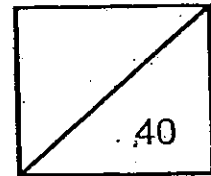




Rosyth School
Topical Test for 2010
SCIENCE
Primary 4



Total
Marks:

Name: _____

Class: Pr _____

Register No. _____

Duration: 1 h 15 min

Date: 4th March 2010

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, A and B.
4. For questions 1 to 10 in Section A, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.
5. For questions 11 to 17, give your answers in the spaces given in Section B.

	Maximum	Marks Obtained
Section A	20 marks	
Section B	20 marks	
Total	40 marks	

* This booklet consists of 11 pages. (Pg. 1 to 11)

This paper is not to be reproduced in part or whole without the permission of the Principal.









Section A (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). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Which one of the following is not a cycle?

- (1) Day and night
- (2) Change in tides
- (3) Age of a person
- (4) Change in seasons

2. Which one of the following pairs of animals is not correctly matched?

	cockroach	beetle	dragonfly	butterfly
Adult				
Young				
	(1)	(2)	(3)	(4)

3. Which of the following comparisons between the life cycle of a mosquito and that of a butterfly are correct?

		Butterfly	Mosquito
A	Has 4 stages in its life cycle.	Yes	Yes
B	The young resembles the adult.	Yes	No
C	It is a pest during the larval stage.	Yes	No
D	Both life cycles begin from an egg which is laid in water.	No	Yes

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

4. The statements below describe the order of the growth of a green bean seed.

A	Flowers appear. Then fruits and seeds are formed.
B	The shoot appears from the seed.
C	The seed absorbs water.
D	The seedling grows into a young plant and makes its own food.
E	The root appears from the seed.

Which one of the following sequences shows the correct order of the growth of a green bean seed?

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

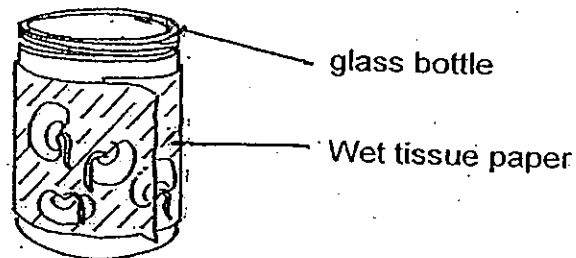
5. In an experiment, a group of children grew some balsam and bean seeds. They placed an equal number of balsam or bean seeds in jars W, X, Y and Z. They recorded what they did in the table below.

Jars	Type of seed	Type of soil used	Location of the jar
W	balsam	Garden soil	In the shade
X	balsam	Sand	In sunlight
Y	bean	Garden soil	In the shade
Z	bean	Sand	In the shade

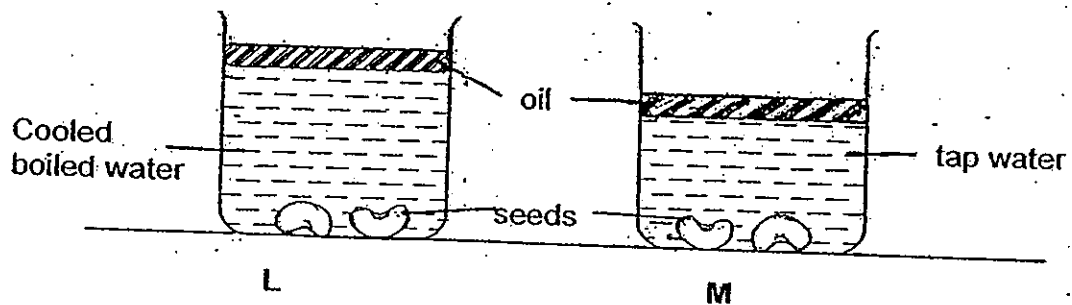
Which two jars should the children compare in order to find out whether balsam or bean seeds grow into seedlings faster?

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

6. Ahmad soaked some green bean seeds overnight and scattered them randomly in a glass bottle lined with wet tissue paper the next day. Over the next few days, he noticed that whatever position the beans were in, all their roots grew downwards. Why was this so?



- (1) The roots were too heavy.
 - (2) The roots were growing towards gravity.
 - (3) The roots were trying to grow towards light.
 - (4) The roots were trying to grow in search of soil.
7. Jill conducted an experiment using green bean seeds as shown in the diagram below. She placed the two set-ups, L and M, in a dark room.

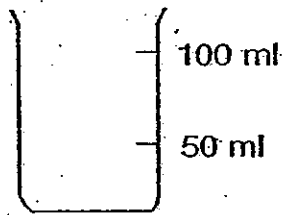


After five days, Jill observed that only the seeds in set-up M germinated. What is the possible reason for the above observations?

- (1) There is no air in set-up L.
- (2) There is too much water in L.
- (3) The seeds in set-up L are dead.
- (4) Oil has stopped the air from dissolving in.

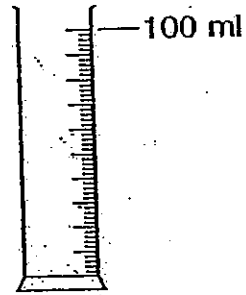
8. Which one of the following apparatus will enable you to measure 50 ml of water most accurately?

(1)



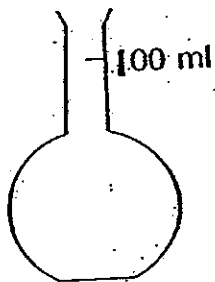
Beaker

(2)



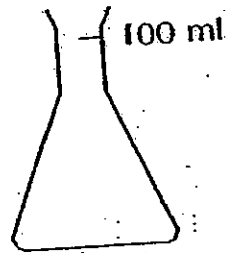
Measuring cylinder

(3)



Flat-bottomed flask

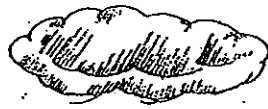
(4)



Conical flask

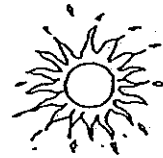
9. Which of the following are not matter?

(A)



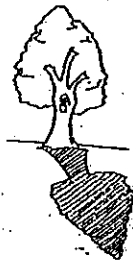
Cloud

(B)



Heat

(C)



Shadow

(D)



Wind

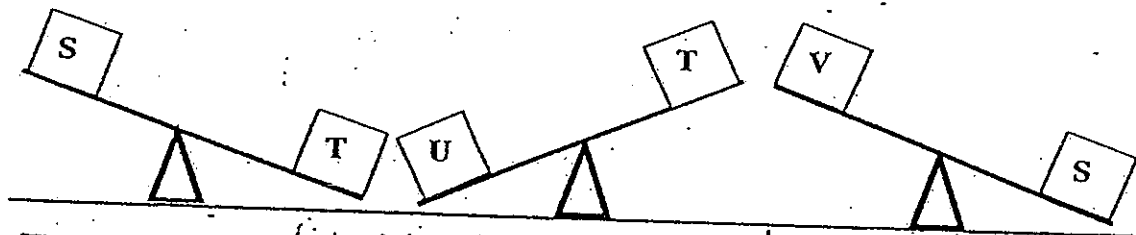
(1) A and D only

(3) A, B and C only

(2) B and C only

(4) A, B, C and D

10 Study the following diagrams carefully.



The boxes, S, T, U and V, are arranged according to their masses, from the most mass to the least mass.

Which one of the following is correct?

(1) T → U → S → V

(2) U → T → S → V

(3) S → T → U → V

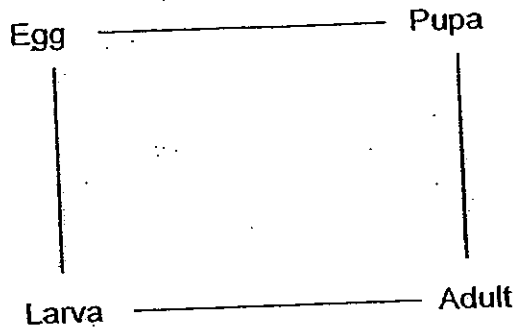
(4) U → S → T → V

End of Section A

Section B (20 MARKS)

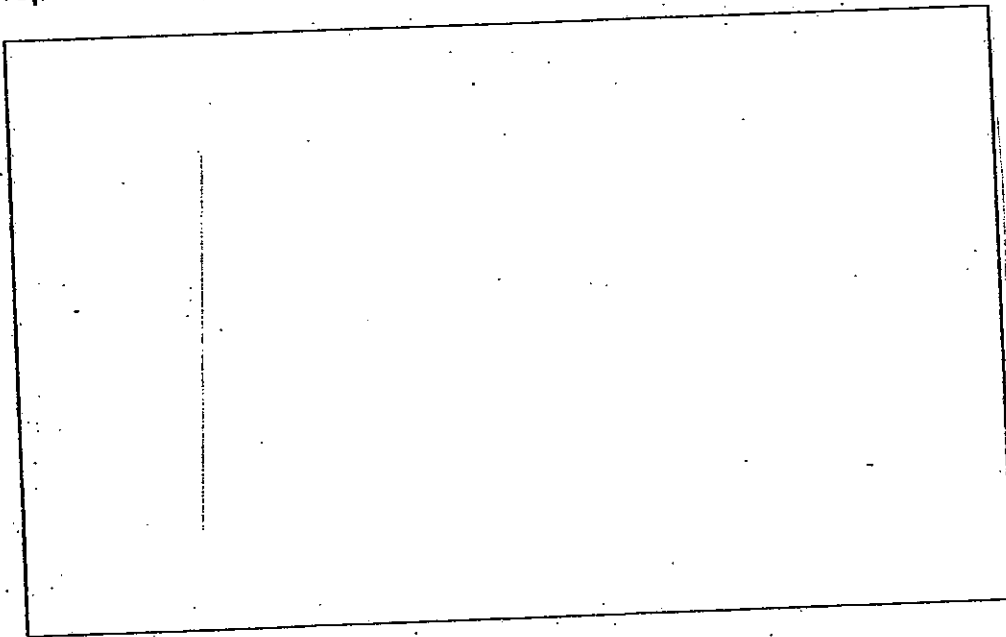
For questions 11 to 17, write your answers in this booklet.

11. Ahmad drew a life cycle as shown below.



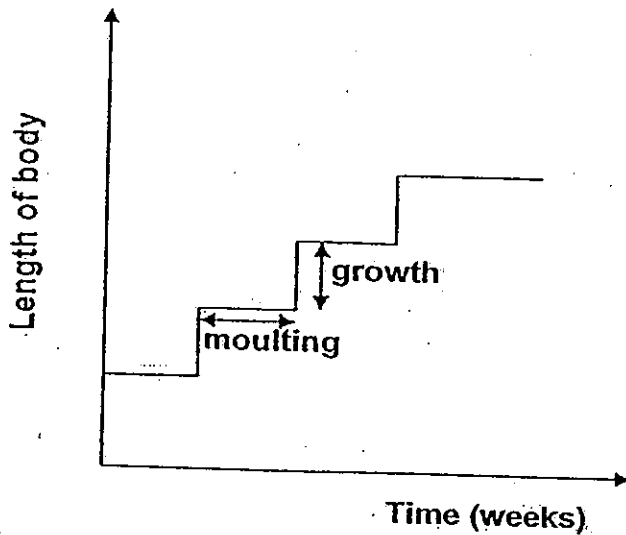
His friend, Tom, said that his diagram of the life cycle was wrongly drawn.

(a) Re-draw the diagram in the box below to show it as a correctly represented cycle. (2 marks)

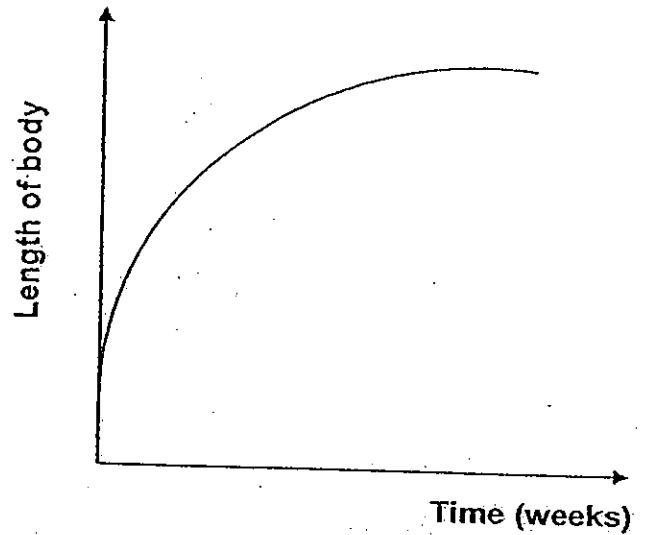


(b) What would happen to the life cycle of this insect if food is not provided for all the larvae? (1 mark)

12. Study the graphs below carefully. They show how the length of the body of two animals increases over time.



GRAPH C



GRAPH D

(a) Which graph represents the life cycles of the following animals? (1 mark)

Butterfly: _____

Chicken: _____

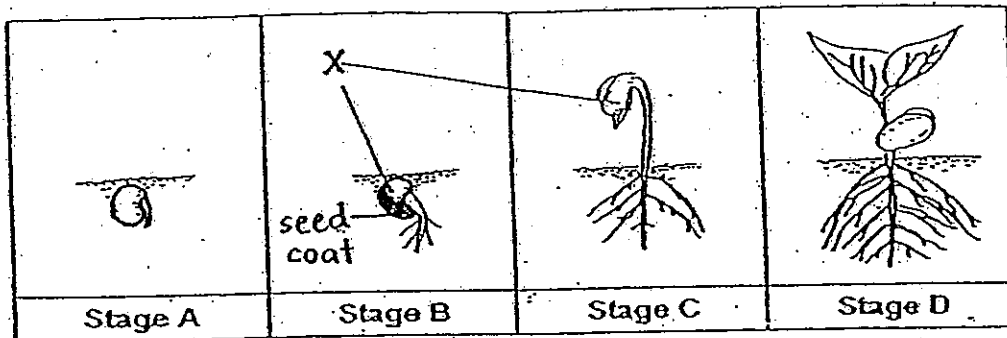
(b) Why is there no moulting process in the life cycle of a chicken? (1 mark)

13. Based on functions only, state a similarity and a difference between a young plant and an adult plant. (2 marks)

Similarity: _____

Difference: _____

14. The diagram below shows the different stages of growth of a seed.

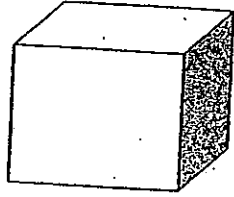


- (a) Besides air, what are the other conditions needed for the seed to germinate? (1 mark)

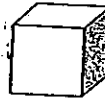
- (b) Name the part marked X. (1 mark)

- (c) If the leaves at Stage D were plucked away, what would happen to the seedling and explain why. (2 marks)

15. The cubes below are made of different materials but have the same mass.



Cube P

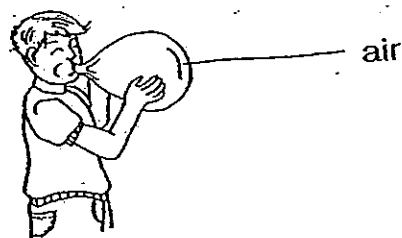


Cube Q

Study the following statements carefully and determine if each statement is 'true', 'false' or 'not possible to tell'. Tick the appropriate boxes provided. (2 marks)

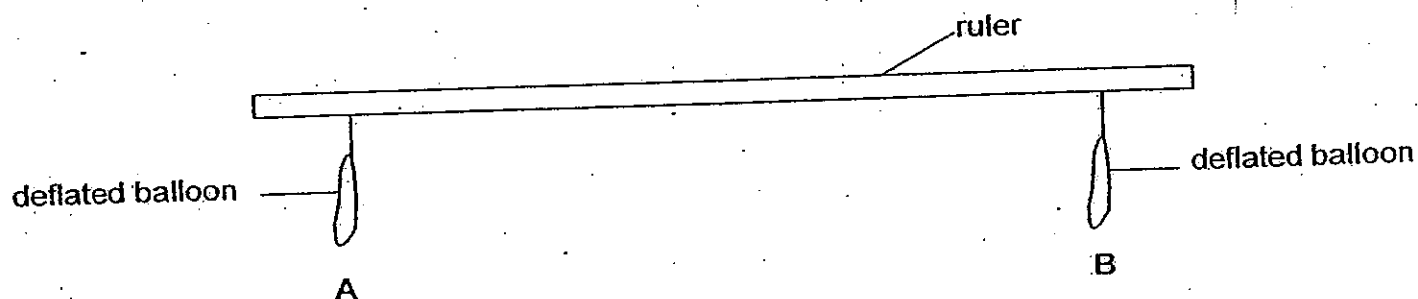
	Statements	True	False	Not Possible To Tell
(a)	Cube P is heavier than Cube Q.			
(b)	Cube P occupies more space than Cube Q.			
(c)	Cube P is made of styrofoam and Cube Q is made of aluminium.			
(d)	Cube Q is more likely to float on water than Cube P.			

16. The picture below shows Jason blowing air into a balloon.



(a) What property of matter does the above action show? (1 mark)

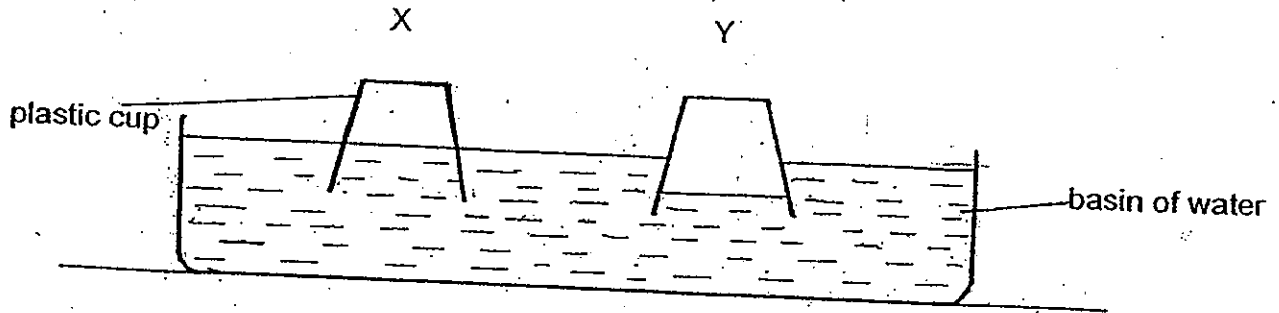
Jason set up another experiment as shown below.



(b) What must Jason do to show that air has mass in the above set-up? (1 mark)

(c) What observation would Jason make in (b) to show that air has mass. (1 mark)

17. Two identical plastic cups, X and Y, were inverted into a basin of water. One of the cups has three holes at the base while the other cup does not have holes.

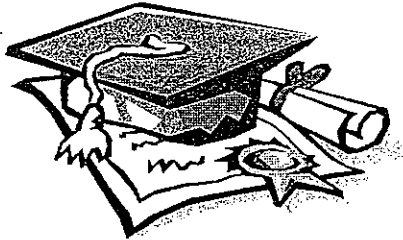


- (a) Based on the observation, which cup has holes at the base? Explain your choice. (2 marks)

- (b) If the two cups were completely immersed into the basin of water without tilting the cups, what would you observe? (2 marks)

Cup X:

Cup Y:

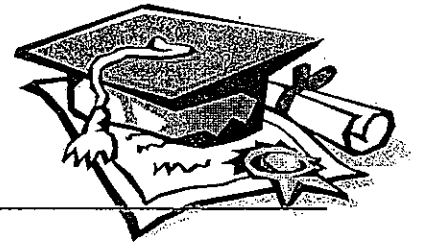


ANSWER SHEET

EXAM PAPER 2010

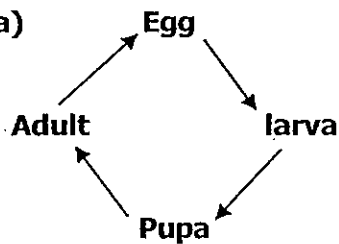
**SCHOOL : ROSYTH PRIMARY
SUBJECT : PRIMARY 4 SCIENCE**

TERM : CA1



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

11)a)



b)The life cycle will not discontinue.

12)a)Butterfly: Graph C.
Chicken : Graph D.

b)The chicken does not have a hard covering. Its skin is able to stretch as it grows.

13)Similarity: They both can make food.

Difference: The adult plant can reproduce but the young plant cannot.

14)a)It will need water and warmth to germinate.

b)It is the seed leaves.

c)The seedling will die. The leaves are needed to make food for the plant.

15)a)F b)T c)Not d)F

16)a)It shows that air occupies space.

b)Jason should blow one balloon to give it some mass.

c)The ruler will tilt downwards towards the inflated.

17)a)X. As air has escaped through the holes, water can no enter to take its place.

b)Cup X: Bubbles will be seen emerging from the base of X.

Cup Y: The water level will stay the same as before.