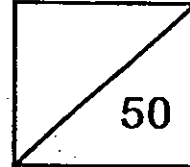




Rosyth School
Continual Assessment 2 for 2013
Science
Primary 5



Name: _____

Class: Pr 5 _____ Register No. _____ Duration: 1 h 15 min

Date: 29 August 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
Section A	30 marks	
Section B	20 marks	
Total	50 marks	

* This paper consists of 18 pages altogether.

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Part I (30 Marks)

For each question from 1 to 15, 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. "A number of animals of the same kind, living and reproducing in a place." What is this known as?

- (1) Habitat (2) Organism
(3) Population (4) Community

2. An experiment was set up with two identical pots A and B. They were filled with equal amounts of soil. Two Balsam seedlings were planted in Pot A and fifteen Balsam seedlings planted in Pot B. A few weeks later, the height of the plants and thickness of the stems were measured.

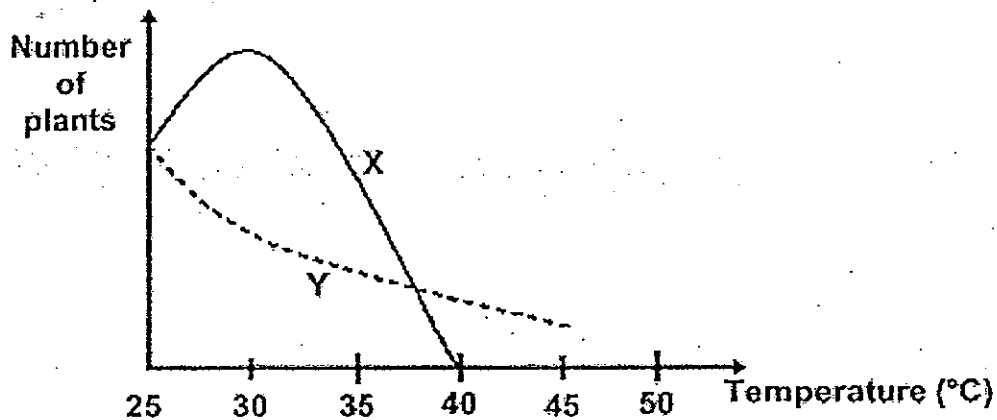
The average height and thickness of the plants in pots A and B were recorded as shown below.

Average height of plants (cm)		Average thickness of stems (cm)	
Pot A	Pot B	Pot A	Pot B
25	31	1	0.5

The above result is most likely because the plants in pot B were competing for

- (1) air (2) space
(3) water (4) sunlight

3. Melissa conducted an experiment to find out how temperature affects the growth of two types of plants, X and Y. She presented her findings in a graph as shown below.



She made the following observations based on her results.

- A: Plant X grows best at 30°C.
- B: There is more Plant X than Plant Y between 25°C and 35°C.
- C: The number of Plant X increases as the temperature increases.
- D: The number of Plant Y decreases as the temperature increases.

Which of the following statements are correct?

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

4. Study the following food chain.

Algae → shrimp → cod fish → seal → polar bear.

Which of the animals above are both a prey and predator?

- (1) cod fish and seal only
- (2) shrimp and codfish only
- (3) seal and polar bear only
- (4) shrimp, cod fish and seal only


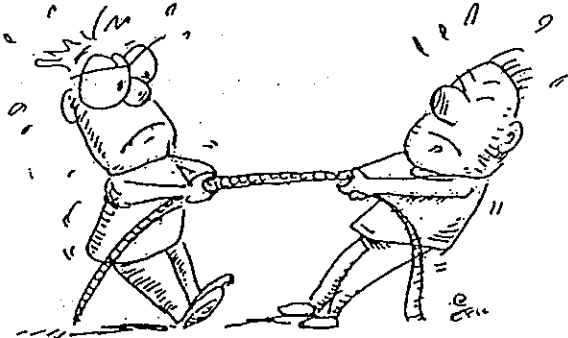
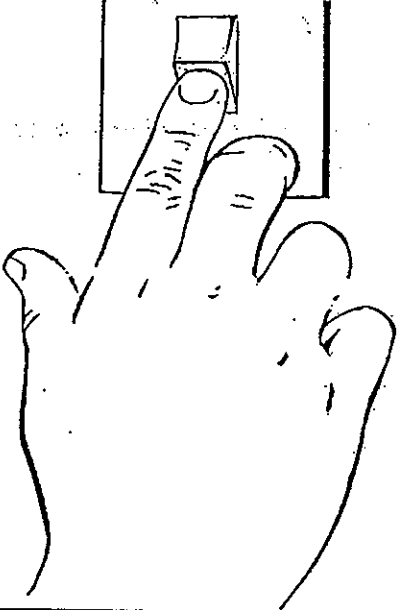
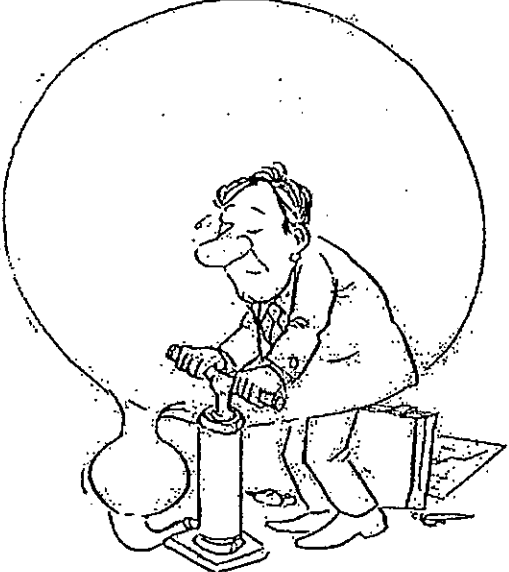
7. Barry observed different kinds of plants and animals in the pond habitat in his backyard. He recorded the number of these organisms in the table below.

Organisms	Number of Organisms
Water Lily Plants	6
Tadpole	10
Frog	4
Guppy	7
Dragonfly nymph	22
Dragonfly	3
Water Lettuce Plants	5
Water Beetle	11

Based on the information above, which of the following statements is true?

- (1) Frogs reproduce more than damselflies.
- (2) There are eight populations in the pond habitat.
- (3) All the above organisms can form a single food chain.
- (4) There are two populations of producers and four populations of consumers.

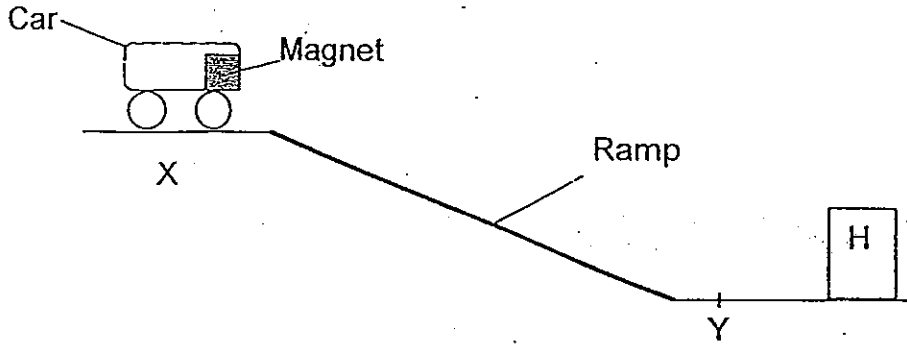
8. Which of the following involve both a push and a pull?

<p>A: mopping the floor</p>  A black and white illustration of a person in a dark uniform mopping a floor. The person is leaning forward, holding a long-handled mop. A bucket is on the floor to the right.	<p>B: playing tug-of-war</p>  A cartoon illustration of two people playing tug-of-war. They are pulling on a rope with great effort, their faces showing strain. There are motion lines around their heads.
<p>C: pressing a light switch</p>  A line drawing of a hand with the index finger pressing down on a rectangular light switch.	<p>D: pumping a balloon with air</p>  A cartoon illustration of a man in a suit sitting on a stool, using a hand pump to inflate a large balloon. The balloon is shown as a large circle behind him.

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

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

9. Jamie set up an experiment as shown below. When she released the car from X, the car moved back a little before stopping at Y. The car did not touch object H.

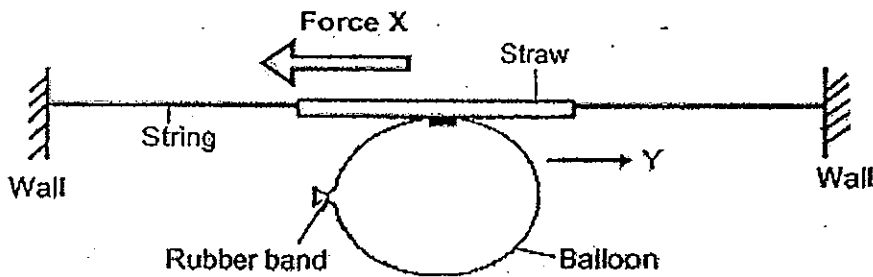


Which of the following forces are acting on the set-up above?

- A: Frictional force
- B: Magnetic force
- C: Gravitational force
- D: Elastic spring force

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

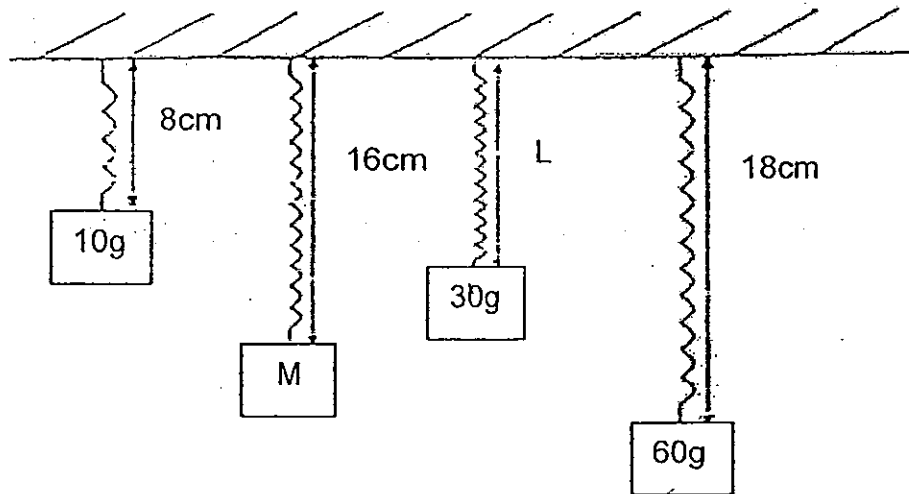
10. A string was passed through a straw. An inflated balloon tied with a rubber band was glued firmly to the straw. When the rubber band was removed, air rushed out of the balloon, producing a force of 10 units, causing the balloon to move in direction Y.



At the same time, an opposing force X was also acting on the straw. What is force X and its likely amount that was acting on the string?

	Force	Amount (units)
(1)	Friction	8
(2)	Friction	12
(3)	Gravity	8
(4)	Gravity	12

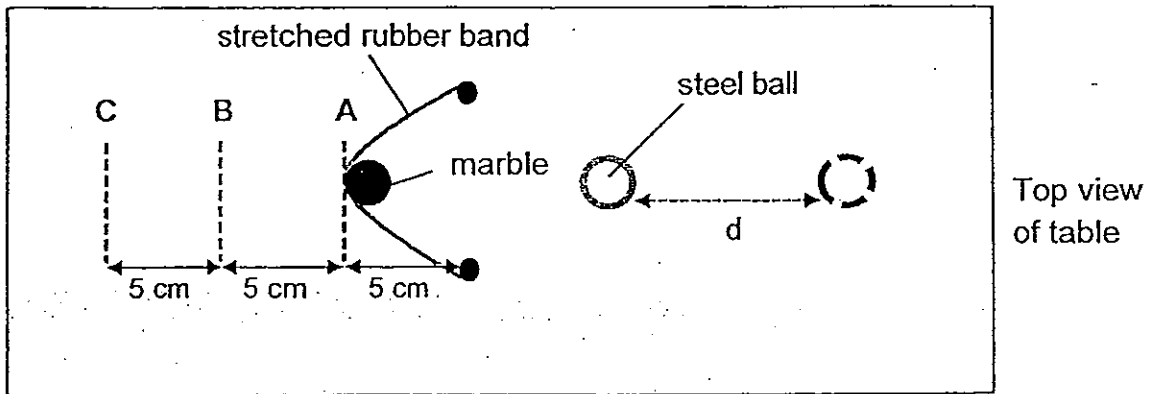
11. The diagram below shows the length of four similar springs. The initial length of each spring is 6cm. Different loads were hung on them, causing the springs to extend.



Which of the following correctly shows the missing information?

	M (g)	L (cm)
(1)	40	12
(2)	50	12
(3)	40	14
(4)	50	14

12. Raja placed a steel ball at a fixed point on a smooth table as shown below.



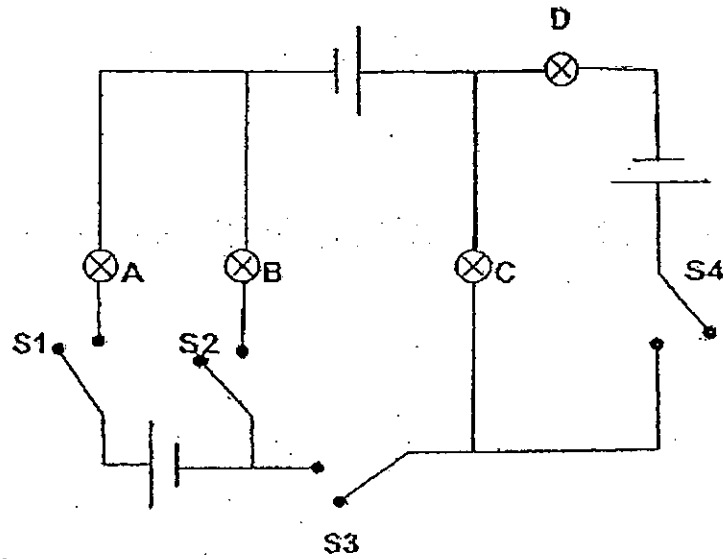
He then stretched the rubber band to the starting distance at A and released a marble to hit the steel ball. He recorded d (the maximum distance travelled by the steel ball when it came to a stop) and repeated his experiment using the different starting points B and C.

Starting point	A	B	C
Maximum distance travelled by steel ball (cm)	?	8	?

Which one of the following could be missing information from the table above?

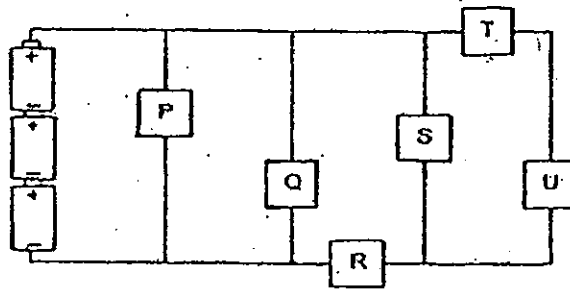
	A	C
(1)	6	7
(2)	11	14
(3)	14	4
(4)	4	12

13. Gerard set up an electric circuit as shown in the circuit diagram below. The bulbs are labelled A, B, C and D and the switches are labelled S1, S2, S3 and S4.



Which of the following two switches should you close to produce the brightest light? Not all the bulbs would be lit.

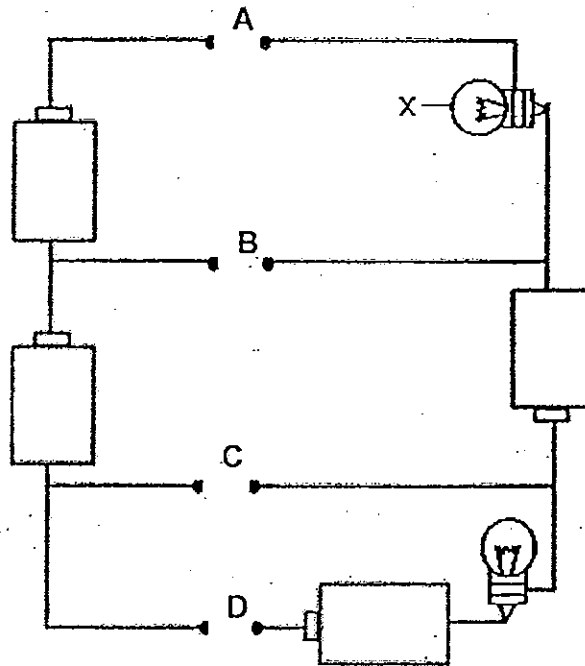
- | | |
|---------------|---------------|
| (1) S1 and S2 | (2) S1 and S3 |
| (3) S2 and S3 | (4) S3 and S4 |
14. The circuit below has six bulb holders labelled P, Q, R, S, T, U connected to each other.



Janet has two bulbs. In which two bulb holders should the bulbs be fixed such that both bulbs will light up?

- | | |
|-------------|-------------|
| (1) P and R | (2) Q and T |
| (3) R and S | (4) T and S |

15. The diagram below shows an electric circuit. Irene placed one of the four items – wooden chopstick, plastic ruler, iron thumbtack and a copper coin at each of the gaps A, B, C and D.



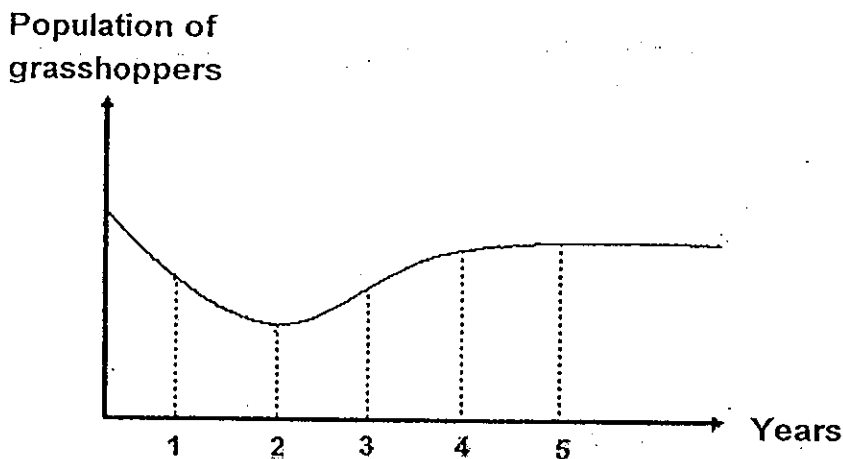
Which of the following arrangements would result in Bulb X being the brightest?

	A	B	C	D
(1)	Thumbtack	Copper coin	Chopstick	Ruler
(2)	Thumbtack	Chopstick	Copper coin	Ruler
(3)	Ruler	Copper coin	Chopstick	Thumbtack
(4)	Copper coin	Ruler	Chopstick	Thumbtack

Part II (20 marks)

For questions 16 to 23, write your answers in this booklet.

16. A farmer discovered that his plants were being eaten by grasshoppers and decided to use pesticide to kill them. He sprayed pesticide on a monthly basis over a period of 5 years. The graph below shows the population of the grasshoppers over the 5 year period.



- (a) From the graph, describe the change in population of the grasshoppers over the first two years. [1 mark]

- (b) Why did the population of the grasshoppers increase after 2 years despite repeated sprayings of the pesticides? [1 mark]

17. Ben conducted an experiment to find out if the amount of acid would affect the germination of pea seeds. He set up his experiment based on the following procedure:

1. Line four identical dishes with paper towels.
2. Pour equal amounts of distilled water to soak the paper towels in each dish.
3. Add 0, 5, 10 or 15 drops of acid to each of the 4 dishes respectively.
4. Place 40 pea seeds onto each dish.

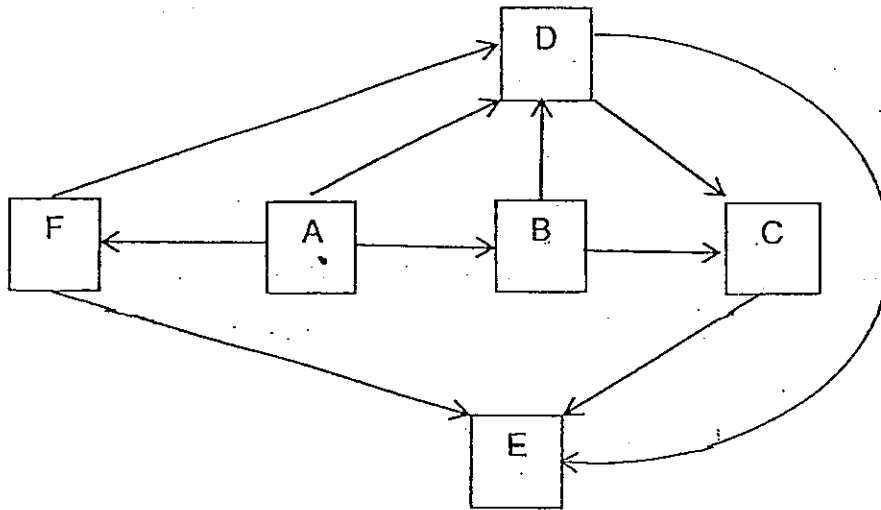
He then waited 48 hours for the seeds to germinate and recorded the results in the table below.

Number of drops of acid added	Number of pea seeds germinated after 48 hours
0	35
5	20
10	7
15	2

- (a) What can Ben conclude about the germination of the pea seed from his experiment? [1 mark]

- (b) What is the purpose of the set-up with no drops of acid added? [1 mark]

18. Study the food web below.



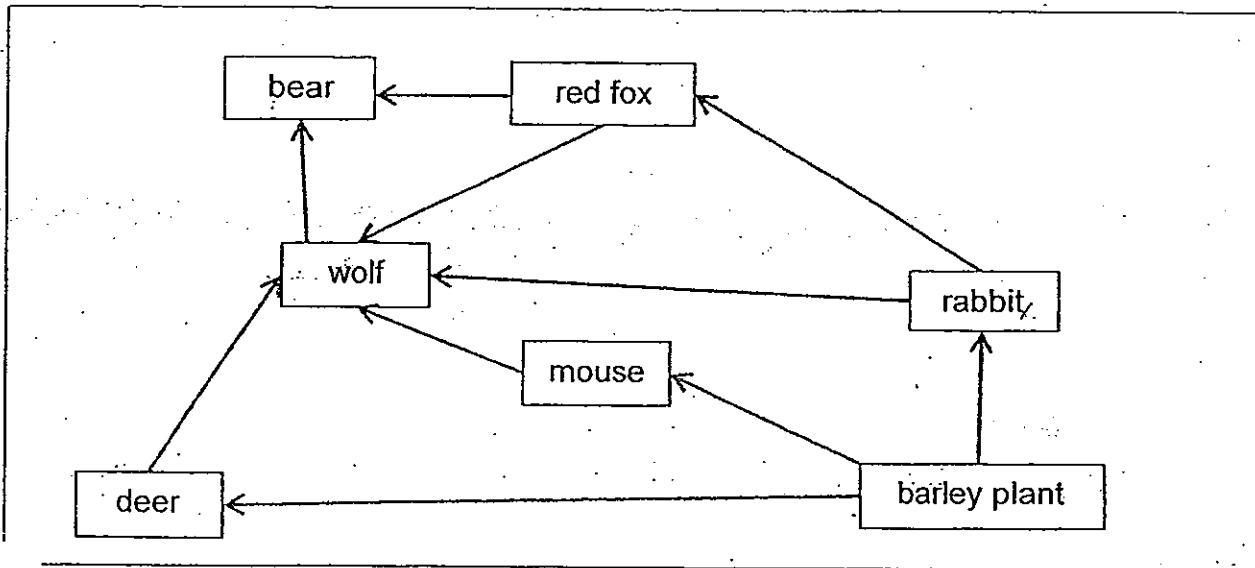
(a) Which organism is a food producer? [1 mark]

(b) Based on the food web, write a food chain involving 5 organisms. [1 mark]

(c) Identify if the following statements are True or False and tick the appropriate boxes below. [1 mark]

		True	False
(i)	If B increases, E will definitely increase		
(ii)	If E decreases, B will definitely increase		

19. Study the food web below.



(a) State the number of food chains that make up this food web. [1 mark]

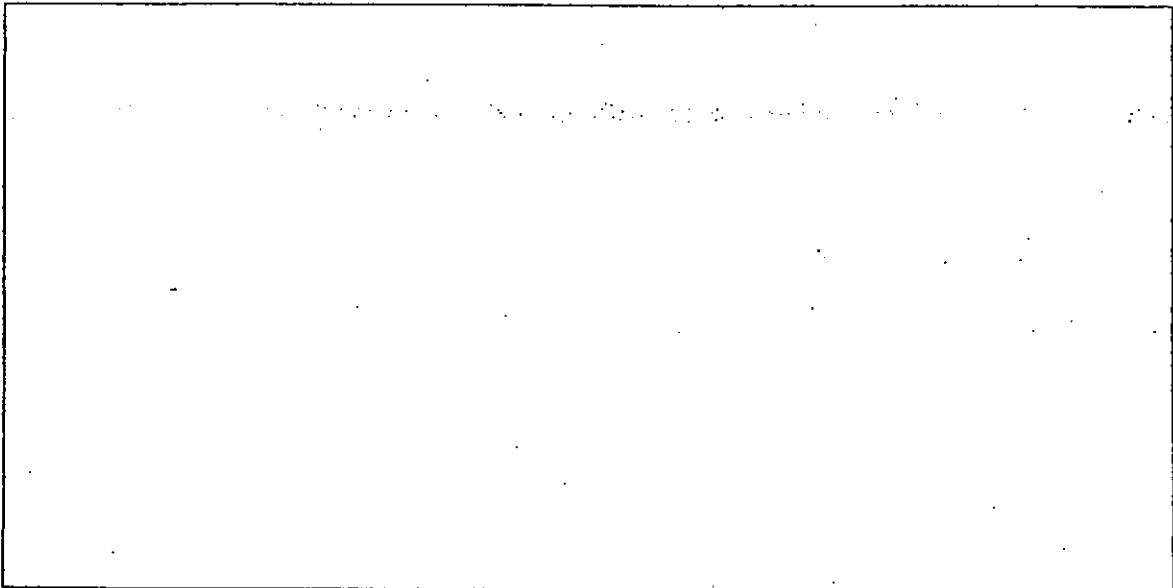
(b) Which will be the most affected organism if all the rabbits are wiped out? Give a reason for your answer. [1 mark]

20. Organisms P, Q, R, S and T are living things living together in a community. Study the information given below.

Q is a food producer
Q is eaten by P and S
T eats R and S
P is eaten by S and R.

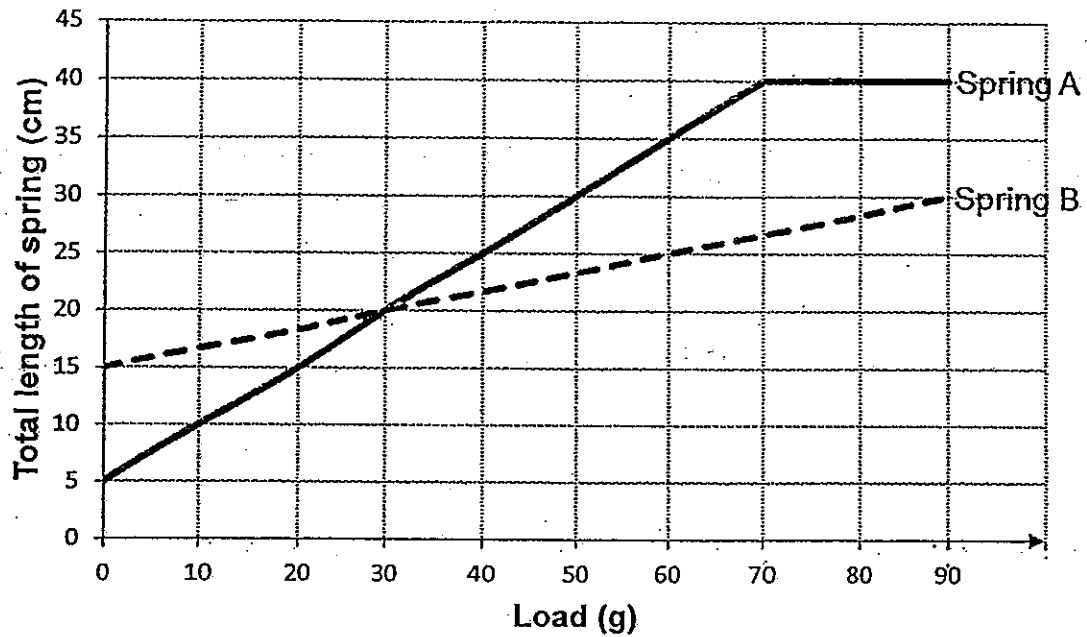
- (a) What is a community? [1 mark]

- (b) Draw the food web of organisms P, Q, R, S and T in the box below. [1 mark]



- (c) Which of the living things is an omnivore? [1 mark]

21. Springs, A and B, were used to support various loads. The results were recorded and plotted in the graph below.

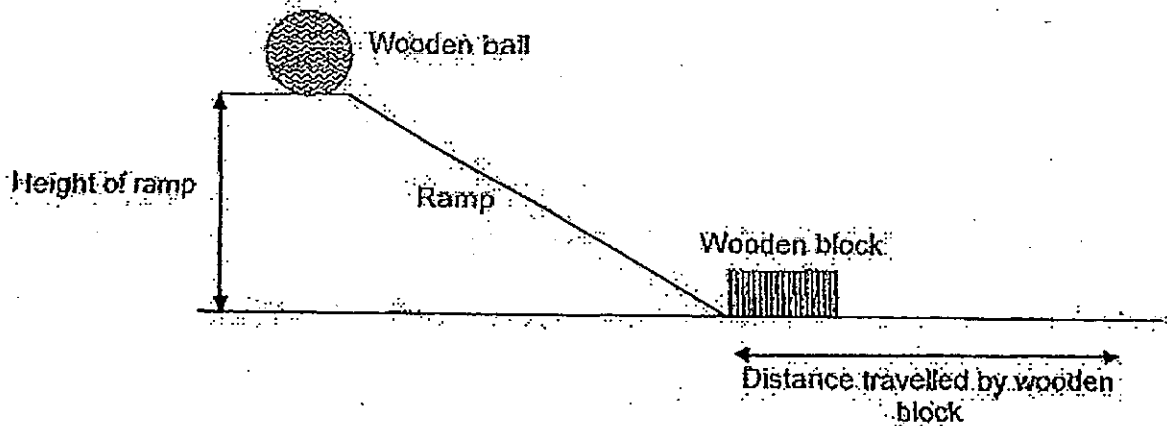


- (a) What was the difference in the initial lengths of Spring A and B? [1 mark]

- (b) What was the difference in the extensions of the two springs when a 30g load is hung on them? [1 mark]

- (c) What can be observed about the length of Spring A when the mass was increased from 70g to 90g? Explain your answer. [1 mark]

22. Study the set-up below.



When the ball rolls down the ramp, it hits the wooden block and moves it to a new position. The distance moved by the wooden block was measured. The experiment was repeated with different heights of the ramp and the results were recorded in the table below.

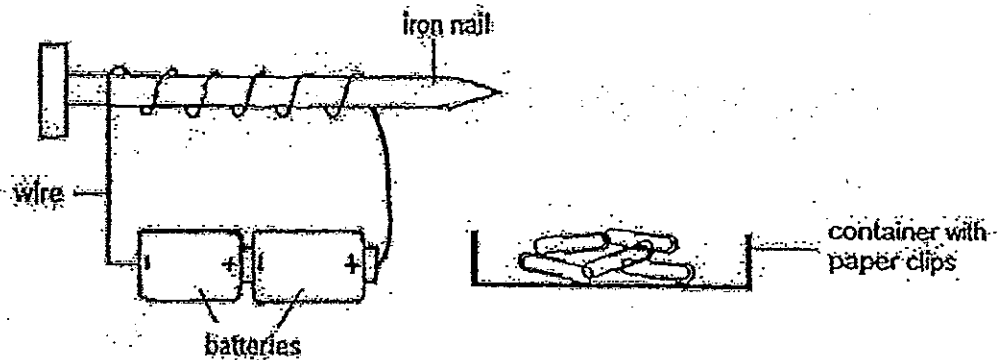
Height of ramp (cm)	15	25	30
Distance moved by the wooden block (cm)	19	27	33

- (a) What was the relationship between the height of the ramp and the distance moved by the block? [1 mark]

- (b) Name one variable that had to be kept the same in order for the experiment to be a fair one. [1 mark]

- (c) What would be the effect on the distance moved by the wooden block if the wooden ball is replaced with a solid metal one of the same size? [1 mark]

23. Julie conducted an experiment to find out how the strength of the electromagnet was affected by the number of coils of wire using the set-up as shown below. She recorded the greatest number of paper clips the electromagnet could attract in a table.



Number of coils	Number of paper clips
10	2
20	3
30	5
40	6

- (a) State the relationship between the number of coils of wire and strength of the electromagnet. [1 mark]

- (b) Without changing the number of coils of wire, state another way that she can make the electromagnet stronger. [1 mark]

END OF PAPER



ANSWER SHEET

EXAM PAPER 2013

SCHOOL : ROSYTH

SUBJECT : PRIMARY 5 SCIENCE

TERM : CA2

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
3	4	3	1	4	2	4	4	3	1	2	4	2	3	2

16)a)The grasshopper had decreased from the first three years and increased back for the next two years.

b)The grasshopper had become restantist to the pesticide.

17)a)The amount of acid affects the number of pea seeds that germinate.

b)It is control set-up to prove that acid is that only variable that affects the germination of food.

18)a)A.

b)A→B→D→C→E

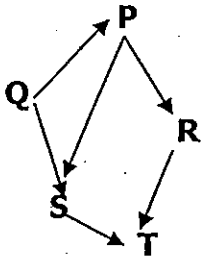
c)i)T ii)F

19)a)5

b)Red Fox. The Red Fox does not have other food source to feed on.

20)a)A community is different population that are living together.

b)



20)c)S.

21)a)10cm.

b)10cm

c)It stop extending. It has reach its maximum length.

22)a)As the height of the ramp increased the Distance moved by the block also increase.

b)Material of ramp.

c)The wooden block would be pushed further away, it would be heavier so the impact would be more.

23)a)The more the number of coil around the iron nail the stronger the electromagnet.

b)Increase the number of batteries.