Rosyth School
Topical Test 2014
SCIENCE
Primary 4

Total Marks: 40

Name: _____

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

Date: 3 March 2014 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 Parts, Part I and Part II.
4. For questions 1 to 10, write your answers in the brackets given in Part I.
5. For questions 11 to 17, write your answers in the spaces given in Part II.

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

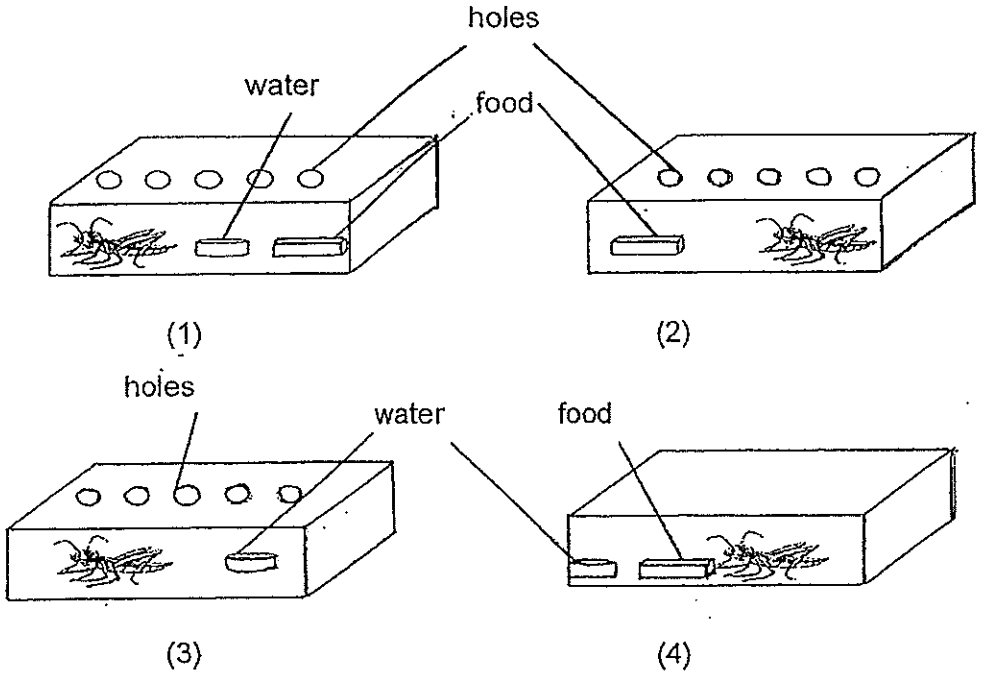
* This booklet consists of 13 pages.

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. Ali wanted to find out if air, food and water are needed for living things to survive. He placed a grasshopper into each of the set-up below.

   In which of the set-ups would the grasshopper survive the longest?



( )

2. Joshua observed some animals over a period of time. He recorded his observations in the table as shown below. A tick (√) shows that the animal has the characteristic and a cross (X) shows that the animal does not have the characteristic.

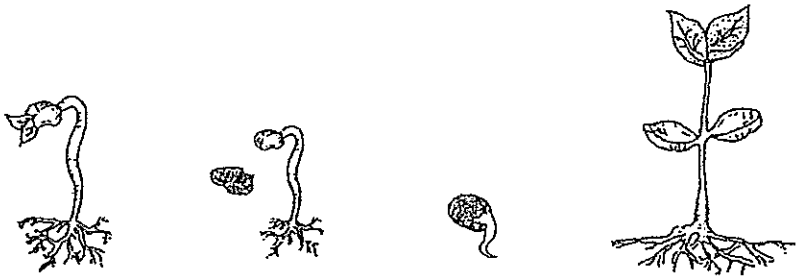
Observation	Animal A	Animal B	Animal C	Animal D
It has feelers.	X	√	X	√
It has 6 legs.	X	X	X	√
Part of its life cycle is in water.	X	√	√	√

Which one of the following animals best describes a mosquito?

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

( )

3. In the diagram below, A, B, C and D represent the different developmental stages in the life cycle of a flowering plant.



stage A stage B stage C stage D

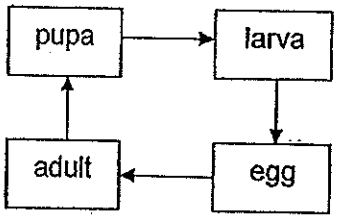
Which of the following shows the correct order of developmental stages in the life cycle of a flowering plant?

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

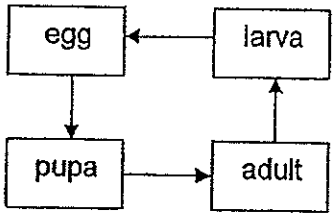
( )

4. Which one of the following shows the correct order of stages in the life cycle of a housefly ?

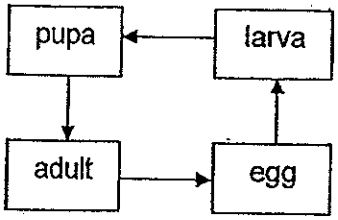
(1)



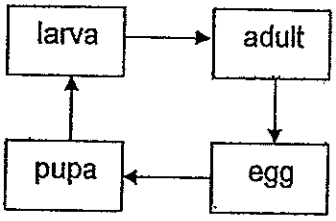
(2)



(3)

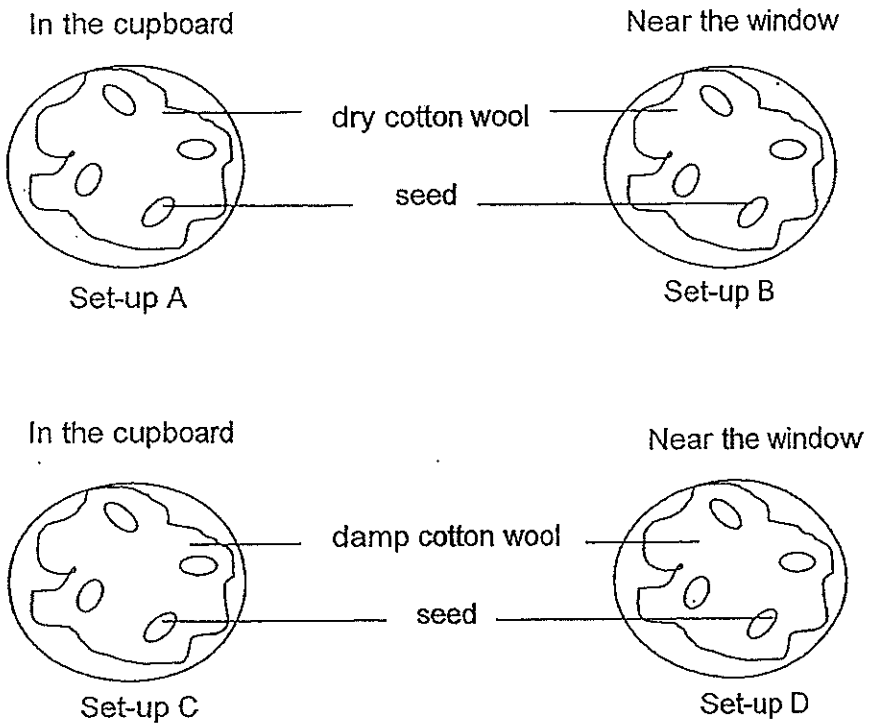


(4)



( )

5. Selina set up an experiment as shown below. Set-up A and Set-up C were placed in the cupboard while Set-up B and Set-up D were placed near the window.



After three days, she observed that the seeds in Set-up C and Set-up D had grown into seedlings but seeds in Set-up A and Set-up B had not grown into seedlings.

Based on the experiment, which factor is needed for seeds to grow into seedlings?

(1) Presence of light
(2) Presence of water
(3) Cotton wool
(4) Warmth

( )

6. An adult butterfly has just laid an egg on a leaf. The stages A, B, C and D below show the development of a butterfly.

A: Caterpillar hatched from the egg.
B: Caterpillar stopped eating and changed into a pupa.
C: Caterpillar ate a lot of leaves and moulted a few times.
D: A butterfly came out of the pupa and soon laid eggs to start the cycle again.

Arrange the stages in order.

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

( )

7. Timothy sorted out some mealworm beetles into four boxes M, N, O and P, according to the stages of their life cycles that they were in. Each box contained 5 mealworm beetles. He placed 20g of appropriate food and water into each box. The amount of food left after three days was then recorded in the table below.

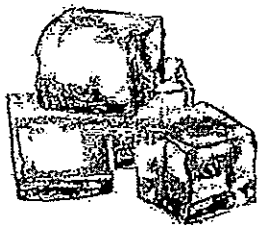
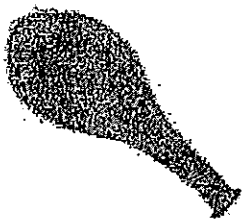
Box	Amount of food left (g)
M	20
N	11
O	20
P	0

Which of the following correctly identifies the stages of the mealworm beetles in each box?

	M	N	O	P
(1)	egg	larva	pupa	adult
(2)	egg	adult	pupa	larva
(3)	larva	adult	egg	pupa
(4)	pupa	egg	adult	larva

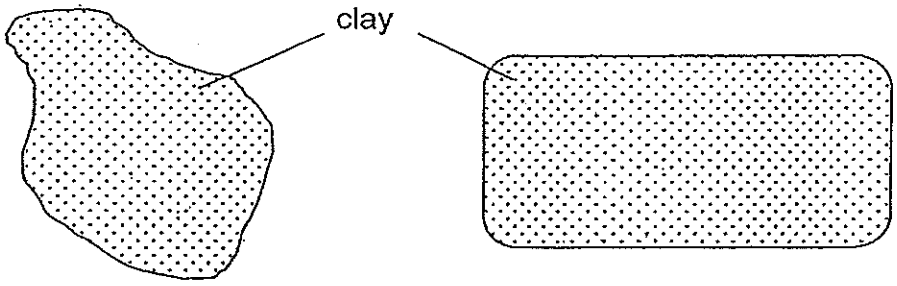
( )

8. Which of the following is not a matter?

(1)  ice	(2)  music
(3)  deflated baloon	(4)  empty container

( )

9. The pictures below show a piece of clay before and after it was reshaped.



Before reshaping After reshaping

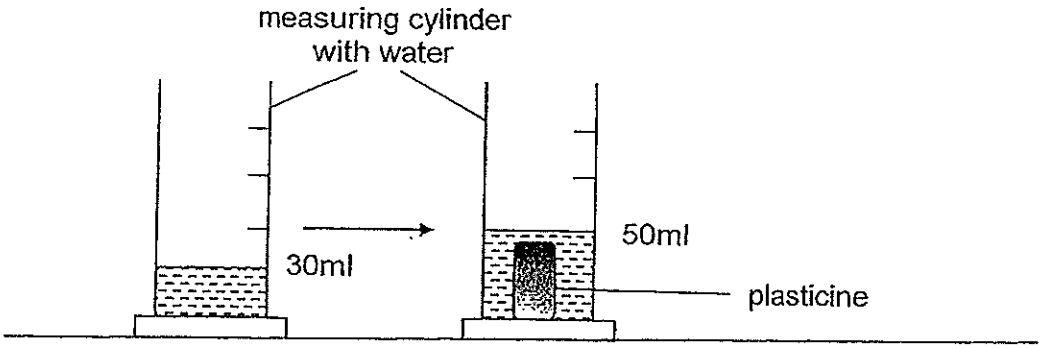
What change(s) has taken place when the piece of clay was reshaped?

A: Its mass has changed.
B: Its shape has changed.
C: Its volume has changed

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

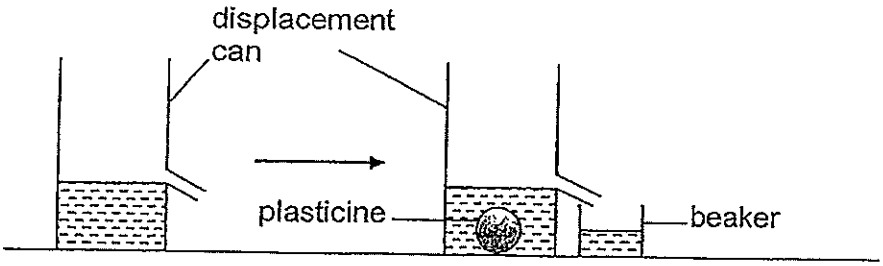
( )

10. Study the diagram below.



Ryan put a piece of plasticine into a measuring cylinder with some water. He observed that the volume of water rose to 50ml.

Then, he took out the piece of plasticine and rolled it into a ball. He then placed the plasticine into a displacement can as shown below.



What is the volume of water collected in the beaker?

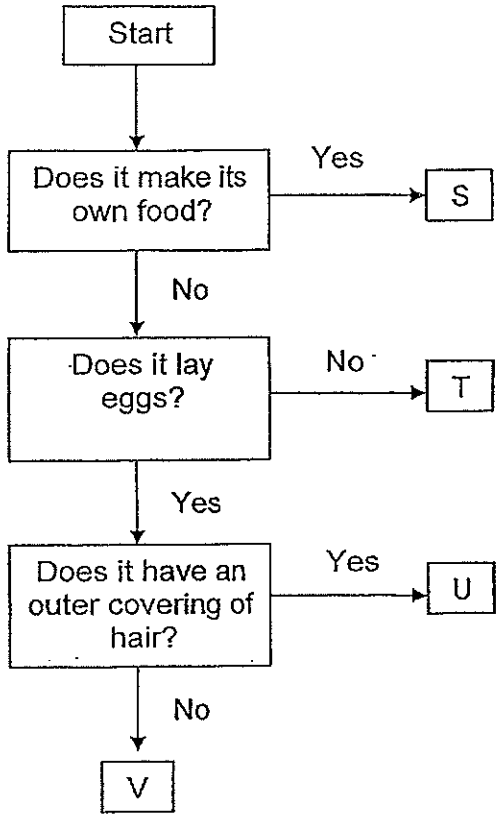
(1) 15ml
(2) 20ml
(3) 25ml
(4) 50ml

End of Part I

Part II (20 Marks)

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

11. Study the flow chart below.



(a) Based on the flow chart, state two similarities between U and V? [1m]

_____

_____

(b) Do you think S is an animal? Support your answer. [1m]

_____

_____

12. Gopal was trekking in the jungle when he found an animal that he had never seen before. He brought it back and kept the animal in a container with holes. He then made his observations over a month.

OBSERVATIONS

- It has a pair of wings but cannot fly.
- Its body is covered with greyish feathers.
- When he touched the animal, it moved away.
- The fruit and water left for the animal were all finished.
- After 3 weeks, there were several eggs in the container too.

(a) Based on the observations, which group of animals does it belong to? Give one evidence to support your choice. [2m]

_____

_____

(b) Why do you think Gopal placed the animal in a container with holes and gave it fruit and water? [1m]

_____

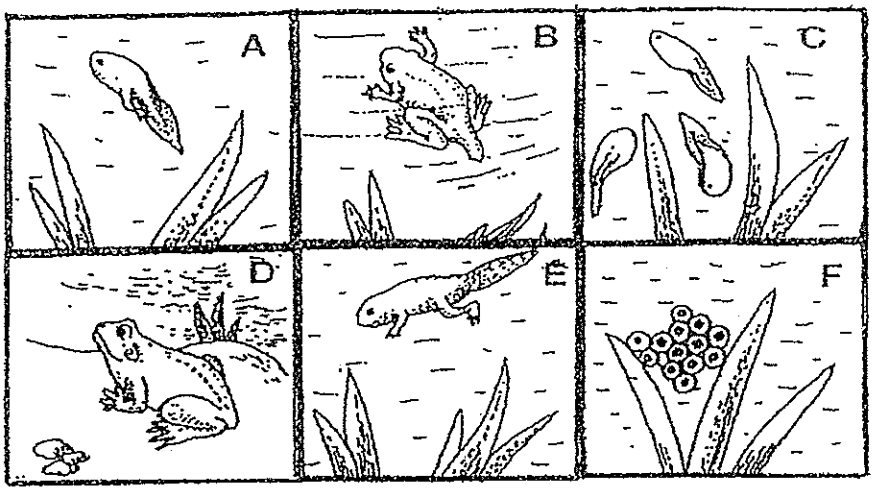
_____

(c) Based on Gopal's observation, state one characteristic of a living thing that can be observed. [1m]

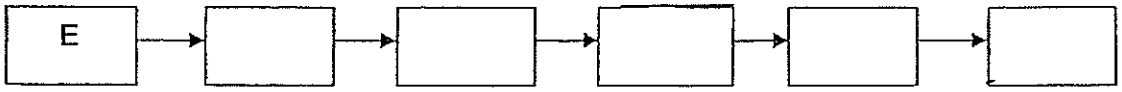
_____

_____

13. The diagram A, B, C, D, E and F below shows the development of the frog.



(a) Arrange the letters to show the correct sequence in the development of the frog. The first box has been completed for you. [1m]

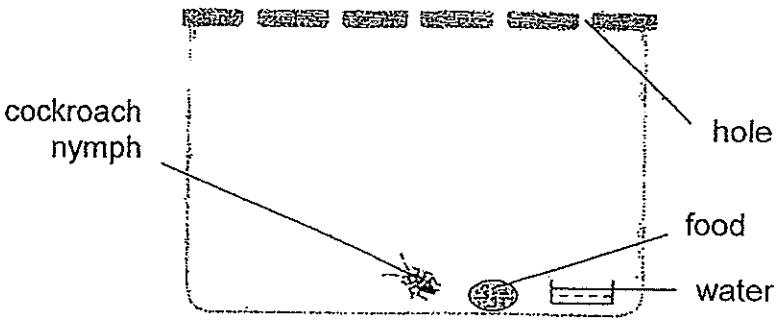


(b) What will happen if all the frog eggs are eaten by other animals? [1m]

_____

_____

14. Derek kept a cockroach nymph in a container as shown in the diagram below.



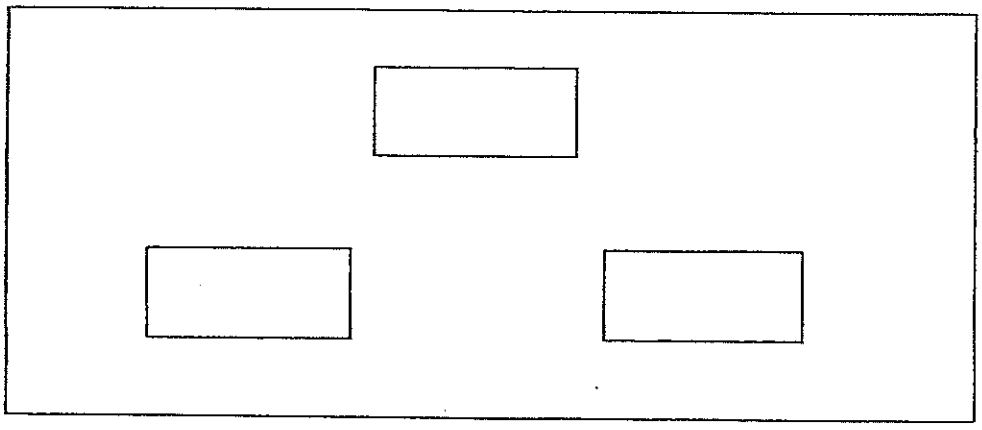
After some time, some brown-coloured dried skin was found inside the container.

(a) What has caused the brown coloured dried skin to be there? [1m]

_____

_____

(b) In the space below, use the boxes to draw the life cycle of a cockroach. [1m]

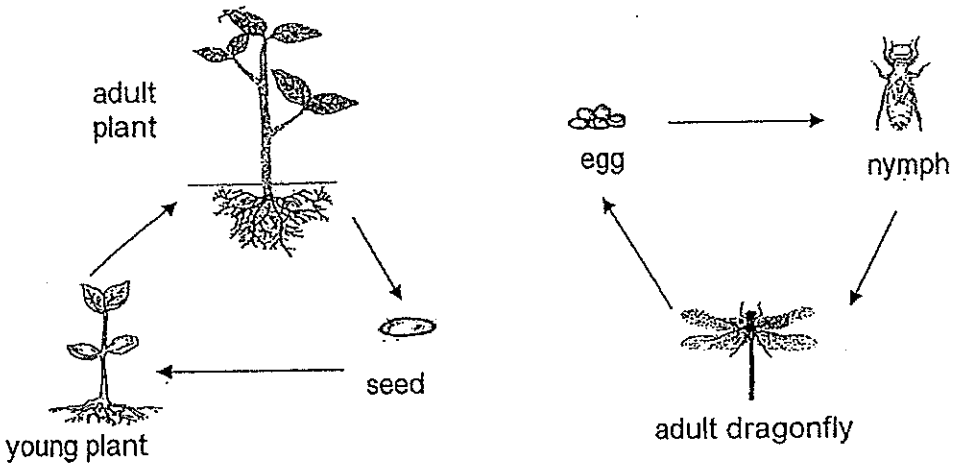


(c) Do you think a cockroach is an insect? Support your answer. [1m]

_____

_____

15. The following diagrams show the life cycles of a plant and a dragonfly.



(a) Give one similarity between the life cycles of a plant and a dragonfly. [1m]

_____

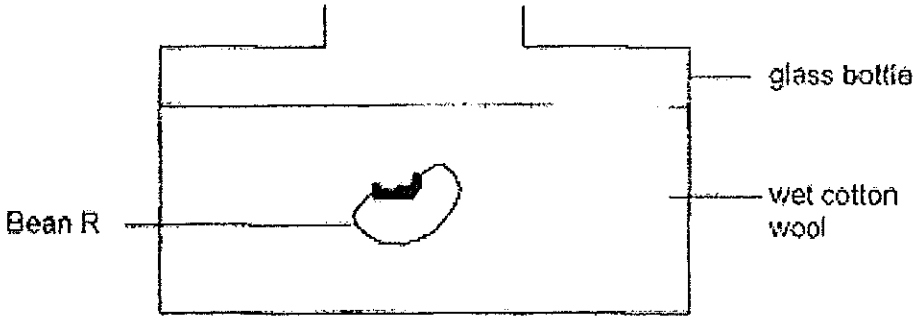
_____

(b) Give one difference between the life cycles of a plant and a dragonfly. [1m]

_____

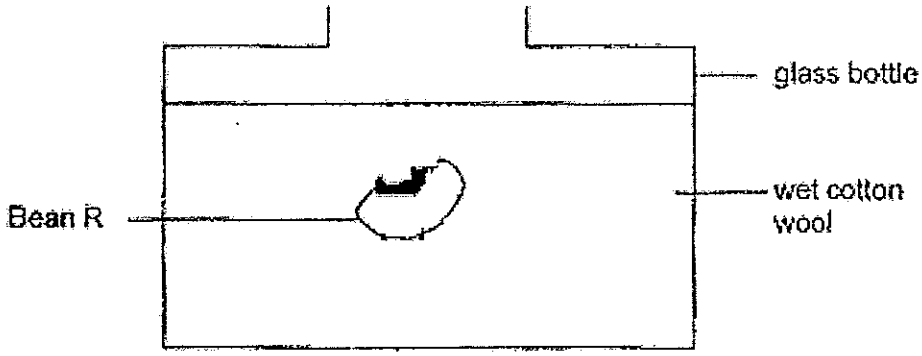
_____

16. Benedict placed Bean R on some wet cotton wool in a glass bottle. He made sure that the cotton was kept damp.



After a few days, Benedict observed roots and shoots growing out of the bean.

(a) Draw and label the roots and the shoot of Bean R in the diagram below. [2m]



(b) In which direction will the roots grow? Give a reason for your answer. [2m]

Year: 2014

Level: Primary 4

School: Rosyth School

Subject: Science

Semester: CA1

Part I:

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

Part II:

Q11) a) Both U and V lay eggs and cannot make its own food.

b) No, an animal does not make its own food but hunts for food.

Q12) a) Birds, it has greyish feathers and birds have feathers.

b) He wants the animal to survive as living things need air, food and water to survive.

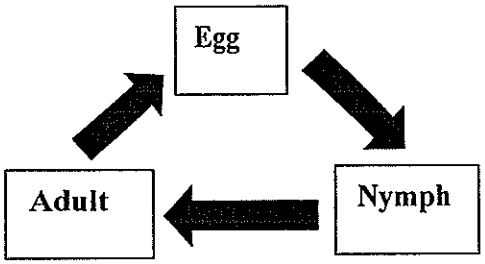
c) Living things respond to changes.

Q13) a)

b) The frog will not continue and will stop as no same kind will reproduce.

Q14) a) The cockroach nymph shed his skin.

b)

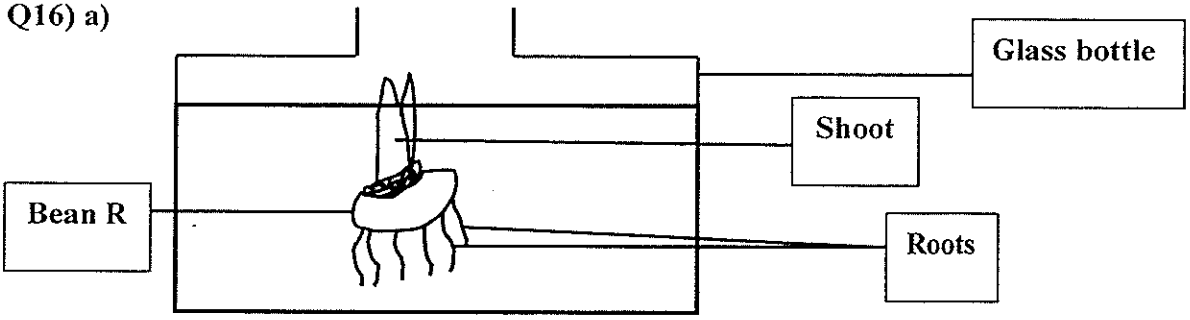


c) Yes, it has six legs and a pair of feelers.

Q15) a) Both life cycles have three stages.

b) The life cycle of a plant begins with a seed while the life cycle of a dragonfly begins with and egg.

Q16) a)



b) The roots will grow downwards. It holds the seedling firmly to the wet cotton wool.