Rosyth School
Topical Test for 2019
SCIENCE
Primary 4

Name: _____ Total Marks: 40

Class: Pr 4_____ Register No._____ Duration: 50 min

Date: _____ Parent's Signature: _____

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 sections, Part I and Part II.
4. For questions 1 to 11, write the correct answer in the brackets provided.
5. For questions 12 to 17, give your answers in the spaces provided in Part II.

	Maximum Marks	Marks Obtained
Part I	**22 marks**	
Part II	**18 marks**	
Total	**40 marks**	

* This booklet consists of 12 printed pages (including cover page).

This paper is **not** a weighted assessment. The purpose of this **assessment** is to monitor your learning to provide feedback. It is to help you identify your strengths and weaknesses and target areas that need to work that can be used by you to improve your learning.

Part I (22 marks)

For each question from 1 to 11, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Write the correct answer in the bracket provided.

1. Adam, Beth and Carla made a few statements about living things.

Who has/have made a correct statement(s)?

(1) Carla only
(2) Beth and Carla only
(3) Adam and Beth only
(4) Adam, Beth and Carla

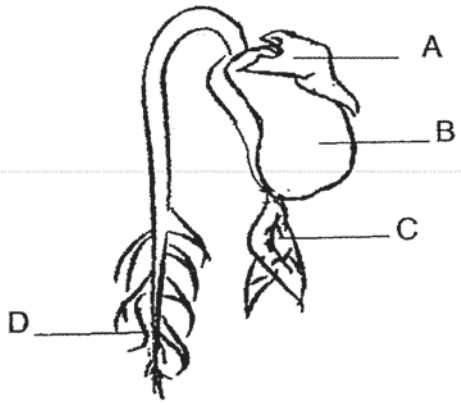
( )

2. Look at the diagrams below. Which one of the following shows the correct life cycle of a flowering plant?

(1) seedling → seed → adult	(2) seedling → seed → adult → seedling
(3) seedling → seed → adult → seedling	(4) seedling ← adult ← seed

( )

3. Study the picture of a germinating seed below.

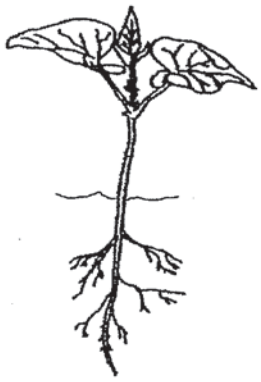


Which part of the seed will grow first when it germinates?

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

4. The diagram below shows two stages in the life cycle of a bean plant.

stage A



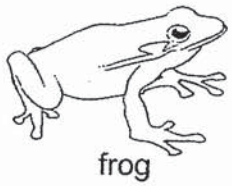
stage B

What is/are the common characteristic(s) between stage A and stage B in the life cycle of a bean plant?

A: They can make their own food.
B: They are able to produce seeds.
C: They can absorb water through their roots.

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

5. Sam wanted to compare the life cycles of a frog and a grasshopper.


frog


grasshopper

He wrote the similarities of the two life cycles in his worksheet.

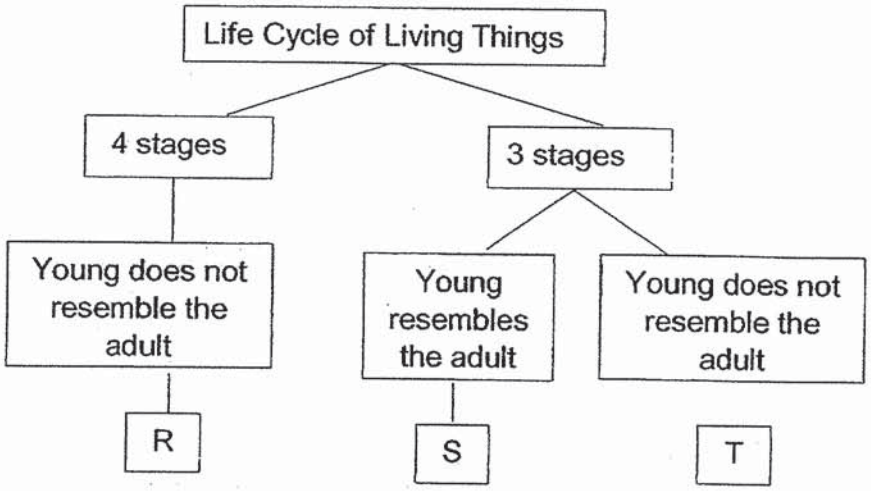
A: Both begin from the egg stage.
B: Both the adults lay eggs in water.
C: Both the young look like the adult.
D: Both have 3 stages in their life cycles.

Which of his statements are correct?

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

( )

6. Study the diagram below.

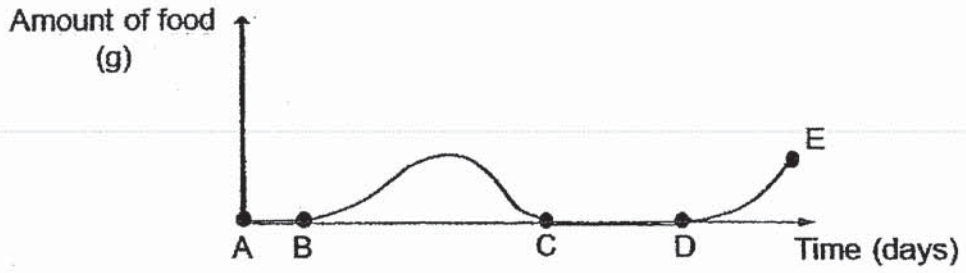


Which one of the following represents R, S and T?

	R	S	T
(1)	Frog	Rose plant	Mealworm beetle
(2)	Rose plant	Mealworm beetle	Frog
(3)	Mealworm beetle	Rose plant	Frog
(4)	Mealworm beetle	Frog	Rose plant

( )

7. The graph shows the amount of food that is eaten at different stages of the life cycle of a mealworm beetle.

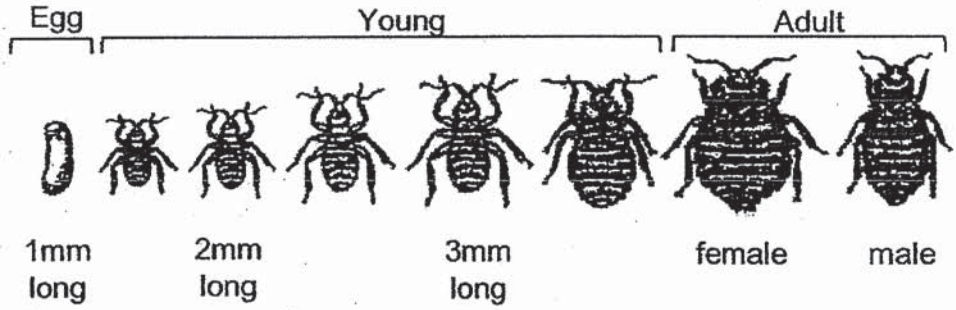


If E is the adult stage of the mealworm beetle, which of the statement(s) is/are true about the graph?

P: The length of the egg stage is from A to B.
Q: The least amount of food was eaten from B to C.
R: The mealworm beetle was going through its pupa stage from C to D.

(1) P only
(2) P and R only
(3) Q and R only
(4) P, Q and R ( )

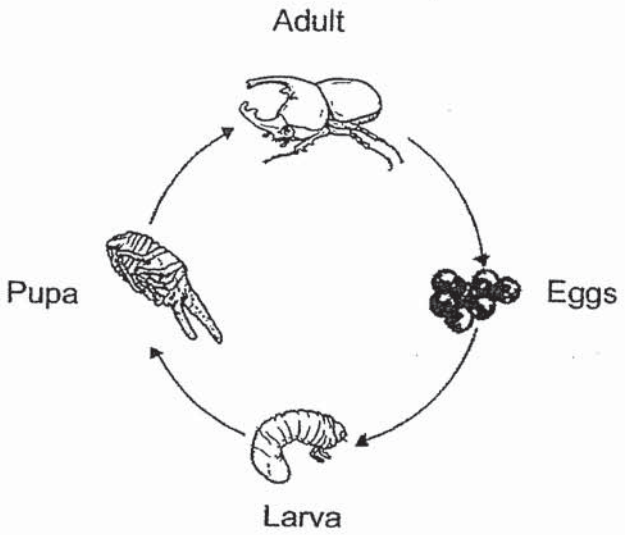
8. The diagram below shows the development of Animal X from an egg to an adult.



Based on the development shown above, how many stages are there in the life cycle of Animal X?

(1) 2 stages
(2) 3 stages
(3) 4 stages
(4) 7 stages ( )

9. The diagram below shows the life cycle of an insect.

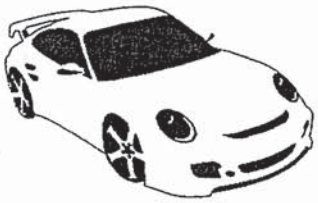


At which two stages of the life cycle of the insect does it not need to find and eat any food?

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

( )

10. Which of the following is **not** a matter?

(1)  dog	(2)  car
(3)  plant	(4)  shadow

( )

11. Which one of the following are matter?

A: Clouds
B: Ice cubes
C: Heat from sun
D: Shadow of a boy

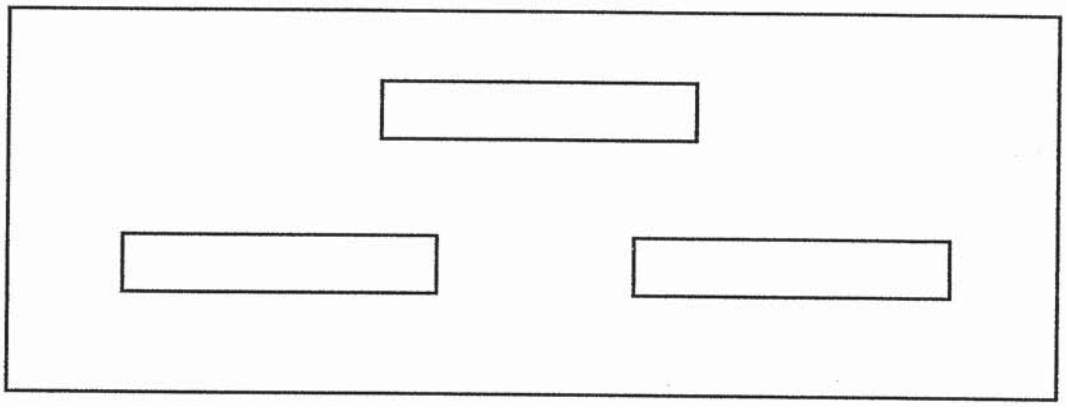
(1) A and B
(2) A and D
(3) B and C
(4) C and D
( )

End of Part I

Part II (18 marks)

For questions 12 to 17, write your answers in the blanks provided.

12 (a) Complete the life cycle of a cockroach.
Name the stages in the boxes and draw the arrows. (1m)



(b) Explain why the young of the cockroach moults. (1m)

_____

_____

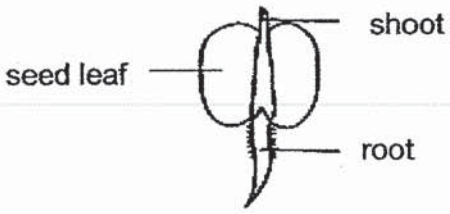
The pictures below show an adult cockroach and its young.

(c) Name one way in which the young of the cockroach looks like its adult.(1m)

_____

_____

13. Alan carried out an experiment in a dark room to observe the life cycle of a green bean plant. The diagram shows a green bean seed that was germinating.



(a) Predict the mass of the seed leaf as the seedling grew. Circle the correct answer. (1m)

The mass of the seed leaf (decreased / remained the same / increased).

(b) Explain your answer in (a). (1m)

_____

_____

(c) As Alan continued the experiment in the dark room, he noticed that the green bean plant was beginning to wither. Suggest what Alan could do to ensure the plant does not wither and die. (1m)

_____

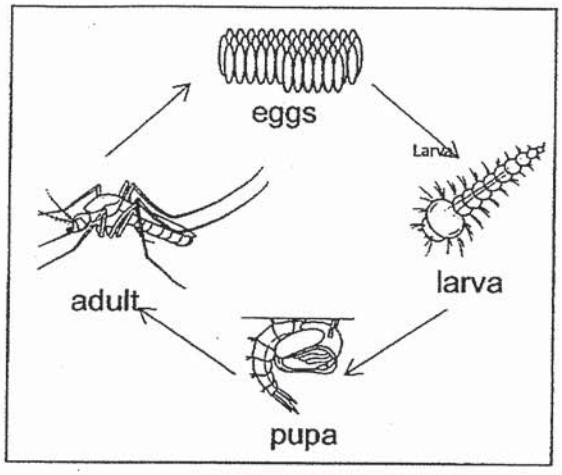
_____

(d) Why is the life cycle important to the bean plant? (1m)

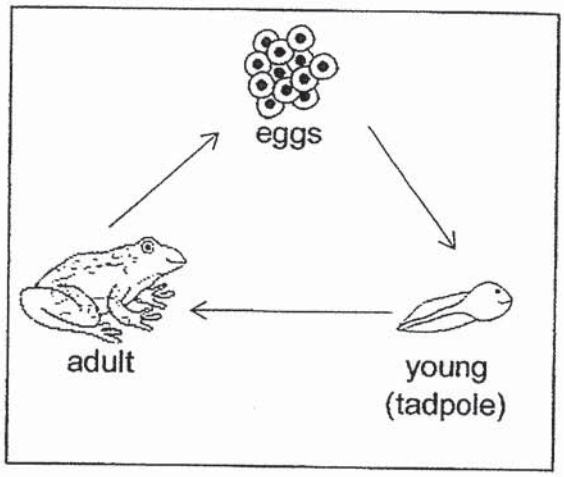
_____

_____

14. The diagrams below show the life cycle of the mosquito and frog.



Life cycle of mosquito



Life cycle of frog

(a) State one similarity between the two life cycles. (1m)

_____

_____

(b) State one difference between the two life cycles. (1m)

_____

_____

(c) Tadpoles go through a few physical changes as they develop into the adult frogs. Name one way in which the tadpole is different from the adult frog. *(Do not compare the size.)* (1m)

_____

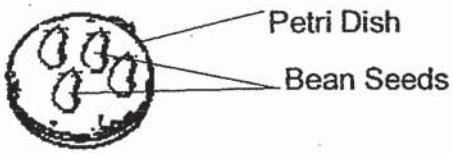
_____

(d) Why do mosquitoes and frogs lay many eggs at a time? (1m)

_____

_____

15. Hasan prepared four set-ups similar to the one shown below.



He prepared the four set-ups according to the table shown below.

Set-up	Presence of Water	Place
E	√	Refrigerator
F	√	Cupboard
G	√	Near Window
H	X	Kitchen Table

(a) In which two set-ups would the seeds most likely germinate? (1m)

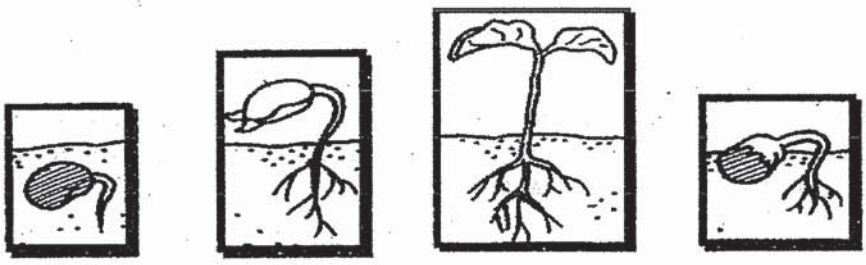
Set-up _____ and Set-up _____

(b) Explain your answer in (a) (1m)

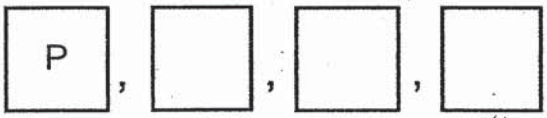
_____

_____

The diagrams below show the developmental stages in the growth of a bean plant.



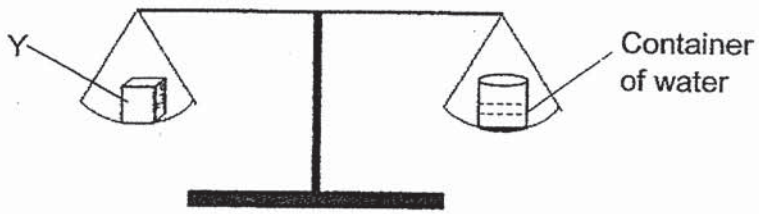
(c) Arrange the stages in the life cycle of a bean plant. Write the letters Q, R and S in the boxes provided. (1m)



16. Put a tick (√) in the appropriate boxes to indicate if each statement about matter is true or false. (2m)

Statement	True	False
All matter can be seen.		
Air does not have mass.		
All matter cannot be compressed.		
Volume is the amount of space an object occupies.		

17. Hari placed an object Y on a beam balance as shown below.



(a) Based on the above observation, what can we infer about the masses of object Y and the container of water? (1m)

_____

_____

(b) Using only the materials above, what would you do to show that water is a matter? (1m)

_____

_____

End of Part II

ANSWER KEY

YEAR : 2019
LEVEL : PRIMARY 4
SCHOOL : ROSYTH SCHOOL
SUBJECT : SCIENCE
TERM : TOPICAL TEST

SECTION A (30 marks)

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
2	3	4	2	1	3	2	2	2	4
Q11									
1									

SECTION B

(12a) egg→nymph→adult
(12b) To grow bigger skin.
(12c) They have a pair of feelers.
(13a) decreased.
(13b) The seed leaf provides food for the seedling before the first green leaf appears.
(13c) Bring it to a place where there is sunlight.
(13d) To ensure the continuity of its kind.
(14a) Both live cycles begin with an egg stage.
(14b) The mosquito has 4 stages while the frog has 3 stages.
(14c) The adult frog has legs but the tadpole does not.
(14d) To make the egg chance of survival higher.
(15a) Set-up G and Set-up F.
(15b) G needs sunlight and water.
(15c) P,S,Q,R
(16) False,False,False,True
(17a ct X has the same mass as the container of water.
(17b away the water from the container.