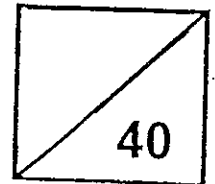




Rosyth School
Topical Test, 2013
Science
Primary 4



Name: _____

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

Date: 04 March 2013

Parent's Signature: _____

Instructions to Pupils:

1. Do not open this booklet until you are told to do so.
2. Follow all instructions carefully.
3. This paper consists of 2 parts, Part I and Part II.

	Maximum	Marks Obtained
Part I	20 marks	
Part II	20 marks	
Total	40 marks	

* This paper consists of 13 pages altogether.

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Part I (20 MARKS)

For each question from 1 to 10, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the bracket provided.

1. Mary observed two animals, R and S, and completed the table as shown below. A tick (√) means the animal has the characteristic and a cross (X) means the animal does not have the characteristic.

Observation	Animal R	Animal S
Eggs are laid in water	√	X
There are 3 stages.	√	X
It has six legs	X	√

Based on the table above, which of the following animals would most likely represent animals, R and S?

	Animal R	Animal S
(1)	Chicken	Mealworm beetle
(2)	Frog	Cockroach
(3)	Frog	Butterfly
(4)	Mosquito	Cockroach

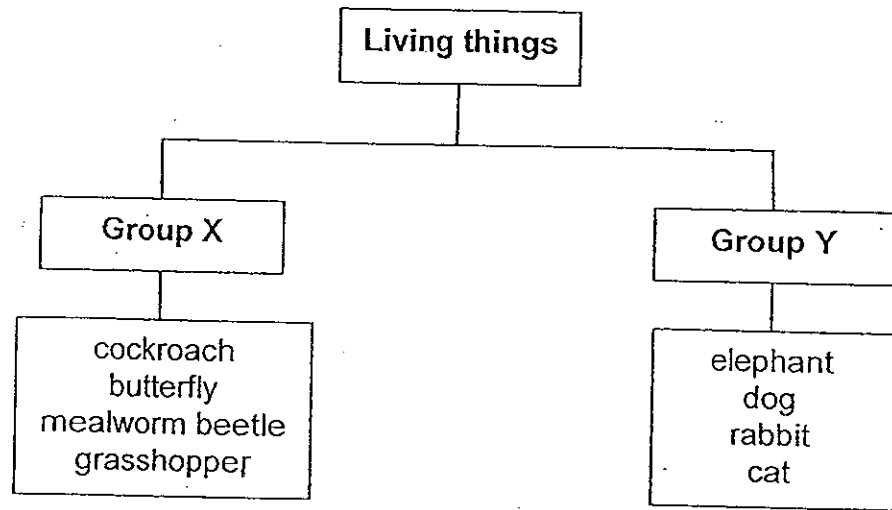
()

2. Which one of the following statements correctly describes the difference between a cockroach nymph and an adult cockroach?

- (1) The adult cockroach eats animals but the nymph eats plants.
 (2) The adult cockroach has six legs but the nymph has four legs.
 (3) The adult cockroach has wings but the nymph does not have wings.
 (4) The adult cockroach has feelers but the nymph does not have feelers.

()

3. Study the two groups of animals below.



Which of the following are suitable headings for the two groups of animals above?

	Group X	Group Y
A	Insects	Mammals
B	Young does not resemble adult	Young resembles adult
C	4-stage life cycle	3-stage life cycle
D	Lays eggs	Give birth to young alive

- (1) A only
(3) C and D only

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

()

4. The pictures below show the developmental growth of a bean plant at various stages of its life cycle.



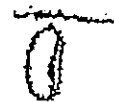
Picture A



Picture B



Picture C



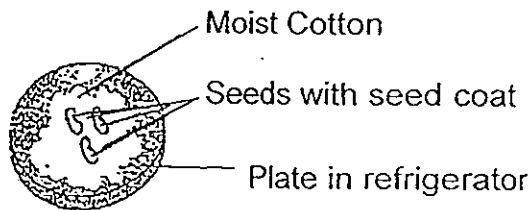
Picture D

Arrange the pictures to show the correct order in the developmental growth of a bean plant.

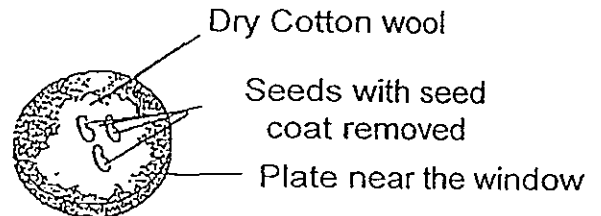
- (1) A, B, C, D
(2) B, A, D, C
(3) D, B, C, A
(4) D, A, B, C

()

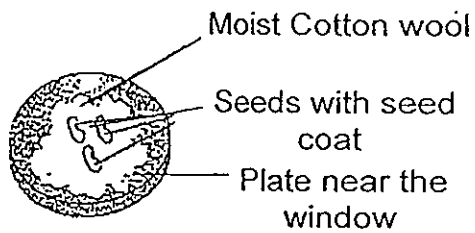
5. John prepared four set-ups, A, B, C and D, as shown below to find out about the conditions needed for seed germination.



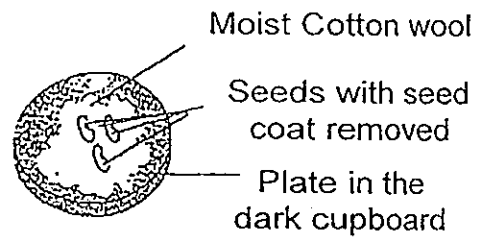
Set-up A



Set-up B



Set-up C



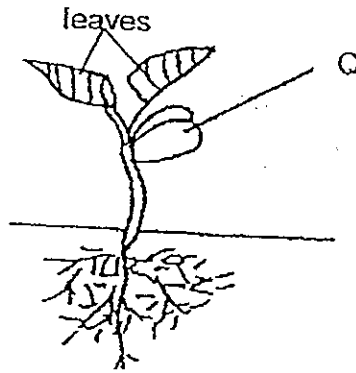
Set-up D

In which of the set-up(s), would the seeds germinate?

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

()

6. The diagram below shows a young seedling with Part Q.



The following pupils, Anna, Betty, Charles and Devi, made some statements about Part Q of the seedling.

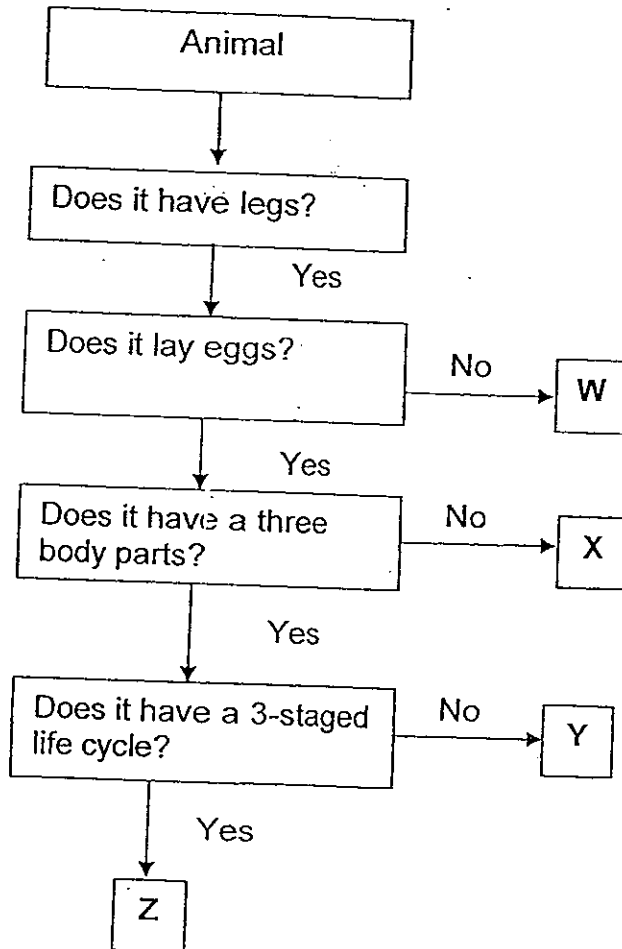
- Anna: Part Q makes food for the adult plant.
Betty: Part Q traps light for the seedling to make food.
Charles: Part Q takes up water and minerals for the seedling.
Devi: Part Q provides food for the seedling before its leaves make food.

Which one of the pupils' statement is correct?

- (1) Anna
(2) Betty
(3) Charles
(4) Devi

()

9. Refer to the flowchart below.

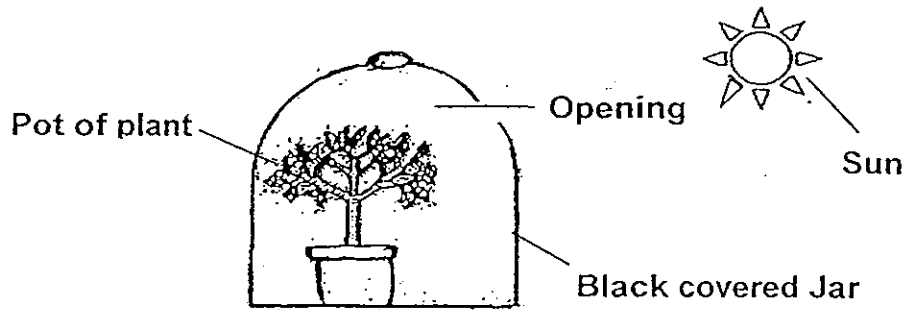


Based on the flowchart, which is most likely to be a butterfly?

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

()

10. Jolly put a pot of plant in a black covered jar. A few days later she observed that the plant was growing towards the opening.



What could the above set-up be used to show?

A	Plants grow taller.
B	Plants need water to survive.
C	Plants need sunlight to survive.
D	Plants respond to changes.

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

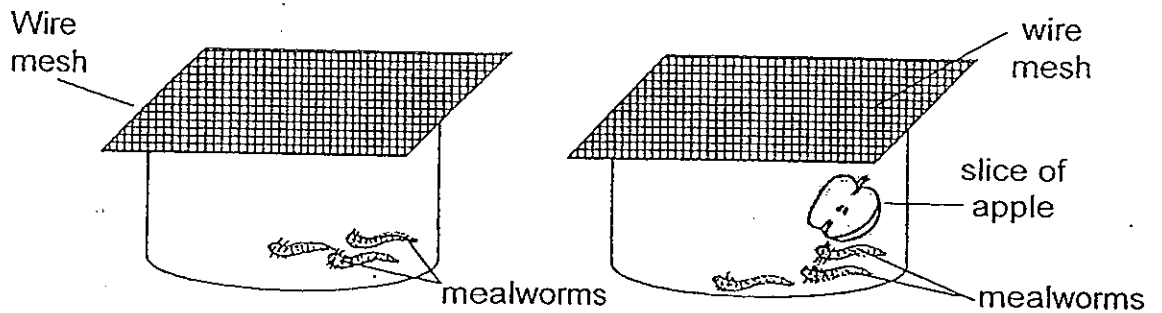
- (2) A and C only
 (4) A, B, C and D. ()

End of Part I

Part II (20 MARKS)

For questions 11 to 17, write your answers in the space provided.

11. Suresh bought some mealworms and decided to keep them in two containers as shown in the two set-ups below.



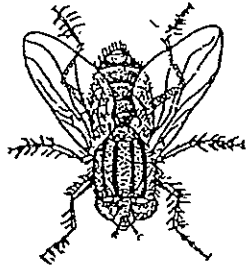
Set up 1

Set up 2

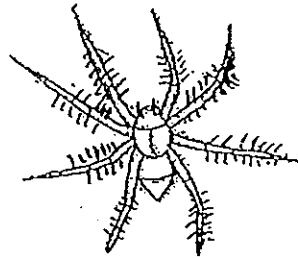
- a) In which set-up will the mealworms not survive after some time? Explain why. (1 m)

- b) After certain time, some of the mealworms changed to mealworm beetles and Suresh released them all. Why did he need to do so for the survival of the mealworm beetles? (1 m)

12. Study the two animals as shown below.



Animal P



Animal Q

Based on the pictures above, state three differences between the two animals. (Do not compare its shape and size) (3m)

Difference 1:

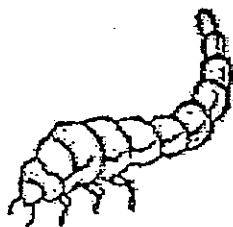
Difference 2:

Difference 3:

13. The pictures below show the stages of growth of a mealworm beetle.



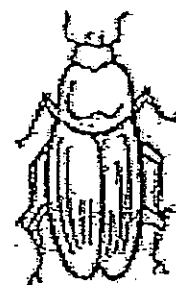
Stage A



Stage B



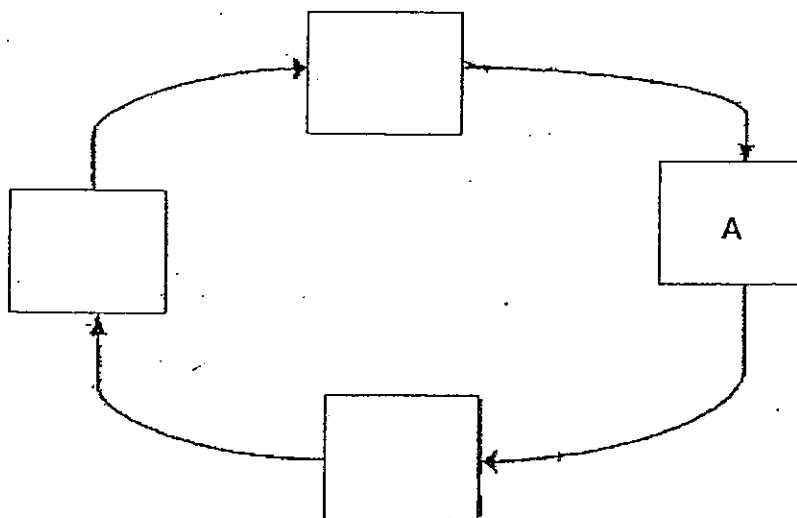
Stage C



Stage D

a) At which stage, A, B, C or D does moulting occur most often? Give a reason for your choice. (1 m)

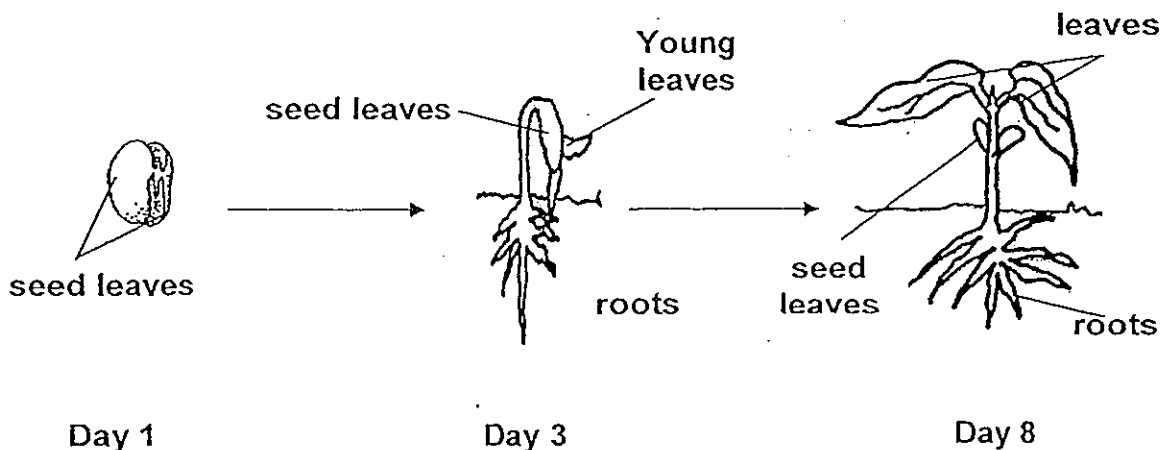
b) Complete the life cycle of the beetle by filling in the letters, B, C and D in the boxes below. (1m)



Life cycle of a mealworm beetle

c) Give a reason why living things reproduce. (1 m)

14. Jason measured the mass of the seed leaves as the seedling grew and recorded the results in the table. He carried out the entire experiment in a dark room.



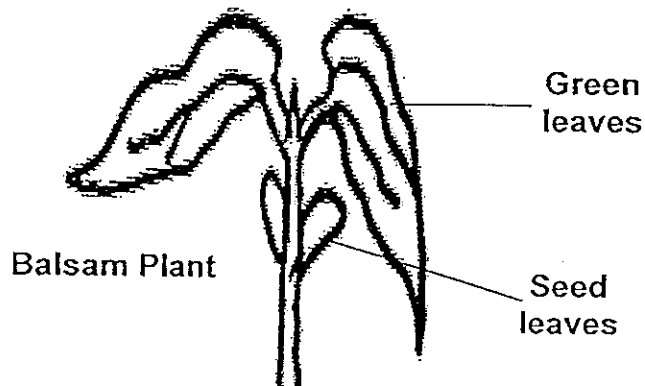
- a) Which set of results (X, Y or Z) in the table below shows the mass of the seed leaves as the seedling grew? Support your choice. (1 m)

Day	Mass in grams		
	X	Y	Z
Day 1	10	2	10
Day 3	6	4	10
Day 8	2	8	10

- b) What will happen to the seedling if it is still kept in the dark room after day 8? (1 m)

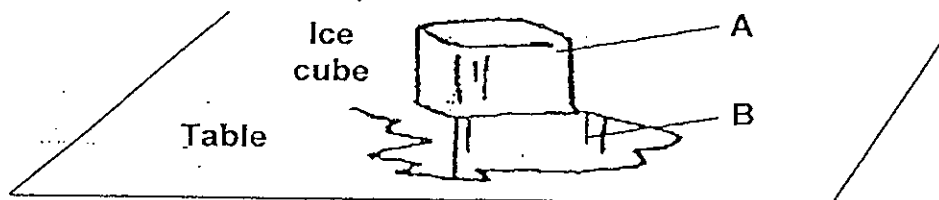
- c) What are the conditions needed for germination?

15. Observe the seedling of a balsam plant as shown below.



- a) Draw the part of the plant which is not shown in the picture. (1m)
b) State two functions of the part drawn in (a). (2m)

16. An ice cube was left on a table with the room temperature at 33°C . The ice started to melt as shown in the diagram below.



- a) Name the state of matter labelled A and B respectively. (2 m)
A: _____
B: _____
- b) State two similarities between the matter A and B. (1 m)

17. Bala wanted to use either Bag A or Bag B to pack the items needed for his camping trip. The properties of the materials of both bags are shown below.

	Bag A	Bag B
Properties	Waterproof	Non-waterproof
	Strong	Strong
Mass of the empty bag (g)	80	160

Bala decided that Bag A is a better choice than Bag B for his camping trip. Based on the table above, support his choice by stating two properties of Bag A and explaining why each of the property make Bag A his choice. (3 m)

Properties	Reason
Property 1:	
Property 2:	

End of Paper

ANSWER SHEET

EXAM PAPER 2013

SCHOOL : ROSYTH PRIMARY

SUBJECT : PRIMARY 4 Science

TERM : CA1

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

Part II

Q11

- Set up 1. The mealworms in set-up 1 will not survive as it has no food or water.
- To all the beetle to look for new sources of food

Q12

Difference 1 : Animal P has a pair of wings but Animal Q does not have a pair of wings

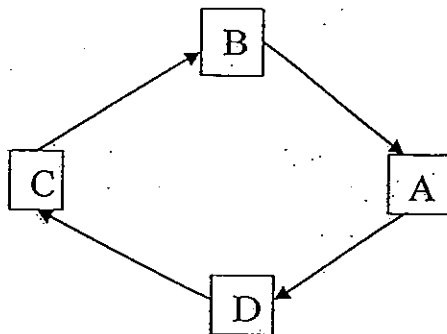
Difference 2: Animal P has six legs but Animal Q has 8 legs

Difference 3: Animal P has 3 body parts but Animal Q has only 2 body parts

Q13

- Stage B. It is growing the most.

b)



c) To ensure continuity of the same types of animals

Q14

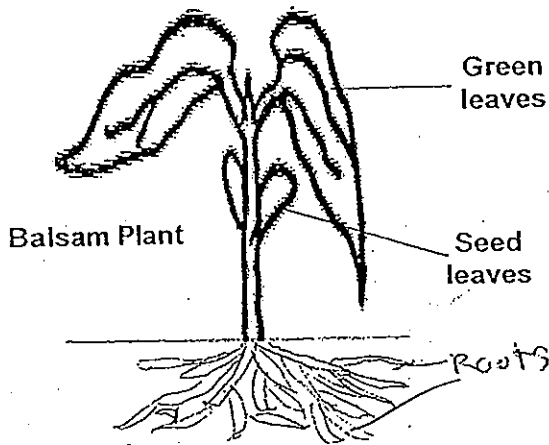
a) X. As the seedling grows, it uses the food in the seed leaves therefore it decreases.

b) It will wither

c) The conditions are Air, Warmth and Water.

Q15

a)



b) It absorbs mineral salts and water from the soil. It holds the plant firmly to the ground

Q16

a) A: Solid B: Liquid

b) Matter A and B has the same mass and volume.

Q17

Properties	Reason
Waterproof	The items will not get wet when it rains.
Lightweight	It will not be too heavy for Bala to carry