CATHOLIC HIGH SCHOOL

MID-YEAR EXAMINATION (2019)

PRIMARY FOUR

SCIENCE

BOOKLET A

Name: _____ ( )

Class: Primary 4 - _____

Date: 16 May 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 14 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 Jenny received a battery-operated toy dog that moves and barks when it is switched on.



Her friends made the following statements about the dog.

Ahmad	The dog is a living thing because it can bark.
Betty	The dog is a living thing because it can move.
Carl	The dog is a non-living thing because it cannot grow.
Doris	The dog is a non-living thing because it does not need air, food and water to survive.

Which pupils made the correct statements?

(1) Betty and Carl
(2) Carl and Doris
(3) Ahmad and Betty
(4) Ahmad and Doris

2 Which one of the following does not reproduce by spores?

(1)



banana tree

(2)



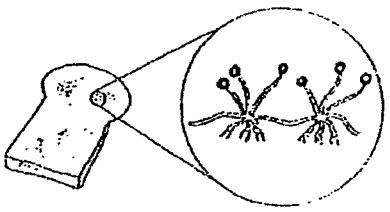
fern

(3)



bracket fungus

(4)



mould

3 Which one of the following characteristics is common among birds and mammals?

(1) They have three body parts.

(2) The young look like the adults.

(3) They reproduce by laying eggs.

(4) They have the same type of body covering.

4 Which one of the following statements about mushrooms is **not** correct?

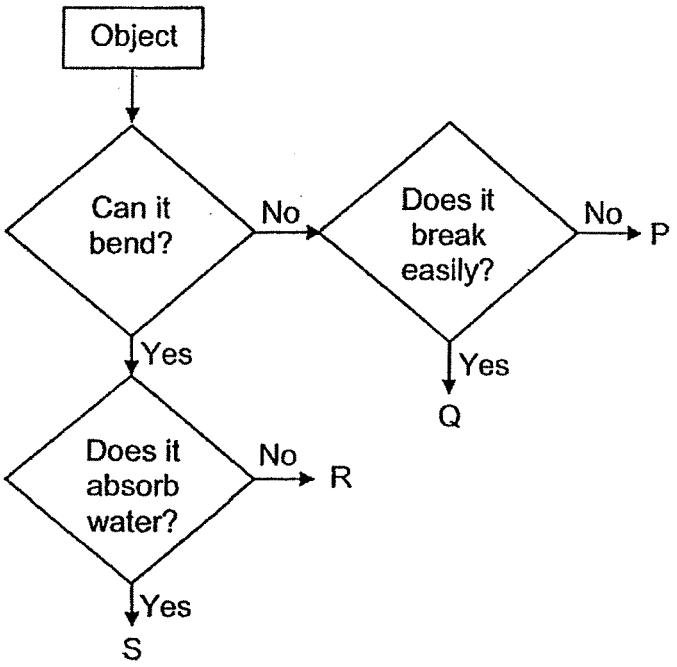
(1) Mushrooms are fungi.

(2) Mushrooms reproduce by spores.

(3) Mushrooms can make their own food.

(4) Some mushrooms feed on dead organisms.

5 Study the chart below.



Ali packed one of the objects in the chart into a box labelled "handle with care". Which object P, Q, R or S is it likely to be?

(1) P

(2) Q

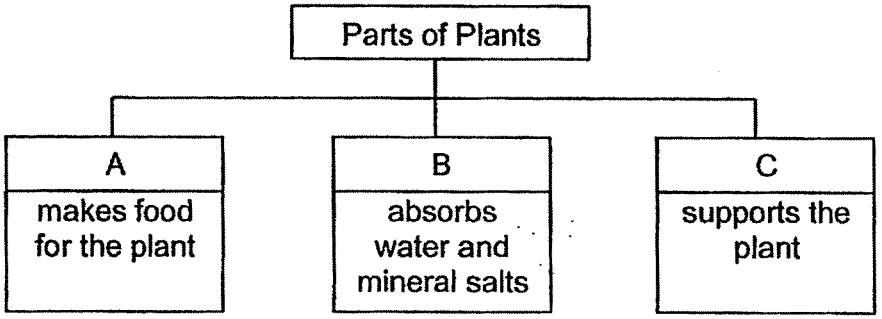
(3) R

(4) S

6 Which of the following parts of the human system are correctly matched to the body systems?

	Skeletal system	Digestive system	Respiratory system
(1)	rib cage	mouth	blood
(2)	skull	gullet	heart
(3)	rib cage	windpipe	nose
(4)	skull	stomach	lungs

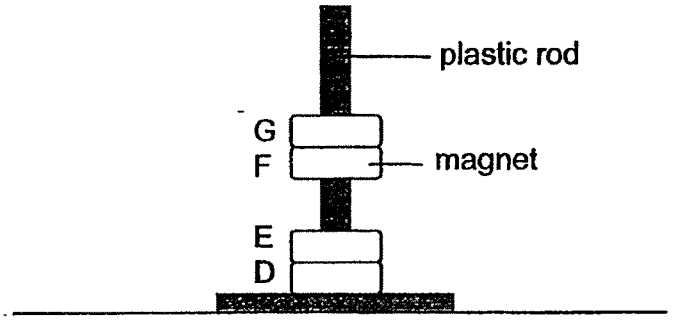
7 Study the chart below.



What are the plant parts A, B and C?

	A	B	C
(1)	leaves	stem	roots
(2)	stem	leaves	roots
(3)	roots	stem	leaves
(4)	leaves	roots	stem

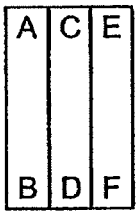
8 In the set-up below, D, E, F and G are four rings which pass through a smooth plastic rod. F is a magnet.



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

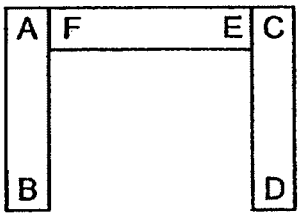
	D	E	G
(1)	iron	magnet	iron
(2)	plastic	iron	iron
(3)	plastic	magnet	plastic
(4)	magnet	magnet	plastic

9 Three bar magnets, AB, CD and EF, can be arranged as shown below.

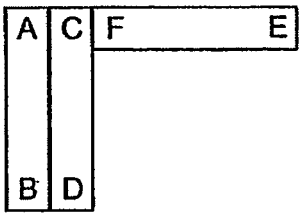


Which of the following arrangements is **not** possible?

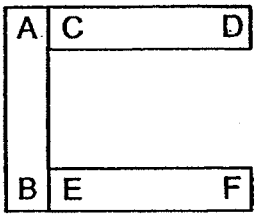
(1)



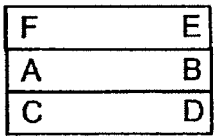
(2)



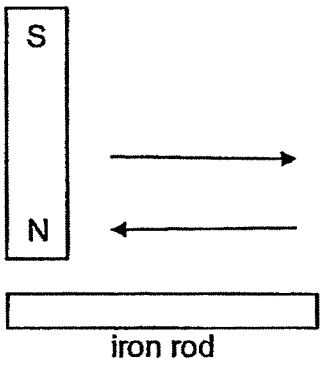
(3)



(4)



10 Clare tried to magnetise an iron rod using the stroking method. She stroked the iron rod with a bar magnet as shown below. When she brought the iron rod near some paper clips, no paper clips were attracted.



What is a possible reason for her observation?

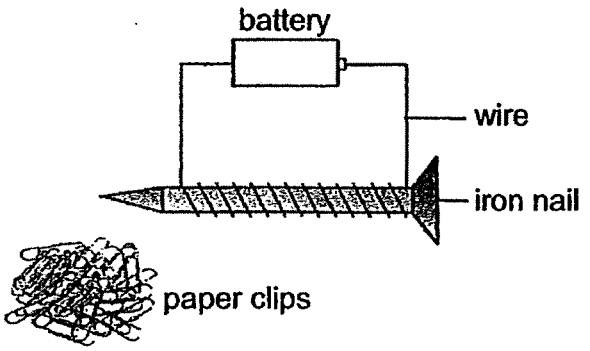
(1) The bar magnet was too big.

(2) Iron cannot be made into a magnet.

(3) The iron rod was stroked in more than one direction.

(4) The iron rod was stroked with the wrong pole of the magnet.

11 Fahmi made an electromagnet as shown below.



He changed the number of batteries in the set-up and counted the number of paper clips attracted by the nail. The results are shown in the table below.

	Set-up			
	E	F	G	H
Number of batteries	1	2	3	4
Number of paper clips attracted by the iron nail	2	5	10	13

Based on the results above, which of the statements are correct?

A The iron nail in set-up H has the strongest magnetism.

B The strength of the electromagnet depends on the number of batteries.

C The iron nail in set-up G is a stronger electromagnet than the iron nail in set-up F.

D The strength of the electromagnet depends on the number of coils around the iron nail.

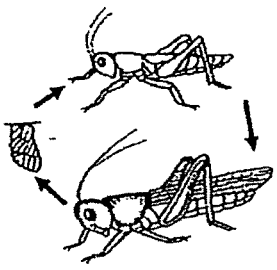
(1) A, B and C only

(2) A, B and D only

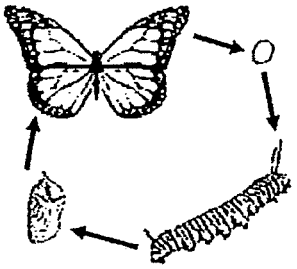
(3) A, C and D only

(4) B, C and D only

12 The diagram below shows the life cycle of animals X and Y.



animal X



animal Y

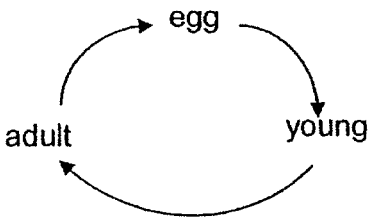
Based on the diagrams above, which of the following statements are correct?

A The adults of animals X and Y moult.
B The young of animals X and Y develop from eggs.
C The young of animal Y does not look like the adult.
D Animals X and Y go through the same stages in their life cycles.

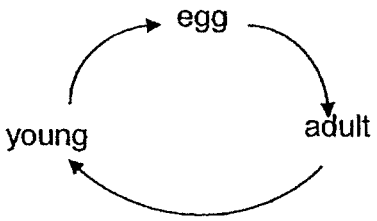
(1) A and B only
(2) A and D only
(3) B and C only
(4) C and D only

13 Which of the following shows the life cycle of a mealworm beetle?

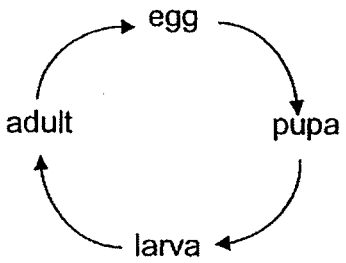
(1)



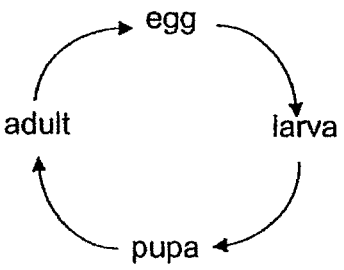
(2)



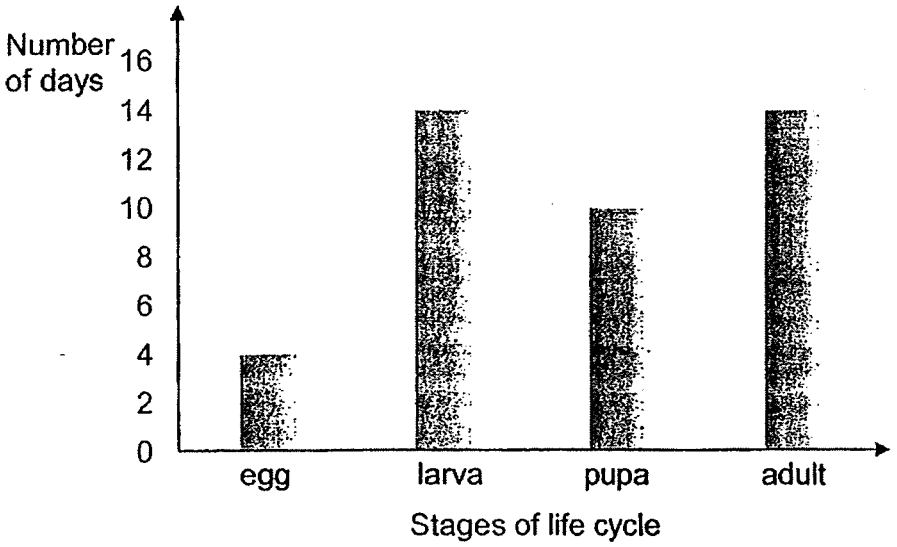
(3)



(4)



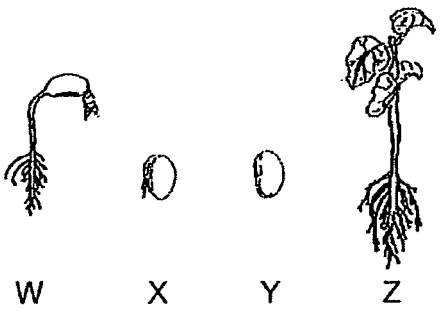
14 The graph below shows the number of days for each stage of the life cycle of insect Q.



Based on the graph, which stage of the life cycle will insect Q be in 12 days after the egg is hatched?

(1) egg
(2) larva
(3) pupa
(4) adult

15 Study the diagrams below.

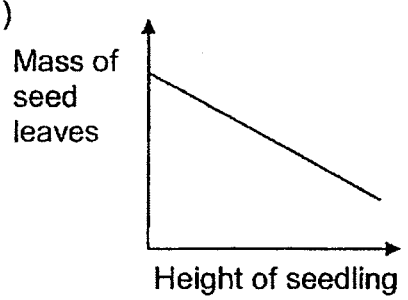


Which of the following shows the correct order of growth in a plant's life cycle?

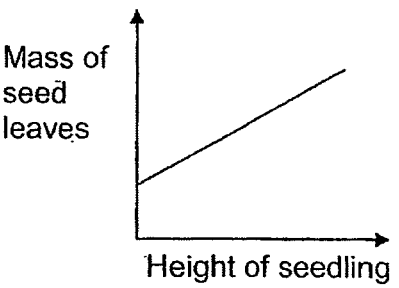
(1) W → X → Y → Z
(2) X → Y → W → Z
(3) Y → X → W → Z
(4) Z → Y → X → W

16 Which one of the following graphs correctly shows the relationship between the mass of the seed leaves and the height of the seedling?

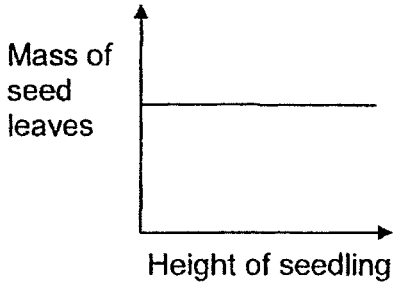
(1)



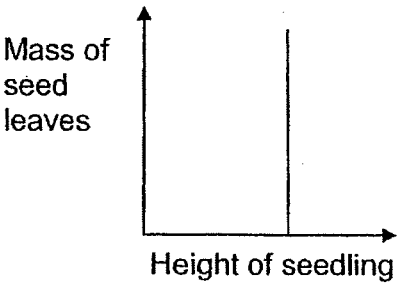
(2)



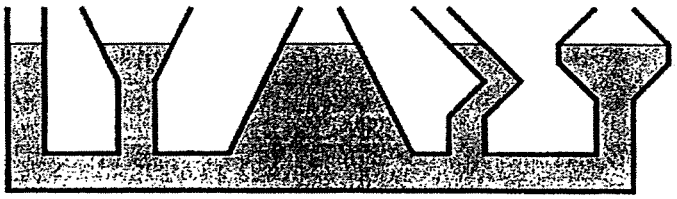
(3)



(4)



17 Jack poured some liquid into a container as shown below.



From his observation, what can he conclude about the property of the liquid?

(1) The liquid has mass.

(2) The liquid can be compressed.

(3) The liquid has no definite shape.

(4) The liquid does not have a definite volume.

18 Which of the following is **not** a **matter?**

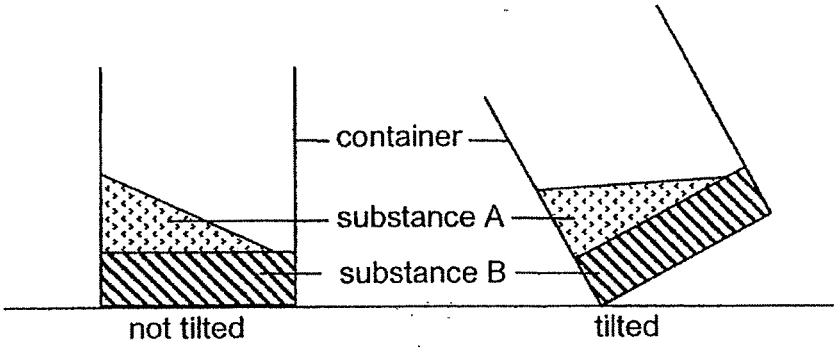
(1) milk

(2) light

(3) sand

(4) oxygen

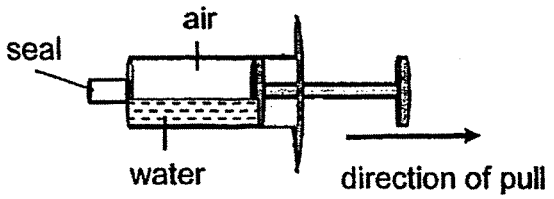
19 The diagram below shows a container containing two substances A and B.



Based on your observations, which of the following correctly represents the state of matter of substances A and B?

	substance A	substance B
(1)	solid	solid
(2)	solid	liquid
(3)	liquid	liquid
(4)	liquid	solid

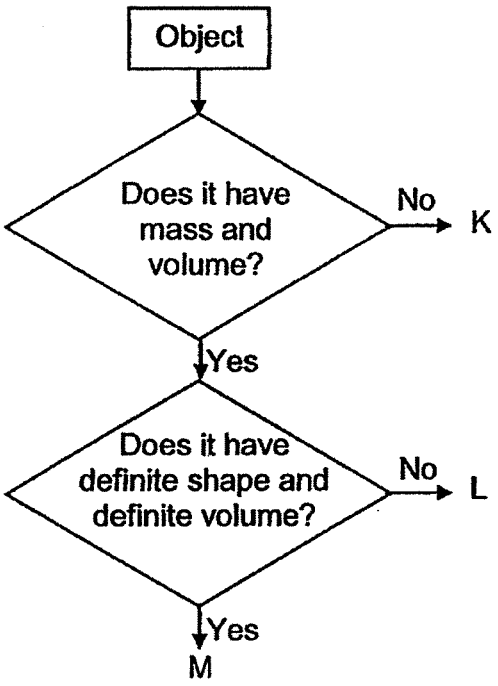
20 Lay San filled a syringe with some water. She sealed the tip and pulled the plunger of the syringe outwards as shown in the diagram below.



What would happen to the volume of air and water in the syringe?

	Volume of air	Volume of water
(1)	remains the same	remains the same
(2)	decreases	increases
(3)	increases	decreases
(4)	increases	remains the same

21 Study the chart below.



Which of the following statements are correct about L?

A L is a gas.

B L has mass.

C L can be compressed.

(1) A and B only

(2) A and C only

(3) B and C only

(4) A, B and C

22 Mariam and her cat were in a dimly-lit room. Which one of the following statements explains why she could see her cat's eyes clearly?

(1) Mariam's eyes were sources of light.

(2) The cat's eyes were sources of light.

(3) Light was reflected from the cat's eyes to Mariam's eyes.

(4) Light was reflected from Mariam's eyes to the cat's eyes.

23 Jack saw his reflection on the window of his father's car.
Which one of the following statements explains why he was able to see his reflection?

(1) The window was a mirror.

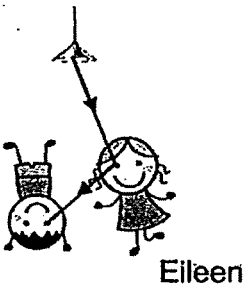
(2) The window gave off light.

(3) The window reflected light.

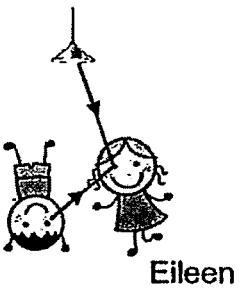
(4) The car was parked in a very bright place.

24 Which one of the following diagrams shows how light travels to Eileen's eyes to enable her to see her friend?

(1)



(2)



(3)



(4)



End of Booklet A

CATHOLIC HIGH SCHOOL

MID-YEAR EXAMINATION (2019)

PRIMARY FOUR

SCIENCE

BOOKLET B

Name: _____ ( )

Class: Primary 4 - _____

Date: 16 May 2019

Parent's Signature: _____

Booklet A	48
Booklet B	32
Total	80

11 questions

32 marks

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

INSTRUCTIONS TO CANDIDATES

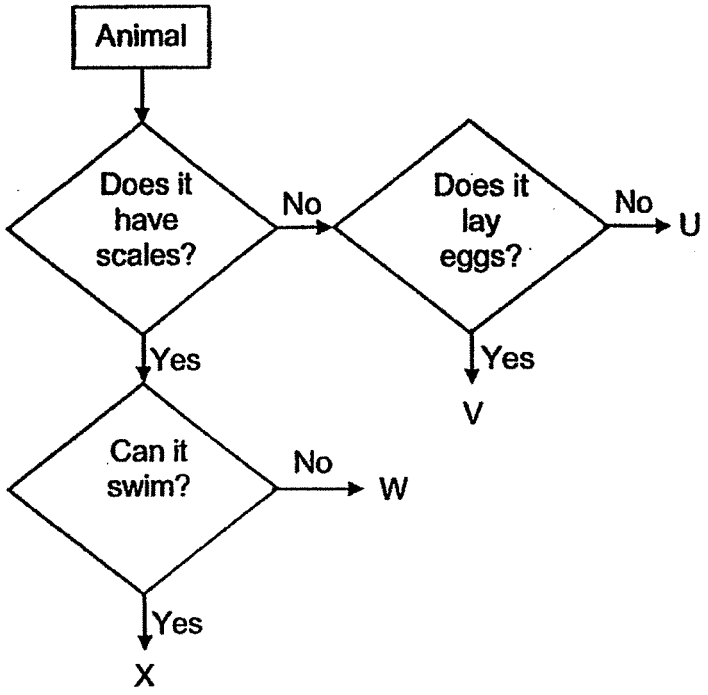
Do not turn over this page until you are told to do so.
Follow all instructions carefully.
Answer all questions.
Write your answers in this booklet.

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

Booklet B (32 marks)

For questions 25 to 35, 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 Study the chart below.



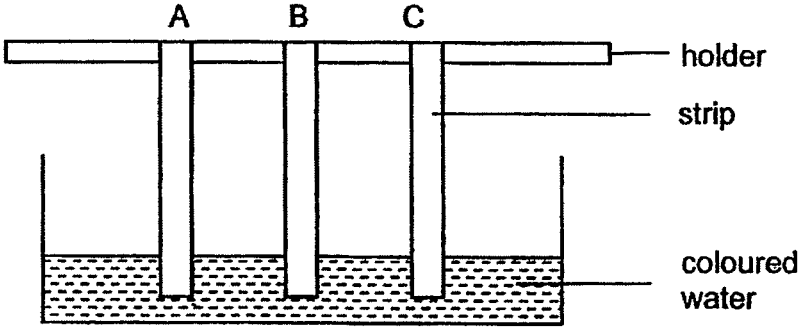
(a) State the characteristics of animal U. [1]

(b) State one difference between animals V and W. [1]

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SCORE	2

26 Jenny hung three similar strips made of different materials A, B and C from the same height and dipped them into a basin of coloured water.



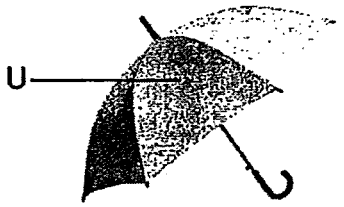
After 10 minutes, she measured the water level on the strips and recorded the results in the table below.

Strip	Height of water level on material (cm)	
	Before	After
A	0	0
B	0	6
C	0	4

(a) What property of material was tested in the above experiment? [1]

_____

The picture below shows an umbrella.



(b) Based on the results, which material A, B or C is most suitable to make part U? [1]

_____

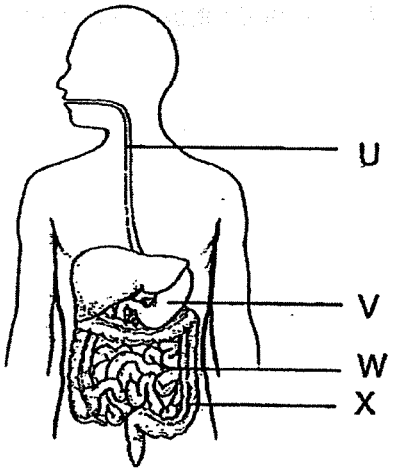
(c) Give a reason for your answer in (b). [1]

_____

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SCORE	3

27 The diagram below shows the human digestive system.



(a) Name the part of the digestive system represented by U and X. [1]

Part	Part of the digestive system
U	
X	

(b) In which part(s) U, V, W and X is/are digestive juices added? [1]

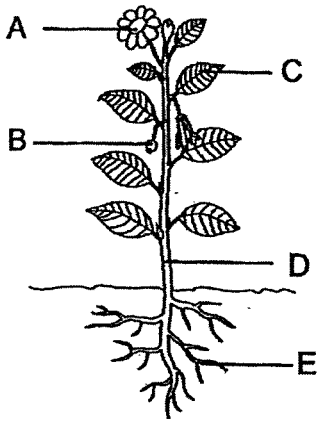
(c) State two things that take place in W. [2]

(i)	
(ii)	

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SCORE	/4

28 The diagram below shows a plant with parts labelled A, B, C, D and E.



(a) Which part of the plant performs the following functions? [2]

	Function	Part
(i)	Protects the seeds	
(ii)	Holds the plant firmly to the ground	

(b) The plant will eventually die if all the leaves are removed.
Do you agree with this statement? Explain why. [1]

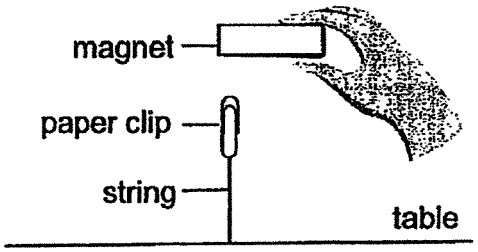
_____

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SCORE	/ 3

29 Josh ties a paper clip to a string and attaches the string to the table. He then holds a magnet above the paper clip as shown in the diagram below.



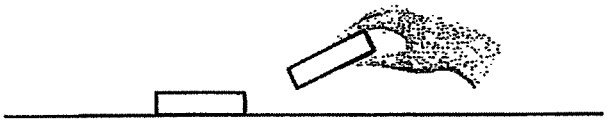
(a) What happens to the paper clip when Josh removes the magnet? [1]

(b) Josh repeats the experiment using different objects.

Which of the following will act in the same way as the paper clip? Put a tick (✓) in the box. [1]

Objects	
Aluminium foil	
Wooden match	
Plastic pen cover	
Steel nail	

(c) Josh takes another magnet and puts it on the table. He holds the other magnet close to it as shown in the diagram below.



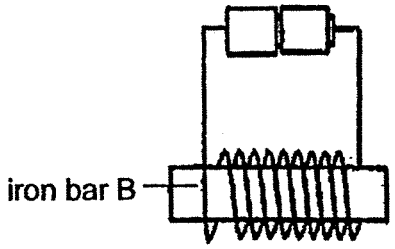
The magnets do not touch each other but the magnet on the table is pushed away.

Why is the magnet on the table pushed away? [1]

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SCORE	3

30 James used an iron bar to make an electromagnet as shown in the diagram.



(a) Besides adding more batteries, suggest one method to make the electromagnet stronger. [1]

_____

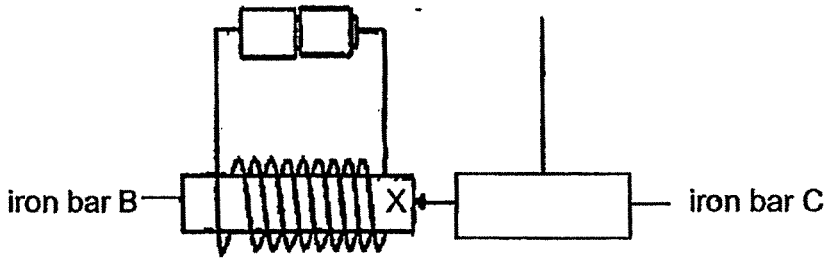
_____

(b) What can James do to confirm that the electromagnet is stronger? [1]

_____

_____

(c) James then placed iron bar C near end X of iron bar B as shown in the diagram below.



He observed that iron bar C moved towards iron bar B and concluded that iron bar C is a magnet. [1]

Do you agree with him? Explain your answer.

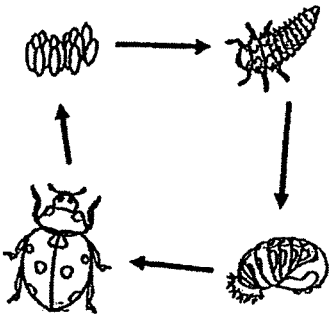
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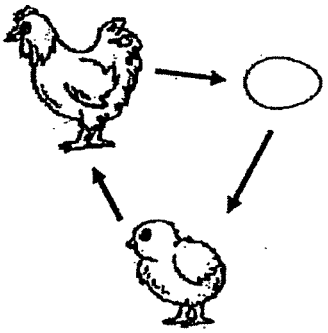
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SCORE	/3

31 The diagrams below show the life cycles of animals M and N.



animal M



animal N

(a) Based on the diagrams above, state one similarity between the two life cycles. (Do not compare shape and size.) [1]

_____

_____

(b) Based on the diagrams above, state one difference between the two life cycles. (Do not compare shape and size.) [1]

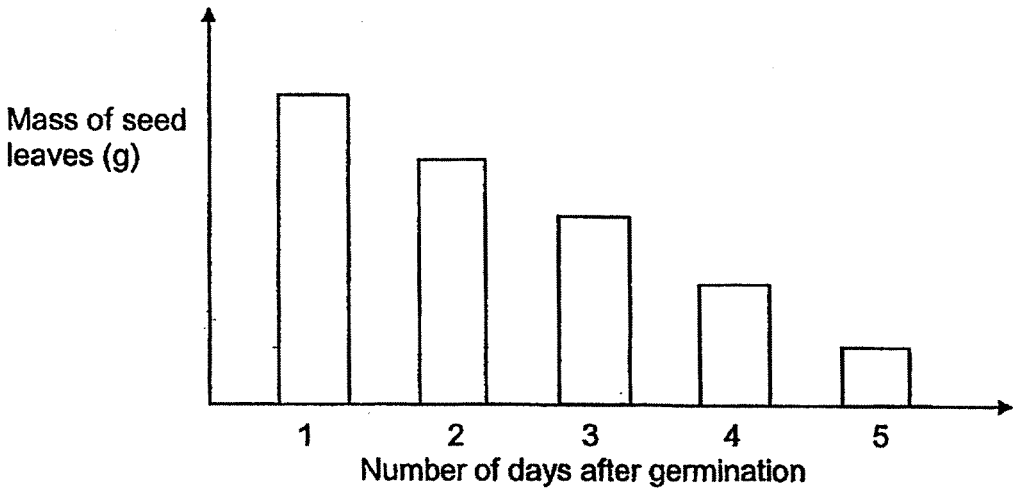
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SCORE	2

32 The graph shows the mass of seed leaves as a seed develops into a young plant.



(a) What will happen to the mass of seed leaves as the number of days after a seed start developing into a young plant increases? [1]

_____

_____

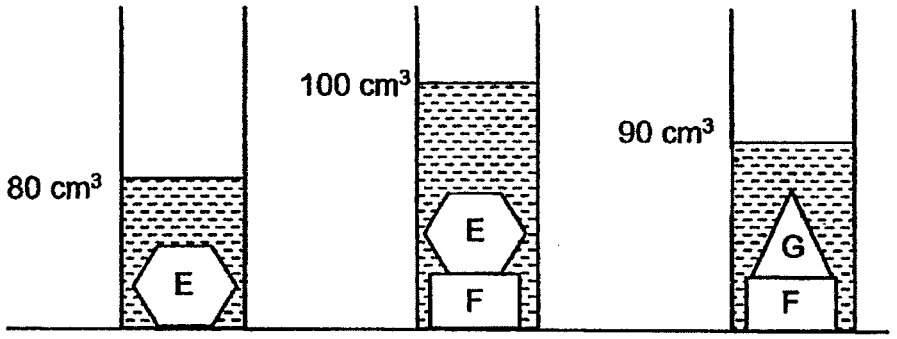
(b) Where does the young plant get its food from after Day 5? [1]

_____

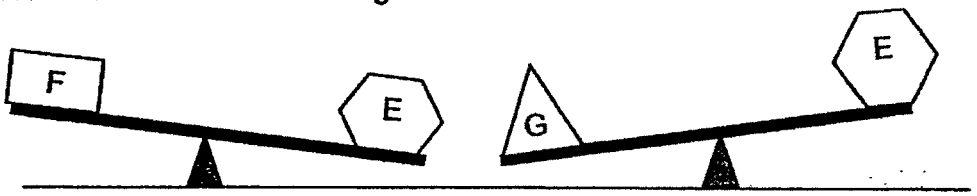
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SCORE	/2

33 Samuel placed three objects E, F and G in three measuring cylinders each containing 50 cm^3 of water, as shown in the diagrams below.



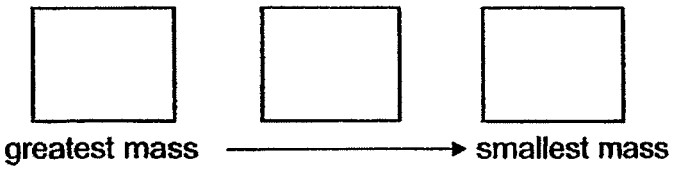
Samuel also compared the mass of the objects E, F and G using a balance as shown in the diagram below.



(a) Based on the information above, put a tick (✓) in the correct box to indicate if each statement is 'True', 'False' or 'Not possible to tell'. [2]

	Statements	True	False	Not possible to tell
(i)	F occupies the most space.			
(ii)	All the objects occupy space.			
(iii)	All the objects have a definite shape.			
(iv)	The greater the mass of the object, the greater the volume.			

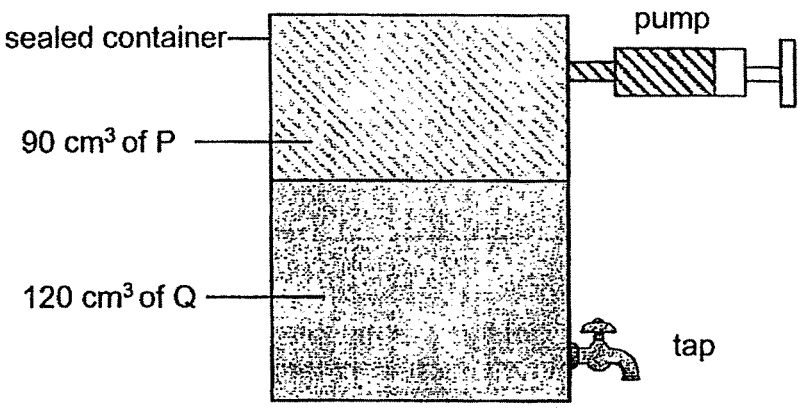
(b) Arrange the objects in order of mass, starting with the greatest. [1]



(Go on to the next page)

SCORE	3

34 Doris conducted an experiment using the set-up shown below.



(a) After Doris used the tap to remove 20 cm^3 of Q from the container, she observed that the volume of P in the container was 110 cm^3.

Identify the states of matter of substances P and Q. [1]

(i)	substance P	
(ii)	substance Q	

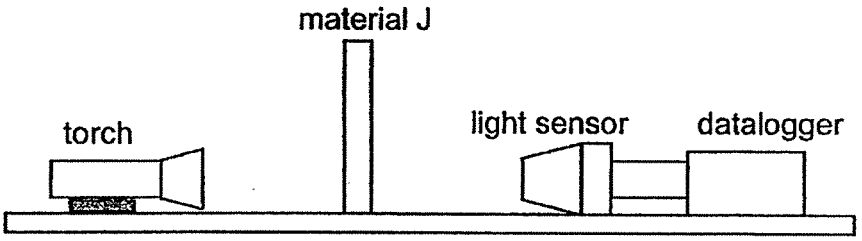
(b) Which property of each substance did you use to obtain the answer to (a)? [2]

(i)	substance P	
(ii)	substance Q	

(Go on to the next page)

SCORE	3

35 Ali wanted to find out which material allows the most light to pass through. He set up the experiment as shown below.



He recorded the amount of light that passed through material J in the table below and repeated the experiment using materials K and L.

Material	Amount of light that passed through (units)
J	0
K	160
L	80

(a) What variable was changed and measured in the above experiment? [1]

Variable changed : _____

Variable measured : _____

(b) What conclusion can he make from this experiment? [1]

_____

_____

(c) Based on Ali's observation, which material is most suitable for making a toilet door? Explain your answer. [2]

_____

_____

End of Booklet B

SCORE	/ 4

SCHOOL : CATHOLIC HIGH PRIMARY SCHOOL

LEVEL : PRIMARY 4
SUBJECT : SCIENCE
TERM : 2019 SA1

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	1	2	3	2	4	4	2	2	3

Q 11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	3	4	2	3	1	3	2	1	4

Q 21	Q22	Q23	Q24
4	3	3	4

SECTION B

Q25)	a)Animal U does not have scales and does not lay eggs. b)Animal V does not have scales but animal W has scales.
Q26)	a)To test whether the material is waterproof or not. b)A. c)Strip A did not absorb any water but strip B and c absorbed water Umbrellas must be waterproof and only strip A did not absorb any water. Therefore strip A is most suitable to make part U.
Q27)	a)U : gullet X : large intestine b)V and W c)i)The digestion ends in W. ii)Blood carries the digested food to all parts of the body.
Q28)	a)i) B ii)E

	b)Yes , I agree. Because all plants need leaves to make its own food. When the leaves are removed, the plant cannot make its own food and will eventually die.
Q29)	a)The paper clip dropped / felt down to the table. b)Steel bail c)The like poles are facing each other so they will repel.
Q30)	a)Wrap more coils around iron bar B. b)Ifa the electromagnet attracts more paper clips than before, it is a stronger electromagnet. c)No. An iron bar can be attracted to a magnet as it is magnetic.
Q31)	a)They both have an egg stage. b)Animal M has 4 stages in its life cycle but animal N only has 3 stages in its life cycle.
Q32)	a)As the number of days increases , the mass of the seed leaves decrease. b)The young plant has leaves to make its own food.
Q33)	a)i)F ii)T iii)T iv)F b)G E F
Q34)	a)i)gaseous ii)liquid b)i)It does not have a definite volume. ii)Liquid has a definite volume.
Q35)	a)Variable changed : Type of materials. Variable measured : Amount of light that can pass through each material. b)Material K allow most, light to pass through, followed by material L, then material J does not allow any light to pass through. c)Material J. It does not allow any light to pass through so nobody can see through the door.