



CATHOLIC HIGH SCHOOL
END-OF-YEAR EXAMINATION (2019)
PRIMARY THREE
SCIENCE
BOOKLET A

Name: _____ ()

Class: Primary 3 - _____

Date: 31 October 2019

24 questions

48 marks

Total Time for Booklets A and B: 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

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

Follow all instructions carefully.

Answer all questions.

Shade your answers in the Optical Answer Sheet (OAS) provided.

This booklet consists of 13 printed pages, excluding the cover page.

Booklet A (24 × 2 marks)

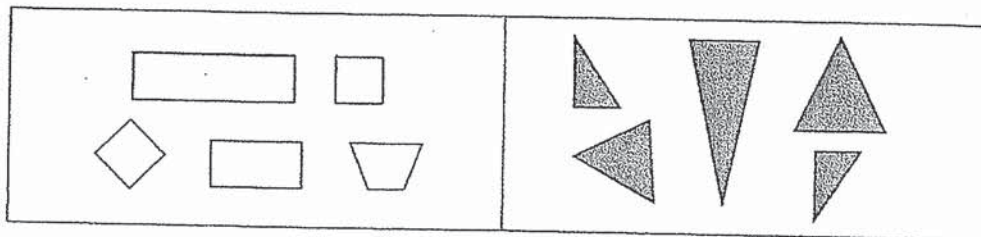
For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet. (48 marks)

1 Which statement(s) is/are characteristic(s) of all living things?

- A They grow.
- B They reproduce.
- C They make their own food.
- D They move from place to place.

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

2 Study the diagram below.

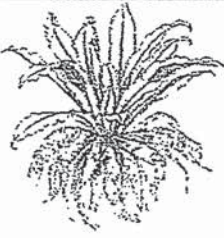
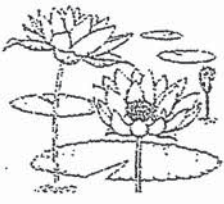
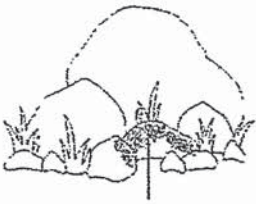


The objects are classified according to their _____.

- A sizes
- B shapes
- C colours
- D number of sides

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

3 Study the two groups of plants as shown below.

Group A	Group B
 rose	 fern
 water lily	 moss

The plants are grouped according to whether they _____.

- (1) are trees or ferns
- (2) are able to make food
- (3) are land or water plants
- (4) are flowering or non-flowering plants

4 Animal G has the following characteristics:

- three pairs of legs
- a hard outer covering

Which group does animal G belong to?

- (1) Insect
- (2) Reptile
- (3) Mammal
- (4) Amphibian

5 Study the plants below.



plant X



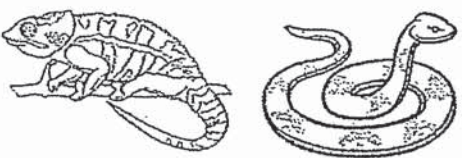
plant Y

Based on the diagrams above, how is plant X similar to plant Y?

- A Both have roots.
- B Both have stems.
- C Both have leaves.
- D Both have flowers.

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

6 Study the two groups of animals below.

Group M		Group N	
			

Which of the following correctly describes animal groups M and N?

	Group	Has scales	Has hair	Lays eggs
(1)	M	No	Yes	No
(2)	M	Yes	No	Yes
(3)	N	No	Yes	Yes
(4)	N	Yes	No	No

7 Which statement about bacteria is correct?

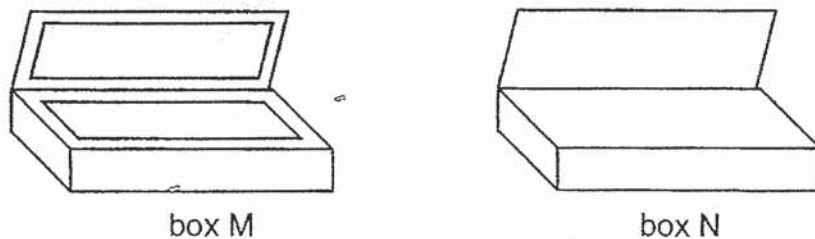
- (1) Bacteria can make their own food.
- (2) Some bacteria reproduce from spores.
- (3) All bacteria are harmful to living things.
- (4) Bacteria respond to changes in the surroundings.

8 Samuel, Wei Ling and Betty made the following statements about yeast.



Which pupil(s) was/were correct?

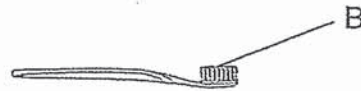
- (1) Samuel only
 - (2) Wei Ling only
 - (3) Samuel and Betty only
 - (4) Wei Ling and Betty only
- 9 Zhihao has two cardboard boxes M and N of different thickness. He wants to use box M to carry the class library books from the classroom to the staffroom without tearing.



Which of the following is the best reason for Zhihao to use box M?

- (1) Box M is heavier than box N.
- (2) Box M is stronger than box N.
- (3) Box M is more flexible than box N.
- (4) Box M is able to absorb more water than box N.

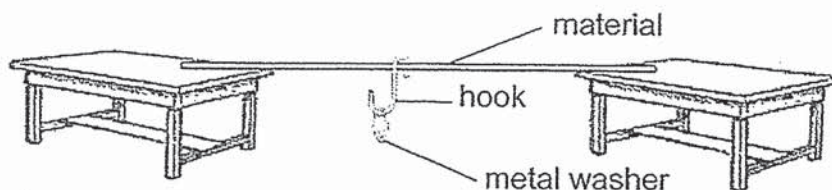
- 10 Carrie brushes her teeth with a toothbrush as shown below.



Based on the properties shown below, which material is most suitable for making part B of the toothbrush? A tick (✓) in the box shows that the material has that property.

	Material	Properties		
		strong	flexible	waterproof
(1)	P	✓	✓	✗
(2)	Q	✓	✗	✓
(3)	R	✓	✓	✓
(4)	S	✗	✓	✓

- 11 Yusri wanted to find out the strength of three materials S, U and V of the same length. He hung the metal washer onto the hook one at a time until the material broke.



He then counted the number of metal washers needed to break each material and recorded the results in the table below.

Material	Number of metal washers needed to break the material
S	4
U	16
V	9

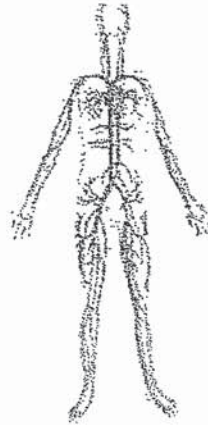
Based on his results, arrange the materials from the strongest to the weakest.

	strongest	→	weakest
(1)	U	S	V
(2)	U	V	S
(3)	V	S	U
(4)	V	U	S

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

- (1) Supports the body
- (2) Gives the body shape
- (3) Removes air from the body
- (4) Protects the organs in the body

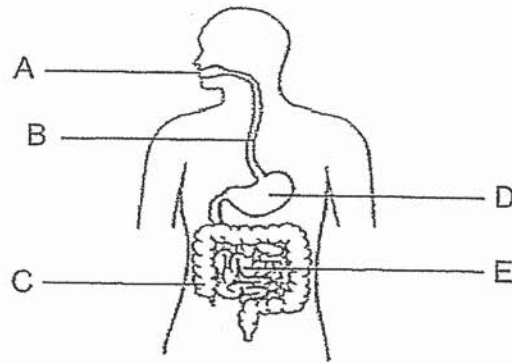
13 Study the diagram below.



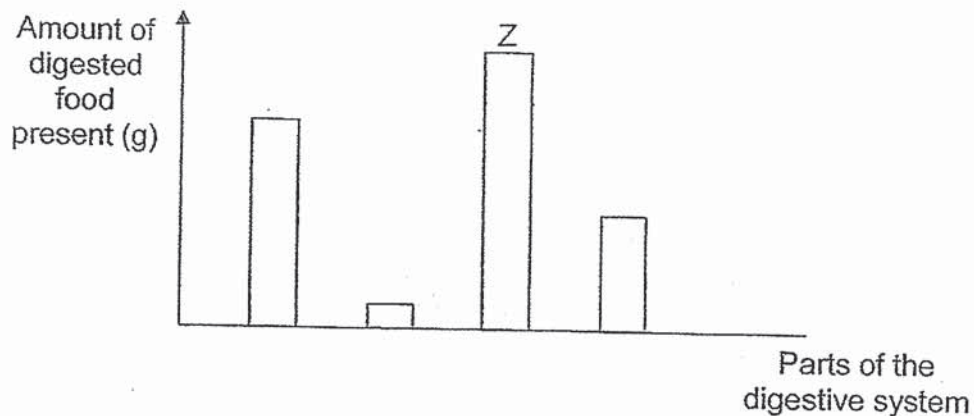
Which body system does the diagram above belong to?

- (1) digestive system
- (2) muscular system
- (3) circulatory system
- (4) respiratory system

Use the diagram below to answer questions 14 and 15.



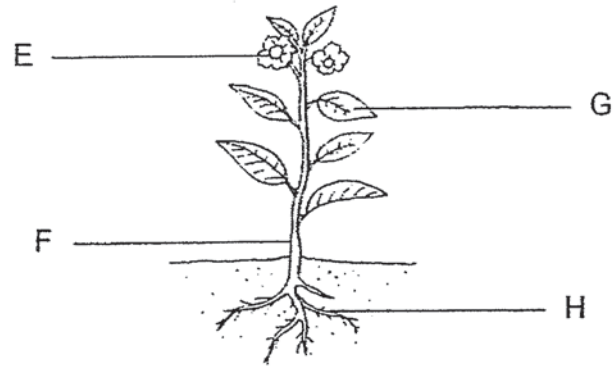
- 14 Based on the diagram above, in which parts A, B, C, D and E are digestive juices found?
- (1) A and B only
 - (2) A, D and E only
 - (3) C, D and E only
 - (4) B, C, D and E only
- 15 The graph below shows the amount of digested food present in various parts of the human digestive system.



Which part of the human digestive system could substance Z be taken from?

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

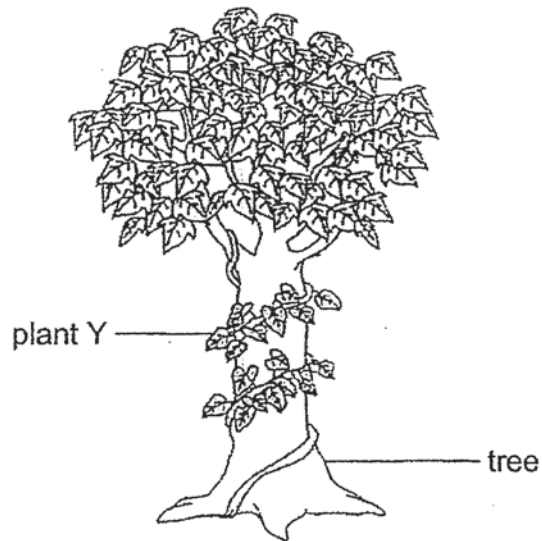
16 Study the diagram below.



Which part (E, F, G or H) of the plant is able to trap light from the Sun?

- (1) E
- (2) F
- (3) G
- (4) H

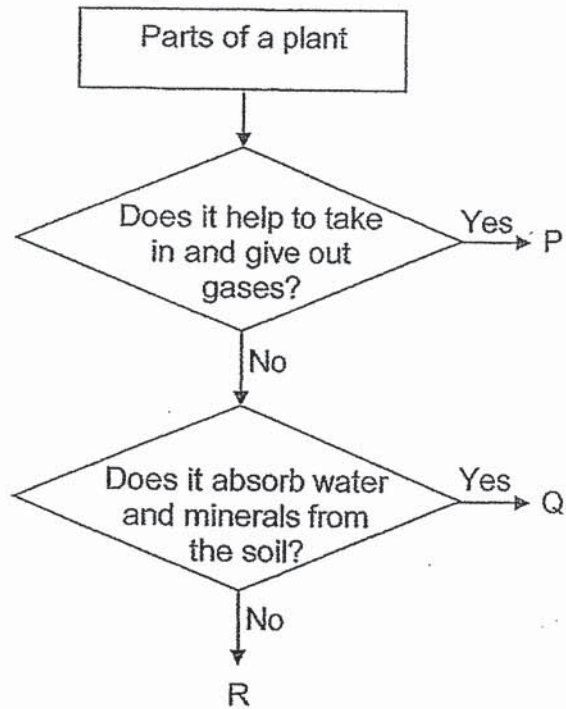
17 The diagram below shows a tree and plant Y.



What is plant Y trying to get by climbing up the tree?

- (1) air
- (2) food
- (3) water
- (4) sunlight

18. Study the diagram below.



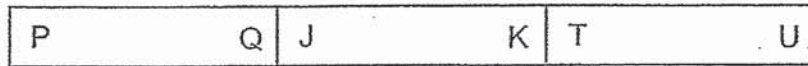
What do P, Q and R represent?

	P	Q	R
(1)	leaf	root	stem
(2)	leaf	stem	root
(3)	stem	root	leaf
(4)	stem	leaf	root

19. Which one of the following things does **not** make use of magnets?

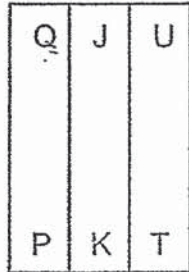
- (1) newspaper
- (2) refrigerator
- (3) chess board
- (4) doorstopper

20 Three bar magnets PQ, JK and TU can be arranged as shown below.

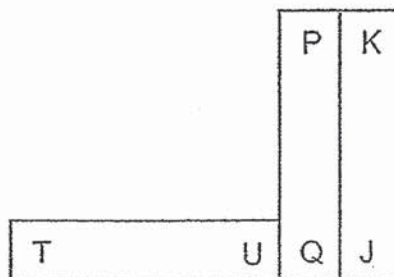


Which of the following arrangements of the magnets is **not** possible?

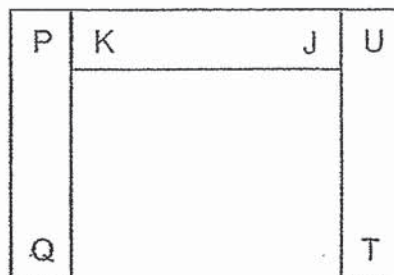
(1)



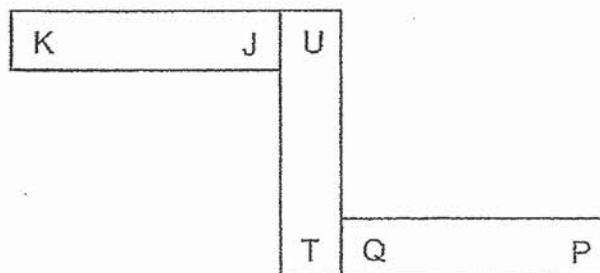
(2)



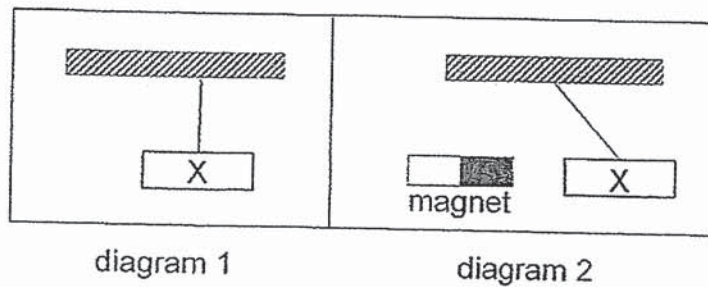
(3)



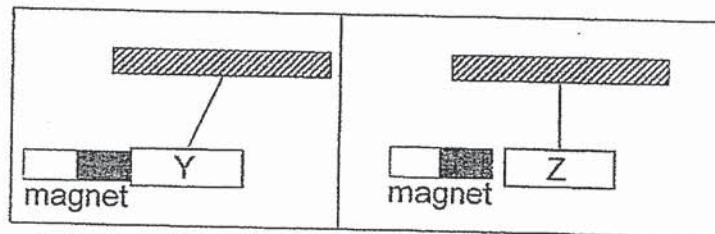
(4)



- 21 Bar X was hung from a string as shown below in diagram 1. Faizal moved a magnet near to bar X and recorded his observations in diagram 2.



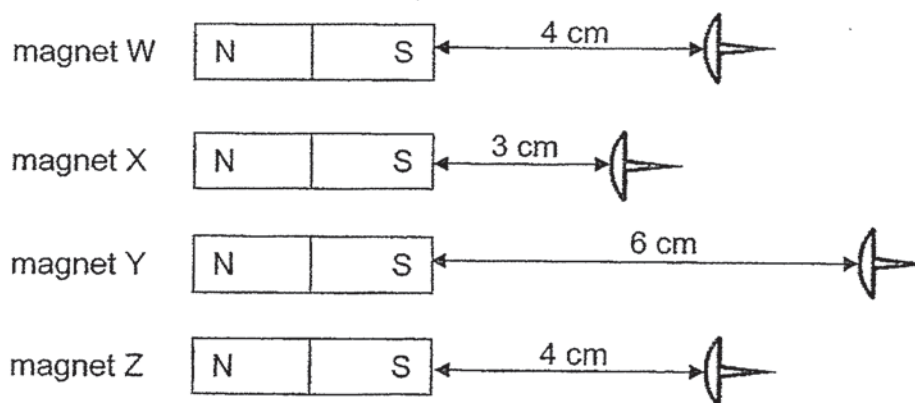
He repeated with bars Y and Z. The diagrams below show his observations.



Based on the observations above, which statement is correct?

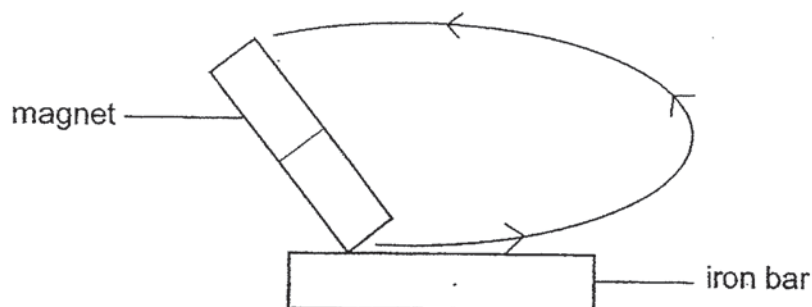
- (1) All bars are magnetic.
- (2) Bars X and Y are magnets.
- (3) Only bar Z is non-magnetic.
- (4) Only bar X is a magnet and the rest are magnetic.

- 22 The diagram below shows the distance at which the different magnets W, X, Y and Z can attract an iron pin.



Which of the following best describes the above observations?

- (1) Magnet Y is the strongest.
 - (2) Magnet W is weaker than magnet X.
 - (3) Magnet X is stronger than magnet Y.
 - (4) Magnet Z is twice as strong as magnet W.
- 23 Andy stroked an iron bar with a magnet as shown below.

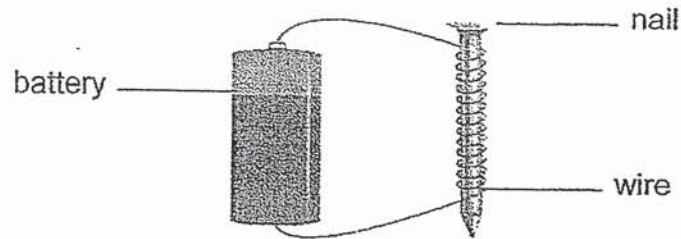


The iron bar attracted two paper clips after it was stroked a few times.

What could Andy do so that the iron bar could attract more than two paper clips?

- (1) Drop the iron bar a few times.
- (2) Heat the iron bar over a flame.
- (3) Stroke the iron bar in a different direction many times.
- (4) Increase the number of times he stroke the iron bar in the same direction.

- 24 Selvi tested four electromagnets A, B, C and D using some paper clips. The batteries used were similar.



The table below shows the results.

Electromagnet	Number of batteries used	Number of paper clips attracted
A	1	2
B	2	4
C	3	?
D	4	8

What could be the possible number of paper clips attracted for electromagnet C?

- (1) 6
- (2) 2
- (3) 3
- (4) 9

End of Booklet A



CATHOLIC HIGH SCHOOL
END-OF-YEAR EXAMINATION (2019)
PRIMARY THREE
SCIENCE
BOOKLET B

Name: _____ ()

Class: Primary 3 - _____

Date: 31 October 2019

Parent's Signature: _____

Booklet A	48
Booklet B	32
Total	80

10 questions

32 marks

Total Time for Booklets A and B: 1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

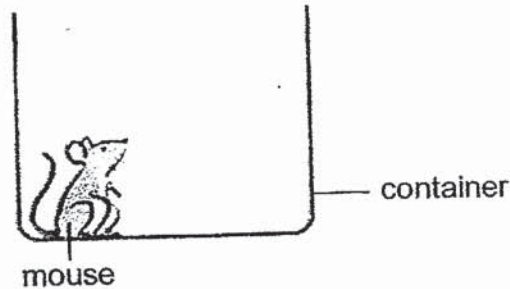
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

This booklet consists of 11 printed pages, excluding the cover page.

Booklet B (32 marks)

For questions 25 to 34, write your answers in this booklet.
The number of marks available is shown in brackets [] at the end of each question or part question. (32 marks)

25 Chee Keong kept a mouse as shown below.



- (a) Based on the diagram above, which basic need of living things was provided for the mouse? [1]

- (b) What would happen to the mouse if it did not have the basic need in (a)? [1]

- (c) Name two other important needs of living things. [1]

(Go on to the next page)

SCORE	3
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- 26 The table below shows the characteristics of four plants W, X, Y and Z. A tick (✓) shows the characteristic that each plant has.

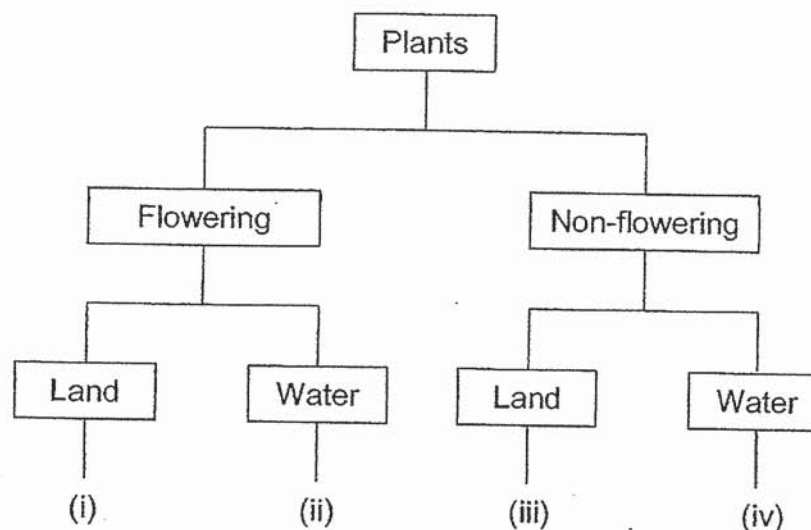
Characteristics	Plants			
	W	X	Y	Z
has flowers	✓		✓	
grows in water			✓	✓

- (a) Based on the table above, state two characteristics of plant Z. [1]

(i) _____

(ii) _____

- (b) Based on the table above, plants W, X, Y and Z can be classified as shown below.



What do (i), (ii), (iii) and (iv) represent? Fill in the blanks with W, X, Y and Z.

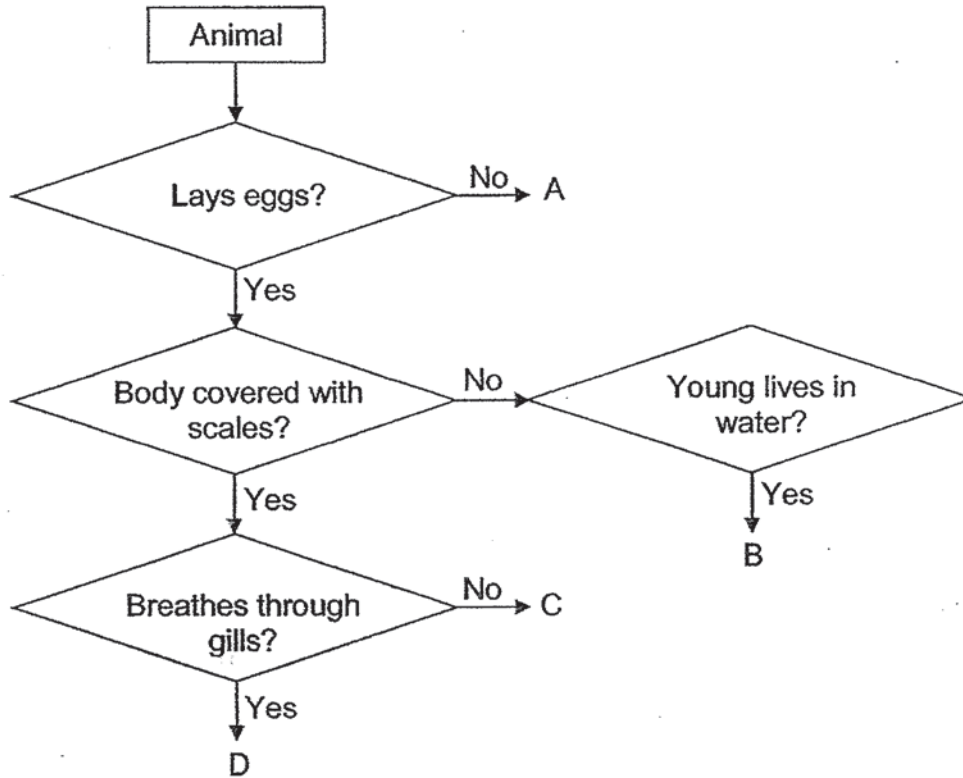
[2]

(i)	
(ii)	
(iii)	
(iv)	

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SCORE	3
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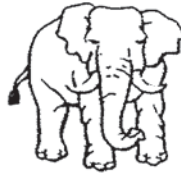
27 Study the diagram below.



Based on the diagram above,

(a) which letter A, B, C or D represents the animal below?

[1]



(b) state one similarity between animals C and D.

[1]

(c) which animal group does animals B and C belong to?

[1]

(i) animal B : _____

(ii) animal C : _____

(Go on to the next page)

SCORE	3
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- 28 Lydia had four similar muffins P, Q, R and S. She added different amounts of water on three of the muffins and placed all of them in the Science Room over a period of ten days.



10 ml



20 ml



30 ml



no water added

The table below shows the number of days taken for the muffins to turn mouldy.

Muffin	P	Q	R	S
Number of days for muffins to turn mouldy	6	4	2	?

- (a) Muffin P turned mouldy in 6 days. Would the number of days for muffin S to turn mouldy be more than, same as or less than 6 days? Put a tick (✓) in the correct box below.

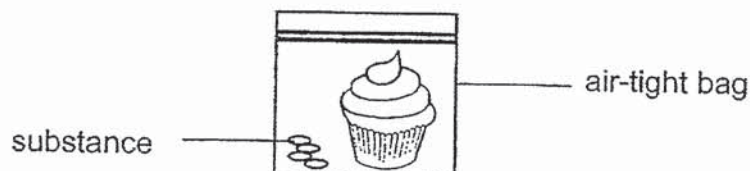
[1]

more than 6 days	same as 6 days	less than 6 days

- (b) Explain your choice in (a).

[1]

Lydia took another muffin and toasted it in the oven. She cooled it and then placed it in an air-tight plastic bag. She added substance X to absorb the moisture in the bag as shown below.



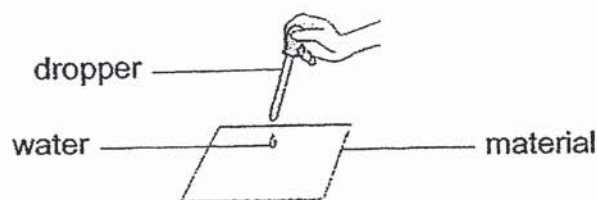
- (c) What would Lydia observe on the muffin after two days?

[1]

(Go on to the next page)

SCORE	3
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- 29 Dinesh conducted a test on two different materials P and Q of similar size and thickness. He put two drops of water on both materials as shown below.



He recorded his observations below.

Material	Observations
P	water is absorbed by material P
Q	water stayed on the surface of material Q

- (a) Put a tick (✓) in the box(es) next to the variable that Dinesh must keep the same to make his test fair. [1]

	Variable	Tick (✓)
(i)	distance between the dropper and the materials	
(ii)	type of material	
(iii)	number of drops of water dropped onto the material	

- (b) Based on Dinesh's results, which material P or Q would be more suitable for making tissue paper? Give a reason. [1]

Dinesh wore a pair of gloves made from material R to wash his car as shown below.



- (c) Based on the picture above, list two properties of material R in the blanks below. [2]

(i) _____

(ii) _____

(Go on to the next page)

SCORE	4
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- 30 Timothy ate a plate of noodles for his lunch as shown below.



Arrange the digestive processes below to show the order of digestion.

Write 1, 2, 3 and 4 in the boxes provided.

[2]

Digestive Process	Steps
Water is removed from the undigested food.	
The food is chewed and broken down into smaller pieces.	
The digested food passes through the walls of the small intestine into the blood.	
The food is mixed with digestive juices to break down into simple substances.	

(Go on to the next page)

SCORE	2
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31 · Study the diagram below.



(a) Name part F. [1]

(b) State a function of part F. [1]

During a thunderstorm, the roots of the trees are pulled out of the ground as shown in the diagram below.

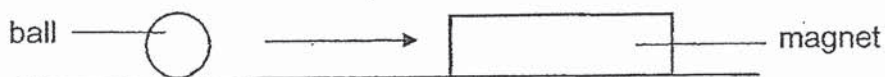


(c) Which function of the roots resulted in the tree being pulled out from the ground? [1]

(Go on to the next page)

SCORE	3
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32 Xavier placed a magnet near a ball as shown below.



He observed that the ball moved towards the magnet in the direction as shown by the arrow.

- (a) Based on Xavier's observation, name one material the ball could be made of. [1]

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

Xavier replaced the ball with a glass marble as shown below.



- (c) What do you think he would observe? [1]

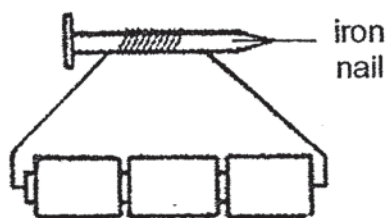
- (d) Give a reason for your answer in (c). [1]

(Go on to the next page)

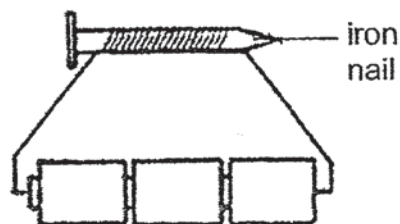
SCORE	4
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33 Ahmad had the following set-ups.

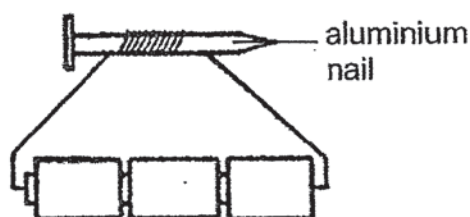
set-up A (10 coils)



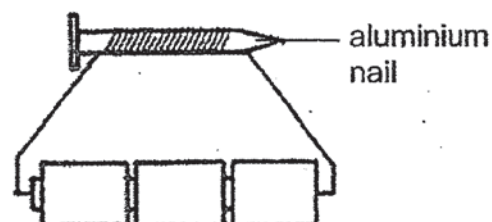
set-up B (20 coils)



set-up C (10 coils)



set-up D (20 coils)



- (a) Which set-ups should Ahmad use to find out if the number of coils on the nail would affect the strength of the electromagnet? [1]

Ahmad tested set-ups B and D with some paper clips. The table below shows part of his observation.

- (b) Complete the table to show the number of paper clips which set-up D could attract. [1]

Set-up	Number of paper clips attracted
B	8
D	

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

(Go on to the next page)

SCORE	3
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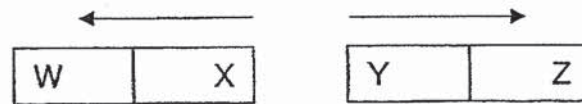
Continue from Question 33

- (d) Without changing the number of batteries, suggest one thing Ahmad could do to set-up A so that the iron nail could attract more paper clips. [1]

(Go on to the next page)

SCORE	1
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- 34 John brought two bar magnets near each other. He observed that they moved in the directions as shown by the arrows.



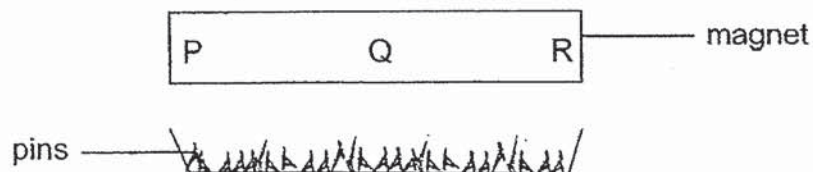
- (a) Name the poles at X and Y. [1]

X: _____

Y: _____

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

John then marked another bar magnet into three parts P, Q and R as shown in the diagram below.



After marking the magnet, he lowered it into a tray of pins and counted the number of pins attracted to the different parts of the bar magnet.

- (c) Identify the part(s) with the most number of pins attracted to the magnet by putting a tick (✓) in the correct box(es). [1]

Parts	P	Q	R
Number of pins attracted			

End of Booklet B

SCORE	3
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ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 3
SCHOOL : CATHOLIC HIGH SCHOOL
SUBJECT : SCIENCE
TYPE : END-OF-YEAR

Booklet A

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

BOOKLET B

(25a) Oxygen

(25b) The mouse will die.

(25c) Food and water.

(26a)(i) Plant Z does not bear flowers.

(ii) Plant Z grows in water.

(26b)(i) W

(ii) Y

(iii) X

(iv) Z

(27a) A

(27b) Both have scales.

(27c)(i) Amphibians

(ii) Reptiles

(28a) more than 6 days

(28b) Muffin S did not have water and mould needs moisture to grow.

(28c) She did not observe any mould growing on the muffin.

(29a)(i) distance between the dropper and the materials.

(iii) number of drops of water dropped onto the material.

(29b) Material P, because it is absorbent.

(29c)(i) waterproof

(ii) flexible

(30) 4,1,3,2

(31a) Stem.

(31b) It is to transport water to all parts of the plant.

(31c) The roots hold the plant firmly to the ground.

(32a) Steel.

(32b) The ball is made of a magnetic material and the magnet can only attract magnetic materials.

(32c) The marble will not move.

(32d) Glass is a non-magnetic material so the magnet ~~cannot~~ ^{will not} attract the marble.

(33a) Set-up A and B.

(33b) 0

(33c) D did not attract any paper clips because D is made of aluminium which is a non-magnetic material and cannot be magnetised.

(33d) He can coil more wire around the iron nail.

(34a) X: South-pole

Y: South-pole

(34b) The like poles are facing each other so the 2 magnets repel.

(34c) P,R

