9

Rosyth School
End-of-Year Examination 2024
SCIENCE
Primary 3

Name: _____ Total Marks: /48

Class: Pr 3 _____ Register No. _____

Date: 24 October 2024 Parent's Signature: _____

Total time for Booklet A and B: 1h 30min

Booklet A

Instructions to Pupils:

1. Do not open the booklet until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 booklets, Booklet A and Booklet B.
4. For questions 1 to 24 in Booklet A, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.

* This booklet consists of 17 printed pages (including this cover page).

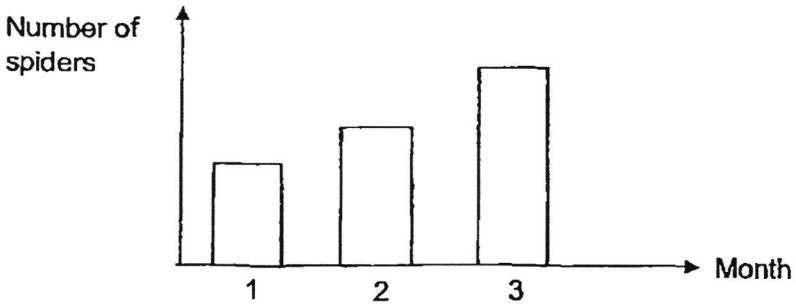
For each question from 1 to 24, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). **Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet (OAS).** (48 marks)

1 A tree fell to the ground during a thunderstorm as shown in the picture.

A week later, the tree is **not able** to survive as it cannot _____.

(1) grow
(2) reproduce
(3) trap enough sunlight
(4) absorb water from the soil

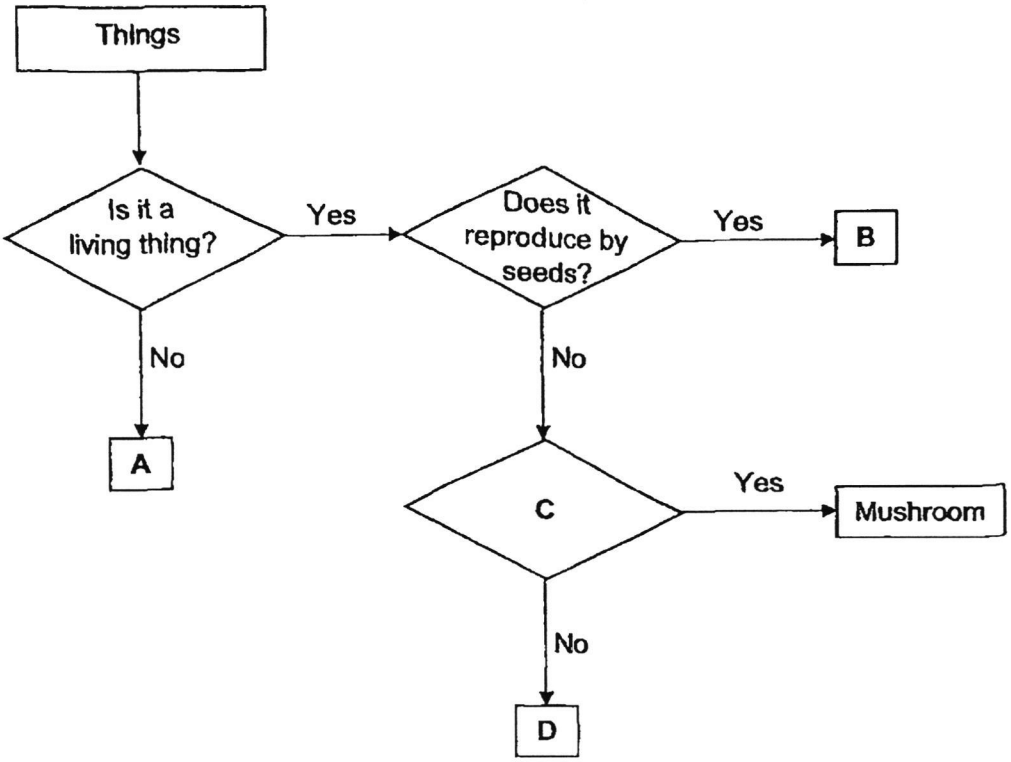
2 Kai Ting recorded the number of spiders in her tank over a period of time in the graph below. She did not add or remove any spiders during the same period of time.



The change in the number of spiders shows that living things can _____.

(1) die
(2) grow
(3) reproduce
(4) respond to changes

Study the flow chart below to answer questions 3 and 4.



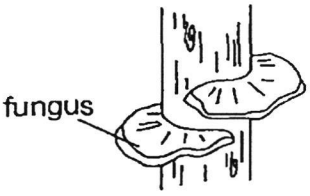
3 Which one of the following represents A and B correctly?

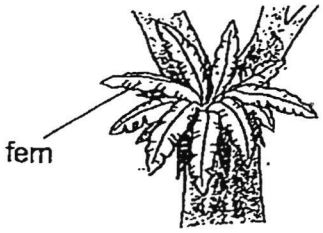
	A	B
(1)	car	moss
(2)	bottle	mango plant
(3)	bottle	fern
(4)	mango plant	car

4 Which of the following best represents C and D?

	C	D
(1)	Does it reproduce by spores?	monkey
(2)	Does it have leaves?	frog
(3)	Does it have 3 stages in its life cycle?	grasshopper
(4)	Does it reproduce by eggs?	dog

5 Study the living things below.



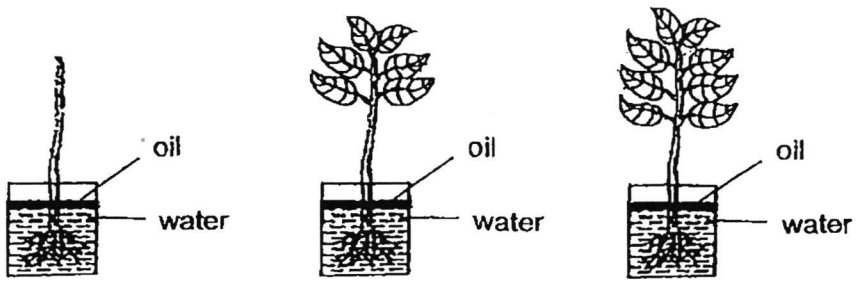


Which of the following statements is true?

A. Both the fungus and fern reproduce by spores.
B. The fungus cannot make its own food but the fern can.
C. The fungus needs water to grow but the fern does not need water to grow.
D. The fungus needs sunlight to grow but the fern does not need sunlight to grow.

(1) A and B only
(2) A and D only
(3) B and D only
(4) All of the above

6 Krishnan conducted an experiment with three similar plants, W, Y and Z. He cut off all the leaves from plant W and only some leaves from plant Y. No leaves were cut from plant Z.



Plant W Plant Y Plant Z

Krishnan then placed each plant in a container with 500 ml of water. The plants were placed at the same location. A layer of oil was added to prevent water loss to the surrounding air.

Krishnan recorded the volume of water left in each container after a week.

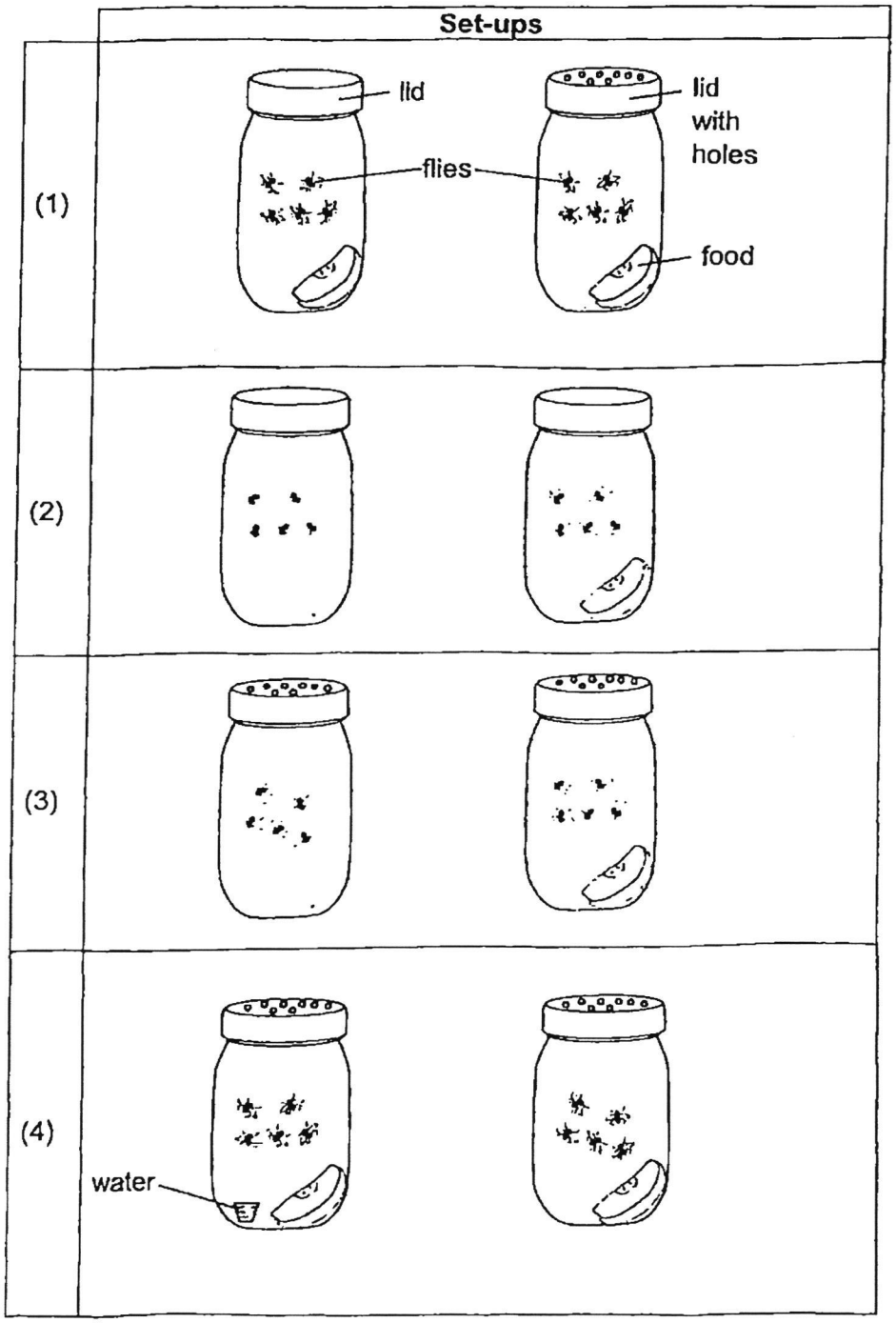
Plant	Volume of water left in the container after a week (ml)
W	400
Y	330
Z	250

The aim of the experiment is to find out how the _____.

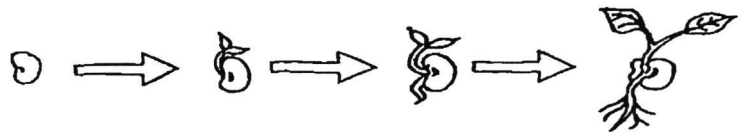
(1) roots of a plant absorb water
(2) stem of a plant absorbs water
(3) the layer of oil prevented water loss to the surrounding air
(4) number of leaves affects the volume of water taken in by the plant

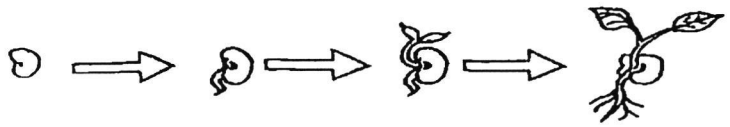
7 Jane wanted to find out if flies need air to survive.

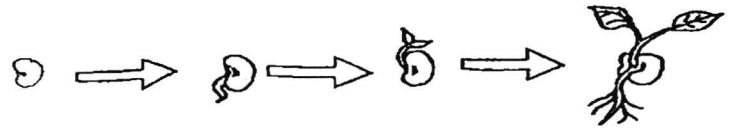
Which of the following set-ups should she use?

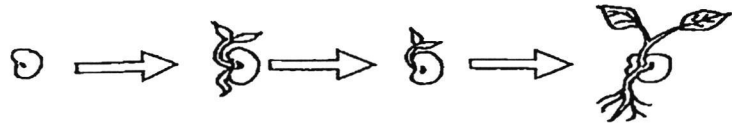


8 Which one of the following diagrams correctly shows the growth of a seed?

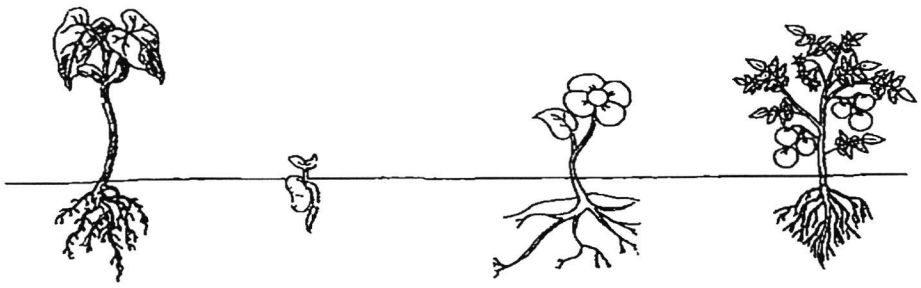
(1) 

(2) 

(3) 

(4) 

9 Look at the pictures of the four different types of plants, A, B, C and D, below.

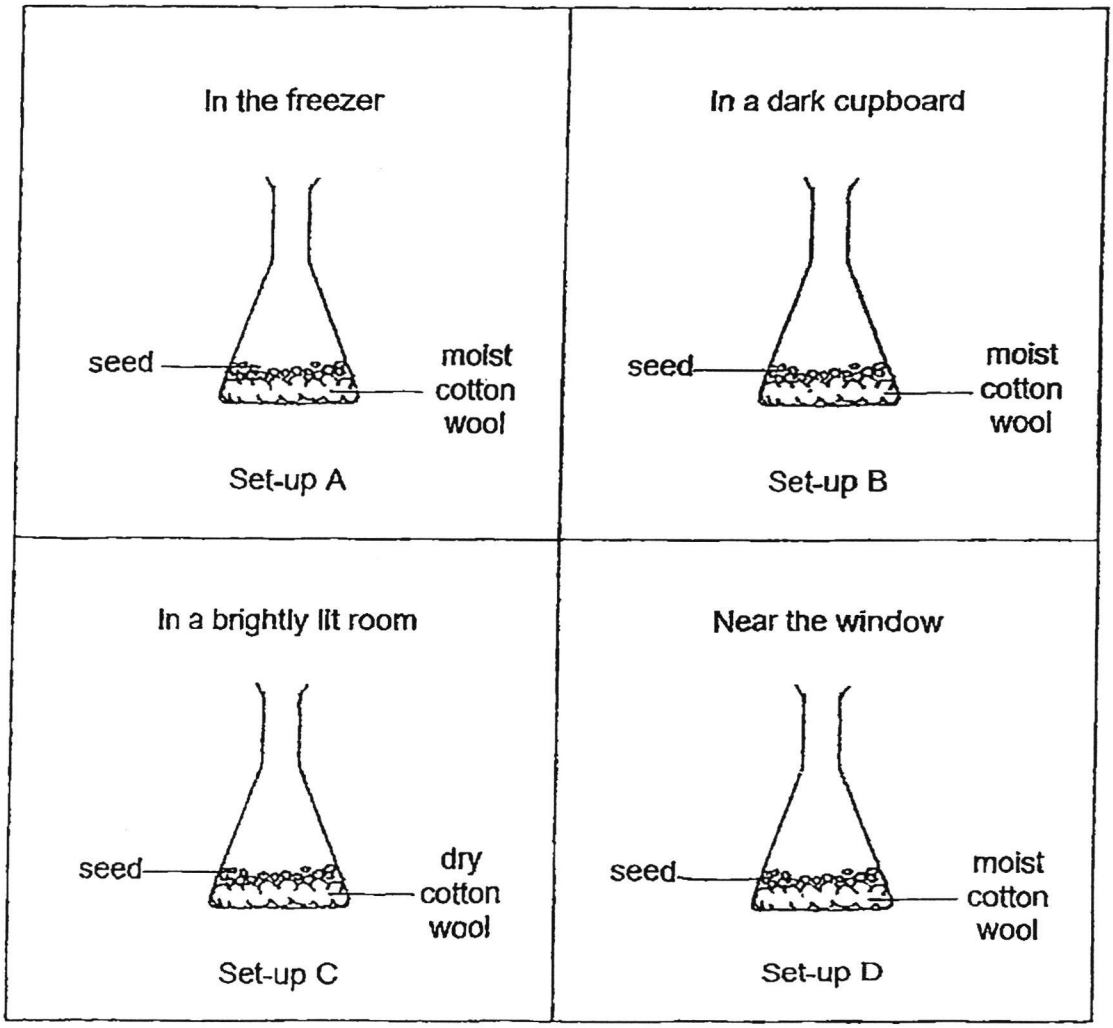


A B C D

Which of the following is/are adult plants?

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

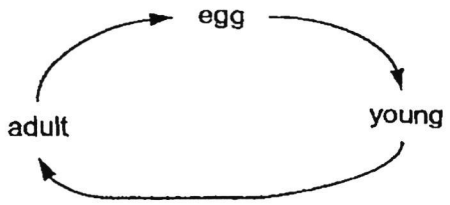
10 Sam prepared four set-ups, A, B, C and D, and placed them in different locations as shown below.



In which of the following set-up(s) would Sam observe the seeds germinating after five days?

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

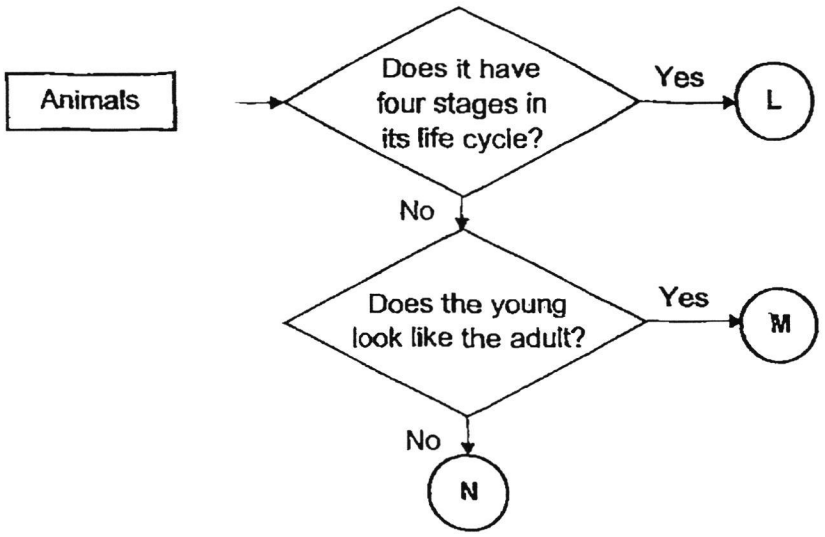
11 The diagram below shows the life cycle of Animal G.



Based only on the life cycle above, which of the following statements is true?

(1) Animal G lives on both land and in water.
(2) Animal G can give birth to its young alive or lay eggs.
(3) The young of Animal G does not resemble the adult.
(4) The time taken for Animal G to grown from one stage to another is the same.

12 Study the flow chart below.



Based on the information given, which of the following correctly represent animals, L, M and N?

	L	M	N
(1)	mosquito	grasshopper	frog
(2)	frog	cockroach	chicken
(3)	butterfly	chicken	beetle
(4)	mosquito	frog	chicken

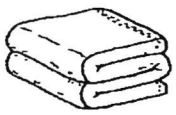
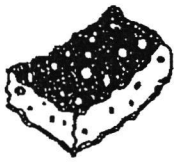
13 The description below shows some characteristics of Animal K.

Animal K
• moults (sheds its skin and grows new one) several times as it grows • feeds on the same kind of food as its parents • resembles its parents but is smaller in size

Animal K is the young of a _____.

(1) frog
(2) mosquito
(3) grasshopper
(4) mealworm beetle

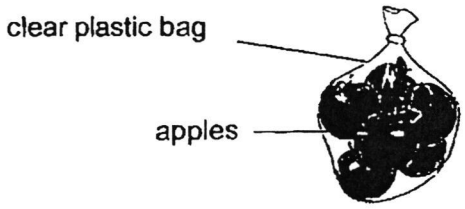
14 The objects have been grouped based on their characteristics.

Group A	Group B
 a glass cup  a plastic Spoon	 a towel  a sponge

What are the suitable headings for group A and B?

	Group A	Group B
(1)	flexible	not flexible
(2)	waterproof	not waterproof
(3)	float on water	sink in water
(4)	strong	weak

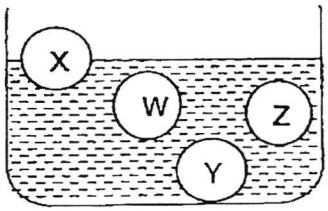
15 Mr Tan wants to sell his apples in packets of five at his store. He decides to use a clear plastic bag to put his apples so that his customers can see the apples they are buying.



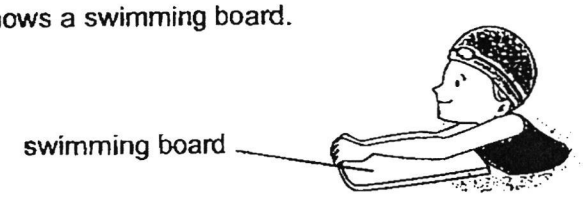
How does the clear plastic bag allow his customers to see the apples?

(1) The clear plastic bag is light.
(2) The clear plastic bag is flexible.
(3) The clear plastic bag does not break.
(4) The clear plastic bag allows light to pass through.

16 Sam carried out a test by dropping different materials, W, X, Y and Z, into a basin of water. The results are shown in the diagram below.



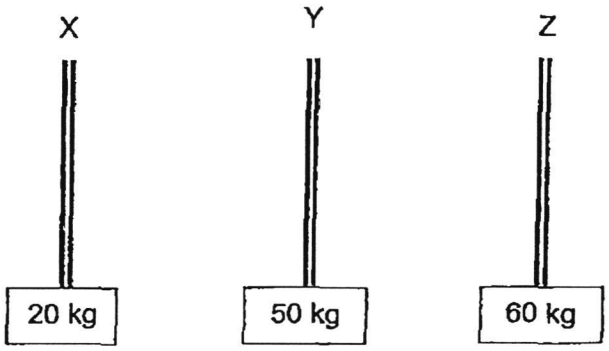
The picture below shows a swimming board.



Which material, W, X Y or Z is most suitable to be used to make the swimming board?

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

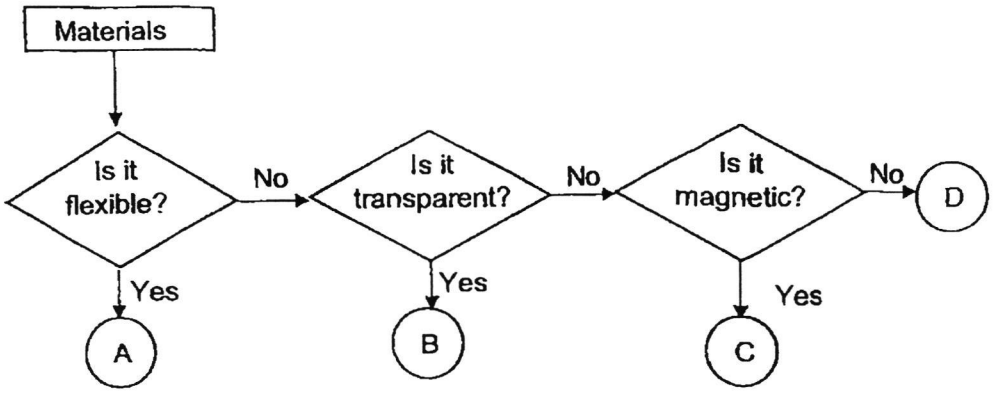
17 Three different weights were tied to three ropes, X, Y and Z, of different materials. The length and thickness of each rope were the same. When the weights were lifted by the ropes, rope X and Y broke.

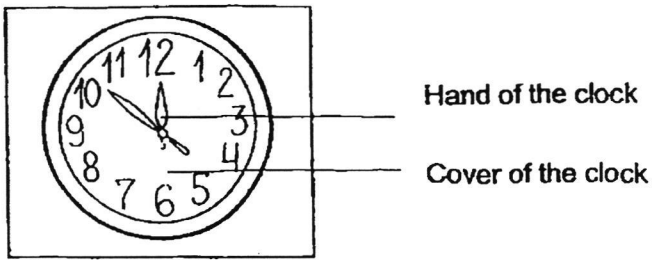


Which one of the following statements is definitely true?

(1) Rope X is the strongest.
(2) Rope Y is the strongest.
(3) Rope Z is weaker than Rope Y.
(4) Rope Z is stronger than Rope Y.

18 Study the flow chart below.

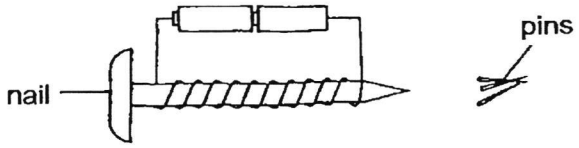




Which one of the following best represents the hand and cover of the clock?

	Hand of the clock	Cover of the clock
(1)	A	B
(2)	D	B
(3)	D	A
(4)	C	D

19 Mandy made an electromagnet as shown below. She placed some pins near the nail. She noticed that no pins were attracted to the nail.



Which one of the following could be a possible reason why no pins were attracted to the electromagnet?

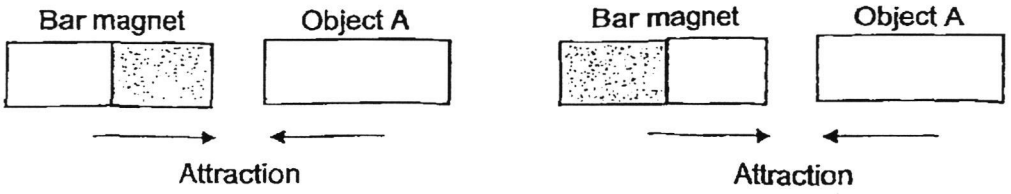
(1) The nail was made of steel.
(2) The pins were made of iron.
(3) The batteries were too weak
(4) There were too many coils around the nail.

20 The diagram below shows a compass.

Which property of a magnet enables a compass to work?

(1) A magnet attracts magnetic materials.
(2) A magnet is the strongest at its poles.
(3) A magnetised material can become a temporary magnet.
(4) A freely suspended magnet will come to a rest in the North-South direction.

21 The diagram below shows a bar magnet and object A. The arrows show what happens when both ends of the bar magnet is brought near to object A.



What can you conclude from the results?

(1) Object A is a magnet.
(2) Object A is made of magnetic material.
(3) Object A is made of non-magnetic material..
(4) The unlike poles of the bar magnet and object A are facing each other.

22 Alice had a bar magnet. She recorded the greatest mass of nail that different parts of a bar magnet could hold without the nail dropping. The results are as shown below.

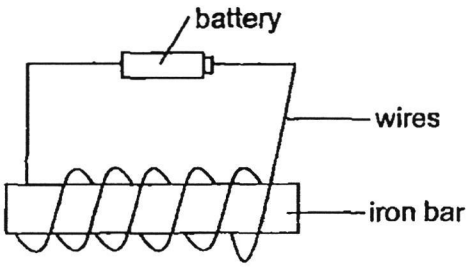
Parts of a bar magnet	Mass of nail (g)
W	10
X	5
Y	10
Z	12

Which one of the following is the middle part of the bar magnet?

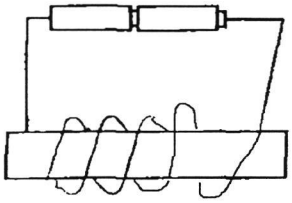
(1) W
(2) X
(3) Y
(4) Z

23 Which one of the following set-ups has the strongest magnetic strength?

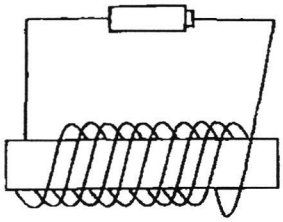
(1)



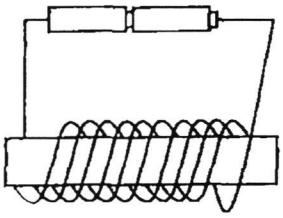
(2)



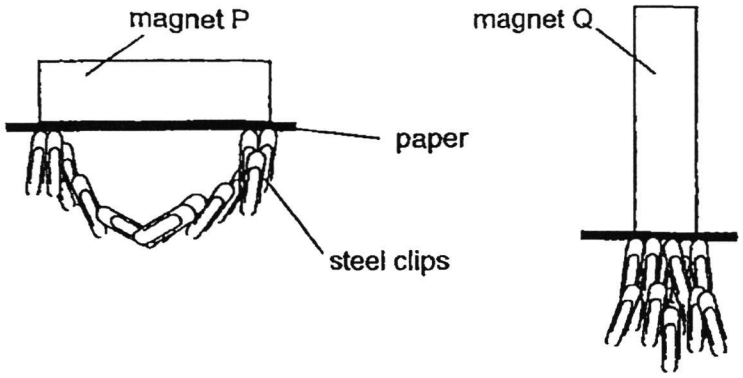
(3)



(4)



24 The diagram below shows two similar magnets, P and Q. Magnet P is placed horizontally and magnet Q is placed vertically. A piece of paper is placed under each magnet. Each magnet is then placed into a container of steel clips.



Based on the above observations, what can you conclude?

A. Magnetic force can pass through paper.
B. The unlike poles of two magnets attract.
C. A magnet can attract more steel clips at the poles.

(1) A and B only
(2) A and C only
(3) B and C only
(4) All of the above

GO TO BOOKLET B

Rosyth School
End-of-Year Examination 2024
SCIENCE
Primary 3

Name: _____ Total Marks: /32

Pr 3 _____ Register No. _____

Date: 24 October 2024 Parent's Signature: _____

Total time for Booklet A and B: 1h 30min

Booklet B

Instructions to Pupils:

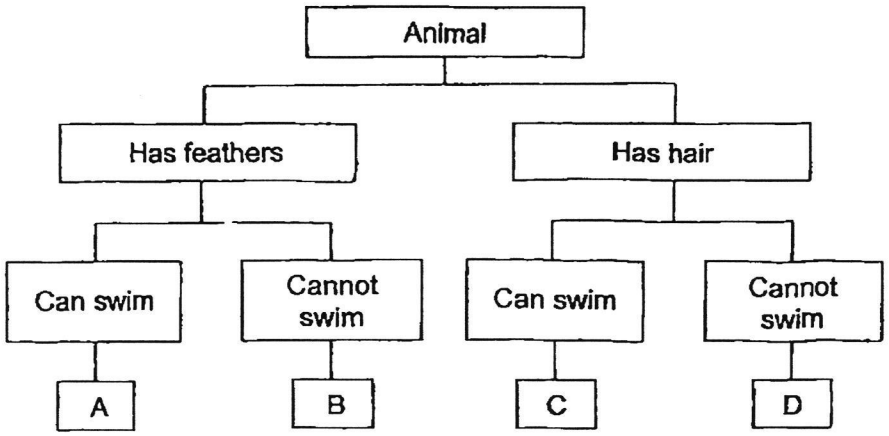
1. Please do not tum over this booklet until you are told to do so.
2. Follow all instructions carefully.
3. Answer all questions.

	Maximum marks	Marks obtained
Booklet A	**48**	
Booklet B	**32**	
Total	**80**	

* This booklet consists of 11 printed pages (including this cover page).

For questions 25 to 34, write your answers in spaces provided. (32 marks)

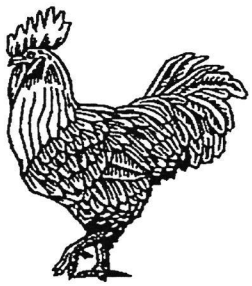
25 Study the classification chart below.



(a) Based on the classification chart, state the characteristics of Animal A. [1]

_____

(b) The picture below shows a bird.



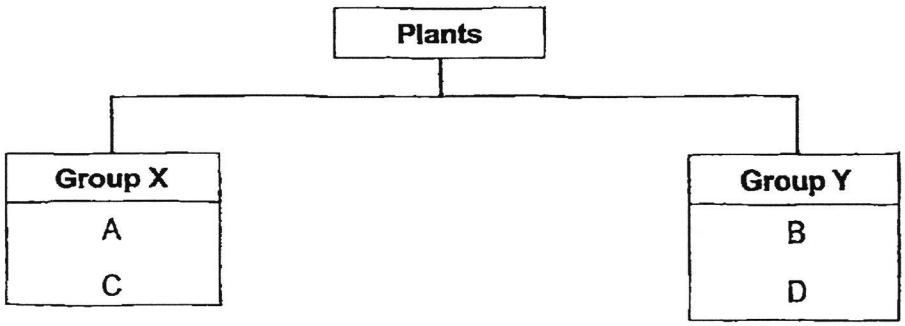
Based on the classification chart, write down one difference between Animal D and a bird. [1]

_____

26 Plant A, B, C and D have characteristics as shown in the table below. A tick (✓) in the box shows that the characteristic is present.

Characteristics	Plants			
	A	B	C	D
has leaves	✓	✓	✓	✓
has flowers		✓		✓
has fruits		✓		
reproduces by spores	✓		✓	

Using the information above, the plants are grouped in the classification chart below.



(a) Give suitable headings for group X and Y. [1]

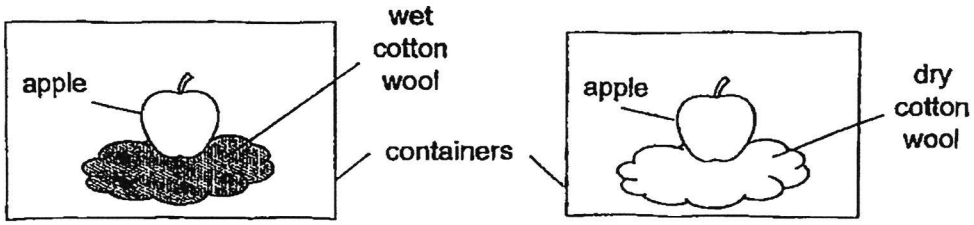
Group X : _____ plants

Group Y : _____ plants

(b) Based on the classification chart above, which group, X or Y, does the sunflower plant belong to? [1]

Group _____

27 Kyle conducted an experiment. He placed two similar apples in two identical containers, Q and R. He placed the containers in a dark cupboard.



(a) In which container, Q or R, would mould first appear on the apple. [1]

Container _____

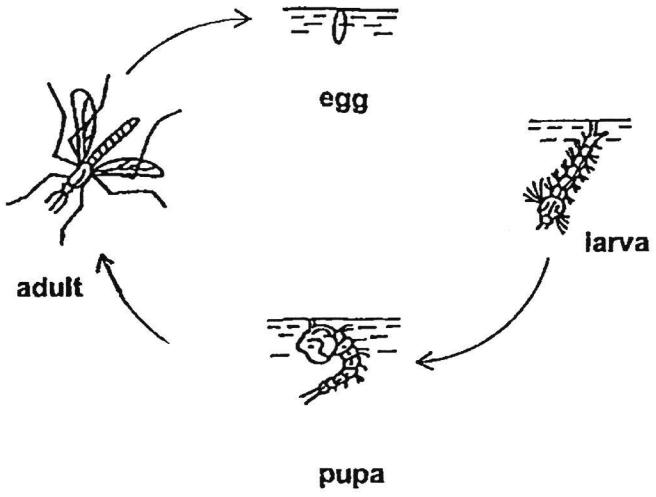
(b) Explain your answer in (a). [1]

_____

_____

(c) Mould reproduces by _____ [1]

28 The diagram below shows the life cycle of a mosquito.



(a) Name one stage in which spraying a layer of oil on the water surface would be effective in reducing its breeding. [1]

_____

(b) Explain why spraying a layer of oil on the water surface would be effective in reducing its breeding at that stage. [1]

_____

_____

(c) Suggest a reason why mosquitoes reproduce. [1]

_____

_____

29 Philip conducted an experiment to find out how the size of a seed would affect the number of days it took to germinate. He used seeds of the same type but of different sizes as show below.

small medium large

Philip recorded his results as shown in the table below.

Size of seed	Number of days seed took to germinate
small	6
medium	2
large	4

(a) What are the conditions for germination? [1]

(b) What could Philip conclude from this experiment? Circle the correct answer. [1]

The size of the seed (*did not affect / affected*) the number of days it took to germinate.

(c) When the seeds had germinated, Philip placed each seedling in a dark cupboard. He observed that the seedling of large-sized seed survived the longest. Explain why. [2]

30 The picture below shows a pair of hiking shoes. It is used for walking on muddy puddles in the forest.

(a) State the property that makes rubber soles suitable so that the user's feet will not be wet. [1]

_____

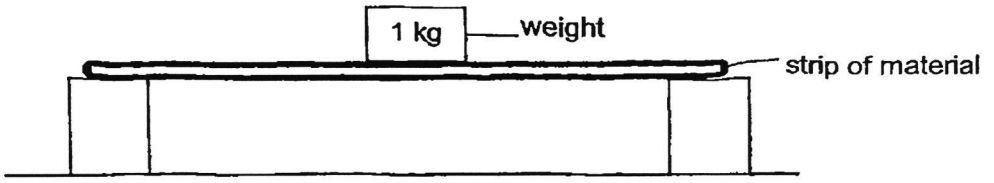
(b) Suggest a suitable material to make the shoelaces of the hiking shoes. Give a reason for your choice of material. [2]

Material : _____

Reason : _____

_____

31 Tim set up an experiment to compare the property of three strips of different materials, X, Y and Z.



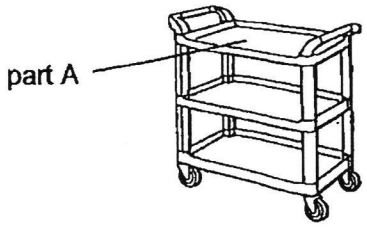
He put 1kg of weight on each strip of material. Then he measured the mass of weights each strip of material could hold until it broke. He recorded the results in the table below.

Strip of Material	X	Y	Z
Mass of weights each strip of material could hold until it broke (kg)	20	100	60

(a) Put a tick (✓) in the boxes that represent the correct variables. [1]

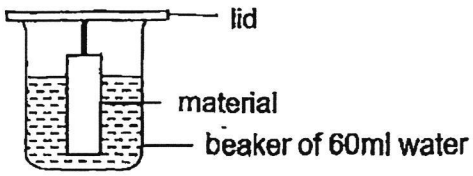
Variables to be	Strip of material	Mass of weights each strip of material could hold until it broke	Length of strip
Changed			
Kept the same			
Measured			

(b) The picture below shows a trolley. The trolley can carry ten laptops.



Based on the results above, which material, X, Y or Z, is most suitable for making part A of the trolley? Explain your answer. [2]

32 Shufang carried out an experiment as shown below. She placed material A into a beaker of water for 5 minutes. She then removed material A and measured the volume of water left in the beaker. She repeated the experiment with material B and C of the same size.

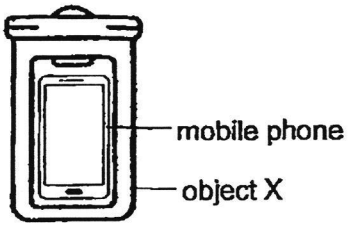


She recorded the results in the table below.

Material	Volume of water left in beaker (ml)
A	20
B	35
C	60

(a) From the results above, which material, A, B or C, was able to absorb the most volume of water? [1]

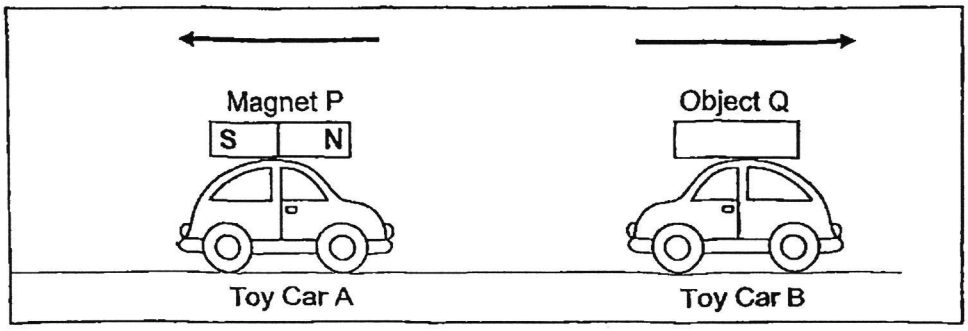
(b) While playing at the beach, Shufang used object X to keep her mobile phone dry.



Based on the results above, which material, A, B or C, is most suitable for making object X? Give a reason for your answer. [2]

(c) State another property of the material in (b) that allows Shufang to take photos with her mobile phone in object X. [1]

33 Junhao tied Magnet P to Toy Car A and Object Q to Toy Car B. **S** represents South pole of a magnet and **N** represents North pole of a magnet.



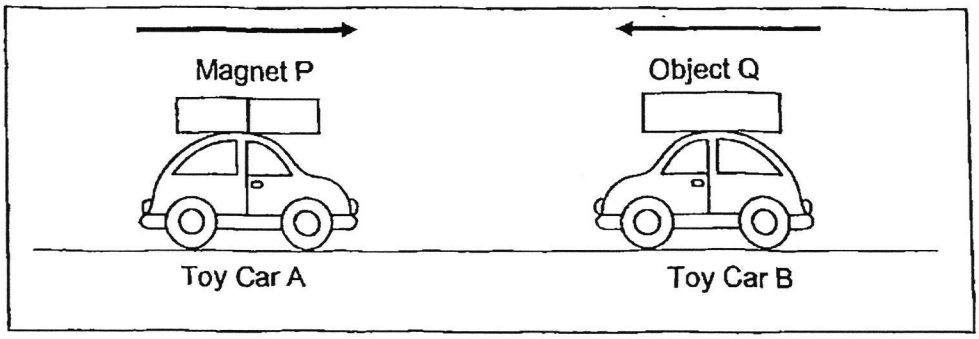
(a) When the two toy cars were brought close to each other, they moved away from each other as shown in the diagram above.

(i) What could Object Q be? [1]

(ii) Explain why the two toy cars moved away from each other. [2]

(b) Junhao rearranged Magnet P on Toy Car A only.
Label the poles in Magnet P in the diagram below so that the toy cars could move towards each other. [1]

Magnet P



34 Jeannie has a bar magnet and Rod P.

(a) Describe how Jeannie can magnetise Rod P using the stroke method. [1]

_____

_____

The magnetised Rod P can attract eight steel clips.

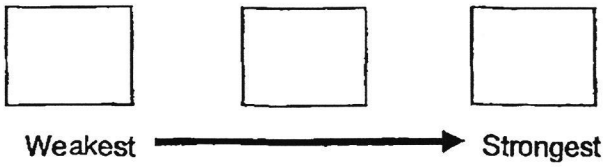
(b) What could she do to make Rod P attract more steel clips? [1]

_____

Jeannie repeated step (a) with Rod Q and Rod R and recorded her observations in the table below.

Rod	Number of steel clips attracted
P	8
Q	10
R	2

(c) Arrange Rod P, Q and R according to their magnetic strength, from the weakest to the strongest in the boxes provided. [1]



(d) Jeannie repeated step (a) with a wooden rod. What is the number of steel clip(s) attracted to the wooden rod? [1]

_____

END OF PAPER

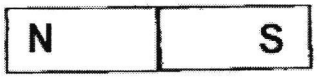
SCHOOL : ROSYTH SCHOOL
LEVEL : PRIMARY 3
SUBJECT : SCIENCE
TERM : SA2
CONTACT :

BOOKLET A

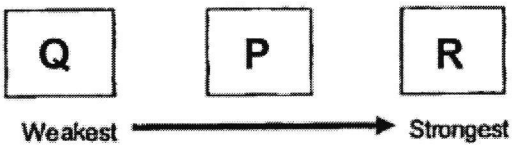
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
4	3	2	1	1	4	1	2
Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16
3	3	2	1	3	2	4	2
Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
4	2	3	4	2	2	4	2

BOOKLET B

Q25 (a)	Animal A has feathers and can swim.
Q25 (b)	Animal D has hair while a bird has feathers.
Q26 (a)	Group X: Non-flowering plants Group Y: Flowering plants
Q26 (b)	Group Y.
Q27 (a)	Container Q.
Q27 (b)	The apple in container A has wet cotton wool, which provides moisture for mould to grow.
Q27 (c)	Spores.
Q28 (a)	The larva stage.
Q28 (b)	The oil prevents the larva from breathing at the surface, living things need air to live and hence they will die.
Q28 (c)	To ensure the continuity of its kind.

<table>
<tr><td>Q29 (a)</td><td>Water, warmth and air.</td></tr>
<tr><td>Q29 (b)</td><td>Did not affect.</td></tr>
<tr><td>Q29 (c)</td><td>It had the greatest amount of food nutrients so it could survive longer on it.</td></tr>
<tr><td>Q30 (a)</td><td>The rubber soles are waterproof.</td></tr>
<tr><td>Q30 (b)</td><td>Material: Fabric.
Reason: Fabric is flexible, making it easy for the user to tie their shoelaces.</td></tr>
<tr><td>Q31 (a)</td><td>
<table>
<tr><th>Variables to be</th><th>Strip of material</th><th>Mass of weights each strip of material could hold until it broke</th><th>Length of strip</th></tr>
<tr><td>Changed</td><td>✓</td><td></td><td></td></tr>
<tr><td>Kept the same</td><td></td><td></td><td>✓</td></tr>
<tr><td>Measured</td><td></td><td>✓</td><td></td></tr>
</table>
</td></tr>
<tr><td>Q31 (b)</td><td>Material Y. It could hold up to 100kg before breaking, ten laptops are very heavy and hence part A must be very strong to withstand the weight of the laptops.</td></tr>
<tr><td>Q32 (a)</td><td>Material A.</td></tr>
<tr><td>Q32 (b)</td><td>Material C. It was the least absorbent as object X should be waterproof to keep her mobile phone dry.</td></tr>
<tr><td>Q32 (c)</td><td>It is transparent.</td></tr>
<tr><td>Q33 (a)</td><td>(i) A magnet.
(ii) The north poles of magnet P and object Q are facing each other, which causes them to repel and move away from each other.</td></tr>
<tr><td>Q33 (b)</td><td> 

Magnet P</td></tr>
<tr><td>Q34 (a)</td><td>Jeannie can use a magnet and stroke rod P using one pole in one direction 10 times.</td></tr>
</table>

Q34 (b)	She can increase the number of strokes.
Q34 (c)	
Q34 (d)	0