

SINGAPORE CHINESE GIRLS' SCHOOL (PRIMARY)

SECOND SEMESTRAL ASSESSMENT 2019

NAME: _____ ()

DATE: 23 OCTOBER 2019

CLASS: PRIMARY 3 SY / C / G / SE / P

Parent's Signature:

SCIENCE

BOOKLET A

20 questions

40 marks

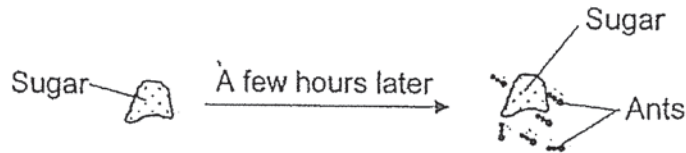
Total time for Booklets A & B: 1 h 25 min

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.
FOLLOW ALL INSTRUCTIONS CAREFULLY.**

Part I (40 marks)

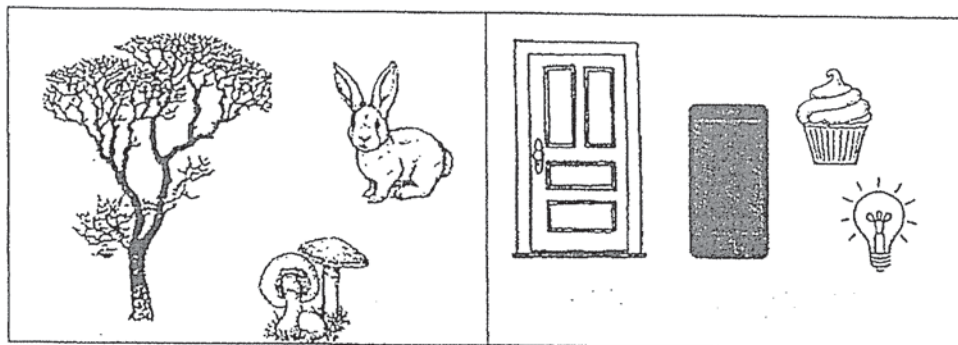
For each question from 1 to 30, four options are given.
One of them is the correct answer. Make your choice (1, 2, 3 or 4).
Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Sam left a spoonful of sugar on the kitchen table and observed what happened a few hours later as shown below.



Based on Sam's observation, which characteristic of living things do the ants show?

- (1) Living things can die.
 - (2) Living things can grow.
 - (3) Living things can reproduce.
 - (4) Living things respond to changes.
2. Study the two groups of things below carefully.



Group X

Group Y

How are the things in Group X different from the things in Group Y?

	Group X	Group Y
(1)	Alive	Not alive
(2)	Cannot grow	Can grow
(3)	Do not reproduce	Can reproduce
(4)	Need air, food and water	Need air and food only

3. Queenie covered only the leaves of the plant with oil.



She observed that the plant died after a week because the plant cannot _____.

- (1) stay upright
 - (2) produce fruits
 - (3) take in and give out gases
 - (4) take in water and mineral salts
4. Janelle recorded the height of her baby over a period of 9 months.

Month	Height of baby (cm)
January	50
February	55
March	58
April	61
May	64
June	68
July	71
August	73
September	75

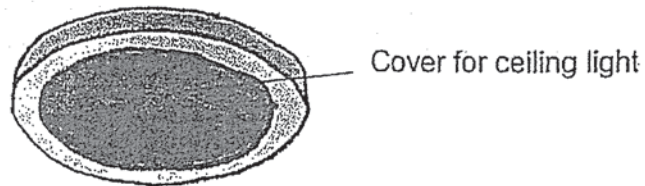
What characteristic of living things does the above table show?

- (1) Living things can die.
- (2) Living things can grow.
- (3) Living things reproduce.
- (4) Living things need air, food and water.

5. The table below shows the properties of Materials P, Q, R and S.

Material	Breakable	Heavy	Allow light to pass through
P	✓		
Q		✓	
R			✓
S	✓	✓	

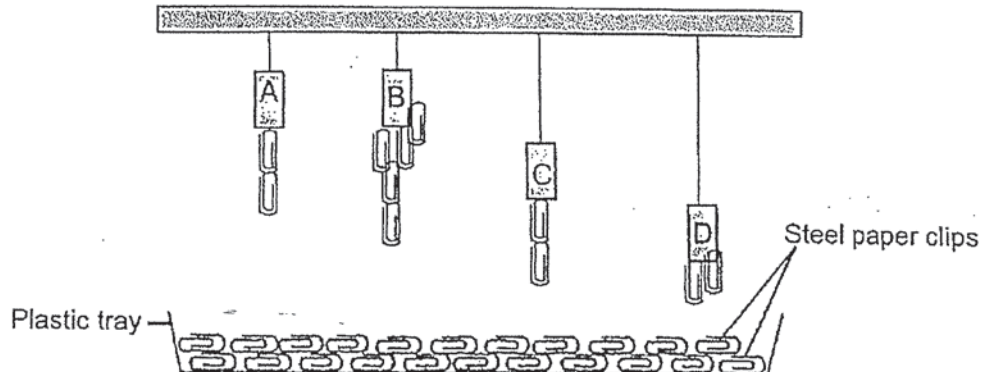
Eric wanted to choose a cover for his ceiling light as shown below.



Which material should Eric use to cover the ceiling light bulb?

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

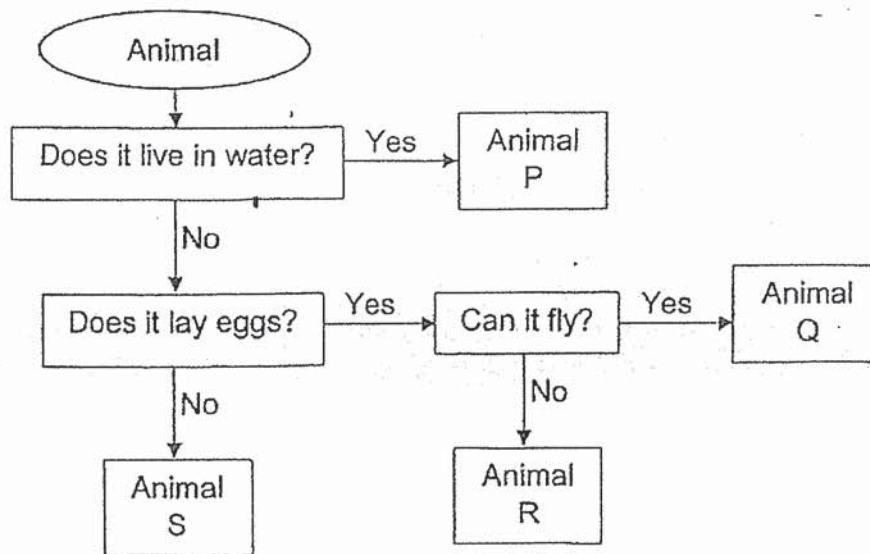
6. Four magnets, A, B, C and D were hung above a tray of identical steel clips as shown in the diagram below.



Based on the above observation, arrange the magnets in order of their magnetic strength, beginning with the strongest magnet.

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

7. Study the flowchart below.



Which one of the following correctly represents Animals, P, Q, R and S?

	P	Q	R	S
(1)	Whale	Parrot	Cobra	Goldfish
(2)	Goldfish	Cobra	Parrot	Elephant
(3)	Goldfish	Parrot	Cobra	Elephant
(4)	Whale	Cobra	Parrot	Goldfish

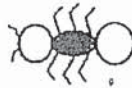
8. Which one of the following shows the correct path in which water will travel in a plant?

- (1) Stems → Leaves → Roots (3) Roots → Leaves → Stem
 (2) Leaves → Stem → Roots (4) Roots → Stem → Leaves

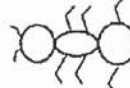
9. Which one of the following correctly shows the body of an insect?



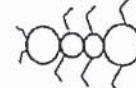
(1)



(2)

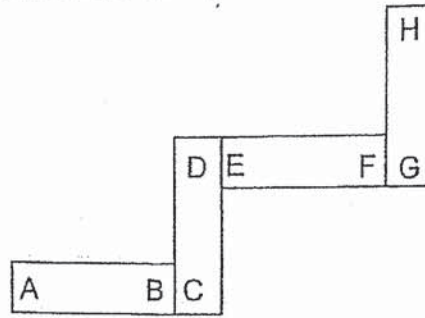


(3)



(4)

10. The diagram below shows the arrangement of four bar magnets.



Which one of the following arrangements is possible among the 4 magnets?

- (1)

A	B	H	G
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 (3)

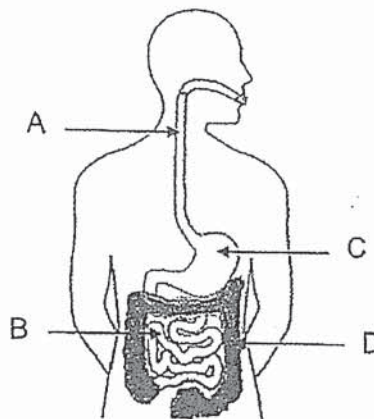
C	D	F	E
---	---	---	---
- (2)

B	A	E	F
---	---	---	---

 (4)

C	D	G	H
---	---	---	---

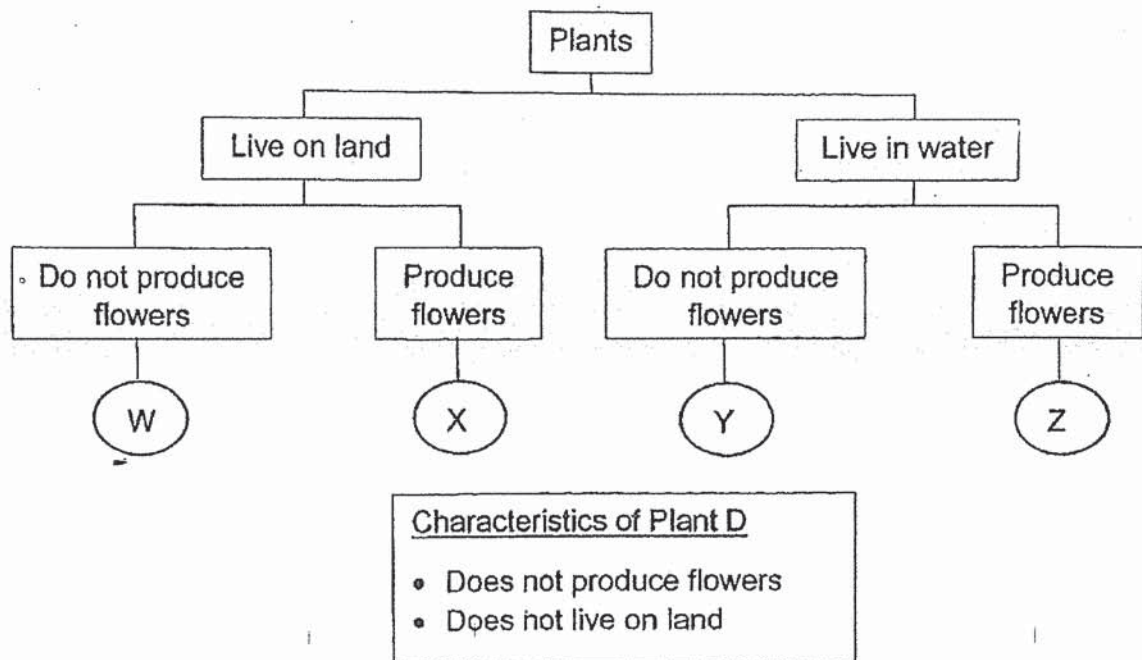
11. The diagram below shows a human digestive system



Which part A, B, C or D produces digestive juices?

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

12. Study the classification chart below.



Based on the information in the table above, which group does Plant D belong to?

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

13. The following statements describe what happens when food enters our body. However, they are not in the correct order.

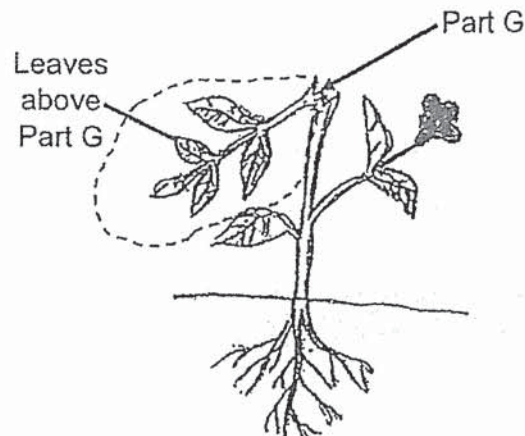
- A: Food is completely digested and goes into the bloodstream.
 B: Food goes into the stomach.
 C: Waste is removed through the anus.
 D: Food enters the mouth.

Which one of the following shows the correct order?

- | | |
|---------------------|---------------------|
| (1) D → B → C → A ✗ | (3) D → A → B → C ✗ |
| (2) D → C → A → B ✗ | (4) D → B → A → C |

14. The plant as shown below is left in an open garden.

Part G was broken and the leaves above Part G died a few days later.



What could have caused the leaves above Part G to die?

- (1) They could not be held up!
- (2) They could not produce flowers.
- (3) They did not have water to make food.
- (4) They did not receive sunlight to make food.

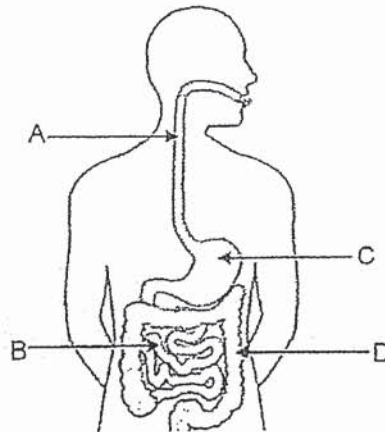
15. The table below shows how some of the organs are classified for the human body systems.

Skeletal system	Digestive system	Respiratory system
Heart	Anus	Nose
Skull	Stomach	Diaphragm
Ribcage	Mouth	Gullet

Which of the above organs are classified wrongly?

- (1) Heart and Gullet
- (2) Skull and Mouth
- (3) Ribcage and Nose
- (4) Anus and Diaphragm

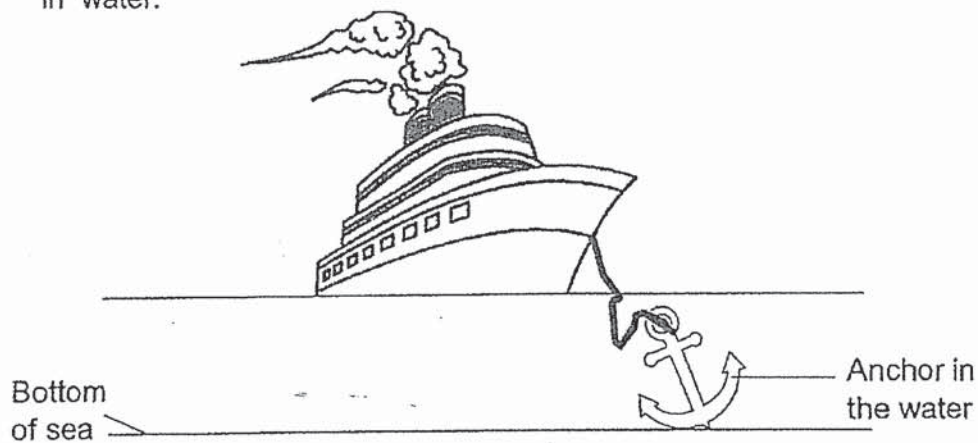
16. The diagram below shows a human digestive system.



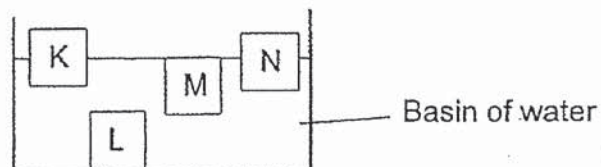
Which part is water removed from the undigested food?

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

17. An anchor stays under water to help the ship remain at the same position in water.



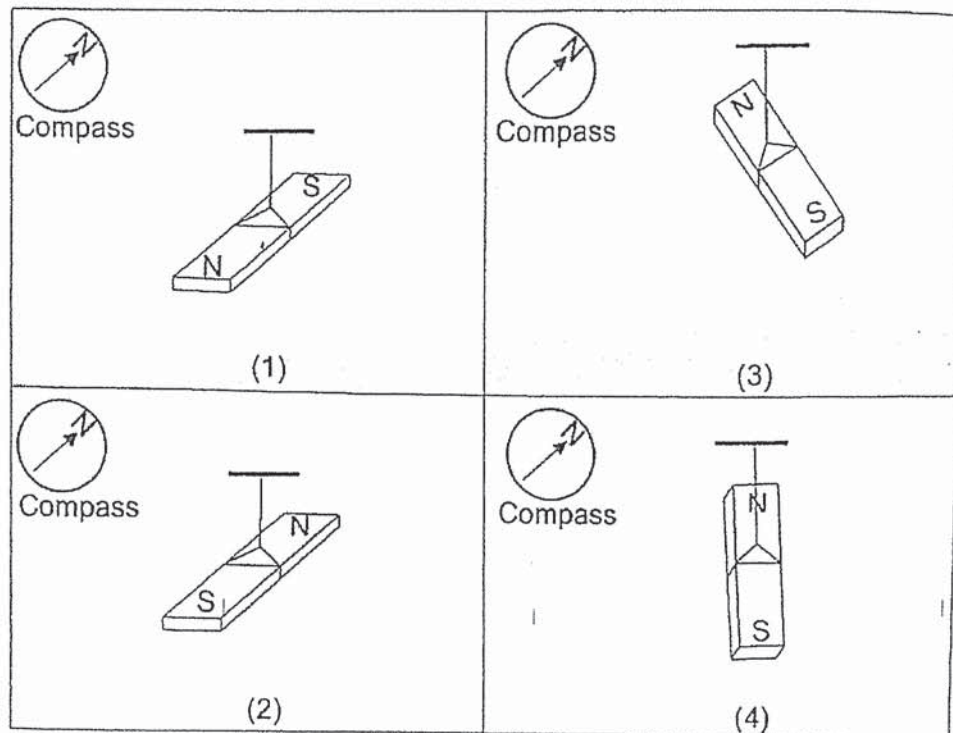
The diagram below shows materials K, L, M and N in a basin of water as shown below.



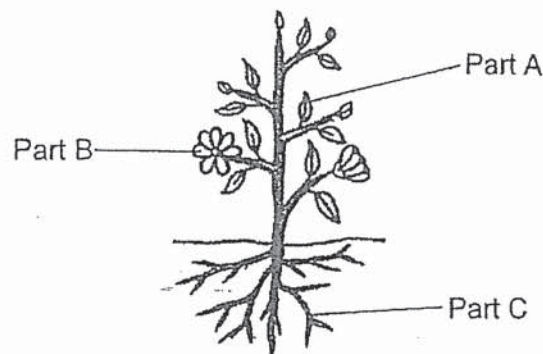
Which material, K, L, M or N is most suitable to make an anchor for the ship?

- | | |
|-------|-------|
| (1) K | (3) M |
| (2) L | (4) N |

18. Which one of the following correctly shows how a magnet will be resting when suspended freely?



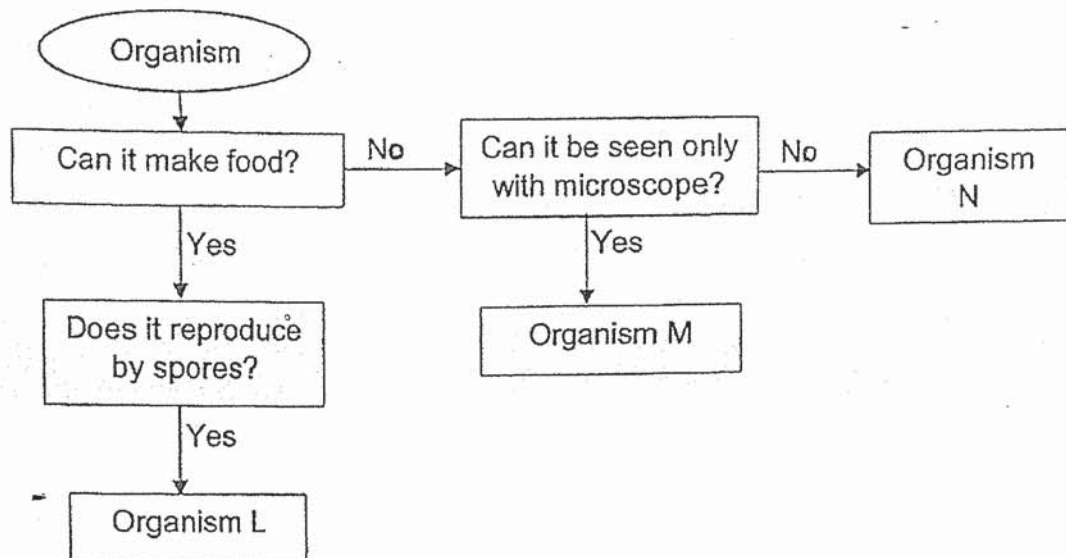
19. The diagram below shows a plant.



Which one of the following is true?

	Part of the plant that makes food	Part of the plant that produces fruit
(1)	A	B
(2)	A	C
(3)	B	C
(4)	C	A

20. Study the flowchart below.



Which one of the following correctly represents organisms L, M and N?

	L	M	N
(1)	Bacteria	Flowering plant	Non-flowering plant
(2)	Non-flowering plant	Fungi	Bacteria
(3)	Flowering plant	Fungi	Bacteria
(4)	Non-flowering plant	Bacteria	Fungi

End of Booklet A

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BOOKLET B

	Total Actual Marks	Total Possible Marks
Booklet A		40
Booklet B		30
Total		70

9 questions

30 marks

Total time for Booklets A & B: 1 h 25 min

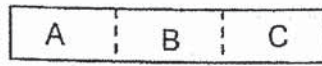
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Part II (30 marks)

Answer all the following questions.

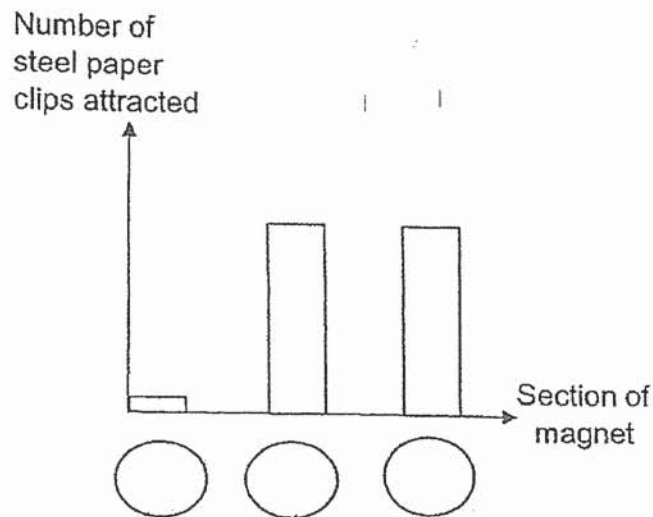
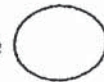
21. a) Kelly divided Magnet X into equal sections, A, B and C, as shown below.



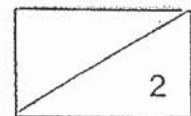
Magnet X

She recorded the number of steel paper clips attracted to different sections of Magnet X in the graph below.

- i) Fill in the correct sections A, B and C of the magnet in the below. (1m)



- ii) For this experiment, besides using steel paper clips, the paper clips can also be made of _____ . (1m)



- b) Objects X and Y are hung on a balance as shown in Diagram 1.

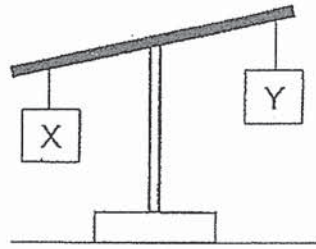


Diagram 1

Next, Object Z is placed near Object X and the result is shown in Diagram 2.

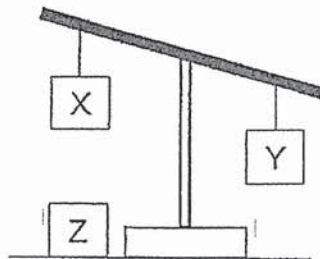
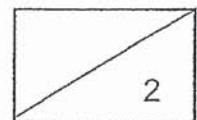


Diagram 2

Based on Diagrams 1 and 2, put a tick (✓) in the boxes for each of the statements. (2m)

	Statements	True	False	Not possible to tell
(i)	Object X is heavier than Object Y.			
(ii)	Object X and Z are definitely magnets.			
(iii)	Object Y is definitely a non-magnetic object.			
(iv)	Object Z will repel Object Y.			

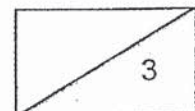


- 22 a) The table below shows only the functions of various human body systems. Using the helping words provided, fill in the boxes below with the correct human body system next to its function. (2m)

Digestive system	Respiratory system	Circulatory system	Muscular system
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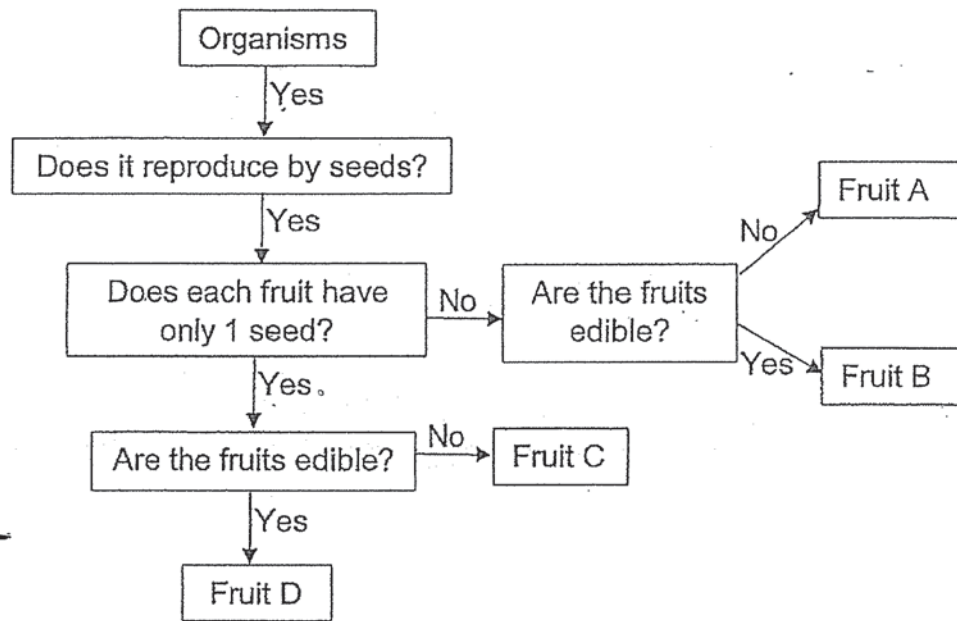
Functions	Fill in the boxes with the correct human body systems
Carries digested food, water and oxygen in the blood to all parts of the body	
Helps different parts of the body to move	
Breaks down food into simpler substances so that they can be used by the body	
Takes in and removes air into and from the body	

- b) State which system the lungs belong to. (1m)



(Go on to the next)

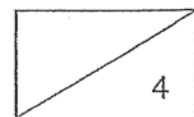
23. Study the flowchart below.



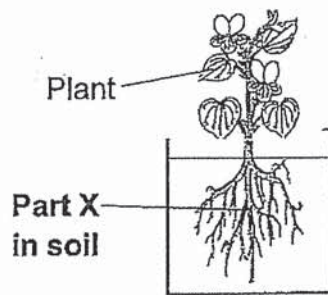
- a) Based only on the above flowchart, state 2 similarities in characteristic between fruits A and C. (2m)

- b) Based only on the above flowchart, state one difference in characteristic between fruits B and D. (1m)

- c) Based only on the above flowchart, explain why Bird's Nest Fern cannot be classified into Fruit A, B, C or D. (1m)

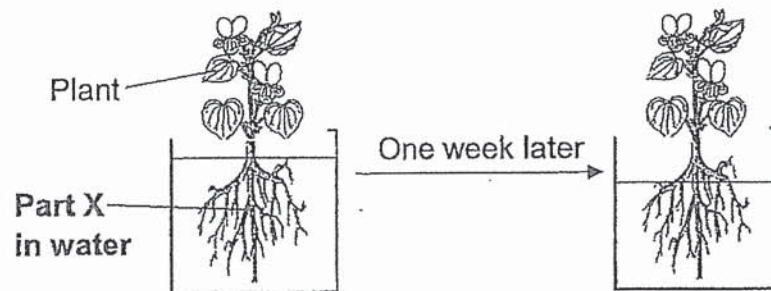


24. Joanne placed a plant in a pot of soil as shown below.



a) State 2 functions of Part X. (2m)

Joanne then placed the plant in a beaker of water.



b) Joanne observed that there was less water in the beaker after a week. Based on Joanne's observation, which characteristic of living things does the plant show? (1m)

25. Jill had 3 similar pieces of bread, A, B and C, as shown below.

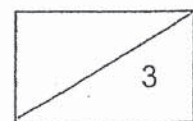
Bread			
	A	B	C
Amount of water provided	3 ml	3 ml	0 ml
Brightness of surrounding	Very bright	Dark	Very bright

After 5 days, she observed there were equal amount of mould growing on Bread A and B, but none on Bread C, as shown below.

		
Bread A	Bread B	Bread C
Presence of mould	Presence of mould	No mould

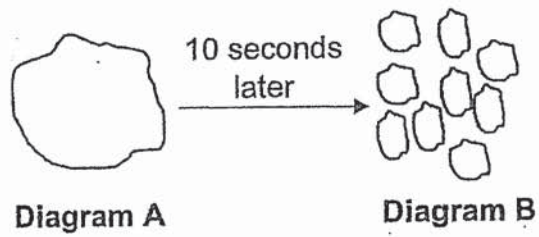
- a) Jill concluded that the mould needs _____ to grow but does not need _____ to grow. (2m)
- b) Tick (✓) the action(s) which will prevent the growth of ^{mould} brown-patches on the bread. (1m)

Action(s) that will prevent growth of brown-patches mould	Put (✓) in the correct boxes below.
a) Cut the bread into smaller piece	
b) Spread jam on the bread	
c) Put the bread in the classroom	
d) Put the bread in the freezer	



(Go on to the next)

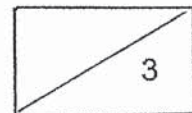
26. Diagram A shows the size of a biscuit before Ella puts it into her mouth. Diagram B shows the size of the biscuit after 10 seconds in her mouth.



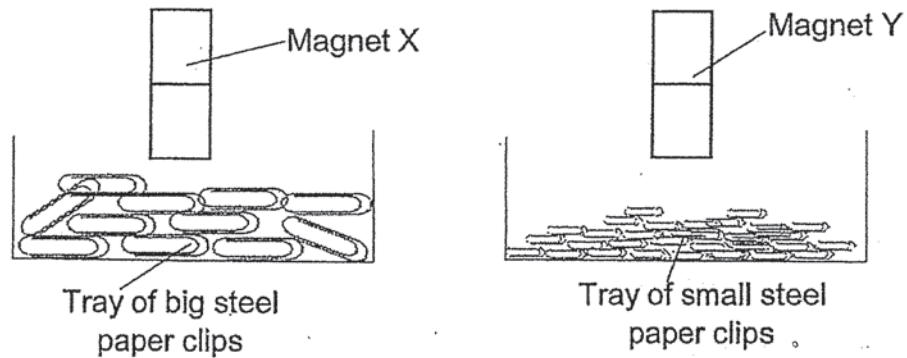
- a) Which part of Ella's mouth causes the food to become smaller pieces? (1m)

- b) Besides making food softer, what does saliva in Ella's mouth do to the food? (1m)

- c) In which part of the human digestive system is the biscuit **completely digested**? (1m)



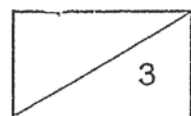
27. a) Shayna wanted to find out if Magnet X or Y is stronger so she set up an experiment as shown below.



- i) Her teacher told her that her experiment was unfair. What should Shayna do to make her experiment a fair one? (1m)

- ii) Put a tick (✓) in the correct boxes for the variables which she should keep the same to ensure a fair test (2m)

	Variables	Put a tick (✓) in the correct boxes
(a)	The type of magnet.	
(b)	The magnetic strength of each magnet.	
(c)	The number of magnetic objects in each tray.	
(d)	The distance between the magnet and the magnetic object.	

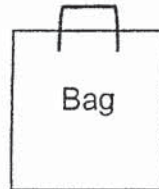


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28. The table below shows the properties of 4 materials, J, K, L and M.

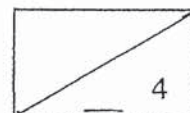
Materials	Waterproof	Mass it can hold before breaking	Allow light to pass through	Flexible
J	✓	15 kg		✓
K	✓	10 kg		
L	✓	15 kg	✓	✓
M		20 kg		✓

a) Based on the table above, describe Material M. (2m)

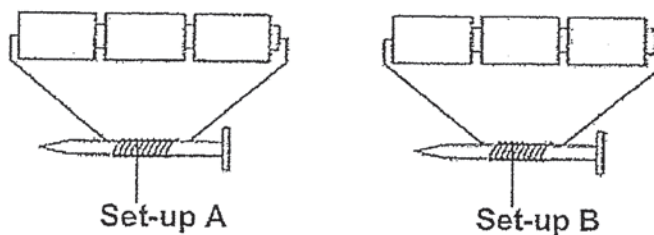


b) What is the difference between using a bag made of Material J and a bag made of Material L? (1m)

c) A bag made of which material, J, K, L or M, will break if it is holding 14kg of goods? (1m)



29. Sheela set-up an experiment as shown below.



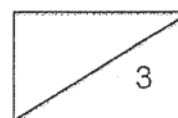
Set-up	Type of nail
A	Copper
B	Steel

- a) Which set-up, A or B, can be made into an electromagnet? Explain. (1m)

- b) State the 2 ways in which she can increase the strength of the electromagnet. (2m)

End of Booklet B

B - 11



(Go on to the next)

ANSWER KEY

YEAR : 2019
 LEVEL : PRIMARY 3
 SCHOOL : SINGAPORE CHINESE GIRL'S SCHOOL
 SUBJECT : SCIENCE
 TERM : SA2

BOOKLET A

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

BOOKLET B

Q21a)i) B A C

ii) clips can also be made of nickel.

b)(i) True

(ii) True

(iii) Not possible to tell

(iv) Not possible to tell

Q22a) circulatory system

muscular system

digestive system

respiratory system

b) Respiratory system.

Q23a) Both Fruits A and C are both inedible.

Both fruits A and C reproduce by seeds.

b) Fruit D has only one seed while Fruit B does not have one seed.

c) The Bird's Nest Fern reproduces by spores while Fruits A, B, C and D all reproduce by seeds. Hence, the Bird's Nest Fern cannot be classified into Fruits A, B, C or D.

Q24a) Part X anchors the plant firmly in the soil.

Part X absorbs water and the mineral salts for the plant.

b) Based on Jannes experiment, living things need water to survive.

Q25a) Water, light

b) Put the bread in the freezer

Q26a) The teeth in Ella's mouth

b) Saliva is also a digestive system juice that digests the food.

c) In the small intestine.

Q27a) i) Shanya should change the tray of big steel paper clips to a tray with small steel paper clips.

(ii) The number of magnetic objects in each tray

The distance between the magnet and the magnetic object.

Q28a) Material M can hold 20 kg mass before breaking, is not waterproof, does not allow light to pass through and it is not flexible.

b) Using a bag made of Material J will not allow light to pass through and using a bag made of Material L will allow light to pass through.

c) Material K

Q29a) Set-up B can be made into an electromagnet. The type of nail used in Set-up B was steel and the type of nail used in set-up A was a copper, copper is a non-magnetic material and cannot be magnetised into an electromagnet. Hence, only set-up B can be made into an electromagnet and only magnetic materials can be magnetised into an electromagnet.

b) Sheela can increase the coils of wire around the nail of the electromagnet. Sheela can increase the number of batteries.

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