CATHOLIC HIGH SCHOOL

SEMESTRAL ASSESSMENT TWO (2017)

PRIMARY THREE

SCIENCE

BOOKLET A

Name: _____ ( )

Class: Primary 3 - _____

Date: 1 Nov 2017

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 15 printed pages, excluding the cover page.

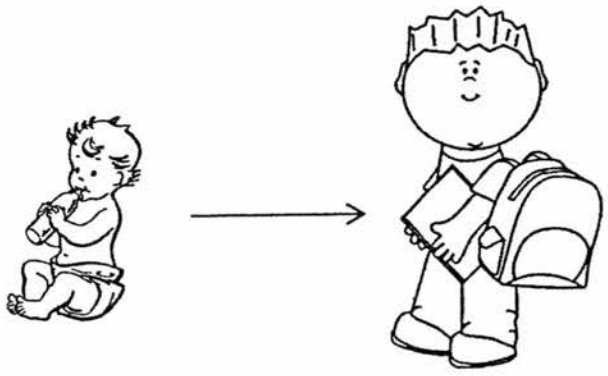
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Booklet A (24 × 2 marks)

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 The diagram below shows a baby becoming a young boy.



Which of the following statements refer to the same characteristic as the diagram above?

A A cow eats grass.
B A caterpillar grows into a butterfly.
C A papaya seed grows into a papaya tree.
D A mouse runs away when a cat chases it.

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

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2 Look at the pictures below.



a real dog



a toy dog

Which one of the following statements is correct?

(1) Both are living things as they can move.

(2) A toy dog is a living thing as it can bark.

(3) A toy dog is a non-living thing as it cannot reproduce.

(4) Both are non-living things as they cannot make their own food.

3 Sarah observed four different types of plants, A, B, C and D, for a period of three months. She kept records of her observations in the table below.

Months	Number of flowers			
	Plant A	Plant B	Plant C	Plant D
January	15	1	0	0
February	20	0	0	0
March	18	0	0	10

What type of plants could A, B, C and D be?

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

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4 The pictures below show two different types of plants.





Which of the following are common characteristics of both plants?

A Both are land plants.
B Both are water plants.
C Both are flowering plants.
D Both are non-flowering plants

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

5 The living thing shown below is _____.



(1) a fish
(2) a reptile
(3) a mammal
(4) an amphibian

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6 Four pupils made the following statements about classification of animals.

Adam	Some mammals live on land.
Bernard	Fish are the only animals with scales.
Candice	Birds are the only animals with feathers.
Diana	Amphibians breathe through their lungs when underwater.

Which pupils were correct?

(1) Adam and Diana only

(2) Adam and Candice only

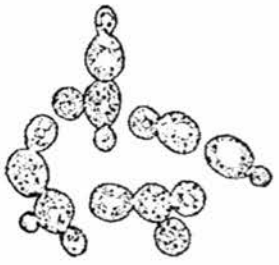
(3) Bernard and Diana only

(4) Bernard and Candice only

7 The diagram below shows two living things.



mushrooms



magnified picture of yeasts

What do the two living things have in common?

A Both can reproduce.
B Both are a type of fungi.
C Both can make their own food.
D Both do not need air, water and food to stay alive.

(1) A and B only

(2) A and D only

(3) B and C only

(4) C and D only

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8 Bacteria are considered living things because they _____.

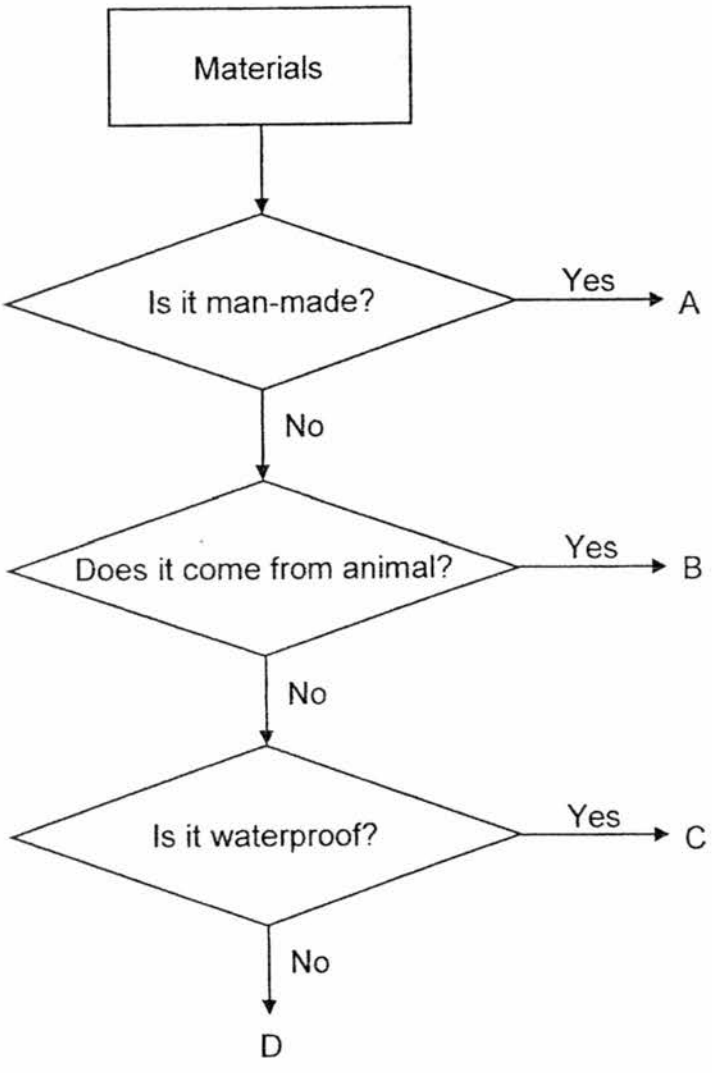
(1) are small

(2) can reproduce

(3) can be found everywhere

(4) can be useful and harmful to us

9 Study the chart below.



Which letter, A, B, C or D, in the chart above represents the material used to make a cotton T-shirt?

(1) A

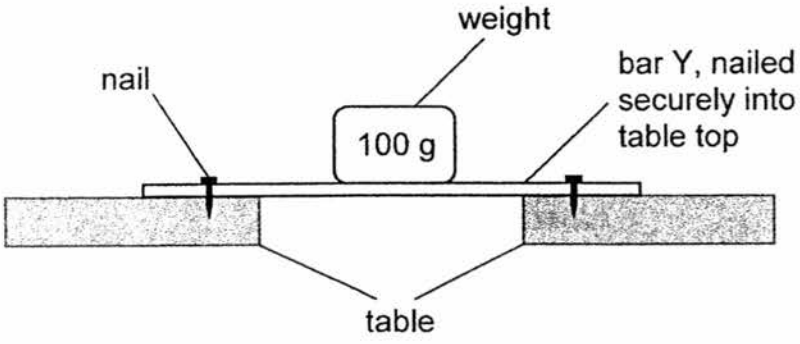
(2) B

(3) C

(4) D

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10 Justin set up an experiment as shown in the diagram below.



He kept on adding the weights to the centre of bar Y until the bar broke. What was Justin trying to find out in the experiment?

(1) To find out the strength of the material of the bar.

(2) To find out the transparency of the material of the bar.

(3) To find out whether the material of the bar is magnetic.

(4) To find out whether the material of the bar is waterproof.

11 Young children are usually given plastic bowls rather than glass bowls when eating.



plastic bowl



glass bowl

Which of the following properties of plastic make it a more suitable material for young children to use than glass?

A It is light.
B It floats on water.
C It does not break easily.
D It does not allow light to pass through.

(1) A and B only

(2) A and C only

(3) B and D only

(4) C and D only

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12 The diagram below shows a boy kicking a soccer ball.



Which of the body systems is/are at work when he is kicking?

A skeletal system
B muscular system
C circulatory system
D respiratory system

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

13 Two organ systems, K and L, found in the human body are described below:

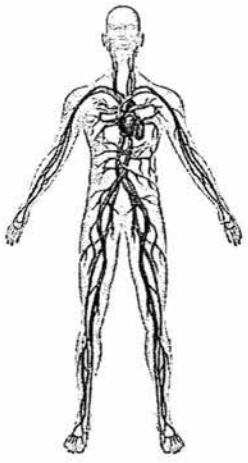
K	L
It gives our body shape. It protects the organs in our body.	It removes solid waste materials from our body. It breaks down the food we eat into substances that our body can use.

Which of the following identifies correctly the organ systems, K and L, in the human body?

	K	L
(1)	skeletal system	digestive system
(2)	digestive system	respiratory system
(3)	muscular system	skeletal system
(4)	respiratory system	muscular system

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14 The diagram below shows an organ system.

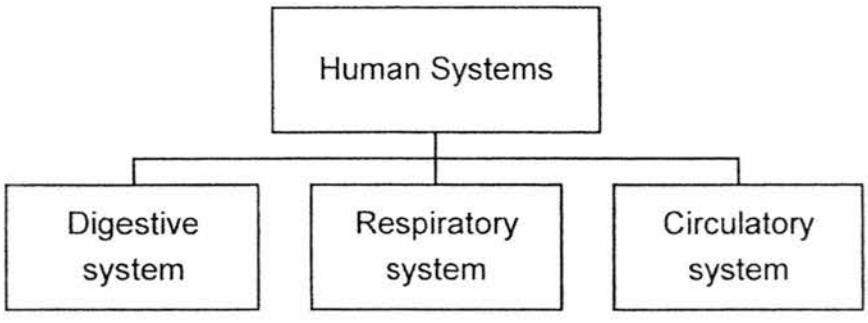


Which of the following are carried in the blood in this system?

A water
B oxygen
C digested food
D carbon dioxide

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

15 Study the diagram below.

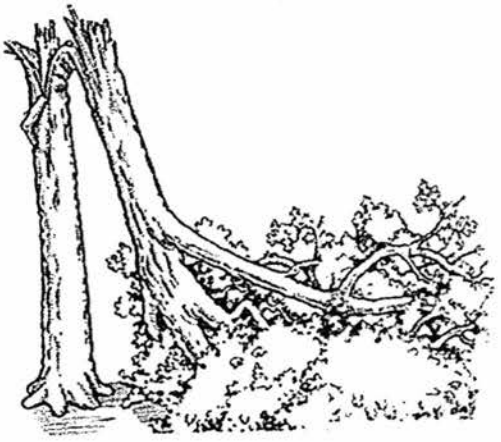


Which of the following parts are correctly matched to the systems?

	Digestive system	Respiratory system	Circulatory system
(1)	gullet	lungs	heart
(2)	windpipe	muscles	mouth
(3)	stomach	nose	backbone
(4)	rib	small intestine	anus

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16 During a thunderstorm, trees can sometimes be struck down by lightning.



When this happens, the stem will not be able to _____.

(1) make food

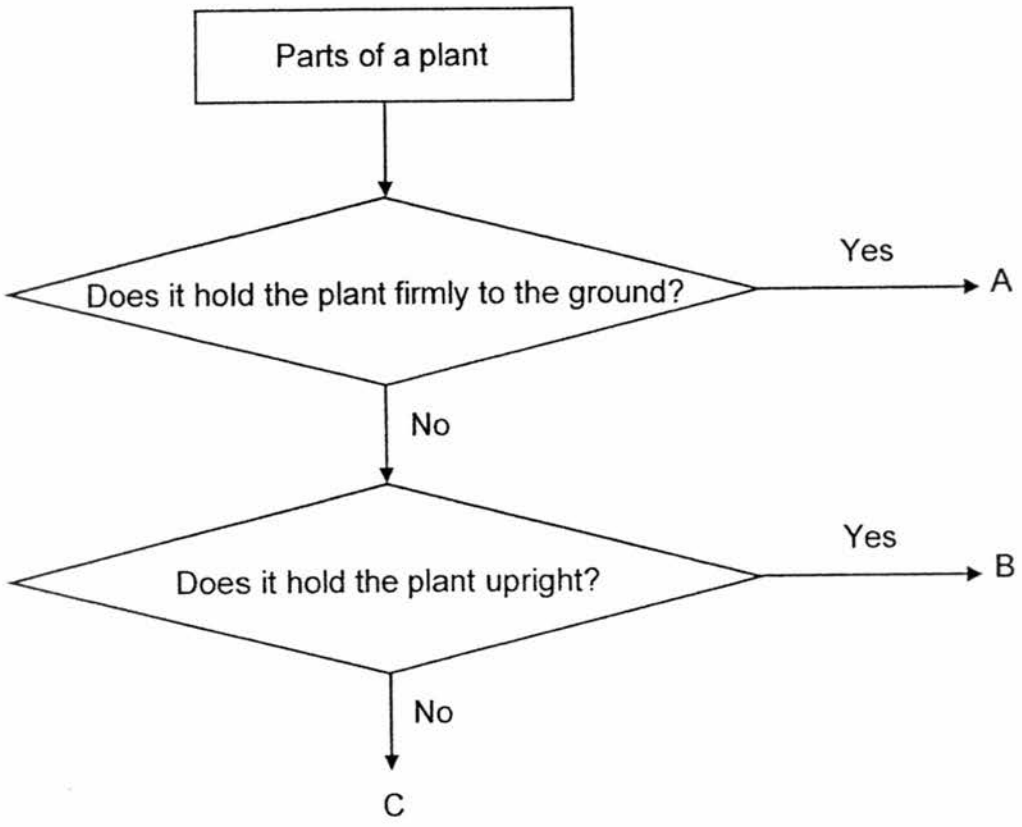
(2) get sunlight

(3) absorb water and minerals

(4) support the leaves and branches

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17 Study the chart below.



Which of the following identifies correctly the parts, A, B and C, of a plant?

	A	B	C
(1)	stem	root	leaf
(2)	stem	leaf	root
(3)	root	stem	leaf
(4)	root	leaf	stem

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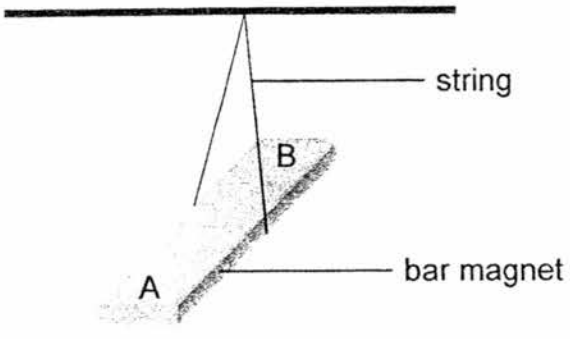
18 Kenneth carried out an experiment on 4 similar potted plants, A, B, C and D. For each plant, he removed some plant parts. Then he placed all the 4 potted plants in his garden and watered them daily with the same amount of water. A cross (X) in the box indicates the plant part that was removed as shown in the table below.

	Plants			
	A	B	C	D
root		X		
fruit	X	X	X	
flower	X			X

Which potted plant would most likely die first?

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

19 Ali pushed a freely suspended bar magnet a little and let it swing until it came to rest. In which direction would the bar magnet point to when it came to a rest?



Which of the following represents A and B?

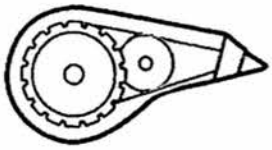
	A	B
(1)	east	west
(2)	west	north
(3)	south	east
(4)	north	south

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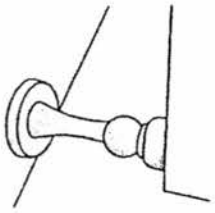
20 Which one of the following does not make use of magnet to work?

(1) 

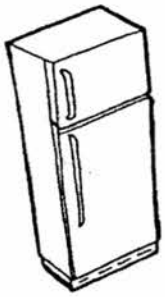
compass

(2) 

correction tape

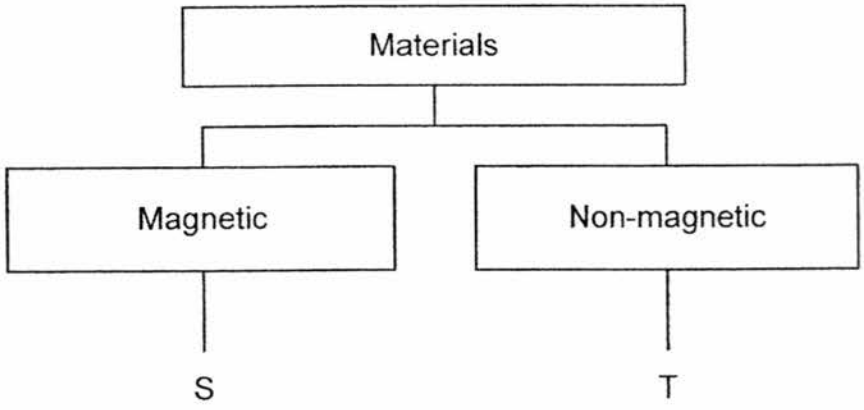
(3) 

doorstopper

(4) 

refrigerator door

21 The chart below shows how materials, S and T, are classified.

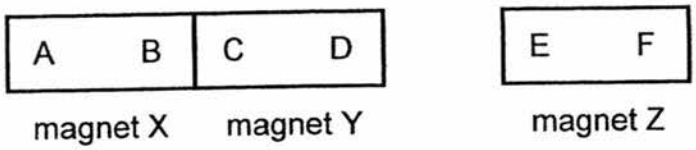


Which of the following represents S and T?

	S	T
(1)	iron	steel
(2)	iron	copper
(3)	aluminium	copper
(4)	aluminium	plastic

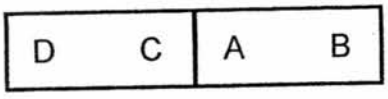
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22 Three magnets, X, Y and Z, are placed near each other. Magnet X and magnet Y attracted each other but magnet Y and magnet Z repelled each other.



Which one of the following is a possible arrangement?

(1) 

(2) 

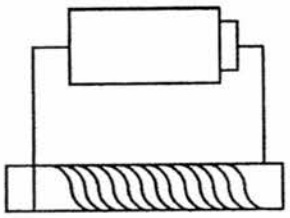
(3) 

(4) 

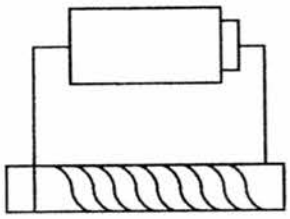
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23 Krishna coiled a length of wire around an iron rod and connected it to a battery. Which one of the following electromagnets is the strongest?

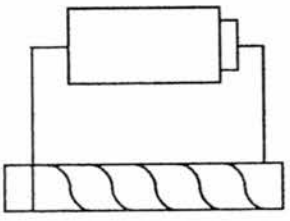
(1)



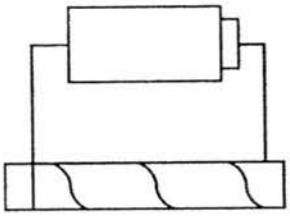
(2)



(3)

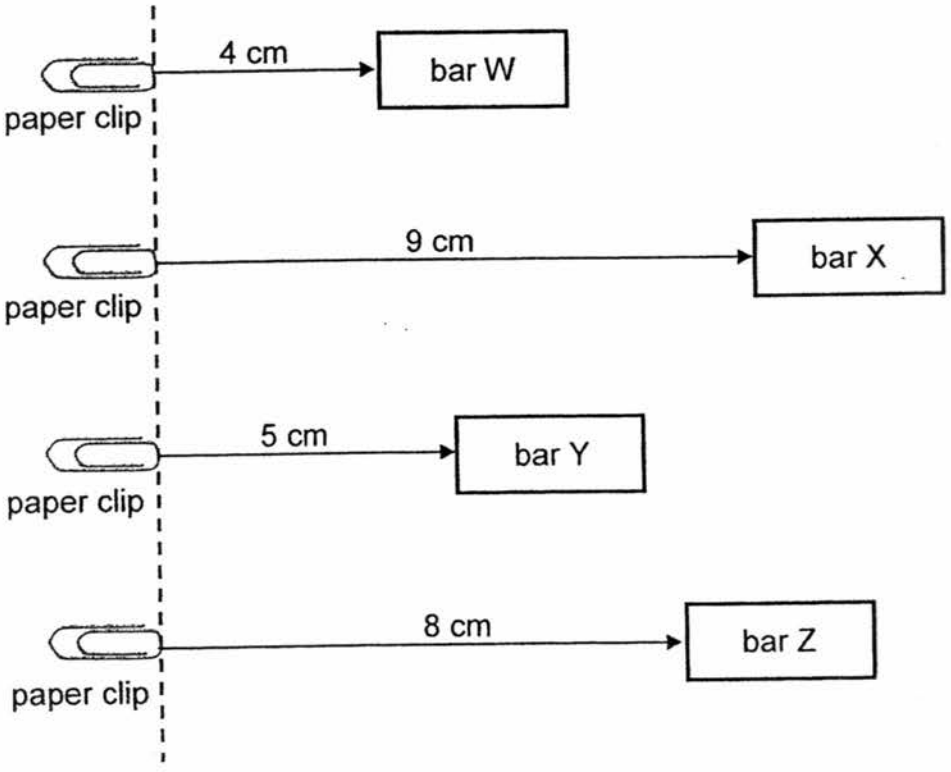


(4)



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24 Lincoln magnetised four identical iron bars, W, X, Y and Z, using the stroking method.
He observed that the iron bars attracted the paper clip at different distances.



Which iron bar was stroked the most number of times?

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

End of Booklet A

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CATHOLIC HIGH SCHOOL

SEMESTRAL ASSESSMENT TWO (2017)

PRIMARY THREE

SCIENCE

BOOKLET B

Name: _____ ( )

Class: Primary 3 - _____

Date: 1 Nov 2017

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 13 printed pages, excluding the cover page.

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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 Jordan classified some animals into the table below.

Animal	Body covering	Number of legs
J	moist skin	4
K	hard outer covering	6
L	scales	4
M	hard outer covering	8

He then grouped the animals as shown below.

Group W
animal J animal L

(a) Based on the above grouping, what characteristic did Jordan use to classify the animals in Group W? [1]

Group W: _____

(Go on to the next page)

SCORE	/ 1

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Continue from question 25

(b) Jordan found another way of classifying the animals as shown:

Group Y
animal K animal M

Which characteristic did he use?

Group Y: _____ [1]

(c) Which animal, J, K, L or M, represents the animal shown? [1]



crocodile

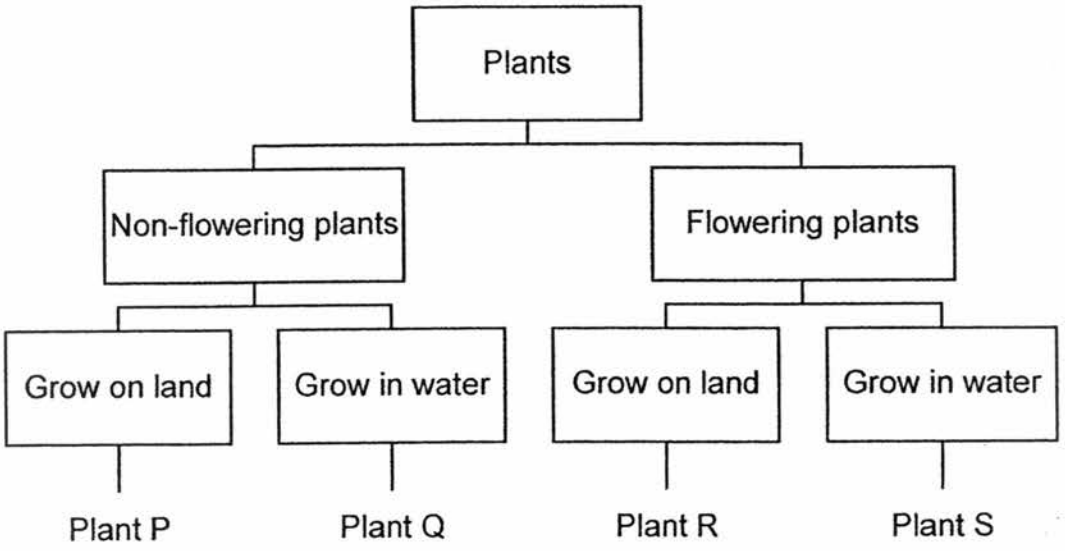
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SCORE	/ 2

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26 Study the diagram below.



(a) What are the characteristics of plant R? [1]

_____

_____

(b) Based on the diagram above, which land plant(s) reproduce(s) by spores? [1]

_____

(c) Which plant, P, Q, R or S, represents the water lily as shown below? [1]



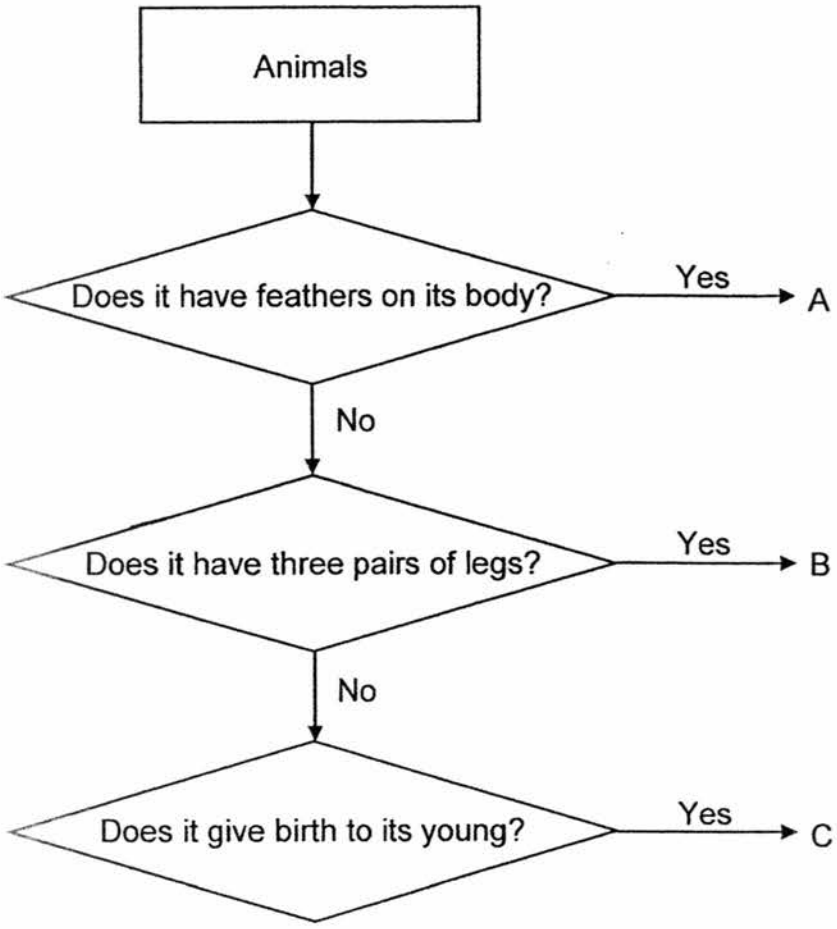
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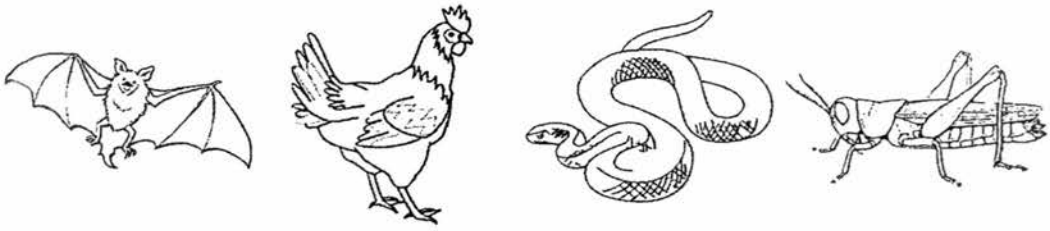
SCORE	3

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27 Study the chart below.



Which of the following animals do A, B and C represent? [3]



bat chicken snake grasshopper

A: _____

B: _____

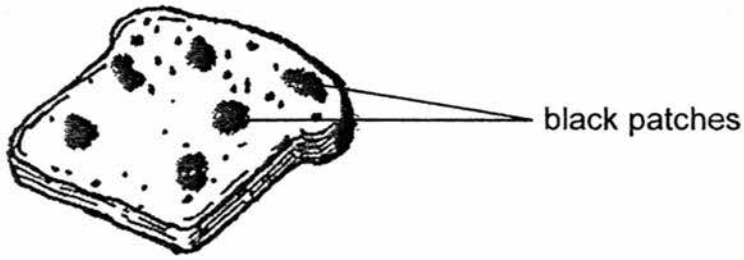
C: _____

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SCORE	3

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28 Zhi Wen sprinkled some drops of water on a slice of bread. He then placed it on the dining table. After 2 weeks, he observed black patches growing on the bread.



(a) What do you think are the black patches? [1]

_____

(b) Why do the black patches grow on the bread? [1]

_____

_____

(c) Where do the black patches get their food? [1]

_____

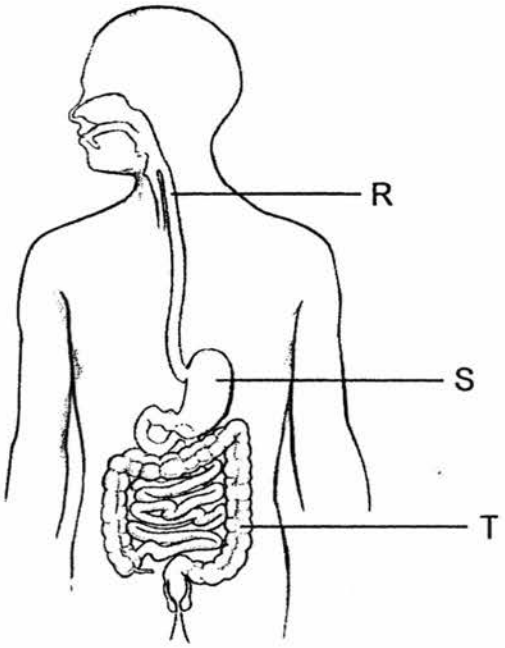
_____

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SCORE	/ 3

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29 The diagram below shows the human digestive system.



(a) Name the parts, R and S. [1]

R: _____

S: _____

(b) What is the function of part T? [1]

_____

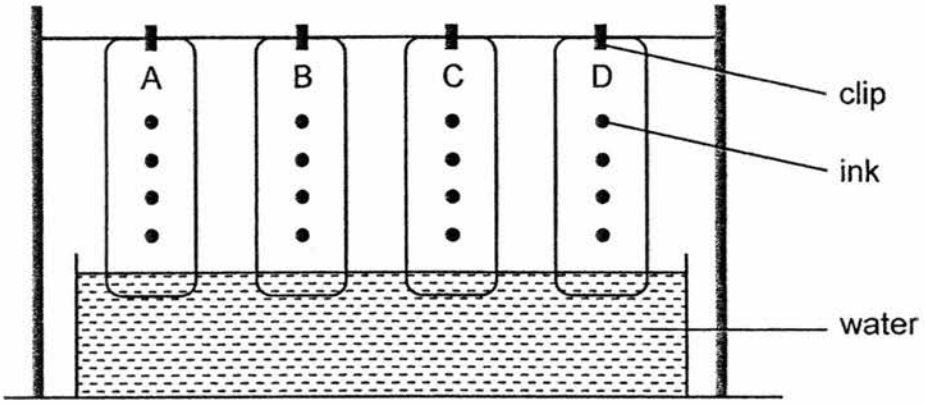
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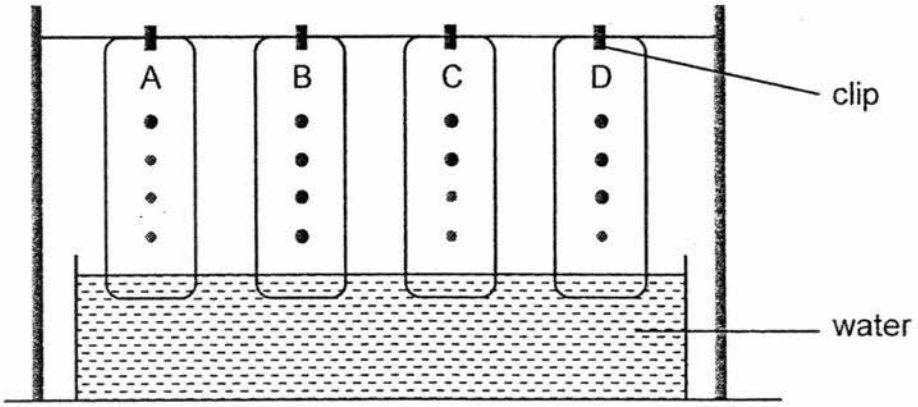
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30 Amanda carried out an experiment as shown in the set-up below. Each material, A, B, C and D, used in the experiment was of the same length, width and thickness. The ink was dotted at equal intervals.



start of experiment

After a few minutes, Amanda observed that the dots of ink disappeared as the materials came into contact with water.



end of experiment

(a) What property of the material is Amanda comparing? [1]

_____

(Go on to the next page)

SCORE	1

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Continue from question 30

(b) The picture below shows an umbrella.



(i) Based on the results above, which material, A, B, C or D, is most suitable for making the part labelled X? [1]

_____

(ii) Explain your answer in (i). [1]

_____

_____

(c) What property must the material used to make the part labelled Y have? [1]

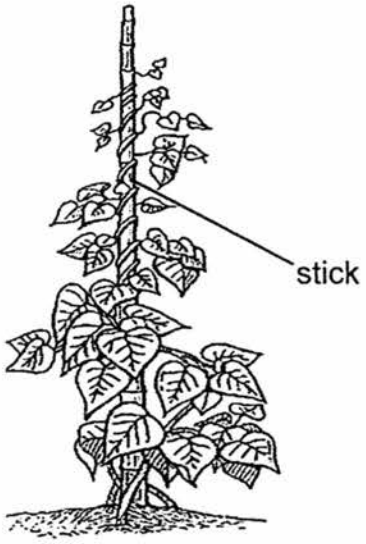
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SCORE	/ 3

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31 Omar used a stick to support and hold up a plant as shown below.



(a) The stick is carrying out the function of a plant part. Name the plant part. [1]

_____

(b) Complete the table below with the correct parts of the plant. [1]

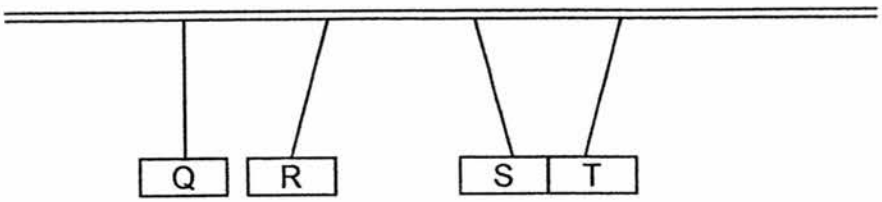
Description	Part
Absorb water and minerals from the soil	
Allow taking in and giving out of gases	

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SCORE	2

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32 Four metal bars, Q, R, S and T, are hung from a string as shown below.



(a) Which of the bars is/are made of copper? [1]

_____

(b) Which of the bars is/are definitely magnets? [1]

_____

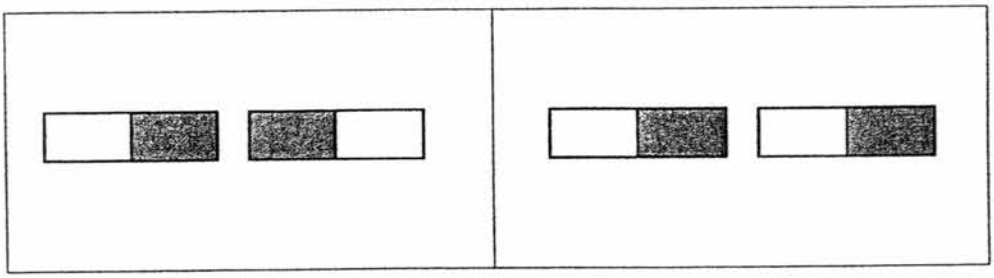
_____

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

_____

_____

(d) Draw arrows in the diagrams below to show how the magnets interact. [1]



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SCORE	4

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33 Winston carried out an experiment to find out how the number of strokes applied on an iron nail by a magnet affects the number of iron pins it would attract. He recorded the results in the table shown below.

Iron nail	Number of iron pins attracted
A	8
B	5
C	14
D	11

(a) Tick (✓) the variable(s) that was/were kept unchanged in his experiment. [1]

Variables	Tick (✓)
size of iron nail	
size of iron pins	
number of strokes	

(b) Based on the results above, which iron nail, A, B, C or D, has become the strongest magnet? [1]

_____

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

_____

_____

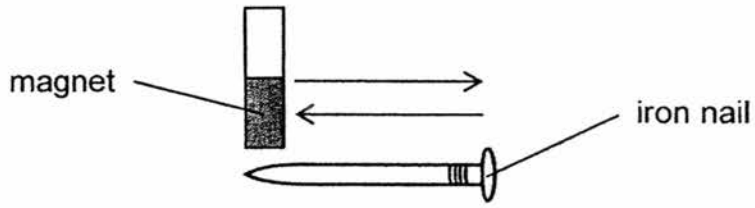
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SCORE	/ 3

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Continue from question 33

Winston tried to magnetise an iron nail using the stroking method as shown below.



(d) Give a reason why the iron nail could not be magnetised. [1]

_____

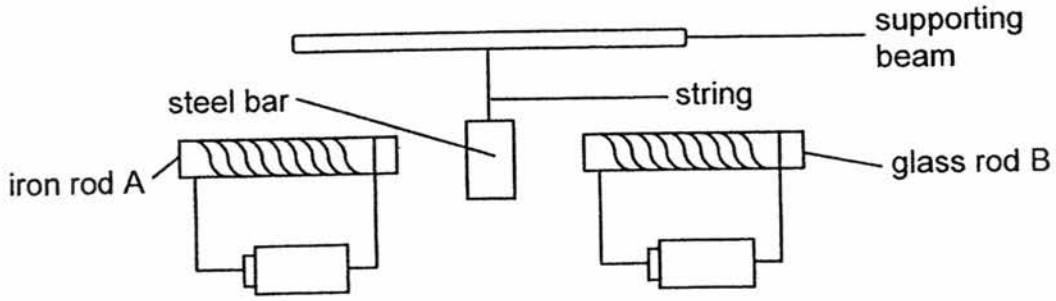
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SCORE	/ 1

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34 Xiaoling set up an experiment as shown below. The iron rod A and glass rod B were of the same size. The battery used were of the same strength.



(a) What would Xiaoling observe about the steel bar? [1]

_____

_____

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

_____

_____

(c) Suggest two ways how Xiaoling can increase the strength of an electromagnet. [2]

(i) _____

_____

(ii) _____

_____

End of Booklet B

SCORE	/ 4

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CATHOLIC HIGH SCHOOL
Semestral Assessment 2 – 2017
Science
Primary 3
Answer Key

Booklet A (24 × 2 marks = 48 marks)

Qn	Ans	Qn	Ans	Qn	Ans	Qn	Ans	Qn	Ans	Qn	Ans	Qn	Ans	Qn	Ans
1	3	4	1	7	1	10	1	13	1	16	4	19	4	22	3
2	3	5	4	8	2	11	2	14	4	17	3	20	2	23	1
3	3	6	2	9	4	12	4	15	1	18	2	21	2	24	2

Booklet B (32 marks)

1. *Award full mark for correct idea/concept. Accept answers which are conceptually correct and relevant in the context of the questions.*
   - *Pupils' responses that show evidence of understanding of relevant concepts and mastery of skills should be carefully evaluated and awarded due credit. Answers that deviate from the mark scheme but demonstrate the right understanding should be accepted.*
2. *Do not award any mark if the answer expresses a wrong idea/concept.*
3. *Partial (½) mark to be awarded only if specified in the mark scheme.*
4. *If more points are given, award marks for correct parts and then deduct ½ mark for each wrong idea/concept.*

Qn	Correct / Acceptable Answer	Marks	Remarks
25	*Concept: Classify things into board groups based on similarities and differences*		
a	(Animals with) 4 legs / Number of legs	[1]	
b	(Animal with) hard outer covering / (Type of) body covering	[1]	outer covering [0]
c	Animal L	[1]	

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26	*Concept: Recognise some broad groups of plants (flowering, non-flowering)*		
a	Plant R is a flowering plant [½] that grows on land [½]. **<u>Other acceptable answer</u>** bears flowers [½] land plant [½]	[1]	Reproduce by seed [0]
b	Plant P	[1]	Deduct ½m for additional answer.
c	Plant S	[1]	
27	*Concept: Observe a variety of animals and infer differences between them*		
	A: chicken B: grasshopper C: bat	[3] 1m each	

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28	*Concept: Mould needs water, warmth to grow*		
a	mould / fungi **Other acceptable answer** bread mould	[1]	
b	There is moisture/water on the bread [½] and mould needs moisture to grow / mould grows where there is moisture [½]. **Other acceptable answer** bread was sprinkled with some water [½] water increases the growth of mould [½] mould grows better when there is moisture [½]	[1]	
c	They get their food from the bread they grow on.	[1]	
29	*Concept: Identify and describe the organs in the human digestive system*		
a	R: gullet S: stomach	[1] ½m each	
b	The large intestine/Part T removes water from the undigested food. **Other acceptable answer** Water is absorb from the undigested food at large intestine/Part T.	[1]	Into the bloodstream / to all parts of the body (deduct ½m) Absorb/remove water [0]<no mention of source>

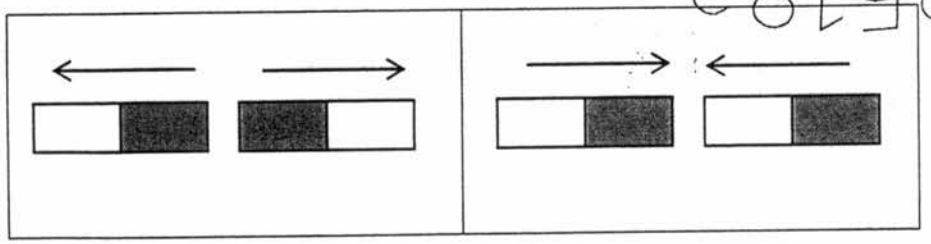
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30	*Concept: Compare physical properties of material based on waterproof*		
a	Whether the material is waterproof. **Other acceptable answer** The material's ability to absorb (water) / absorbency To see which material absorbs the most water Waterproofness / absorbness **Partial answer** Paper absorb water [½]	[1]	
30b	(i) Material B	[1]	
	(ii) None of the dots of ink on material B disappeared [½] showing that it is waterproof / Part X must be waterproof to keep oneself dry if it rains / did not absorb any water in the experiment [½]	[1]	dependent on (i)
c	strong / stiff / waterproof / does not break easily	[1]	Strength [0]

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31	*Concept: Identify the different parts of the plants and state their functions.*		
a	stem	[1]	
b	<table><tr><th>Description</th><th>Part</th></tr><tr><td>Absorb water and minerals from the soil</td><td>root(s)</td></tr><tr><td>Allow taking in and giving out of gases</td><td>leaf/leaves</td></tr></table> **Other acceptable answer** Stomata / leave / leafs [½]	[1] ½m each	
32	*Concept: Recognise that a magnet can exert a push or pull*		
a	Q	[1]	Deduct ½m for additional answer.
b	R and S	[1] ½m each	Deduct ½m for additional answer.
c	The like poles of magnets R and S are facing each other [½], so they repel [½].	[1]	dependent on (b)
d		[1] ½m each	

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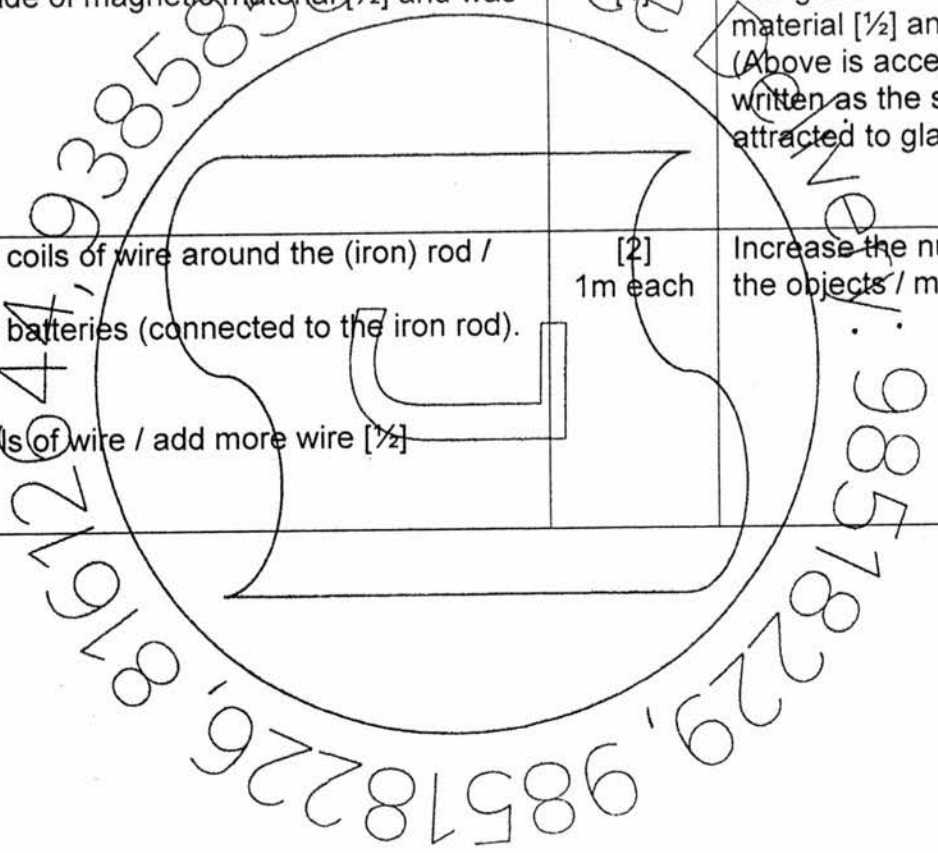
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33	*Concept: Make a magnet by the 'Stroke method'*		
a	<table><tr><th>Variables</th><th>Tick (√)</th></tr><tr><td>size of iron nail</td><td></td></tr><tr><td>size of iron pins</td><td>√</td></tr><tr><td>number of strokes</td><td></td></tr></table>	[1] ½m each	
b	Iron nail C	[1]	
c	It attracted the most number of iron-pins.	[1]	
d	The iron nail was stroked back and forth. ***OR*** The iron nail was not stroked in the same direction. **<u>Other acceptable answer</u>** The iron nail was stroked side to side / left and right / 2 ways / different directions / both directions The iron nail was not stroked in one direction.	[1]	Different ways [0]

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34	*Concept: Make a magnet by electrical method*		
a	The steel bar would be attracted to iron rod (A). ***OR*** The steel bar would move towards iron rod (A).	[1]	
b	The iron rod / steel was made of magnetic material [½] and was magnetised [½].	[1]	The glass rod was made of non-magnetic material [½] and cannot be magnetised [½]. (Above is acceptable **only if** Part A is written as the steel bar would not be attracted to glass rod)
c	(i) Increase the number of coils of wire around the (iron) rod / electromagnet. (ii) Increase the number of batteries (connected to the iron rod). **Partial answer** Increase the number of coils of wire / add more wire [½] <no mention of iron rod>	[2] 1m each	Increase the number of coils of wire around the objects / magnetics objects / bar [0]



7

ONE

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