

METHODIST GIRLS' SCHOOL

Founded in 1887



MID-YEAR EXAMINATION 2019 PRIMARY 3 SCIENCE

BOOKLET A

Total Time for Booklets A and B: 1 hour 15 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.

Name: _____ ()

Class: Primary 3. _____

Date : 14 May 2019

This booklet consists of 14 printed pages including this page.

For each question from 1 to 20, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

[40 marks]

- 1 Ali compared some mushrooms found near a tree and a can of mushroom bought from a supermarket as shown in the diagram below.



Figure A

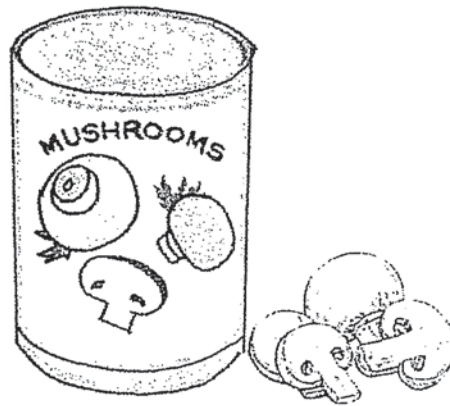


Figure B

He listed down the comparisons he made in the table below.

	Mushrooms in figure A	Mushrooms in figure B
A	can grow	cannot move
B	can move around	cannot grow
C	can reproduce	cannot reproduce
D	cannot respond to changes	can respond to changes

Which of the following correctly describe how the mushrooms in figure A are different from the mushrooms figure B?

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

(Go on to the next page)

2 Study the diagram below.



Lemon plant



Yeast under a microscope

Which of the following correctly describe how the lemon plant is similar to yeast?

- A Both can reproduce.
- B Both respond to light.
- C Both need air, food and water.
- D Both get food from the organisms that they live on.

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

3 Animal Y has the following characteristics.

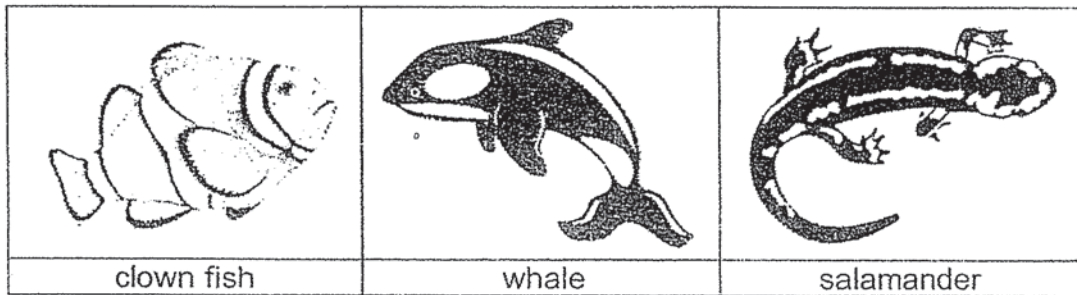
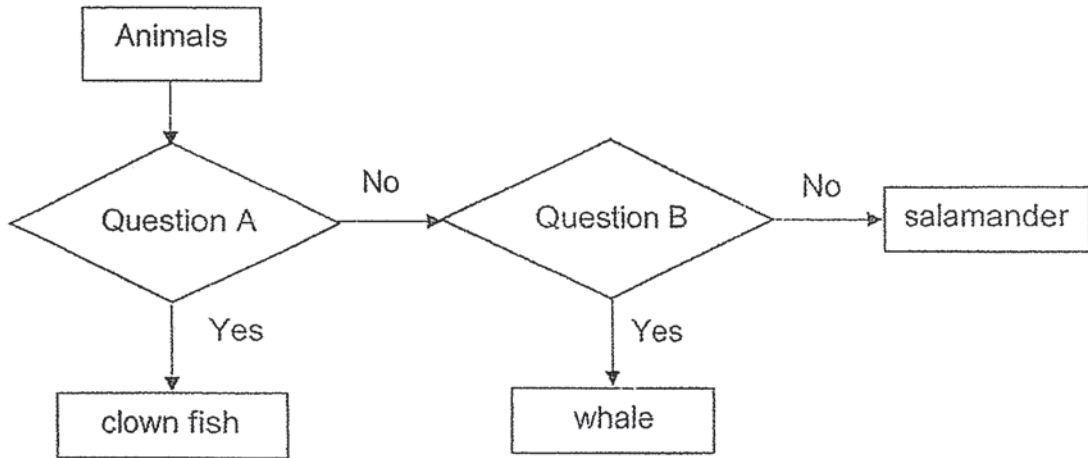
- It has a tail.
- It lays eggs.
- It has scales.

Which animal group does animal Y most probably belong to?

- (1) fish only
- (2) reptile or fish only
- (3) reptile or insect only
- (4) amphibian or fish only

(Go on to the next page)

4 Study the flowchart below carefully.



What are the two questions?

	Question A	Question B
(1)	Does it have scales?	Does it give birth to young alive?
(2)	Does it have scales?	Does it live on both land and water?
(3)	Does it breathe through gills?	Does it have scales?
(4)	Does it breathe through gills?	Does it lay eggs?

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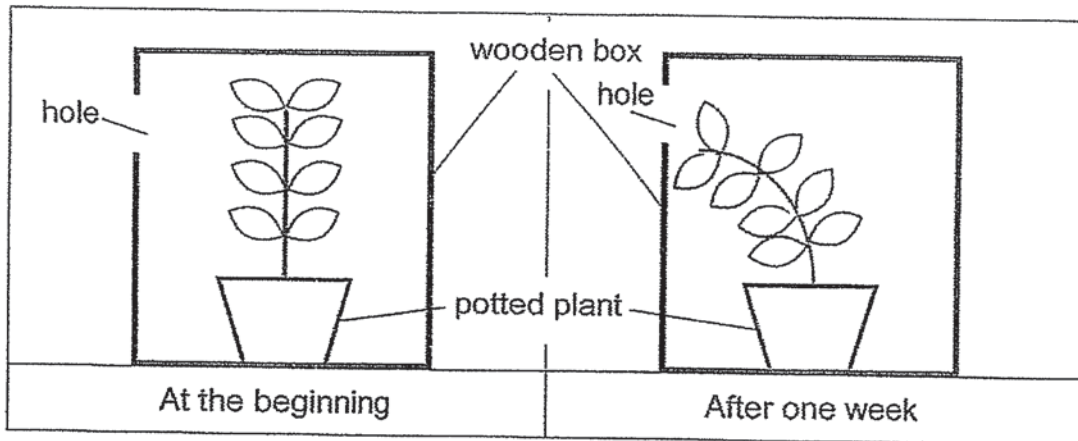
- 5 The table below shows the characteristics of animals W, X and Y. A tick (✓) shows that the animal has the characteristics.

Animal	Tail	Two legs	Lay eggs
W	✓	✓	✓
X	✓		
Y	✓		✓

From the information given above, what outer body covering do animals W, X and Y most likely have?

	Animal W	Animal X	Animal Y
(1)	scales	hair	feathers
(2)	feathers	hair	scales
(3)	feathers	scales	moist skin
(4)	moist skin	scales	hair

- 6 A plant was placed in a cardboard box with a hole. The plant was watered with the same amount of water daily. The diagrams below show the plant at the beginning of the experiment and at the end of one week.

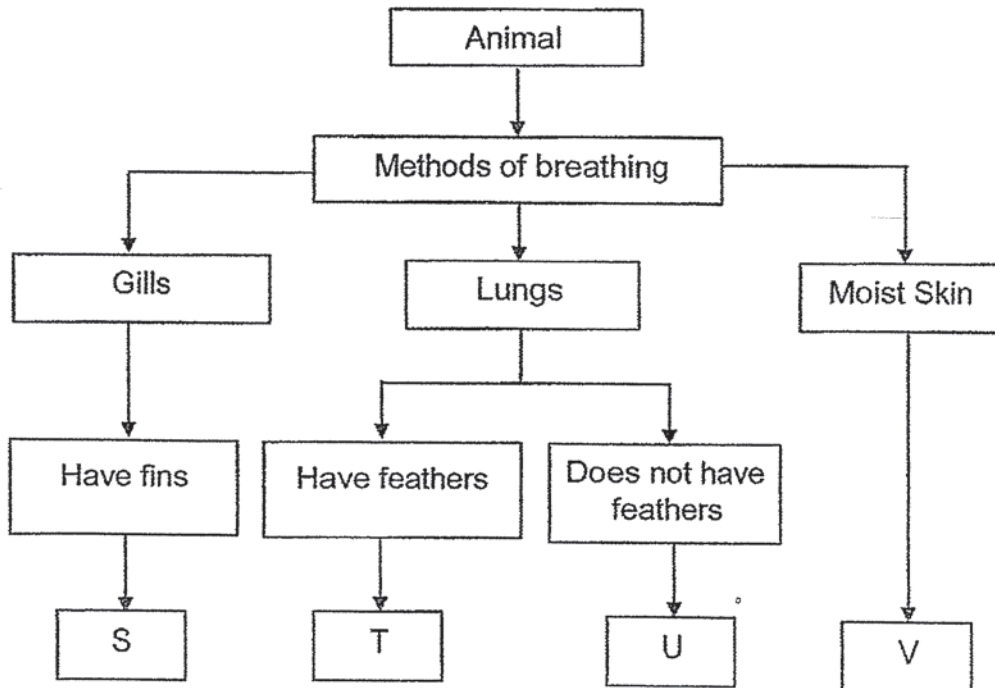


Which one of the following best explains the above observation after one week?

- (1) The plant has a weak stem.
- (2) The roots did not receive enough water for the plant.
- (3) The stems could not support the weight of the leaves.
- (4) The plant grew towards the hole to receive more sunlight.

(Go on to the next page)

7 Study the classification chart below carefully.



Based on the classification chart above, which of the following statements about S, T, U and V are correct?

- A Animal S lays eggs.
- B Animal U produces milk.
- C Animal T has a pair of wings.
- D Animal V lives in water only.

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

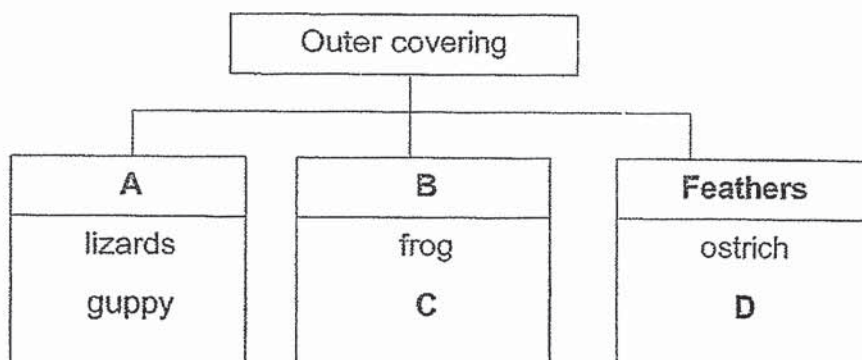
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- 8 The table below shows the characteristics of three organisms A, B and C.

Characteristics	Living things		
	A	B	C
Does it make its own food?	Yes	Yes	No
Does it have fruits?	Yes	No	No

Which one of the following statements is true?

- (1) A reproduces by spores.
 - (2) A and B are green plants.
 - (3) A and C are green plants.
 - (4) B and C are non-flowering plants.
- 9 Study the classification diagram below.

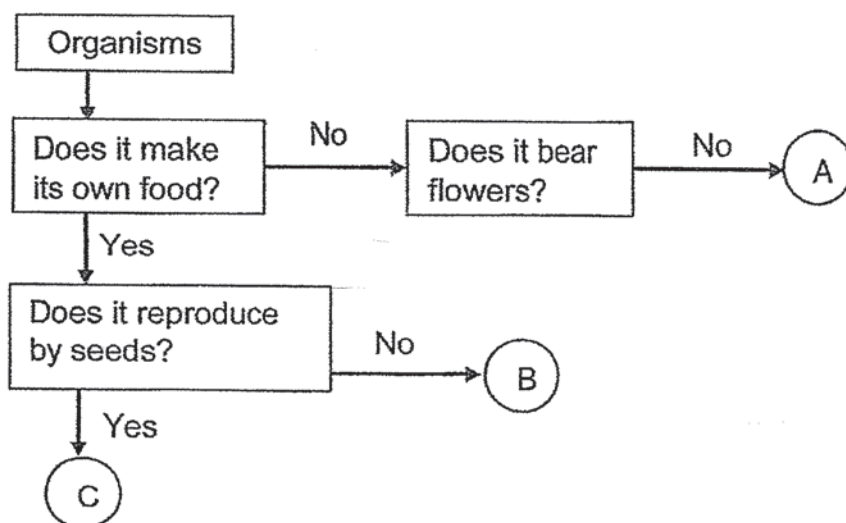


Which one of the following options is correct?

	A	B	C	D
(1)	dry skin	moist skin	toad	eagle
(2)	dry skin	scales	dolphin	sparrow
(3)	scales	hair	seal	bats
(4)	scales	moist skin	toad	penguin

(Go on to the next page)

- 10 Study the flowchart as shown below.



Which of the following best describe organisms A, B and C?

	Flowering plant	Non-flowering plant	Fungi
(1)	C	B	A
(2)	B	C	A
(3)	A	C	B
(4)	C	A	B

- 11 The table below shows the characteristics of animals K, L and M.

Characteristics	Animal K	Animal L	Animal M
Has scales	Yes	No	No
Has moist skin	No	No	Yes
Has three body parts	No	Yes	No
Breathes through gills	Yes	No	No

Which of the following group of animals correctly identifies K, L and M?

	Animal K	Animal L	Animal M
(1)	fish	insect	reptile
(2)	bird	amphibian	insect
(3)	fish	insect	amphibian
(4)	fish	amphibian	reptile

(Go on to the next page)

12 Which of the following statements are true?

- A Fungi and bacteria reproduce by spores.
- B Fungi and bacteria feed on other organisms.
- C Fungi and bacteria come in different shapes and sizes.
- D Fungi and bacteria can only be seen under a microscope.

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

13 Jessica wanted to find out if mould need moisture to survive. She prepared two set-ups as shown below. She used two similar containers, P and Q, for her experiment. The variables for her experiment are shown in the table below.

Container	Amount of water (ml)	Location	Duration of experiment
P	10	open field	10 days
Q	?	?	?

Which one of the following options should Jessica choose to conduct a fair experiment?

Container Q			
	Amount of water (ml)	Location	Duration of experiment
(1)	10	open field	10 days
(2)	10	cupboard	5 days
(3)	0	open field	10 days
(4)	0	cupboard	5 days

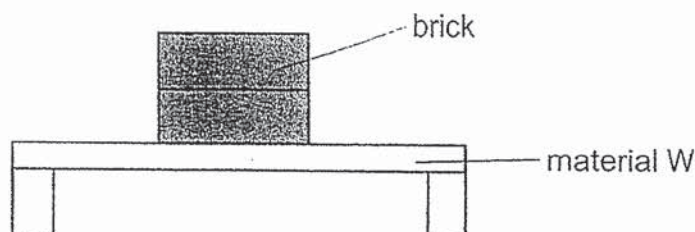
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- 14 An experiment was carried out using four identical plants E, F, G and H. For each plant, one part of the plant was removed. The plant was then placed in the garden and given the same amount of water daily.

Plant	Parts removed
E	All the roots
F	All the flowers
G	All the leaves and roots
H	All the fruits and leaves

Which one of the following plants, E, F, G or H would most likely survive the longest?

- (1) E
 (2) F
 (3) G
 (4) H
- 15 Yi Jing wanted to find out the strength of four different materials, W, X, Y and Z of identical size and thickness. She placed identical bricks, one at a time, on each material as shown below until it broke. She recorded her results in the table below.



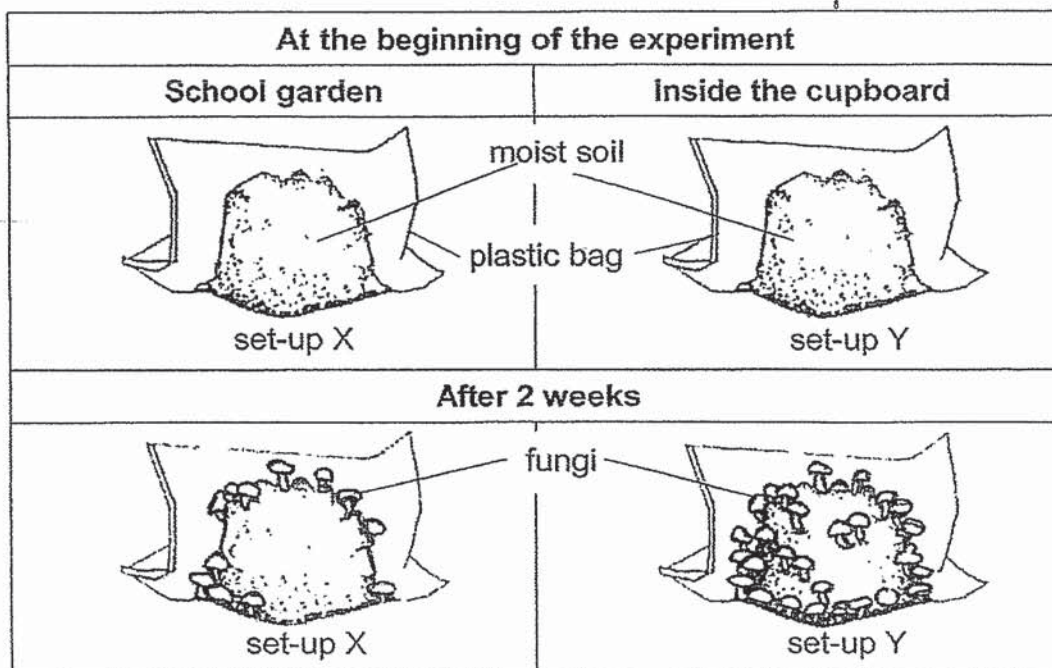
Material	Number of bricks needed to break the material
W	40
X	28
Y	16
Z	10

Based on the results, which material is most suitable for making a chair?

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

(Go on to the next page)

- 16 Christy prepared two set-ups as shown below. The same amount of spores was placed in both set-ups. The diagrams below show what she observed before and after two weeks.



Christy wrote the following statements based on her observations after two weeks.

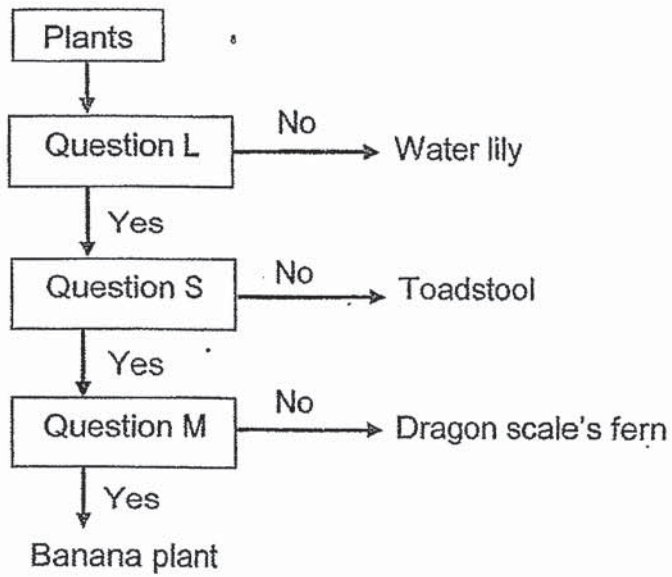
- A Fungi cannot respond to light.
- B Fungi grow faster in dark places.
- C Fungi grow faster in bright places.
- D Fungi need air, food and water in order to grow.

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

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

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17 Study the flowchart as shown below

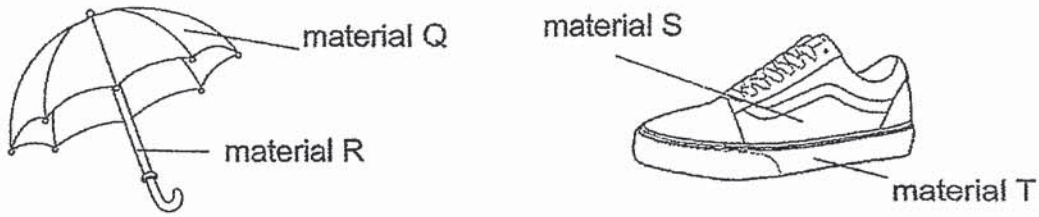


Which one of the following correctly represent questions L, S and M?

	Question L	Question S	Question M
(1)	Does it bear fruits?	Does it live on land?	Does it reproduce by seeds?
(2)	Does it reproduce by spores?	Does it bear fruits?	Does it live on land?
(3)	Does it live on land?	Does it require sunlight to grow?	Does it bear fruits?
(4)	Does it live on land?	Does it bear fruits?	Does it reproduce by spores?

(Go on to the next page)

- 18 The diagrams below show an umbrella and a shoe.



Which one of the following properties should be considered when choosing suitable materials for making part Q, R, S, T?

	Material Q	Material R	Material S	Material T
(1)	flexible	strong	absorbent	hard
(2)	waterproof	stiff	flexible	strong
(3)	allows light to pass through	strong	flexible	absorbent
(4)	waterproof	flexible	strong	allows light to pass through

- 19 The table below shows the properties of material E and F.

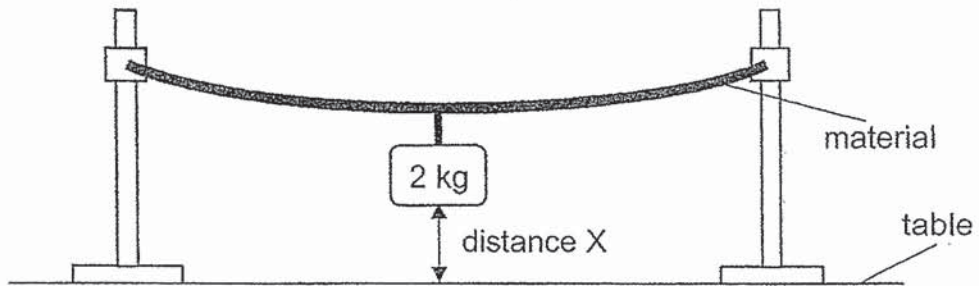
Property	Material E	Material F
Is it flexible?	No	Yes
Is it waterproof?	Yes	No
It is able to float?	No	No

Which of the objects below could be made of material E and F?

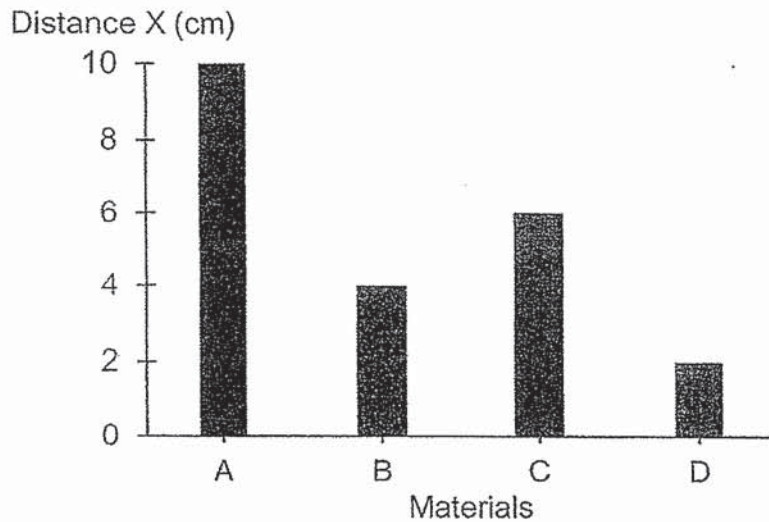
	Object E	Object F
(1)	glass cup	rubber band
(2)	metal key	towel
(3)	ceramic bowl	rain coat
(4)	styrofoam bowl	cotton shirt

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- 20 Dinesh conducted an experiment to test the flexibility of four materials A, B, C and D. He attached a 2 kg mass to each material of identical size and thickness as shown in the set-up below.



He then measured distance X and noticed that the readings for each material were different, depending on how much it bent. The graph shows Dinesh's results.



Based on his results, which material is the **most** flexible?

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

End of Booklet A

METHODIST GIRLS' SCHOOL

Founded in 1887



MID-YEAR EXAMINATION 2019 PRIMARY 3 SCIENCE

BOOKLET B

Total Time for Booklets A and B: 1 hour 15 minutes

INSTRUCTIONS TO CANDIDATES

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

Follow all instructions carefully.

Answer all questions.

Name: _____ ()

Class: Primary 3. _____

Date : 14 May 2019

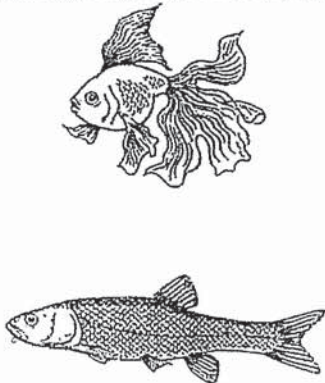
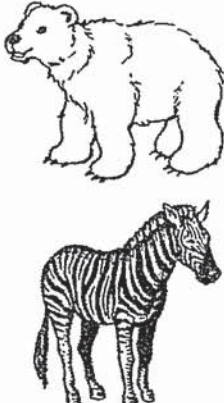
Booklet A	40
Booklet B	20
Total	60
Parent's Signature	

This booklet consists of 9 printed pages including this page.

For questions 21 to 28, write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part question.

[20 marks]

21 Mel classified four animals into two groups, A and B, as shown below.

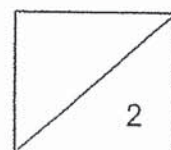
Group A	Group B
	

(a) Describe one different characteristic between the two groups of animals. [1]

Mel made the following observations on animal K:

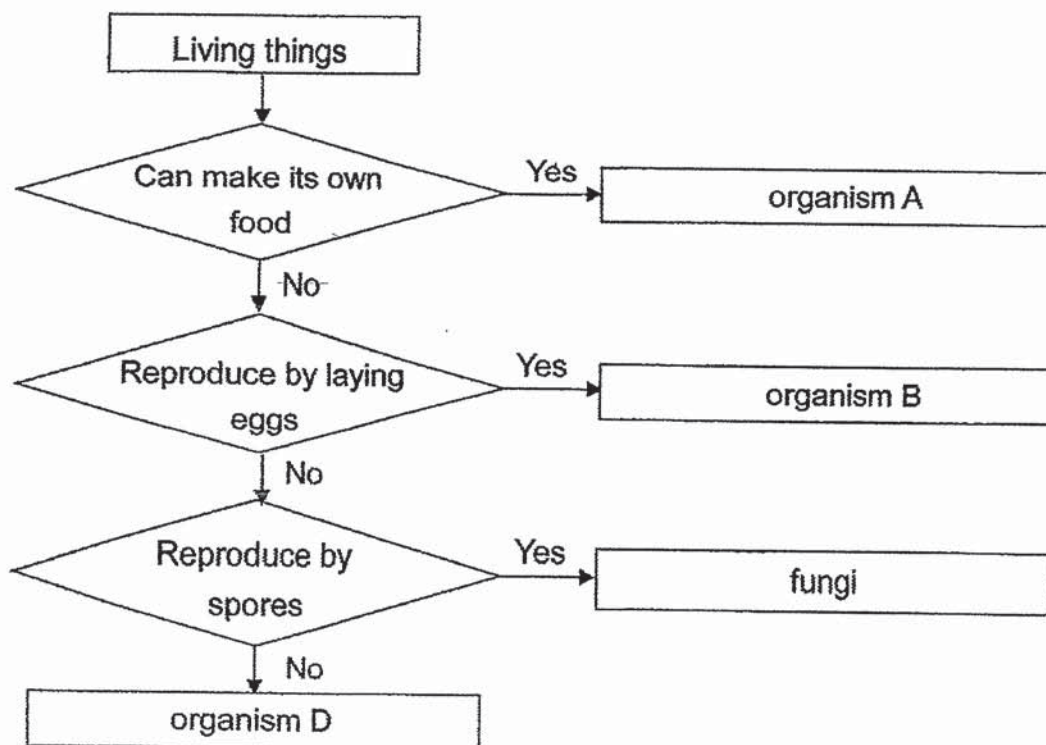
- Lives in water
- Has short hair
- Breathes through lungs

(b) In which group, A or B, does animal K belong to? Explain your answer. [1]



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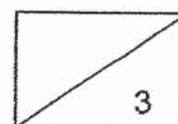
22 Study the flow chart below carefully.



(a) Based on the flow chart, what are the characteristics of organism B? [1]

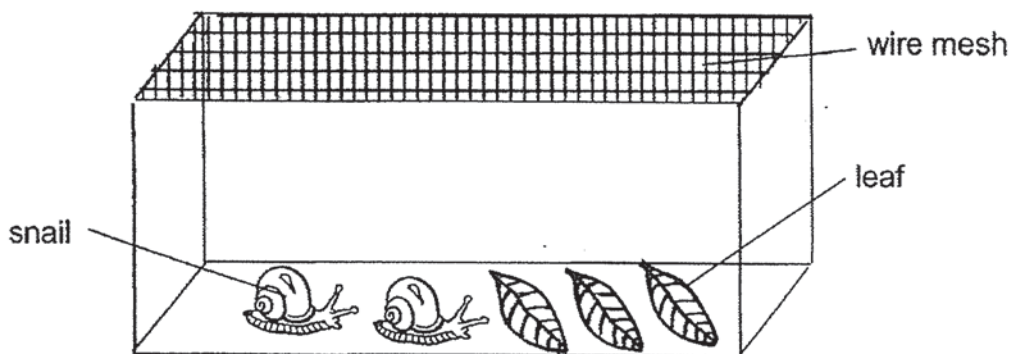
(b) Which group of living things could organism A be? Explain your answer. [1]

(c) If organism D is not an animal, what could it be? [1]



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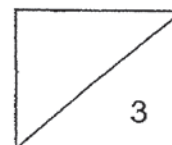
23 Lisa placed two snails in a glass tank as shown in the set-up below.



- (a) What would happen to the leaves in the tank after two weeks? Explain your answer. [1]

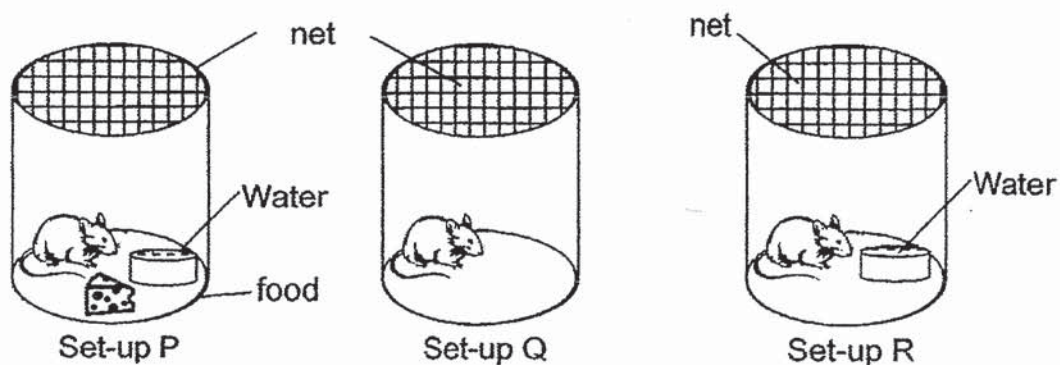
- (b) Lisa also noticed that the snails hide in their shells when she used a stick to touch it. Which characteristic of living things is shown by Lisa's observation? [1]

- (c) Why did Lisa use a wire mesh instead of a plastic sheet to cover the glass tank? Explain your answer. [1]



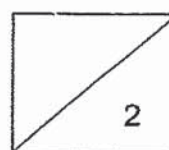
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- 24 Diana conducted an experiment with three similar mice as shown in the set-ups below.



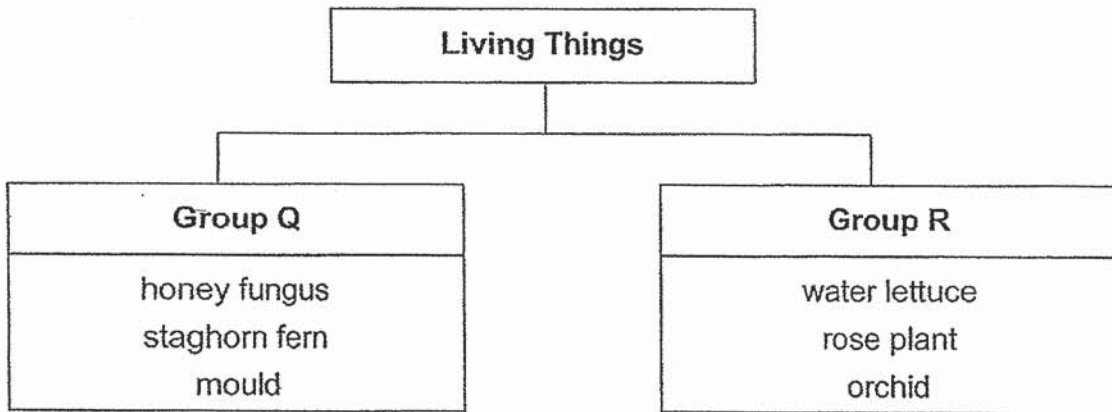
- (a) What was Diana trying to find out if she chose set-up P and R for comparison? [1]

- (b) In which set-up P, Q or R would the mice die first? Explain your answer. [1]



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25 Study the classification chart below.



(a) Suggest suitable headings for Group Q and R. [1]

Group Q: _____

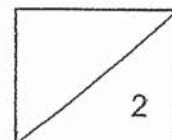
Group R: _____

Tommy found a plant in his garden and did not see any flowers on it. He concluded that the plant is a non-flowering plant.



(b) Are all plants which do not have flowers considered non-flowering plants? Give a reason for your answer. [1]

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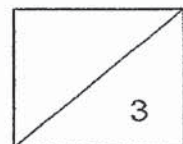
- 26 Jerome found some "white spots" growing on his leather shoes. Curious, he decided to look at the "white spots" under a microscope. He saw an image as shown in the diagram below.



- (a) What are the "white spots" and where did they come from? [1]

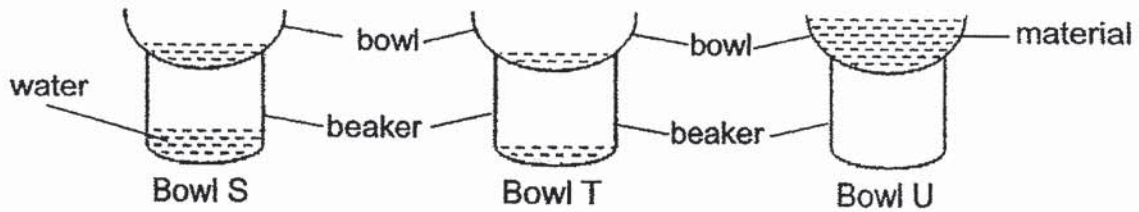
- (b) Give an example of a living thing that belongs to the same group as the "white spots". [1]

- (c) Why were the "white spots" able to grow on Jerome's leather shoe? [1]



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- 27 Jim conducted an experiment as shown in the diagram below. He poured 100 ml of water into each bowl made of materials, S, T and U.



He recorded the amount of water collected in the beaker after 1 hour in the table below.

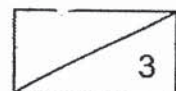
Material of bowl	Amount of water collected in the beaker (ml)
S	70
T	30
U	0

- (a) Put a tick (\checkmark) in the box next to the variable that should be kept the same in order for the experiment to be a fair one. [1]

Variable	Kept the same
Size of bowl	
Size of beaker	
Material of bowl	
Amount of water poured into the bowl	

- (b) What must Jim do to be sure of his results? [1]

- (c) Based on the results above, which material, S, T or U, is the most suitable for making a spoon? Explain your answer. [1]



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- 28 A flower shop wanted to replace the ceramic flower pots to plastic ones so that they are easier to carry and transport.



ceramic pot



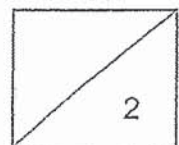
plastic pot

- (a) State two properties of plastic which makes it easier for the flower pots to be carried and transported as compared to ceramic. [1]

Alex wanted to grow some plants in a glass container as shown below.



- (b) What property of glass makes it suitable for growing plants? Explain your answer. [1]



End of Booklet B

Methodist Girls' School (Primary)
Primary 3
2019 Mid-year Examination
Section B

Q.	Answers										
21a	Group A has scales/ fins/ gills but Group B has hair/ legs/ lungs .										
21b	Group B, because Animal K has hair/ breathes with lungs/ is a mammal .										
22a	Organism B cannot make its own food and reproduce by laying eggs .										
22b	Organism A is a plant because only plants can make their own food .										
22c	Bacteria/ yeast										
23a	There will be less/ no more leaves as the snails ate the leaves for food.										
23b	The snails/ living things respond to changes.										
23c	The wire mesh has holes that allow air to enter so the snails can breathe .										
24a	She wanted to find out if the mouse needs food to survive .										
24b	The mouse in set-up Q will die first because it does not have food and water .										
25a	Group Q: Reproduce by spores Group R: Reproduce by seeds										
25b	No, because some plants may be at the young stage and have not reach the adult stage to bear flowers. OR Some flowering plants bear flowers only during certain seasons/ time in the year/ when the conditions are right .										
26a	They are fungi/ mould and they came from the spores in the air.										
26b	Mould/ Toadstool/ Bracket fungus										
26c	They had air, moisture and warmth/ food .										
27a	No partial marks. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Variable</th> <th style="text-align: center;">Kept the same</th> </tr> </thead> <tbody> <tr> <td>Size of bowl</td> <td style="text-align: center;">√</td> </tr> <tr> <td>Size of beaker</td> <td style="text-align: center;">√</td> </tr> <tr> <td>Material of bowl</td> <td></td> </tr> <tr> <td>Amount of water poured into the bowl</td> <td style="text-align: center;">√</td> </tr> </tbody> </table>	Variable	Kept the same	Size of bowl	√	Size of beaker	√	Material of bowl		Amount of water poured into the bowl	√
Variable	Kept the same										
Size of bowl	√										
Size of beaker	√										
Material of bowl											
Amount of water poured into the bowl	√										
27b	He must repeat the test/ experiment a few times.										

27c	Material U, because it is waterproof so the spoon can hold liquid / the user can drink or eat with it.
28a	Plastic is light and does not break easily .
28b	Glass : allows light to pass through so that the plants can get sunlight to make food .

- | | |
|-------|-------|
| 01. 1 | 11. 3 |
| 02. 2 | 12. 3 |
| 03. 2 | 13. 3 |
| 04. 1 | 14. 2 |
| 05. 2 | 15. 1 |
| 06. 4 | 16. 3 |
| 07. 3 | 17. 3 |
| 08. 2 | 18. 2 |
| 09. 4 | 19. 2 |
| 10. 1 | 20. 4 |

5/10.