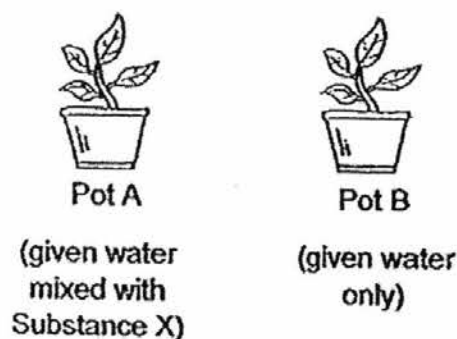
[1]

- (c) What caused the water level to decrease more for Plant B?

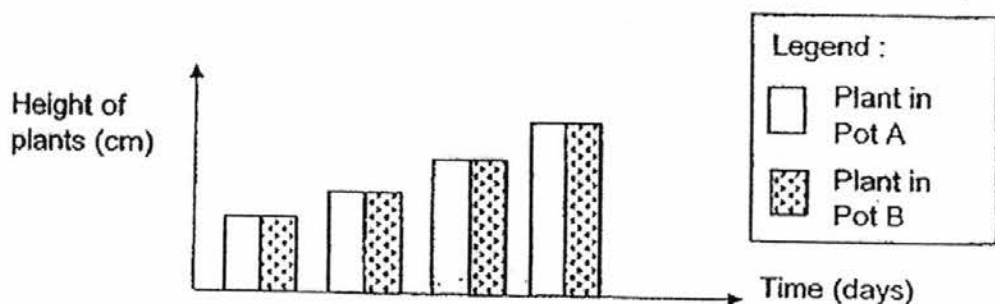
[1]



32. Ben wanted to find out if Substance X affects the growth of plants. He used 2 similar plants in his experiment and placed both pots, A and B, in a field for 4 days.



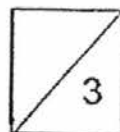
The graph below shows the change in the height of the plants during the experiment.



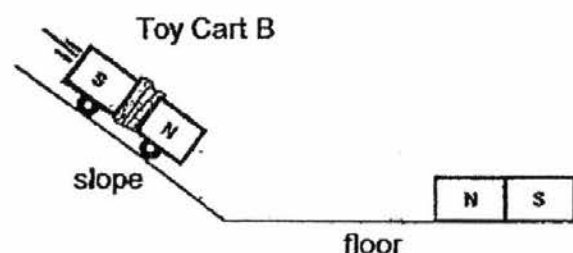
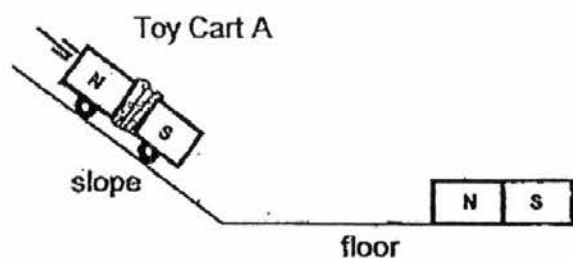
- (a) What can he conclude from the results about Substance X? [1]

- (b) Which part of the plant took in Substance X for the plant in Pot A? [1]

- (c) The plants would die if they were placed in a dark room. Give the reason why this would occur. [1]



33. The diagram below shows 2 identical magnets tied to a toy cart in different ways. They are released from the same starting point, towards another magnet placed on the floor.

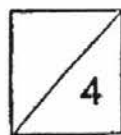


- (a) Which of the similar toy carts, Toy Cart A or Toy Cart B, would move faster as it approaches the magnet on the floor? Explain your answer. [2]

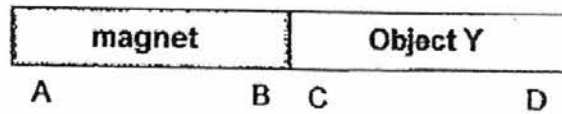
- (b) In another experiment, another similar toy cart, Toy Cart C, was tied with a magnet of same mass but different strength. Toy Cart C travelled faster than Toy Cart A as it approached the magnet on the floor.

- (i) What can you conclude about the strength of the magnet on Toy Cart C? [1]

- (ii) Which pole of the magnet on Toy Cart C was facing the N-pole of the magnet on the floor? [1]



34. Gopal observed that a magnet and Object Y were attracted as shown below. The letters, A, B, C and D, represent the ends of the magnet and Object Y respectively.

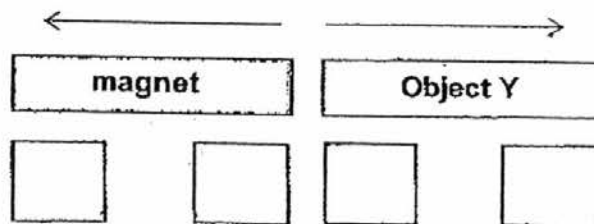


- (a) Gopal cannot conclude that Object Y is a magnet based only on the above observation. Explain why.

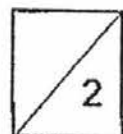
[1]

- (b) Fill in the boxes with letters, A, B, C and D which represent the ends of the magnet or Object Y if Object Y and the magnet repel.

[1]



(End of Paper)



EXAM PAPER 2016 (P3)

SCHOOL : TOA NAN

SUBJECT : SCIENCE

TERM : SA2

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

24)a)A , C and D.

b)D.

c)D.

25)a)i)Respiratory System

ii)Circulatory System

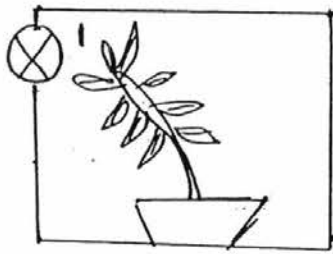
iii)Digestive System

iv)Skeletal System

b)B.

c)B

26)a)



b)The plant respond to changes around it.

c)No. Frosted glass allow lesser light to pass through so the plant cannot trap enough light energy to make food and eventually dies.

27)a)Box Q. It has both moisture and warmth so there is warmth so the patches can grow.

b)They are mould.

c)As the amount of water added to the orange increases, the number of days before green patches appeared on it decreases.

28)a)i)P ii)R iii)Q iv)S

b)It is not waterproof and does not allow any light to pass through.

29)a)Both must have the same length.

b)Strip P is more flexible than strip Q.

c)P bent more than Q when the same amount of water was placed on the strips.

30)a)B.

b)Flower.

c)It can develop into a fruit.

31)a)Plant A has no roots while Plant B has roots.

b)Plant B has roots so it could take in more water.

c)Plant B could take in more water as it has roots so it can make food for the plant.

32)a)Substance X does not affect the growth of plants.

b)The roots.

c)The plant cannot trap sunlight so it cannot make food for the plant.

33)a)Toy Cart A. Their unlike poles are facing each other so they will attract each other.

b)i)It has stronger magnetism in it so it could travel faster.

ii)The S-pole.

34)a)Object Y will only be a magnet when the magnet and object Y repels as only magnets repel each other.

b)A, B, D, C