



Anglo-Chinese School
(Primary)

A Methodist Institution
(Founded 1886)

SEMESTRAL ASSESSMENT TWO 2019
SCIENCE
PRIMARY THREE
BOOKLET A

Name: _____ ()

Class: Primary 3 _____

Date: 24 October 2019

Total Time for Booklets A and B: 1 h 45 min

Additional Materials: Optical Answer Sheet (OAS)

INSTRUCTIONS TO CANDIDATES

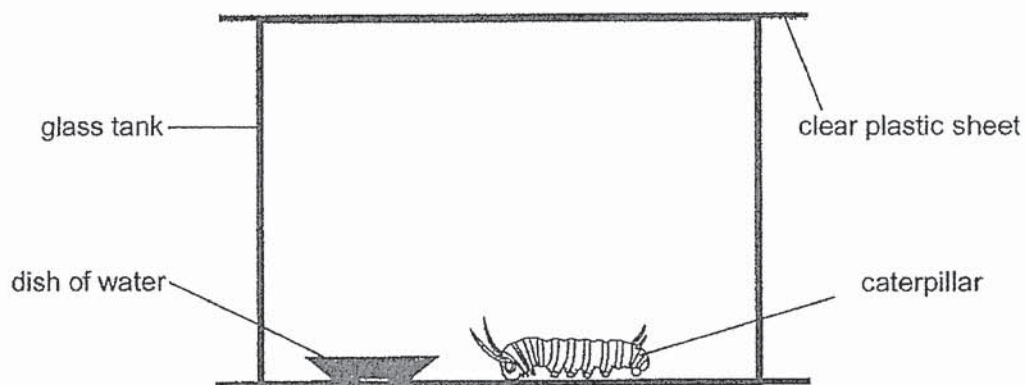
1. Write your name, index number and class in the spaces provided.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Shade your answer on the Optical Answer Sheet (OAS) provided.

This question paper consists of 14 printed pages including this cover page.

For each question from 1 to 22, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and shade your answer on the Optical Answer Sheet.

(44 marks)

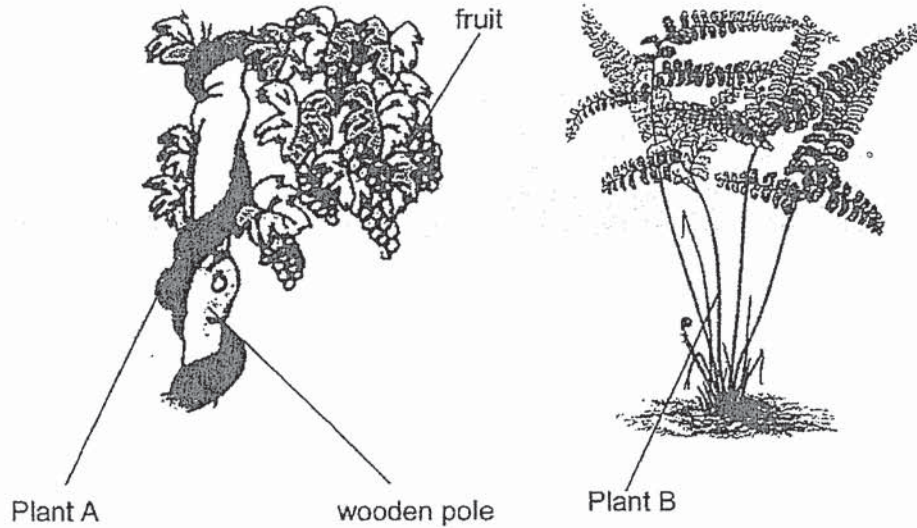
- 1 Which of the following statements is true about living and non-living things?
- (1) Some non-living things can reproduce.
 - (2) All living things can respond to changes.
 - (3) All living things need sunlight to make food.
 - (4) Living things only need air and water to survive.
- 2 Anthony kept a caterpillar in a glass tank with some water. He covered the tank with a clear plastic sheet and sealed it tightly to prevent the caterpillar from escaping. The caterpillar died three days later.



What could Anthony have done to ensure that the caterpillar survived longer?

- A He could put in some leaves.
 - B He could put the set-up under the sun.
 - C He could poke some holes through the plastic sheet.
- (1) B only
 - (2) A and B only
 - (3) A and C only
 - (4) B and C only

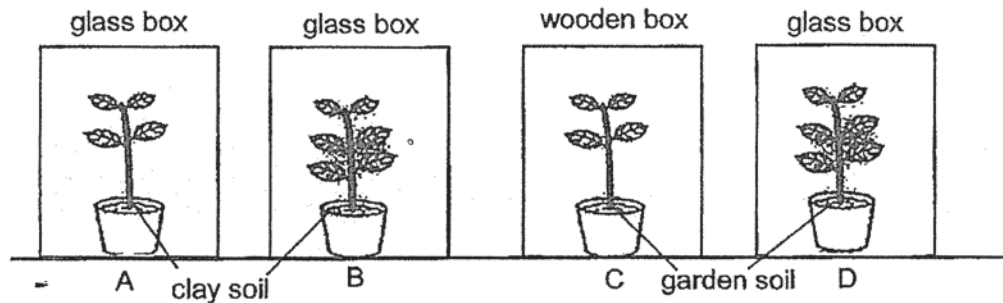
- 3 The diagram shows two fully-grown plants, A and B.



Based on the diagram only, which of the following statements about Plants A and B is true?

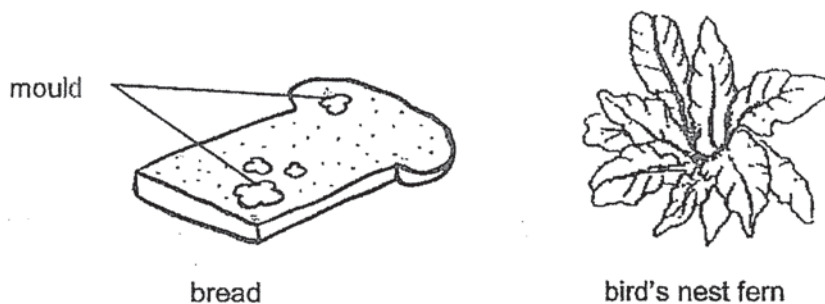
- (1) Both grow in water.
 - (2) Both are non-flowering plants.
 - (3) Both have leaves to make food.
 - (4) Both can move from place to place.
- 4 Carl caught an animal in the garden. Which of the following characteristics showed him that it was an insect?
- A It lays eggs.
 - B It has six legs.
 - C It has three body parts.
- (1) B only
 - (2) A and B only
 - (3) A and C only
 - (4) B and C only

- 5 The diagram shows an experiment that was conducted to find out how the type of soil affects plant growth.



Which two set-ups should be chosen in order for the experiment to be fair?

- (1) A and B
 - (2) A and C
 - (3) B and D
 - (4) C and D
- 6 Study the pictures carefully.



Which of the following statements is true?

- (1) Both mould and bird's nest fern are types of fungi.
- (2) Both mould and bird's nest fern reproduce by spores.
- (3) Bird's nest fern needs water to survive but mould does not.
- (4) Both mould and bird's nest fern cannot make their own food.

- 7 Ben had to classify the following three animals.



bat

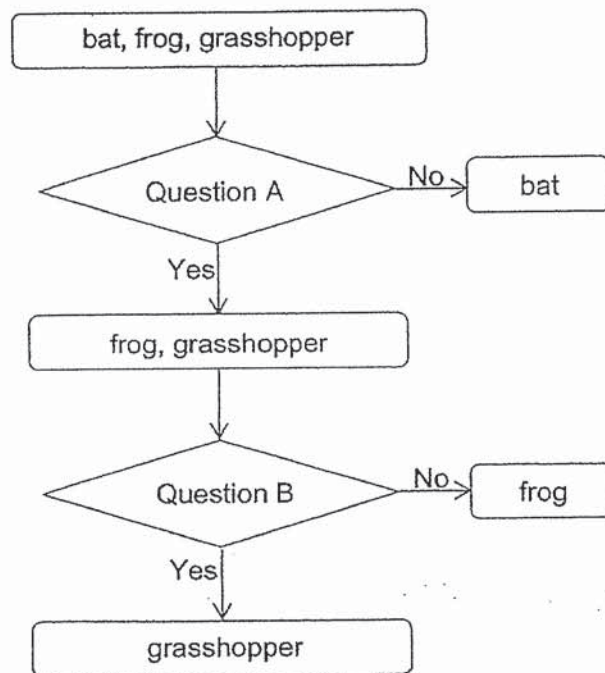


frog



grasshopper

He classified them with the help of the chart as shown.



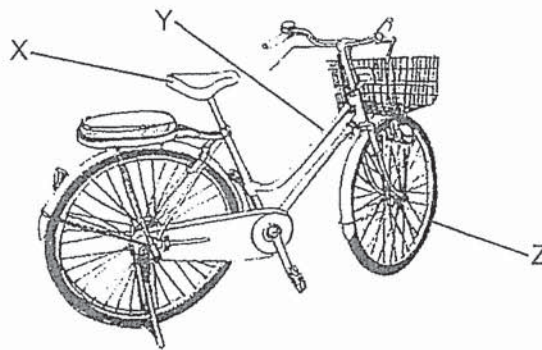
What were the two questions, A and B?

	Question A	Question B
(1)	Does it have wings?	Does it lay eggs?
(2)	Does it lay eggs?	Does it have wings?
(3)	Does it have wings?	Does it have only 2 legs?
(4)	Does it lay eggs?	Does it have only 2 legs?

8 Which of the following statements about bacteria are false?

- A All bacteria are harmful to us.
 - B All bacteria reproduce from spores.
 - C All bacteria can make food under sunlight.
 - D All bacteria can be seen only with a microscope.
- (1) A and B only
 (2) B and D only
 (3) A, B and C only
 (4) A, C and D only

9 The diagram shows a bicycle. X, Y and Z are parts of the bicycle that are made of different materials.



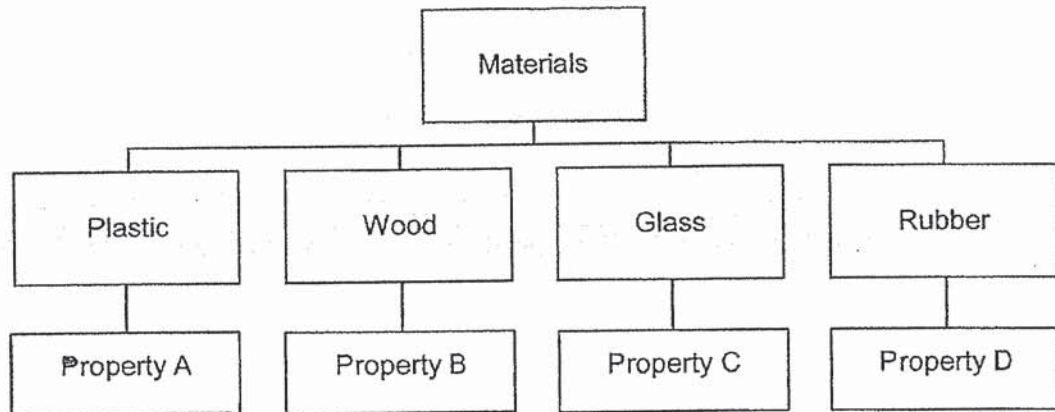
The table shows the property of the material used to make each of the bicycle part.

Part	Property of material used for the part
X	Allows light to pass through.
Y	Is strong.
Z	Is flexible.

Which properties of materials used are correctly matched to the bicycle parts?

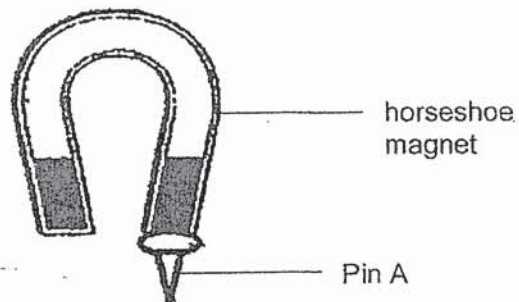
- (1) X and Y only
 (2) X and Z only
 (3) Y and Z only
 (4) X, Y and Z

- 10 Study the classification chart below.



Which of the following does **not** represent Property C?

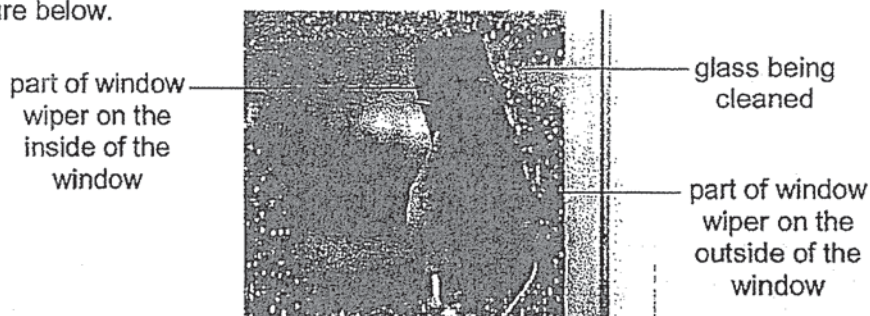
- (1) Strong
 - (2) Flexible
 - (3) Waterproof
 - (4) Allows light to pass through
- 11 A horseshoe magnet is held over some pins. The diagram shows the interaction between the horseshoe magnet and Pin A.



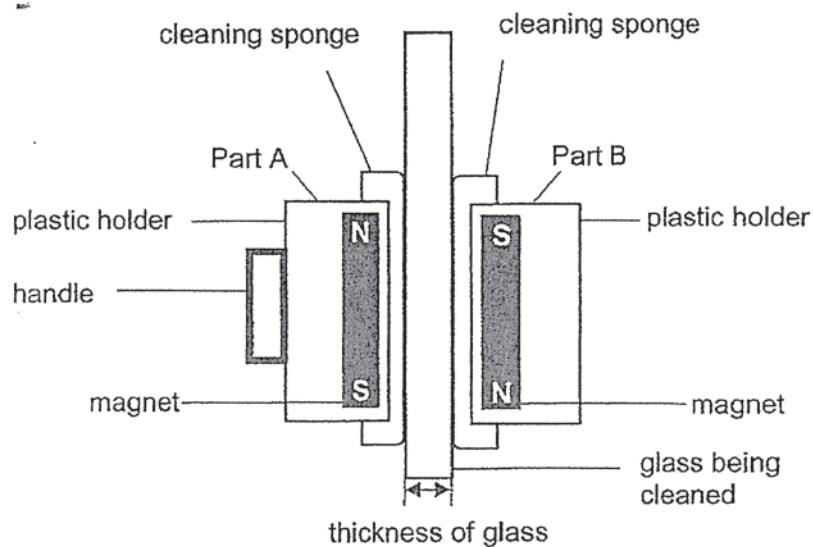
Why is Pin A attracted to the horseshoe magnet as shown above?

- (1) Pin A is made of steel.
- (2) Pin A is made of glass.
- (3) Pin A is made of plastic.
- (4) Pin A is made of copper.

- 12 Magnets are found in some window wipers used to clean glass windows as shown in the picture below.



The diagram below shows how such a window wiper works.



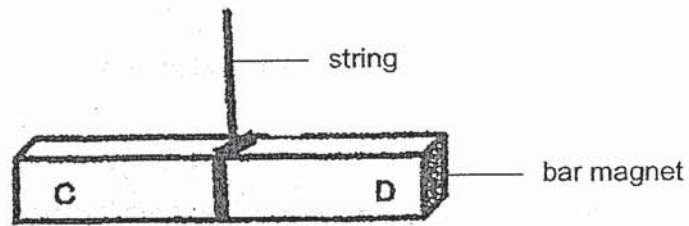
In an experiment, Mary held the handle on Part A of the window wiper and cleaned glass of different thickness. The table below shows the results from the experiment.

Thickness of glass being cleaned (cm)	Part A and Part B of windows wiper
1	Stayed together
2	Stayed together
3	Part B dropped
4	Part B dropped

What can be done to stop Part B from dropping if the glass being cleaned is 3 cm thick?

- (1) Use rubber holders
- (2) Use stronger magnets
- (3) Use thicker cleaning sponges
- (4) Reverse the poles of the magnet in Part A

- 13 Alice suspended a bar magnet freely on a string. It came to rest as shown in the diagram.

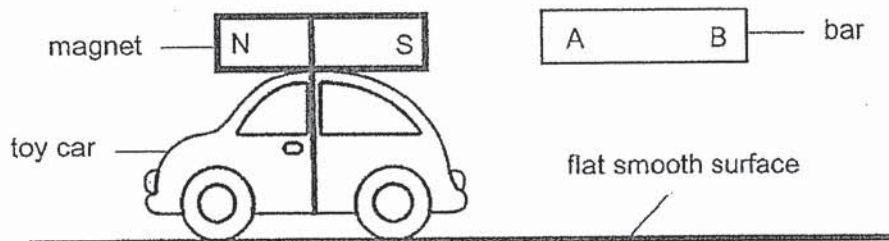


Alice held the N-pole of another magnet near Pole D and noticed that both poles repelled each other.

What would be Pole C and Pole D?

	Pole C	Pole D
(1)	N-pole	N-pole
(2)	N-pole	S-pole
(3)	S-pole	S-pole
(4)	S-pole	N-pole

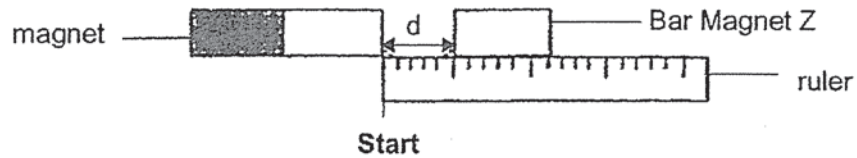
- 14 A magnet was attached to a toy car as shown.



It was observed that when the bar was brought near the toy car, the toy car moved towards both sides A and B of the bar. Which of the following is true about the bar?

- (1) Bar is a magnetic material.
- (2) Bar is a non-magnetic material.
- (3) Bar is a magnet and side A is the N-pole.
- (4) Bar is a magnet and side B is the N-pole.

- 15 Dan set up an experiment to compare the strengths of four magnets, A, B, C and D. He placed each magnet respectively, at the **Start** as shown in the diagram. He measured the distance, d , at which the Bar Magnet Z was being repelled from the magnet used.



He recorded his results in the table below.

Magnet	Distance, d , at which the Bar Magnet Z repelled (cm)
A	2
B	3
C	5
D	7

Based on Dan's results, which of the following conclusion is correct?

- (1) Magnet A is the strongest.
- (2) Magnet A is weaker than Magnet D.
- (3) Magnet C is weaker than Magnet B.
- (4) Magnet C is stronger than Magnet D.

- 16 Max created a temporary magnet using the stroke method. He changed the number of strokes to find out how it affects the strength of the temporary magnet. The results are shown in the table below.

Number of strokes	Number of paper clips attracted by temporary magnet
20	4
30	7
40	9
50	10

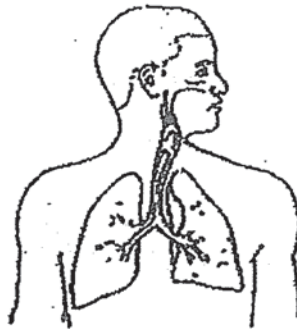
What can Max conclude from the results given in the table?

	Number of strokes	Strength of magnet
(1)	Decreases	Increases
(2)	Decreases	No change
(3)	Increases	Decreases
(4)	Increases	Increases

- 17 Which of the following is **not** a function of the skeletal system?

- (1) It supports the body.
- (2) It gives the body shape.
- (3) It transports food and water.
- (4) It protects the organs in the body.

The picture below shows one of the body systems in a human. Refer to the picture and answer questions 18 and 19.



- 18** Which of the following human body system does the picture show?
- (1) Digestive
 - (2) Muscular
 - (3) Circulatory
 - (4) Respiratory
- 19** Which of the following statements about the above human body system are true?
- A The system removes air from the body.
 - B The system is made up of different parts.
 - C Without the system, food cannot be taken into the body.
- (1) A and B only
 - (2) A and C only
 - (3) B and C only
 - (4) A, B and C

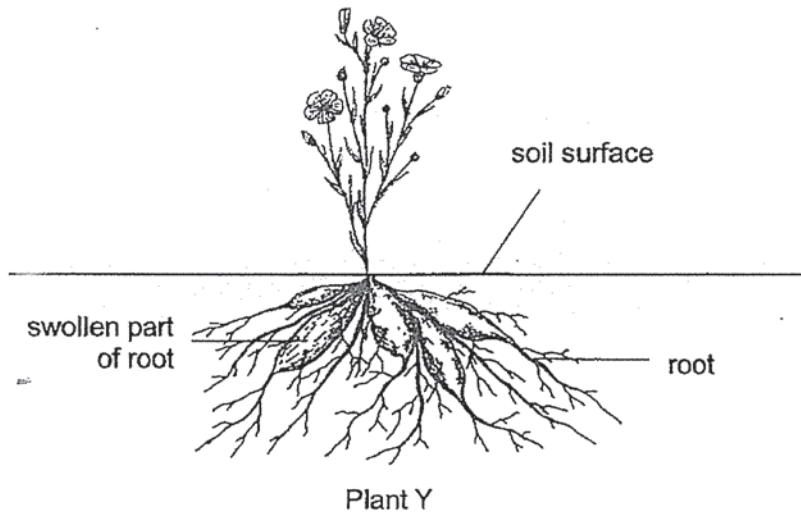
- 20 Four similar plants, W, X, Y and Z, were placed under the sun and given the same amount of water daily. One part from each plant was removed completely as shown in the table.

Plant	Part of the plant that was removed completely
W	Roots
X	Fruits
Y	Flowers
Z	Leaves

After one month, which of the following plants would most likely **not** be alive?

- (1) X and Y only
 - (2) W and Z only
 - (3) W, X and Z only
 - (4) X, Y and Z only
- 21 Which part of a plant helps it to make food?
- (1) Leaf
 - (2) Stem
 - (3) Fruit
 - (4) Flower

22 The diagram shows the roots of plant Y.



Based on the diagram, which of the following statements are true about the roots of Plant Y?

- A It holds the plant upright.
 - B It stores food for the plant.
 - C It makes food for the plant.
 - D It takes in and give out air for the plant.
- (1) A and B only
 (2) B and C only
 (3) A, C and D only
 (4) B, C and D only

END OF BOOKLET A
Please go on to Booklet B.



**Anglo-Chinese School
(Primary)**

A Methodist Institution
(Founded 1886)

**SEMESTRAL ASSESSMENT TWO 2019
SCIENCE
PRIMARY THREE
BOOKLET B**

Name: _____ ()

Class: Primary 3 _____

Date: 24 October 2019

Total Time for Booklets A and B: 1 h 45 min

Parent's/ Guardian's signature

INSTRUCTIONS TO CANDIDATES

1. Write your name, index number and class in the spaces provided.
2. Do not turn over this page until you are told to do so.
3. Follow all instructions carefully.
4. Answer all questions.
5. Write your answers in this booklet.

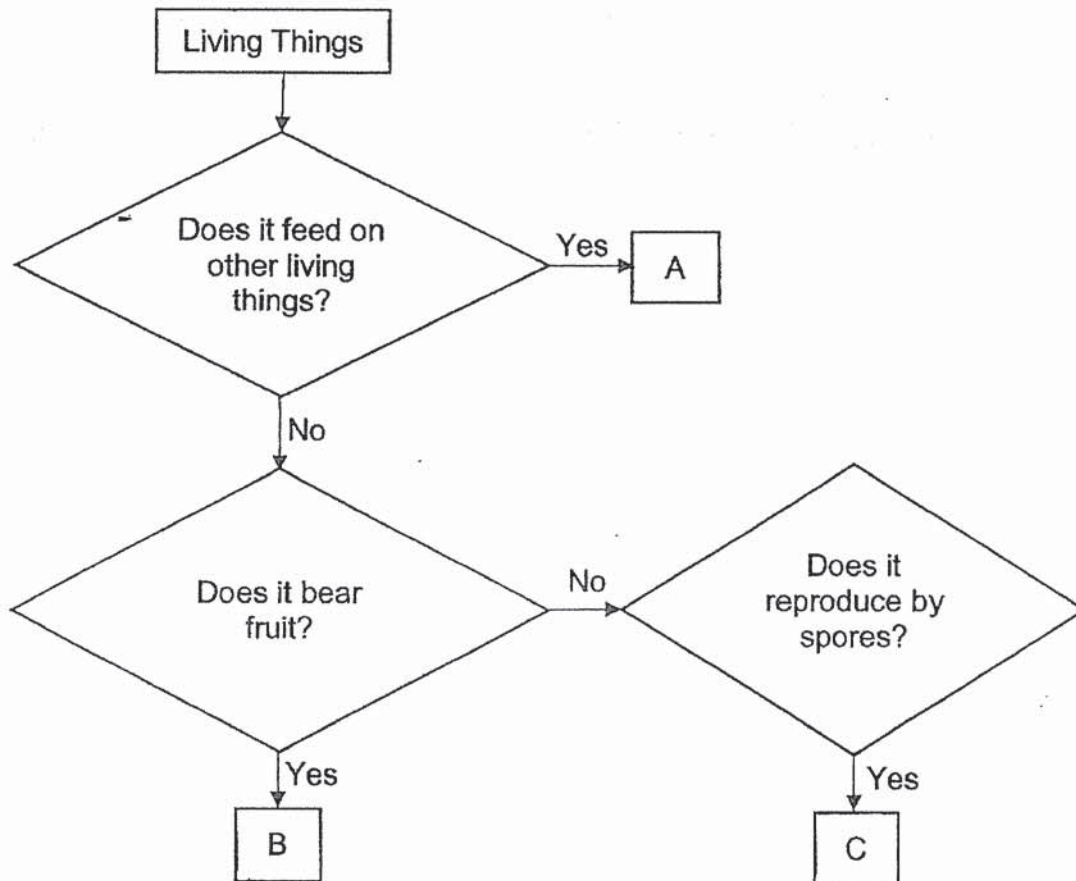
BOOKLET	MAX MARKS	MARKS OBTAINED
A	44	
B	36	
Total	80	

This question paper consists of 10 printed pages including this cover page.

For questions 23 to 32, write your answers in this booklet.

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

23 Study the flowchart carefully.



Answer the following questions based on the flowchart.

(a) State all the characteristics of B. [2]

(b) State one difference between A and C. [1]

(c) Name a living thing that can be B. [1]

(Go on to the next page)

Score	4
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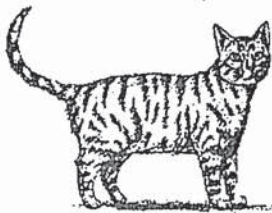
24 The pictures below show four animals, A, B, C and D.

- (a) Link the animals by drawing a straight line to the correct group in which they belong to. Use a pencil and ruler to draw the lines. [2]



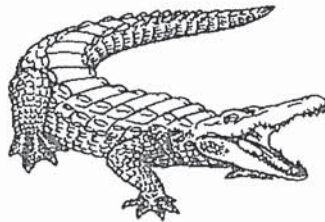
Animal A •

• Reptile



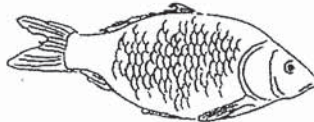
Animal B •

• Fish



Animal C •

• Bird



Animal D •

• Mammal

- (b) State the type of outer coverings that Animal A and Animal D have, respectively. [2]

Animal A: _____

Animal D: _____

(Go on to the next page)

Score	4
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- 25 Some objects that can be found in school had been grouped, as shown in the table, based on the materials that they are made of.

Group A	Group B	Group C	Group D
canteen plates waste paper baskets	school shirts school socks	textbooks teachers' desks	window grills staircase railings

- (a) Identify the four different materials that are used to make the above objects. [2]

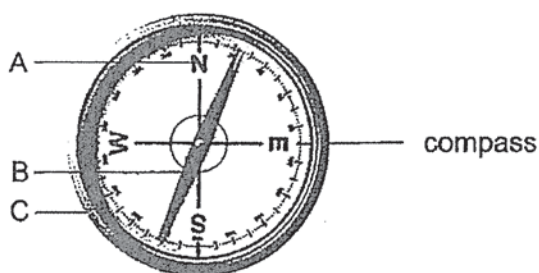
Group	Material
A	
B	
C	
D	

- (b) Name two properties of the material such that it is suitable for making the objects in Group A. [2]

(i) _____

(ii) _____

- 26 The picture below shows a compass.



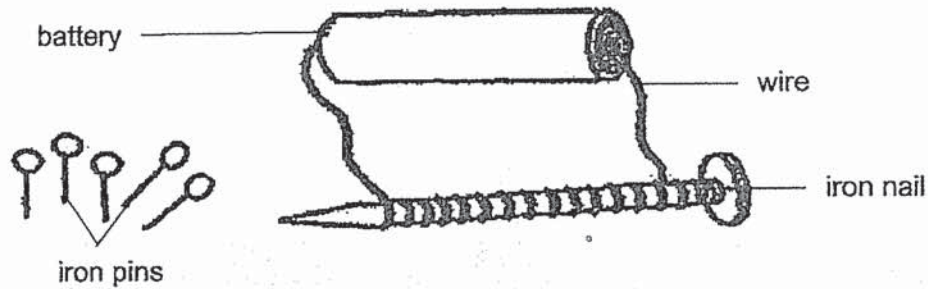
- (a) Write down the part, A, B or C, of the compass which is a magnet. [1]

- (b) In which direction will the compass be finally pointing if it is left freely suspended? [1]

(Go on to the next page)

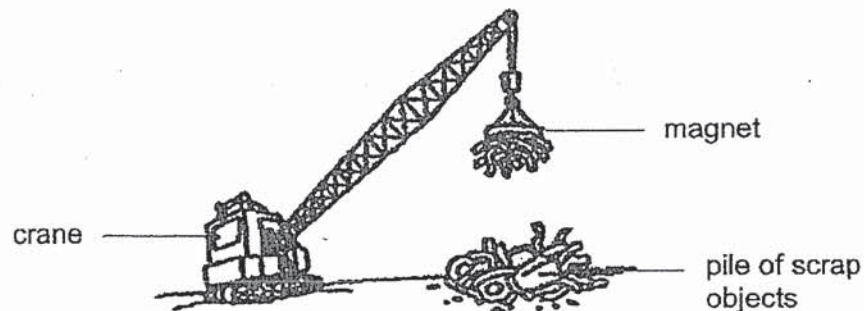
Score	6
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27 James set up an experiment as shown below.



- (a) What would James observe when he placed the iron pins near the iron nail? [1]
-
- (b) Give a reason for your answer in (a). [1]
-
- (c) Suggest one change in the set-up that James can make so that the iron nail attracts more iron pins. [1]
-

The crane as shown in the diagram below can be found at a metal scrapyards. A magnet is attached to one end of the crane.



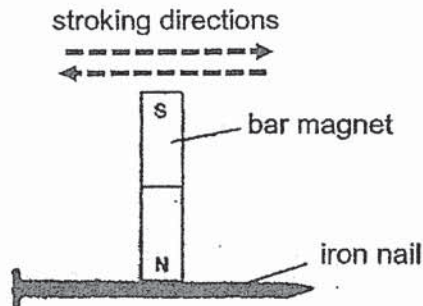
- (d) Explain how the magnet helps to separate objects, which are made of iron, from the pile of scrap objects. [1]
-
-

(Go on to the next page)

Score	4
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28 Jenny and John wanted to magnetise different objects using the stroke method.

- (a) Jenny stroked the iron nail back and forth with a bar magnet three times as shown in the diagram.



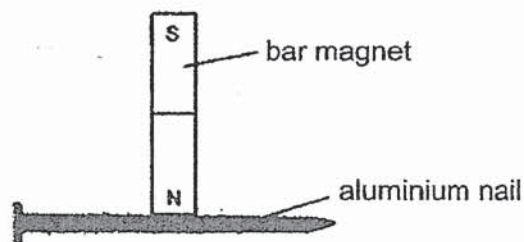
She noticed that the iron nail was not magnetised at all.

State two things Jenny should do to successfully magnetise the iron nail using the stroke method. [2]

- (i) _____

- (ii) _____

- (b) John was able to carry out the stroke method accurately. He then used an aluminium nail instead of an iron nail. No matter how many times he stroked the aluminium nail with the magnet, he was unable to magnetise the aluminium nail at all.



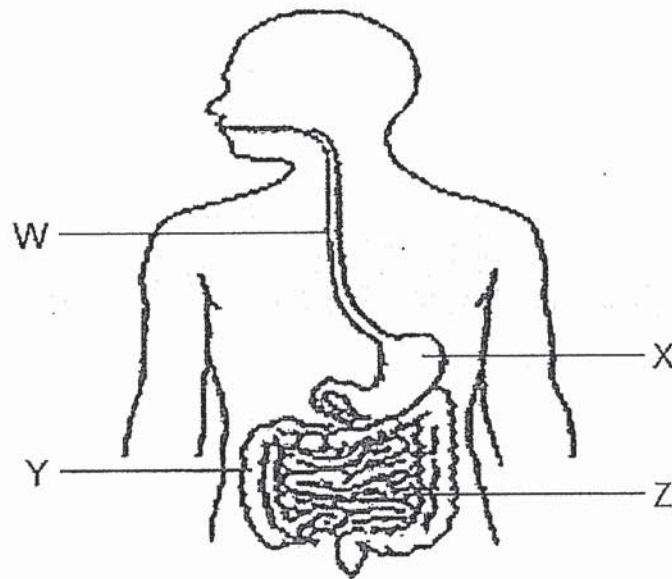
- (i) Give a reason why he was unable to magnetise the aluminium nail. [1]

- (ii) State one way to weaken a magnet. [1]

(Go on to the next page)

Score	4
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- 29 The diagram shows some parts of a human body system that are involved when food is eaten by a person.



- (a) Name parts X and Y.

[2]

X: _____

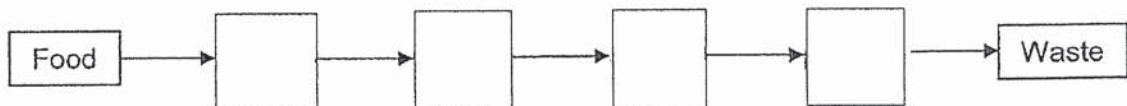
Y: _____

- (b) In which one of the above parts, W, X, Y or Z, is food that had been broken down, ready to be absorbed into the body?

[1]

- (c) Fill in the boxes with letters, W, X, Y and Z, to show how food moves along this human body system.

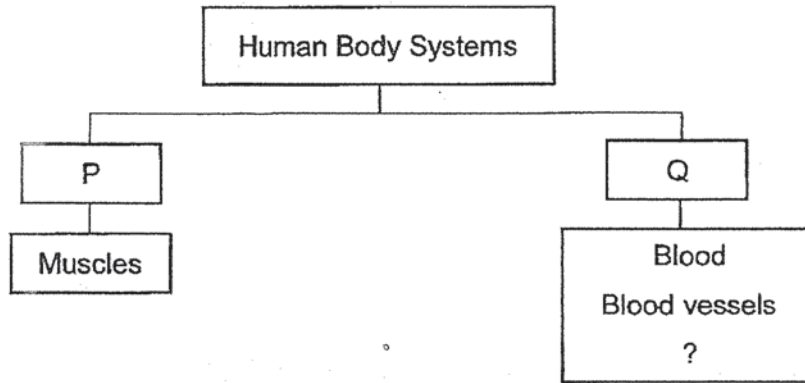
[1]



(Go on to the next page)

Score	4
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- 30 Daniel classified the different human body systems as shown in the chart below.



- (a) From this list, **Circulatory, Digestive, Muscular, Respiratory** or **Skeletal**, choose a suitable heading for each of the following: [2]

P: _____

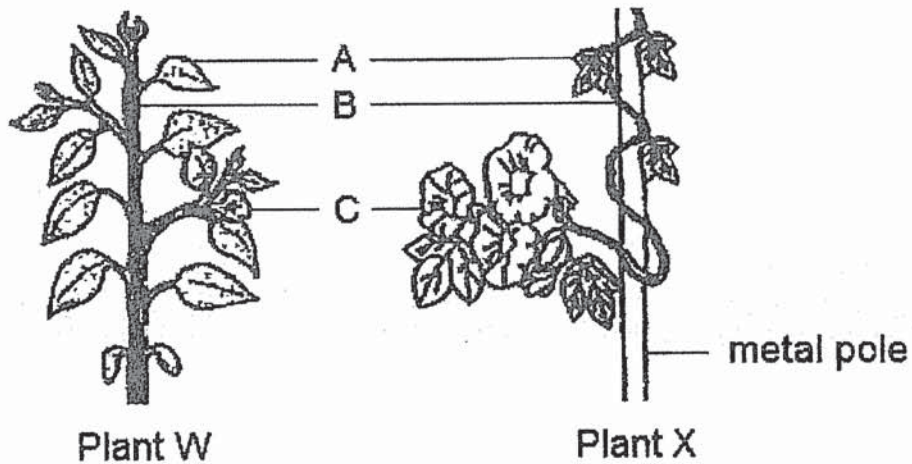
Q: _____

- (b) An important part of the human body system in Q is missing. State the missing part. [1]

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Score	3
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31 The diagram below shows plants, W and X.

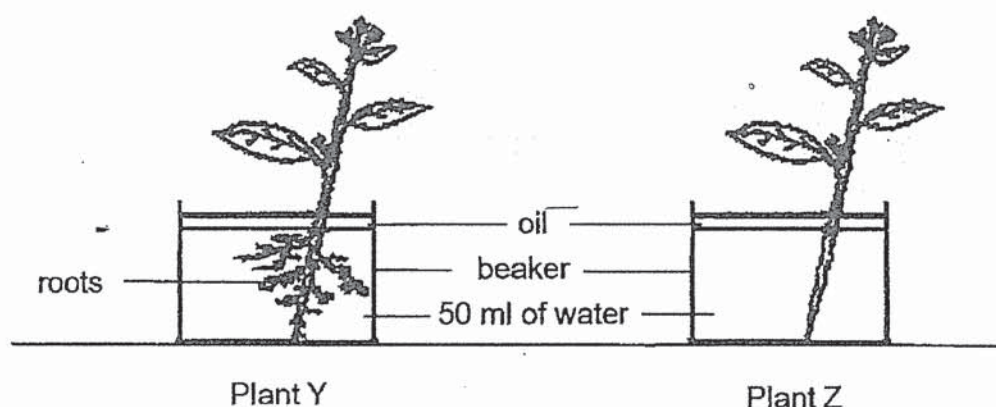


- (a) Which letter, A, B or C is pointing to the leaves? [1]
- _____
- (b) Based on your observations of the diagram above, what is the difference between part B of Plant W and Plant X? [1]
- _____
- (c) It is observed that Plant X grows upwards along the metal pole. Explain why this way of growing is important for the plant. [2]
- _____
- _____

(Go on to the next page)

Score	4
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- 32 Ben conducted an experiment as shown using two similar plants, Y and Z. All of the roots from Plant Z had been removed. He then added oil to ensure that there was no water lost from the beakers to the surroundings. Ben placed both plants next to a window where they were exposed to sunlight.



After five days, Ben recorded the amount of water left in each beaker as shown in the table.

Plant	Amount of water left in beaker after five days (ml)
Y	30
Z	50

- (a) Based on Ben's results, state the function of the roots. [1]
- _____
- (b) After three days, Ben observed that the leaves of Plant Z became brown but those leaves on Plant Y were still green. Suggest a likely reason for this observation. [2]
- _____
- _____

END OF BOOKLET B
Please check all your answers carefully.

Score	3
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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : Anglo-Chinese School (Primary)
SUBJECT : SCIENCE
TERM : SA2

SECTION A (22 x 2marks)

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10
2	3	3	4	3	2	2	3	3	2
Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20
1	2	4	1	2	4	3	4	1	2
Q 21	Q 22								
1	1								

SECTION B (36 marks)

- Q23.a) B bears food and does not feed on other living things.
 b) A feeds on other living things but C does not.
 c) Apple tree.

- Q24.a) Animal A - Bird
 Animal B - Mammal
 Animal C - Reptile
 Animal D - Fish

- b) Animal A: Feathers Y: Scales

Q25.a)

Group	Material
A	Plastic
B	Fabric
C	Wood
D	Metal

- b)i) It is strong. ii) It is waterproof.

Q26.a) Part B.

- b) In the North-South direction.

Q27.a) The iron pins will move towards the iron nail.

- b) The iron pins are attracted by the iron nail which became an electromagnet.

c) He could use more batteries. / He could increase the number of coils around the iron nail.

d) Iron is a magnetic material, the magnet will attract the iron from the pile of scrap objects.

Q28.a)i) Jenny should stroke the iron nail in one direction instead of opposing directions.

a)ii) She should also stroke the iron nail at least 20 times.

b)i) Aluminium is not a magnetic material.

b)ii) Dropping the magnet multiple times.

Q29.a) X: Stomach Y: Large intestine.

b) Part Z.

c) Food -> W -> X -> Z -> Y -> Waste

Q30.a) P: Muscular Q: Circulatory

b) The heart is missing.

Q31.a) A.

b) Plant W has a strong stem while Plant X has a weak stem.

c) This allows the leaves of the plant to get sunlight so that it can make food for the plant.

Q32.a) The roots absorb water for the plant.

b) Plant Z was unable to absorb enough water to survive.

THE END

