

Pei Chun Public School
Semestral Assessment 2 – 2017
Science
Primary 3

Name : _____ () Date : 31 Oct 2017

Class : Pri. 3 ()

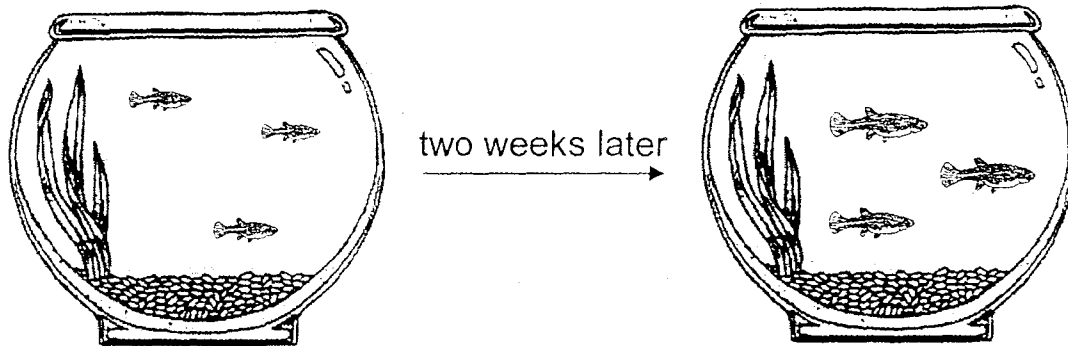
Science Teacher : _____

Time : 1 h 20 min

Section A (24 × 2 marks)

For questions 1 to 24, choose the most suitable answer and shade its number (1, 2, 3 or 4) on the Optical Answer Sheet (OAS) provided.

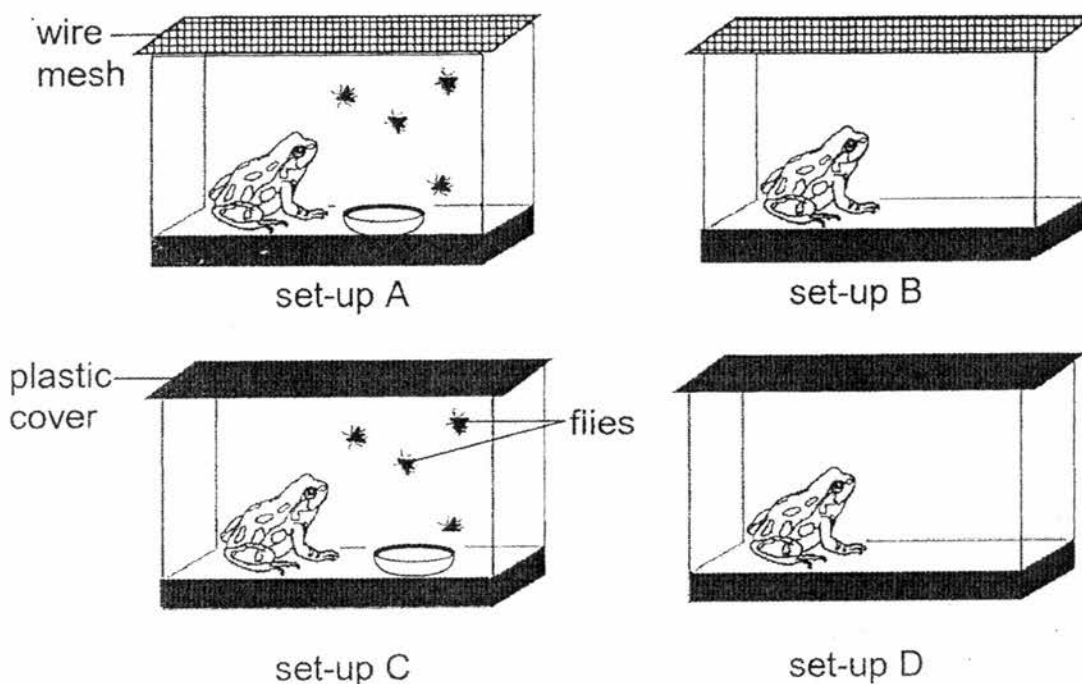
1. Bala bought some guppies and kept them in a fish tank. Two weeks later, he observed the following.



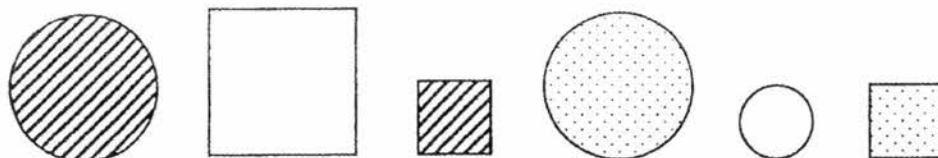
From his observation, Bala can conclude that the guppies are living things because they _____.

- (1) grow
- (2) reproduce
- (3) need air, food and water
- (4) respond to changes around them

2. Pete wanted to find out if living things need air to survive. Which two set-ups should he use to make a conclusion?



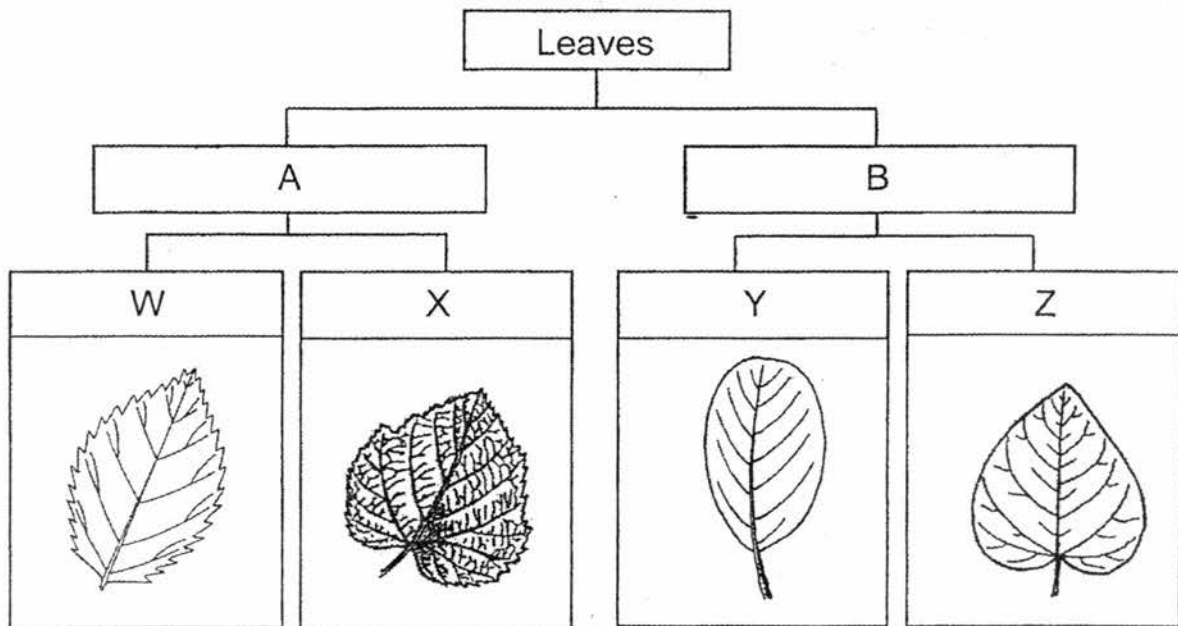
- (1) A and B
 (2) A and C
 (3) B and D
 (4) C and D
3. The diagrams below show six different figures.



How many way(s) can the figures be classified into **equal** groups?

- (1) one
 (2) two
 (3) three
 (4) four

4. The diagram below shows how different leaves are classified according to characteristics, A, B, W, X, Y and Z.



What are characteristics A and Z?

	A	Z
(1)	Oval-shaped	Has smooth edge
(2)	Oval-shaped	Heart-shaped
(3)	Has jagged edge	Heart-shaped
(4)	Has jagged edge	Has smooth edge

5. The table below shows how four organisms can be grouped.

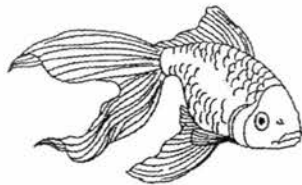
	Can make its own food	Cannot make its own food
Reproduce by seeds	E	F
Does not reproduce by seeds	G	H

Which group of organisms does moss belong to?

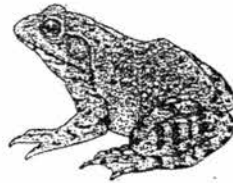


- (1) E
 - (2) F
 - (3) G
 - (4) H
6. Which of the following characteristics are found in birds, but not in other animals?
- A : They can fly.
 - B : They lay eggs.
 - C : They have wings.
 - D : They have feathers.
- (1) B only
 - (2) D only
 - (3) B, C and D only
 - (4) A, B, C and D

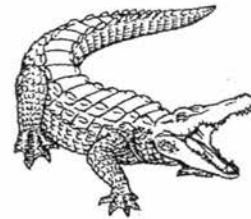
7. Muthu had to classify the three animals shown below.



goldfish

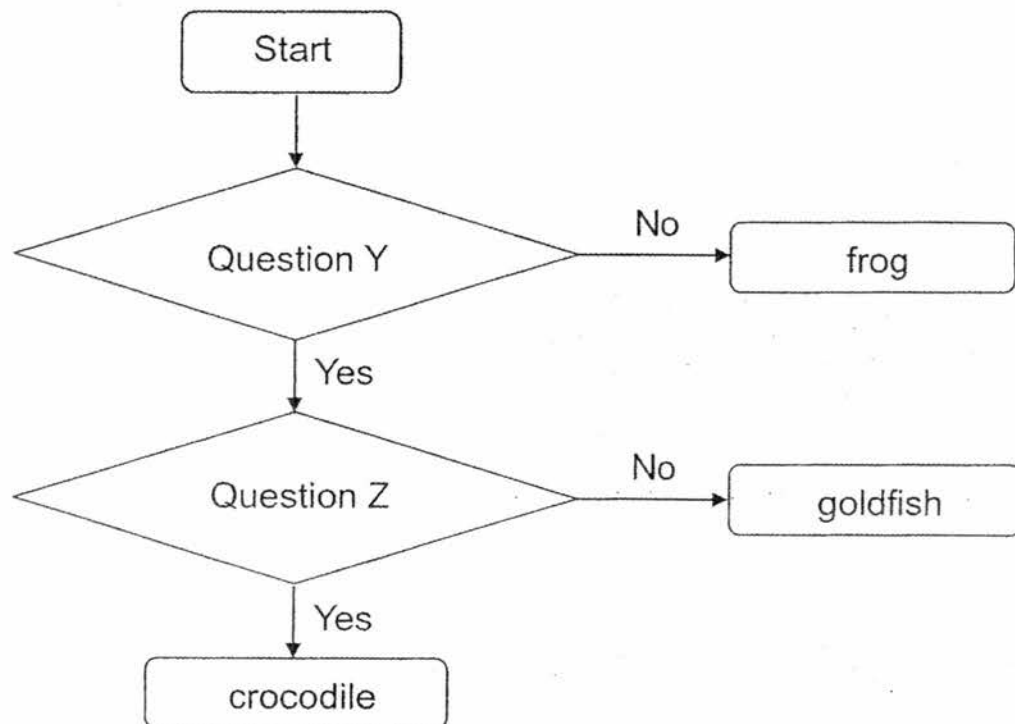


frog



crocodile

He classified them with the help of the chart below.



What are questions Y and Z?

	Question Y	Question Z
(1)	Does it have legs?	Can it live on land?
(2)	Can it live on land?	Does it have scales?
(3)	Does it have legs?	Does it have scales?
(4)	Does it have scales?	Does it have legs?

8. The diagram below shows an animal in the school garden.

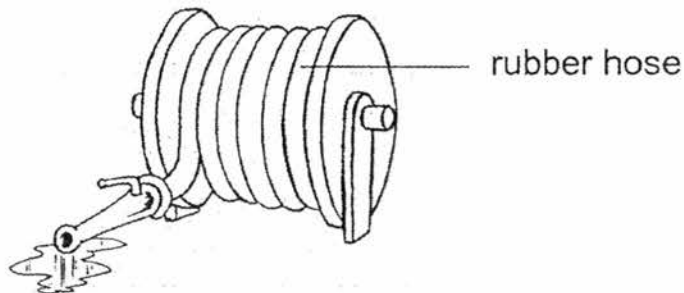


Three children made the following observations about the animal.

- Fandi : It only has two body parts.
Ginny : It feeds on other animals.
Hema : It does not have wings.

Whose observation(s) could be used to show that the animal is not an insect?

- (1) Fandi only
 - (2) Ginny only
 - (3) Fandi and Hema only
 - (4) Ginny and Hema only
9. The diagram below shows a rubber hose.



Which property of the rubber hose allows it to be coiled up as shown in the diagram?

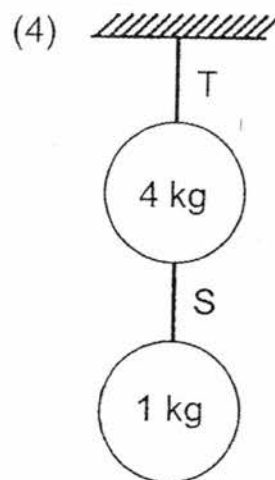
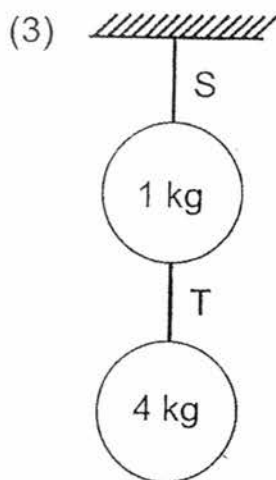
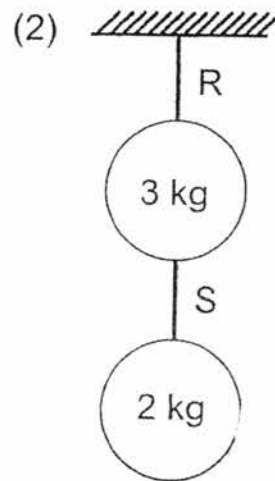
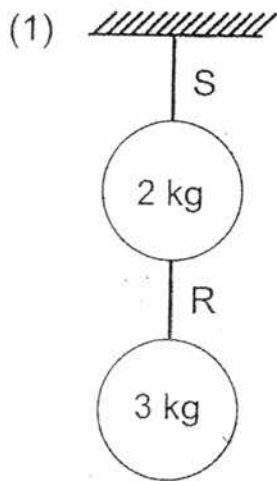
- (1) It is strong.
- (2) It is flexible.
- (3) It is waterproof.
- (4) It does not break easily.

10. Kelly tested three types of string, R, S and T, by hanging loads from each string. He increased the mass of the load until the strings broke. The maximum mass that each string could hold before breaking is shown in the table below.

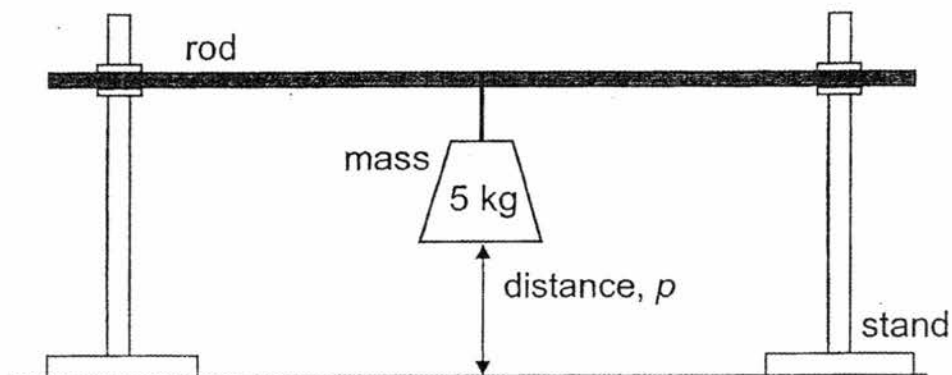
String	Maximum mass that the string can hold before breaking (kg)
R	2
S	3
T	5

Kelly tried a few arrangements of hanging different loads.

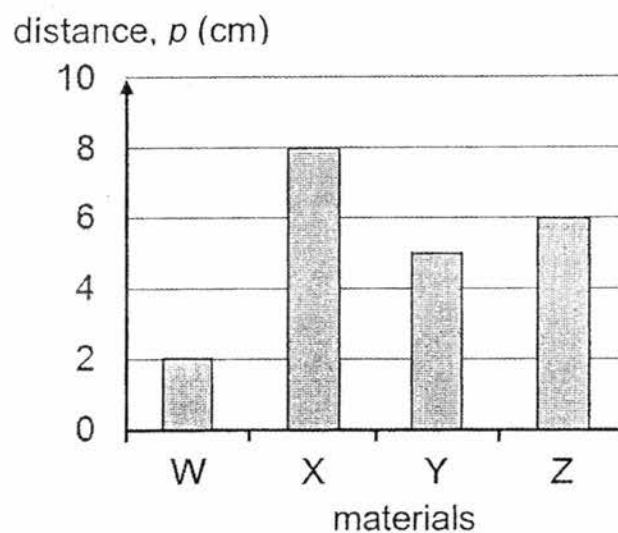
Which of the following arrangements would be possible?



11. Raj wanted to test the flexibility of four materials, W, X, Y and Z. He attached a 5 kg mass to a rod made of material W and measured the distance, p , as shown below.



He repeated the experiment using rods made of materials X, Y and Z. The rods were of the same thickness and length. He recorded his results in the table below.

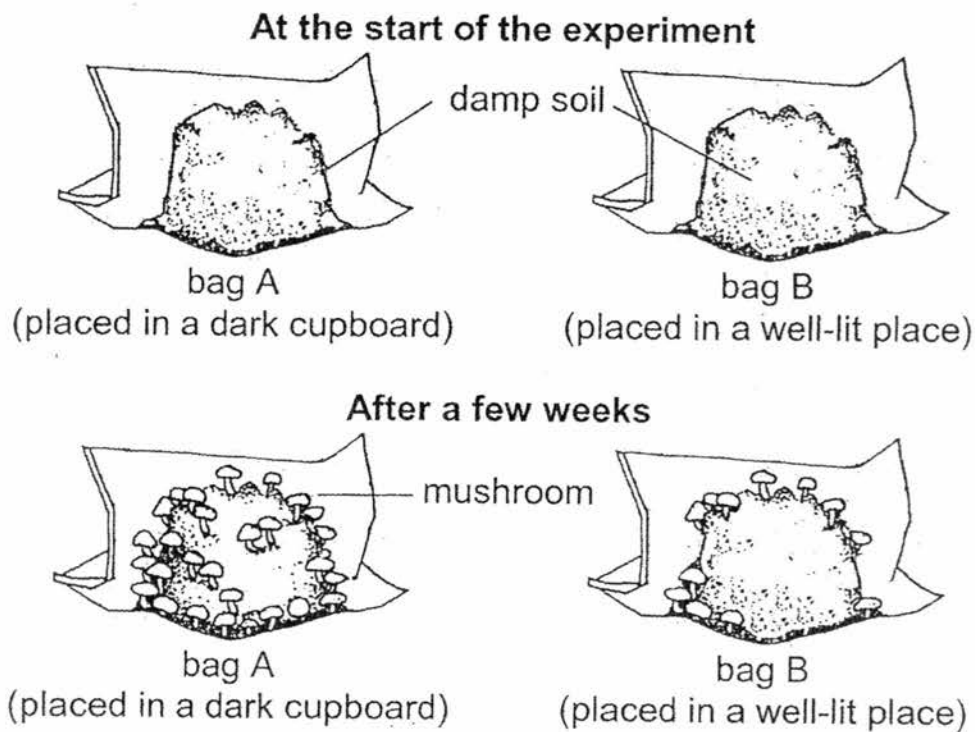


Based on his results, which material is the **least** flexible?

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

12. Yun Hui carried out an experiment to find out if mushrooms need light to grow. She placed the same amount of mushroom spores in two bags of damp soil and left the bags in different places.

The diagrams below show what she observed after a few weeks.



Based on Yun Hui's experiment, which of the following statements about mushrooms is correct?

- (1) They need light to grow.
- (2) They do not need light to grow.
- (3) They can only grow in the dark.
- (4) They grow faster in places with light.

13. The table below shows Hashid's answers to three questions about yeast.

	Question	Answer
A	Is it a bacteria?	No
B	Can it reproduce?	No
C	Is it a micro-organism?	Yes

Which question(s) was / were answered correctly?

- (1) B only
 - (2) C only
 - (3) A and B only
 - (4) A and C only
14. Four bar magnets with their ends marked A to H can be arranged as shown below.

A	B	C	D	E	F	G	H
---	---	---	---	---	---	---	---

Which of the following arrangement of two of the magnets is **not** possible?

(1)

A	B
C	D

(2)

A	B
F	E

(3)

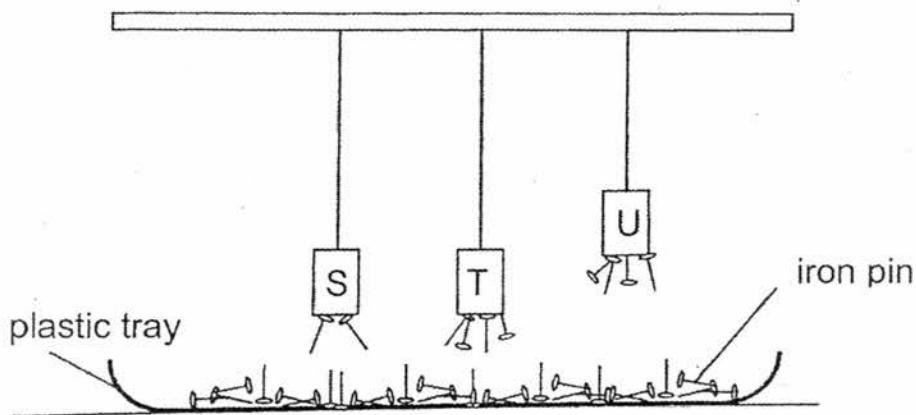
A	
B	G
	H

(4)

	H
C	D
	G

15. S, T and U are magnets hanging from strings of two different lengths as shown in the diagram below. S and T are hung at the same height.

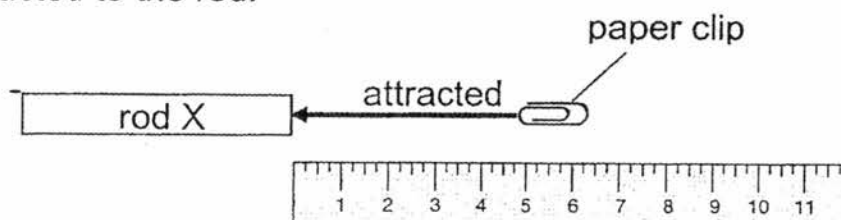
A plastic tray of iron pins is placed below the magnets and different numbers of pins are attracted to the magnets.



Based on the diagram, which of the following statements is **not** true?

- (1) S is the weakest magnet.
 - (2) T is as strong a magnet as U.
 - (3) T is a weaker magnet than U.
 - (4) U is a stronger magnet than S.
16. Rajoo wanted to separate two types of objects which have been mixed together.
- Which pair of objects can be separated using a magnet?
- (1) iron pins and steel staples
 - (2) pencil lead and plastic clips
 - (3) steel clips and steel staples
 - (4) steel clips and plastic clips

17. Richard made three magnets using the stroking method. He used the same bar magnet to stroke three identical iron rods, X, Y and Z, for different number of times. He placed rod X at one end of a ruler and slowly pushed a paper clip towards it until the paper clip was attracted to the rod.



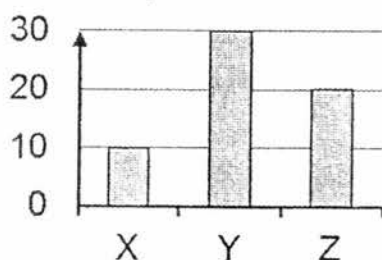
He repeated the experiment with rods Y and Z. He measured the distance at which the paper clip was attracted by each of the rods. His results are shown in the table below.

Magnet	Distance at which the paper clip was attracted to the magnet (cm)
X	5
Y	3
Z	4

Which of the following graph correctly shows the number of times each of the rods was stroked with the bar magnet?

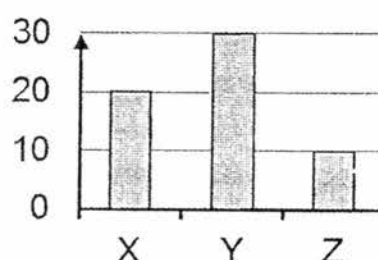
(1)

Number of times stroked



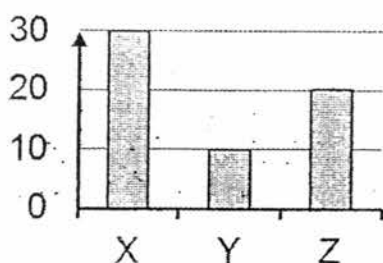
(2)

Number of times stroked



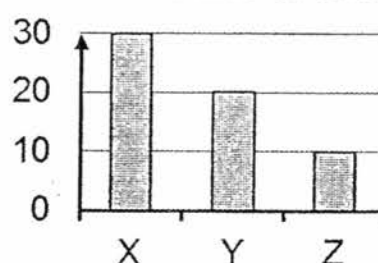
(3)

Number of times stroked

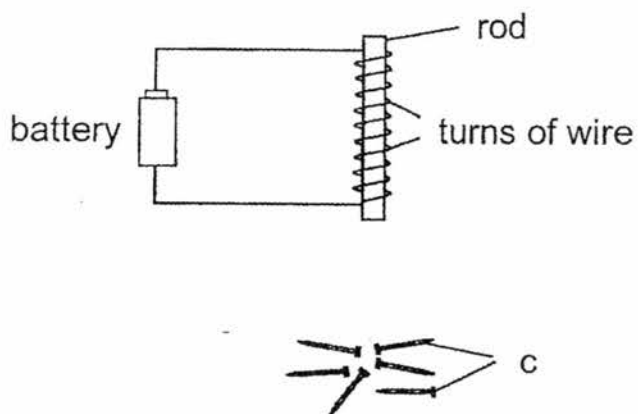


(4)

Number of times stroked



18. Peter used the set-up below to attract some pins.



He added more turns of wire around the rod and counted the number of pins attracted to the rod.

His results are shown in the table below.

Number of turns of wire	Number of pins attracted
10	0
50	2
100	5

Which of the following best explains why no pin was attracted with 10 turns of wires around the rod?

- (1) The battery was not working.
- (2) The rod was made of a non-magnetic material.
- (3) The pins were made of a non-magnetic material.
- (4) The electromagnet was too weak to attract the pins.

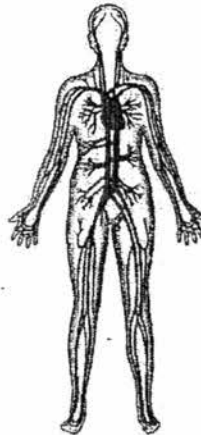
19. The diagram below shows part of the skeletal system in the leg.



Which of the following ^{is} not a function of the part shown?

- (1) It supports the leg.
- (2) It gives the leg its shape.
- (3) It protects the delicate organs in the leg.
- (4) It works with the muscular system to allow the leg to move.

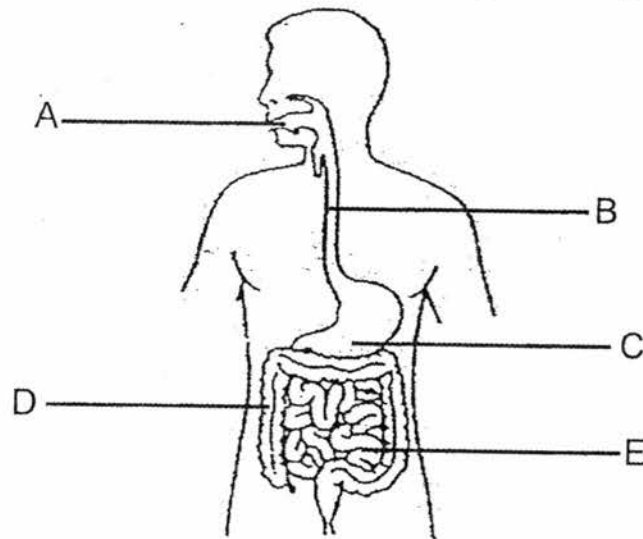
20. The diagram below shows a body system.



The function of this body system is to _____.

- (1) take air into the body
- (2) help different parts of the body to move
- (3) break down food into simpler substances
- (4) transport digested food to the different parts of the body

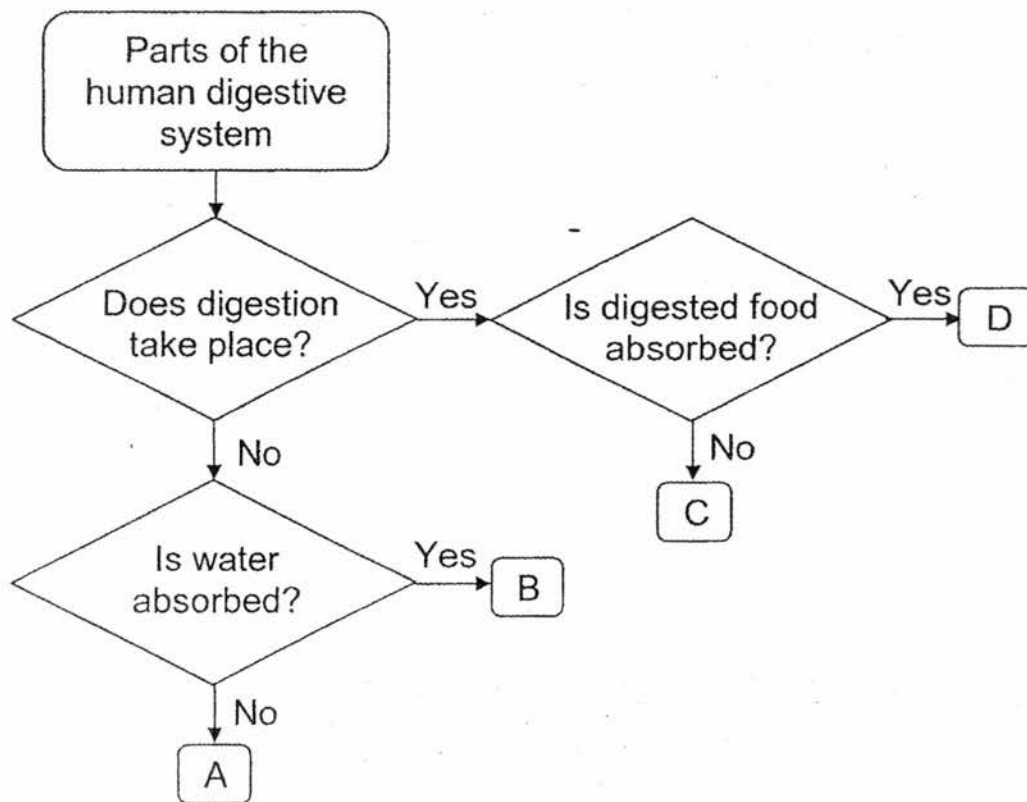
21. The diagram below shows the human digestive system.



At which parts, A, B, C, D or E, are digestive juices added?

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

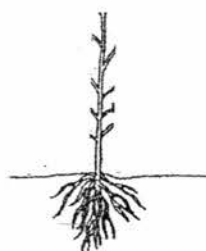
22. Study the flow chart below.



Which letter, A, B, C or D, in the flow chart represents the large intestine?

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

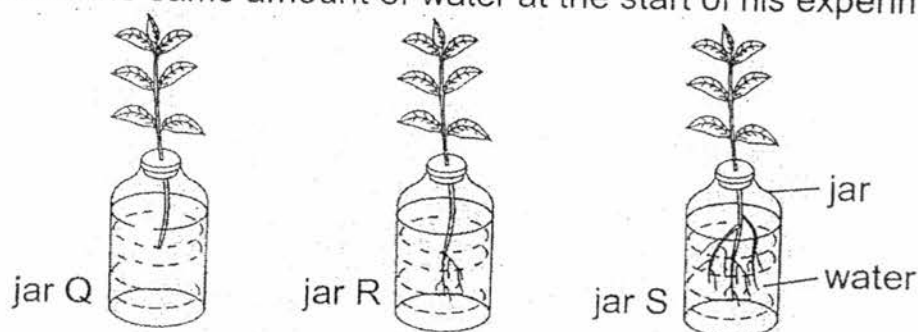
23. Jun Yu put two caterpillars on his plant in his garden. The diagram below shows what his plant looked like after three days.



After two weeks of watering, he noticed that the no new leaves appeared on the plant and the plant died.

The plant died because it could not _____.

- (1) make food
 - (2) produce fruits
 - (3) produce flowers
 - (4) take in the water from the soil
24. Ali removed some parts of the roots from three similar plants. He used the set-ups below for his experiment. The three jars contained the same amount of water at the start of his experiment.



After two days, he measured the amount of water left in each jar. Which of the following correctly shows the results of his experiment?

	Jar with the <u>most</u> amount of water left	Jar with the <u>least</u> amount of water left
(1)	R	S
(2)	S	Q
(3)	Q	S
(4)	S	R

End of Section A

Semestral Assessment 2 – 2017
Science
Primary 3

Name : _____ ()

Class : Pri. 3 ()

Date : 31 Oct 2017

Time : 1 h 20 min

Science Teacher : _____

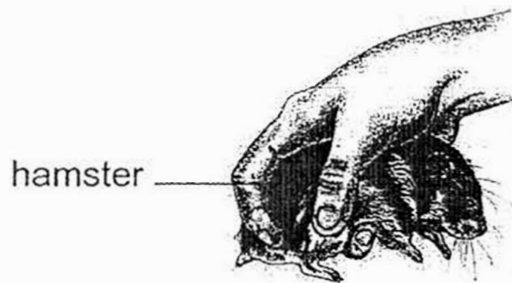
Parent's signature: _____

Section A-	48
Section B	32
Total	

Section B (32 marks)

For questions 25 to 35, write your answers in the spaces provided.

25. Sally tried to pick up her pet hamster as shown below.
It jumped out of her hand as she picked it up.



- a) What characteristic of living thing was shown by the hamster? [1]

- b) Sally kept six similar hamsters in three cages, A, B and C, for five months.

She took good care of the hamsters and did not add any new hamsters to the cages. She counted the number of male and female hamsters in the cages after five months and recorded her observations in the table below.

Cage	Number of hamsters in the cage			
	Start		After five months	
	Male	Female	Male	Female
A	2	0	2	0
B	0	2	0	2
C	1	1	5	4

Based on her observations, Sally said that hamsters can only reproduce when she keeps a male hamster and a female hamster together.

Is she correct? Circle your answer.

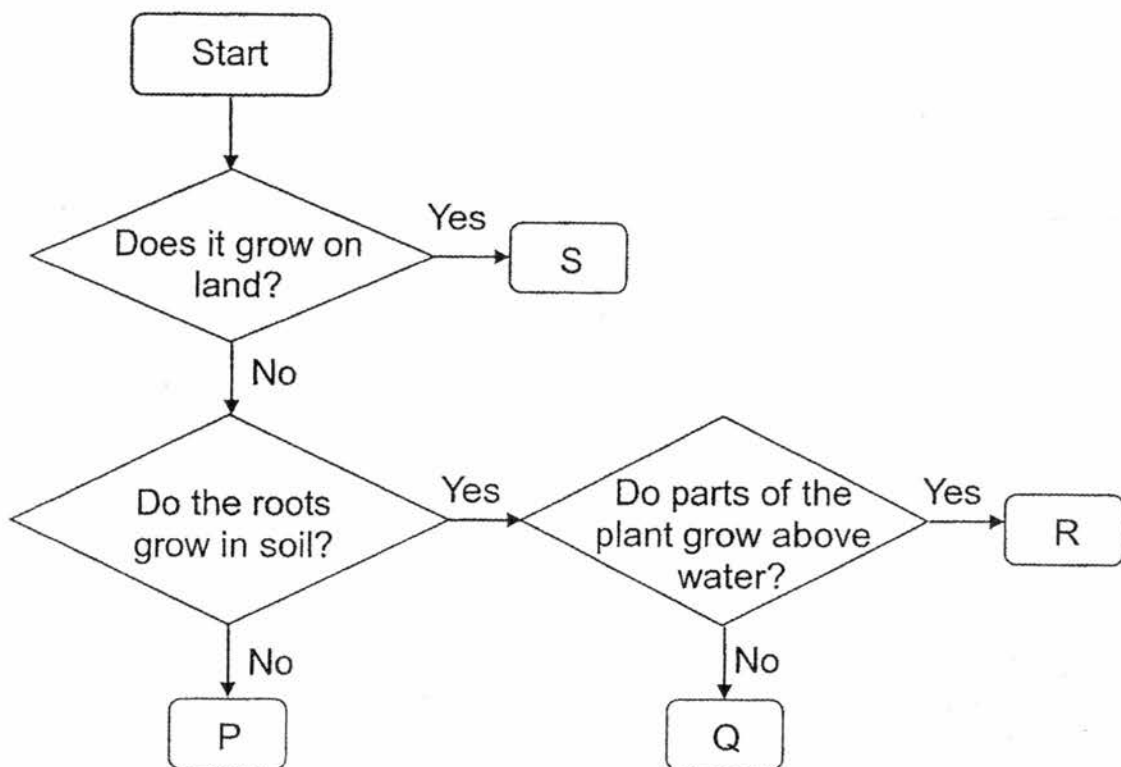
[1]

Yes / No / Cannot tell

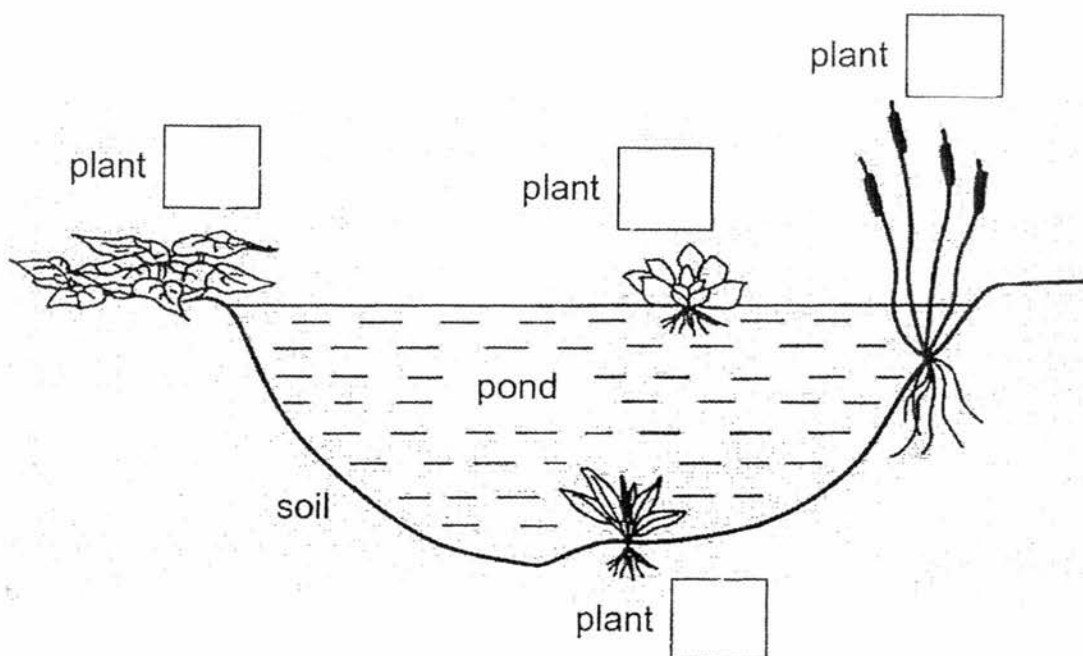
- c) Refer to Sally's observation and give a reason for your answer in (b).

[1]

26. Study the flowchart below. Letters P, Q, R and S represent four different plants.



Match each of the plants in the diagram below to the correct letter. Write the letters in the boxes provided. [2]



SCORE	<input type="text"/>
-------	----------------------

27. The following table gives information on five animals, D, E, F, G and H, based on three characteristics. A tick (✓) shows that the animal has the characteristic.

Characteristic	D	E	F	G	H
Can fly		✓	✓		✓
Lays eggs	✓	✓		✓	
Has hair on its body	✓		✓		

- a) Based on the information given in the table, state **two** characteristics of animal H. [1]

- b) The diagram below shows a bat.

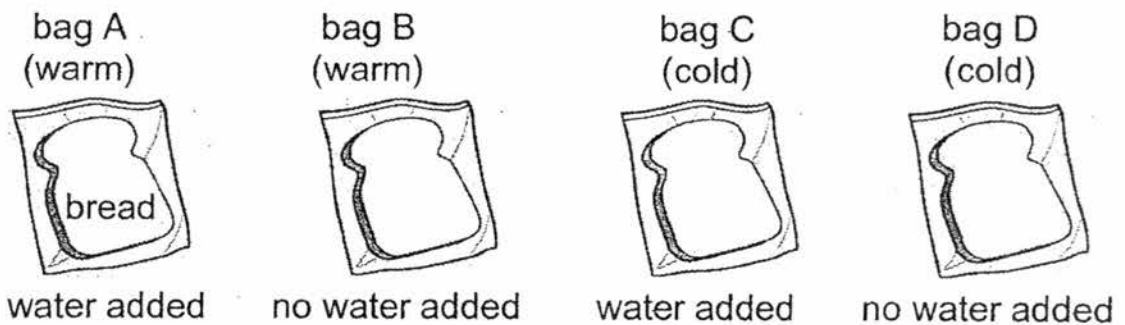


Match the bat to the correct letter (D, E, F, G or H) in the table.

It is animal _____.

[1]

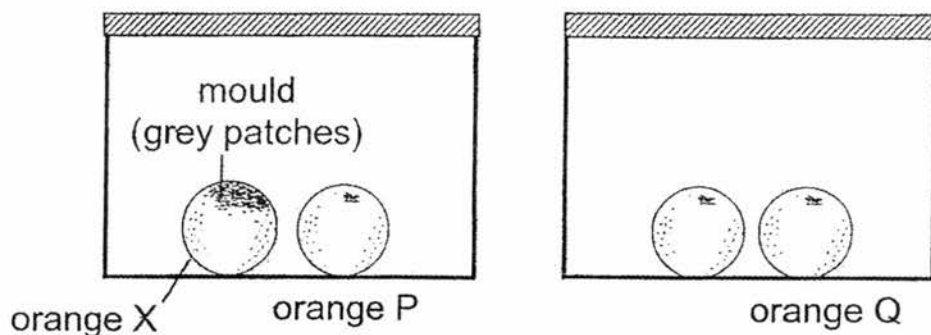
28. Ruth placed two similar pieces of bread in two sealed bags, A and B. She added a few drops of water to the bread in bag A and bag C. She left the bags A and B in a warm place and bags C and D in a cold place.



- a) In which bag, A, B, C or D, would mould take the longest time to appear on the bread? [1]

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

- c) Ruth conducted another experiment with two similar oranges, P and Q. She placed the oranges in two identical tanks and added another orange to each of the tank as shown below. The tanks were covered and left in the same place.



He observed that mould grew on orange P after a few days but not on orange Q. Explain how the mould on orange X caused mould to grow on orange P first. [1]

SCORE	
-------	--

29. Four materials, A, B, C and D, of the same size and thickness were placed in four containers for five minutes. Each container was filled with 100 ml of water.

The table below shows the amount of water left in the four containers after the materials were removed.

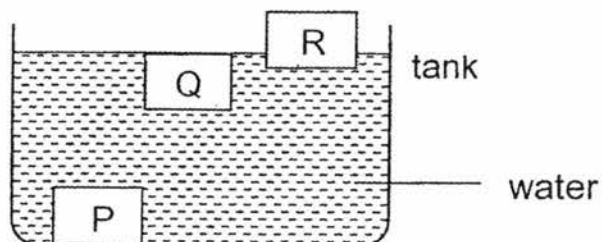
Material	A	B	C	D
Amount of water left in the container (ml)	60	40	90	20

- a) Based on the table above, which material, A, B, C or D, absorbed the most amount of water? Explain your answer. [1]

- b) Based on the table above, which material, A, B, C or D, is the most suitable for making swim suit that dries fast? Explain your answer. [1]

- c) Mary placed 3 cubes made of three different materials, P, Q and R, into a tank filled with water. The cubes were of the same size and mass.

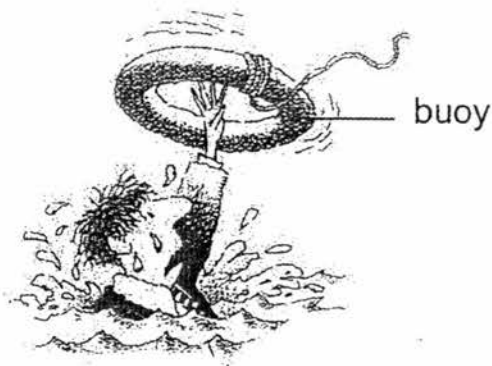
She observed the positions of the cubes in the tank of water. The diagram below shows the results of her experiment.



- c) Which property of material is Mary testing?

[1]

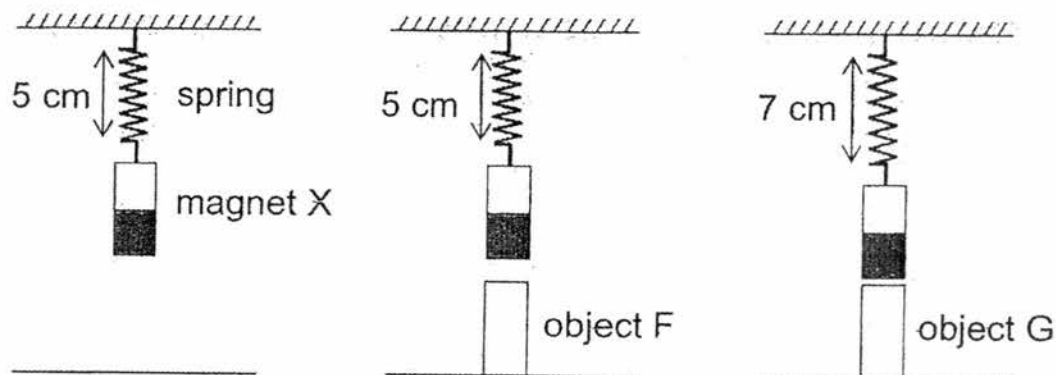
- d) The diagram below shows a buoy which is thrown to a person in the water so that the person can hold on to it. This will prevent the person from drowning.



Based on her results, which material, P, Q or R, is the most suitable for making the buoy? Explain your answer.

[1]

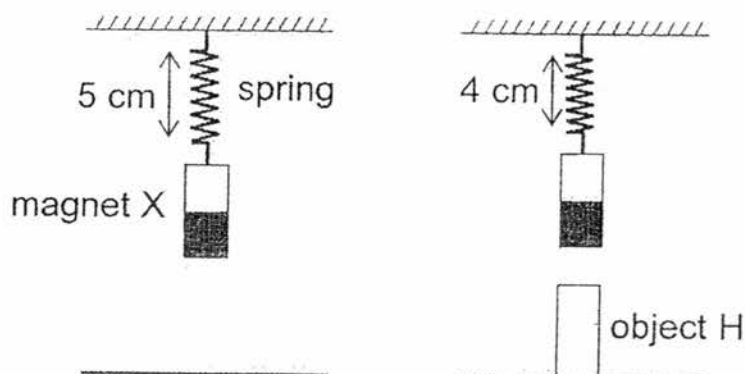
30. John hung magnet X from a spring. He placed two objects, F and G, one at a time, directly under magnet X. The diagrams below show his observations.



- a) Indicate the properties of the materials that objects F and G are made of in the table below. Put a tick (✓) in the correct boxes. [2]

Object	Magnetic	Non-magnetic	Not possible to tell
F			
G			

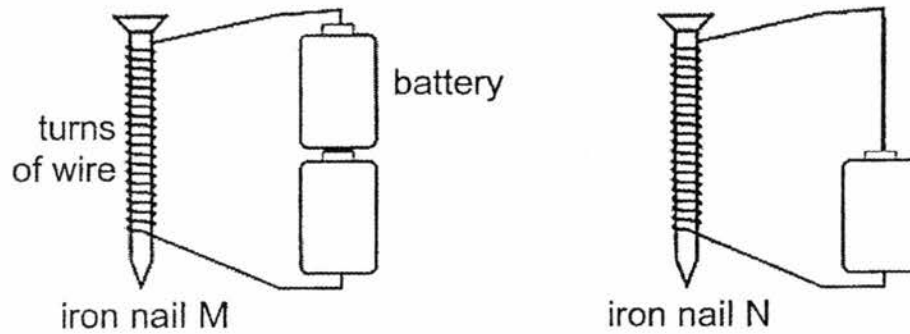
When John placed object H under magnet X, he observed that the magnet X moved up.



- b) What could object H be? [1]

- c) Explain why magnet X moved up. [1]

31. Ya Qi used the set-ups shown below to attract some iron clips. He used identical iron nails and batteries for both set-ups



She lowered iron nails M and N into a tray of iron clips and counted the number of clips attracted by each nail.

- a) Which iron nail, M or N, would attract more iron clips?
Explain your answer.

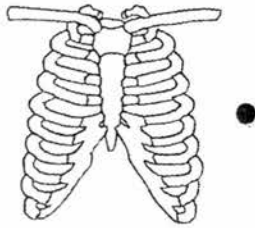
[1]

- b) Ya Qi removed iron nail M from the turns of wire and lowered nail M into the tray of iron clips.
Would nail M still be able to attract any clips?
Give a reason for your answer.

[1]

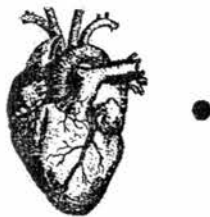
32. Match the organs to the correct body systems.

[3]

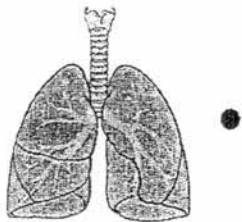


● Circulatory system

● Digestive system



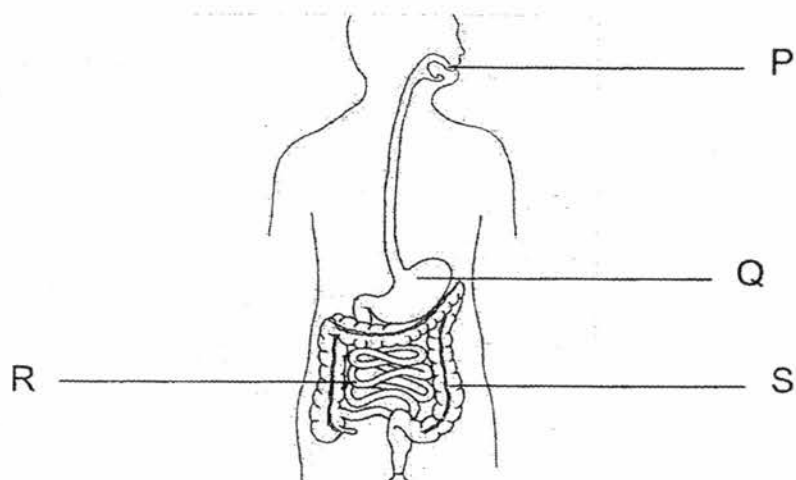
● Muscular system



● Respiratory system

● Skeletal system

33. The diagram below shows the human digestive system.

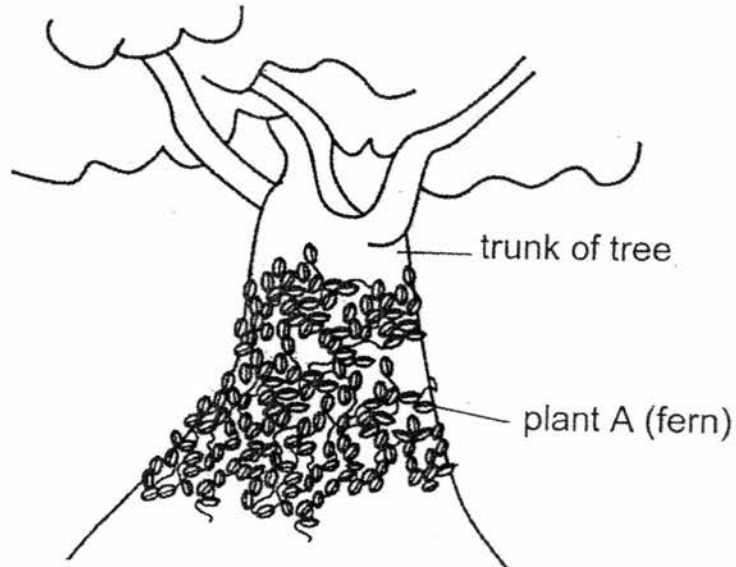


- a) Referring to the diagram, name the parts of the digestive system represented by the letters shown in the table below. [2]

Part	Part of the digestive system
P	
Q	

- b) In which part, P, Q, R and S, is digestion completed? [1]

34. Plant A is a fern that grows on the trunk of a tree.

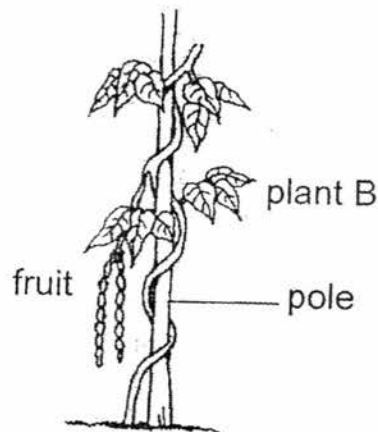


- a) Fill in each blank with a suitable word.

Plant A has a _____ stem which grows around the tree trunk for support. It climbs up the tree trunk and spread out its leaves so that its leaves can get enough _____ to make food.

[2]

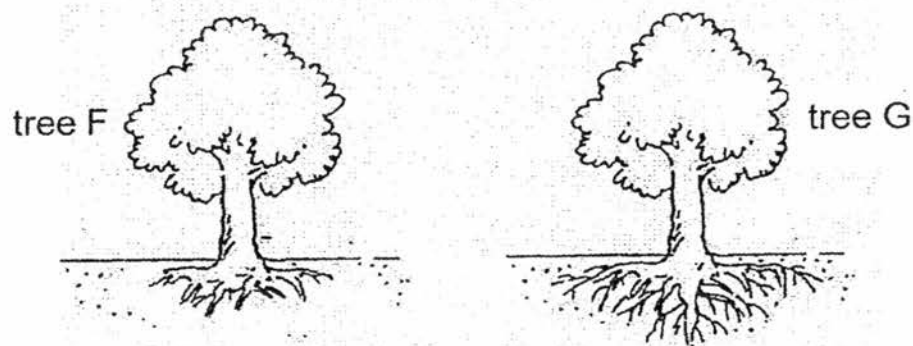
- b) The diagram below shows plant B.



Based on the diagrams, state the difference in the way plants A and B reproduce.

[1]

35. Study the diagrams below carefully.



- a) Which tree, F or G, is more likely to fall over when blown by a strong wind? Explain your answer. [2]

- b) Other than water, state another substance that is taken in from the soil by the roots of the tree. [1]

End of Section B

Set by : Mdm Ong Bok Hoon, Miss Rachel Lim and Mrs Myyher Low
Vetted by: P3 Science teachers

SCORE	
-------	--

EXAM PAPER 2017

LEVEL : PRIMARY 3
SCHOOL : PEI CHUN PUBLIC SCHOOL
SUBJECT : SCIENCE
TERM : SA2

Section A

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

Section B

- Q25. (a) It responds to changes.
(b) Yes
(c) When there is a male and a female hamster in the cage, the number of hamsters increases after five months.

Q26.

S

P

R

Q

- Q27. (a) It does not lay eggs and does not have hair on its body.
(b) F
- Q28. (a) Bag D
(b) Mould needs water and warmth to grow. It will not grow if there is lack of water and warmth.
(c) Orange P is just next to Orange X and they are in the same tank. The mould on Orange X could easily fall on Orange P and reproduce.
- Q29. (a) Material D. It has absorbed the most amount water and it has the least amount left in the container.
(b) Material C. It absorbs the least amount of water so it will take the shortest time for the swim suit to dry.
(c) Ability to float or sink.
(d) The buoy must be able to float on water so we will not sink.
- Q30. (a) Object F: Non-magnetic
Object G: Magnetic
(b) A magnet
(c) The like poles of Magnet H and X are facing each other so they repel.
- Q31. (a) Iron nail M. As Iron nail M has more batteries than Iron nail N. As a result more electric current flow through Iron nail M and make it a stronger electromagnet.
(b) No. As it is not an electro magnet any more.
- Q32. Ribcage → Skeletal system
Heart → Circulatory system
Lungs → Respiratory system
- Q33. (a) Part P → mouth
Part Q → stomach
(b) Part R.

- Q34. (a) weak, sunlight
(b) Plant A reproduce by spores while Plant B reproduce by seeds.
- Q35. (a) Tree G. Its roots spread out and grow further and deeper into the soil. This helps to hold the tree firmly to the ground. As a result, the tree will fall over easily when a strong wind blows.
(b) Minerals.