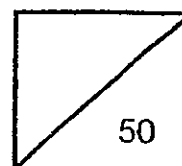




Rosyth School
Continual Assessment 2 for 2012
STANDARD SCIENCE
Primary 5



**Total
Marks:**

Name: _____

Class: Pr 5 _____

Register No. _____

Duration: 1 h 15 min

Date: 21 August 2012

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 15 in Part I, shade the correct ovals on the Optical Answer Sheet (OAS) provided using a 2B pencil.
5. For questions 16 to 23, give your answers in the spaces given in the Part II.

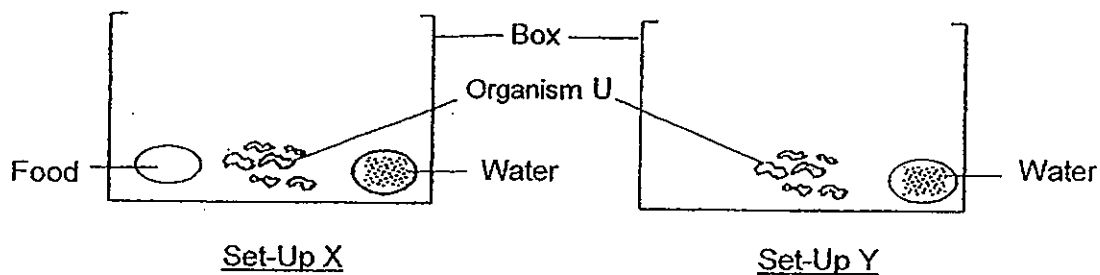
| | Maximum | Marks Obtained |
|----------------|-----------------|-----------------------|
| Part I | 30 marks | |
| Part II | 20 marks | |
| Total | 50 marks | |

* This booklet consists of 19 pages.

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 Catherine wanted to find out if living things need food to survive. She had two set-ups as shown below.



After a few days, Organism U in set-up Y died. She concluded that living things need food to survive.

Which other observation did she use to make the conclusion?

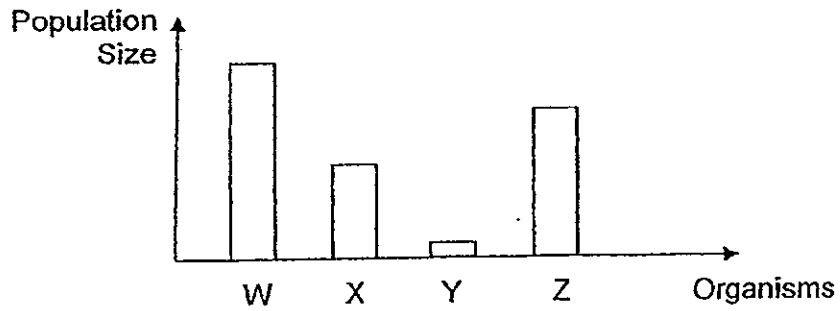
- (1) The temperature in set-up X decreased.
 - (2) The organisms in set-up X were still alive.
 - (3) The amount of water in set-up Y decreased.
 - (4) The number of organisms in set-up X increased.
- 2 There is an increase in the number of wild boars in our nature reserves recently.

Which of the following factor(s) could be the possible reason(s)?

- A Absence of natural predators
- B Increase of natural competitors
- C Increase in availability of food and water

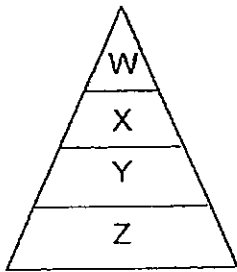
- (1) B only
- (2) C only
- (3) A and C only
- (4) A, B and C

- 3 -- The graph shows the population size of four groups of organisms, W, X, Y and Z in a community.

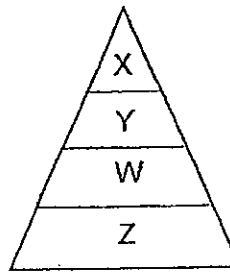


Which one of the following pyramids of energy best represents the above community?

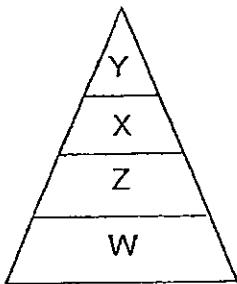
(1)



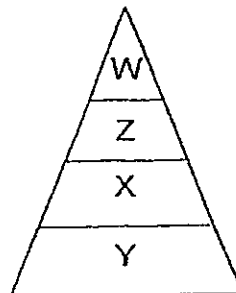
(2)



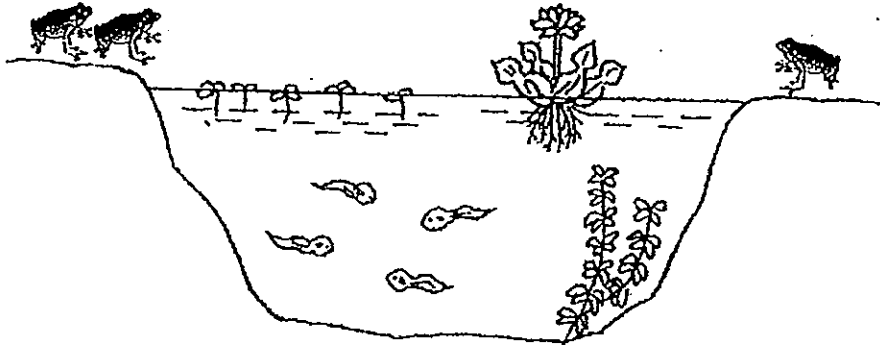
(3)



(4)



4 The diagram below shows the organisms in a pond habitat.



Based on the diagram above, which of the following statement (s) is/are true?

- A All the organisms above form a food web.
- B There are four communities living in the pond.
- C If the population of the frogs decreased, the population of the tadpoles will decrease.

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

5 The table below shows some habitats and their characteristics.

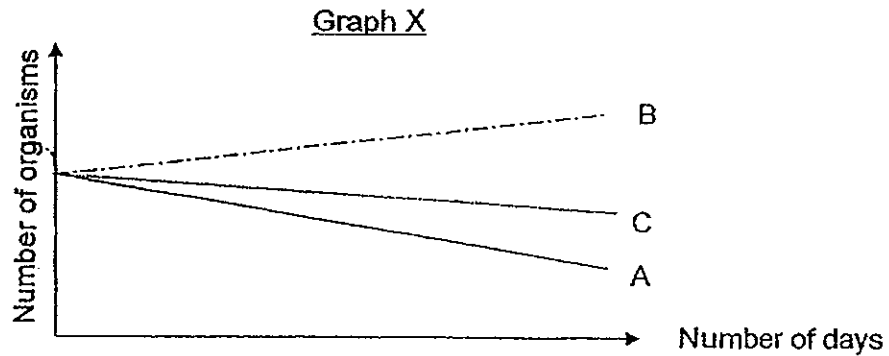
| Habitat | Characteristics |
|---------|--------------------|
| A | Dry, Cold, Icy |
| B | Moist, Cold, Icy |
| C | Dry, Warm, Sandy |
| D | Moist, Warm, Sandy |

Which one of the habitats are you most likely to find a polar bear in?

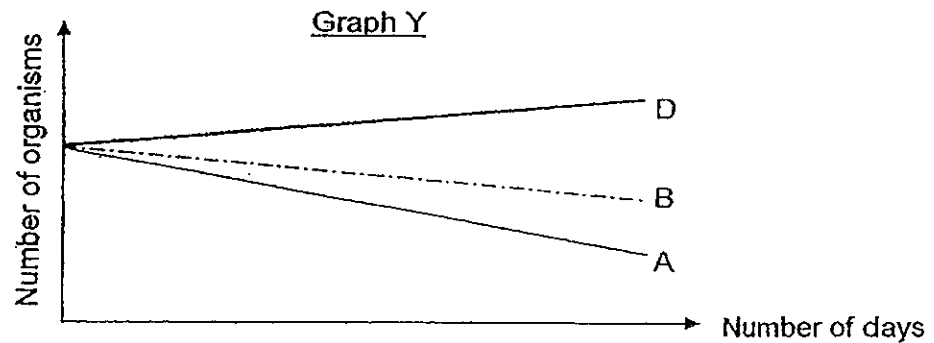
- (1) A
- (2) B
- (3) C
- (4) D

- 6 Jane conducted an experiment on four populations of organisms, A, B, C and D. She placed organisms A, B and C together in a closed tank for a week.

Graph X shows the changes in their population size.



She also placed organisms A, B and D in another closed tank for a week. Graph Y below shows the changes in their population size.

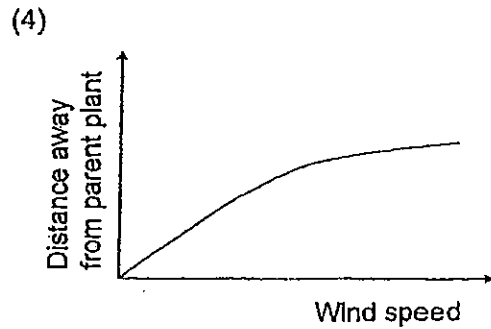
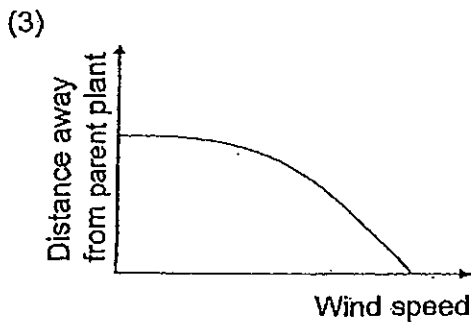
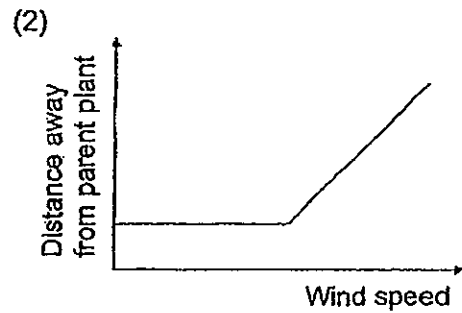
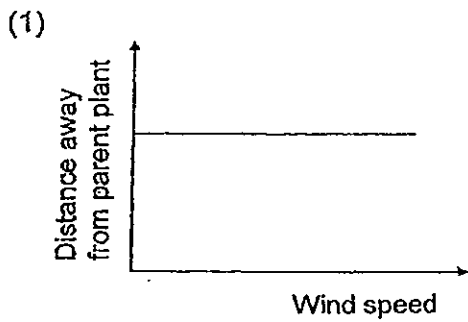


Based on the two graphs, which one of the following is most likely true?

| | Predator | Prey and Predator |
|-----|----------|-------------------|
| (1) | C | B |
| (2) | A | C |
| (3) | D | A |
| (4) | D | B |

7 The fruit of Plant Z dries up when it ripens. Its seeds are small and feathery.

Which one of the following graphs would most likely show how the distance of its seeds are dispersed as the wind speed changes?



8 The diagram below shows some plants and weeds growing close together.



Which of the following would the weeds compete for in order to grow well?

- A Water
- B Space
- C Sunlight
- D Mineral salts

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

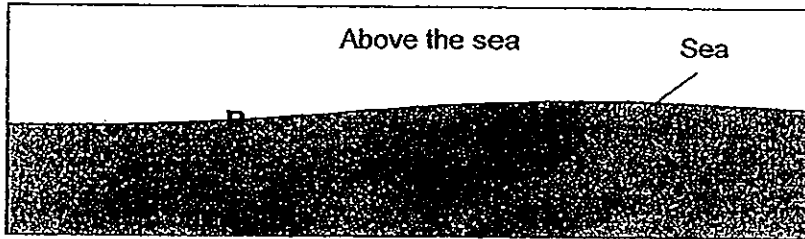
- 9 Jessica wanted to find out the conditions that woodlice prefer. She divided a container with four regions, A, B, C and D as shown below.

| | |
|-------------------|---------------------|
| A cool and dry | B ? |
| C ? | D warm and moist |

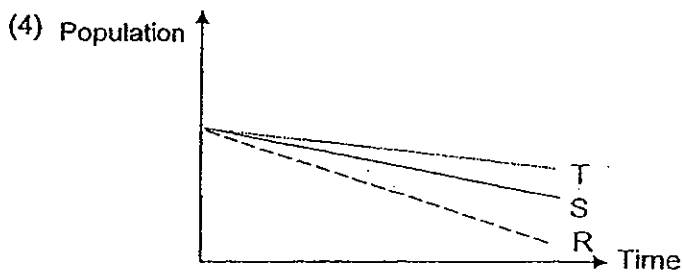
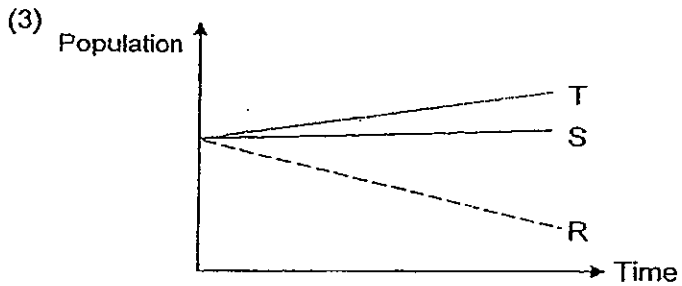
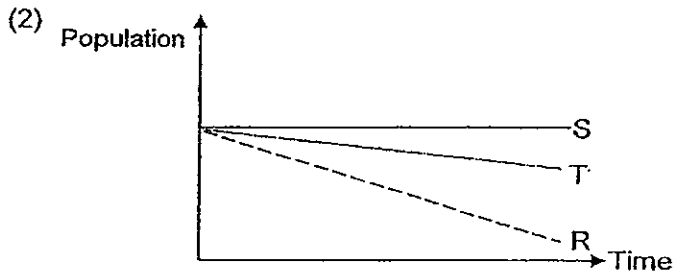
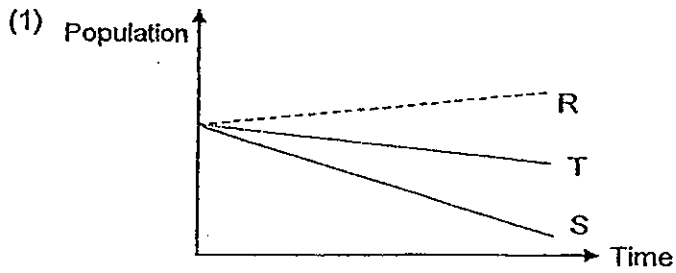
What conditions should the regions B and C be for her experiment?

| | Region B | | Region C | |
|-----|----------|-------|----------|-------|
| (1) | cool | dry | warm | dry |
| (2) | cool | moist | warm | dry |
| (3) | warm | dry | cool | dry |
| (4) | warm | moist | cool | moist |

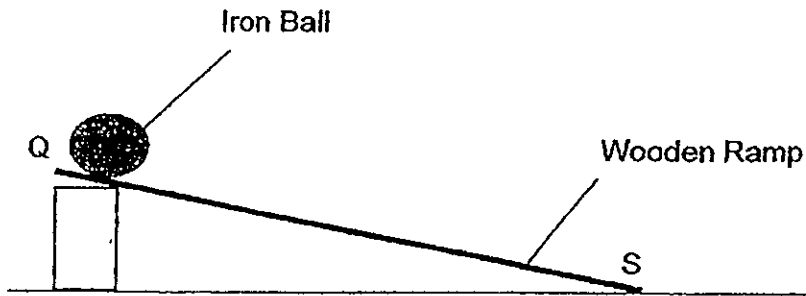
- 10 The diagram below shows three marine animals, R, S and T living in different parts of the sea.



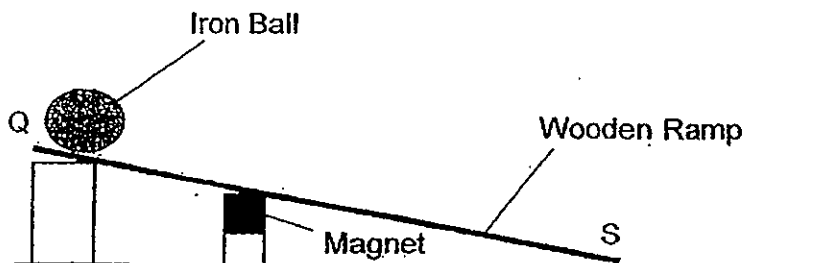
There was a shipwreck and it caused an oil spill in the habitat. Which graph below correctly shows the population of the animals after the oil spill?



- 13 Ken set up an experiment as shown below. He released an iron ball at Q and measured the time needed for the iron ball to reach S.



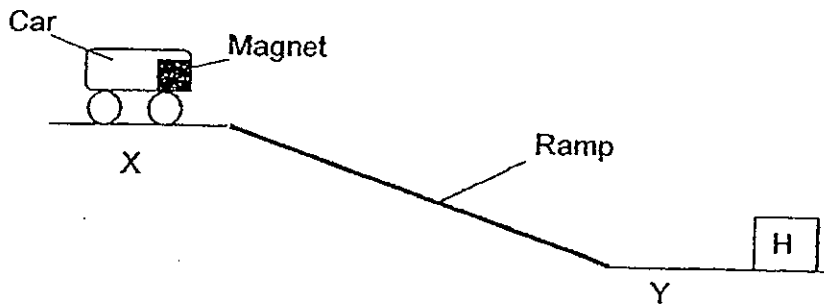
He then placed a strong magnet under a thin wooden ramp as shown below. He released the iron ball again and measured the time taken for it to reach S.



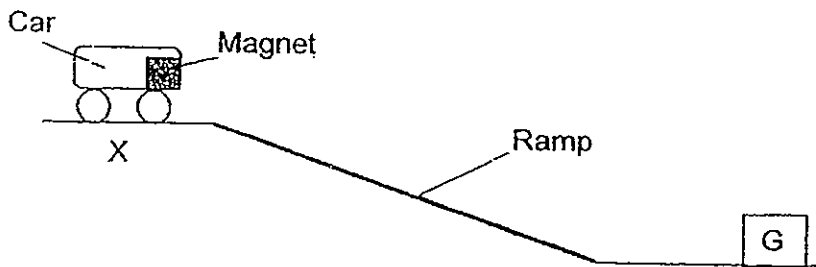
What is Ken trying to find out from the experiment?

- (1) To find out if the iron ball affects the strength of the magnet.
- (2) To find out if the magnet affects the distance travelled by the iron ball.
- (3) To find out if the magnet affects the time taken for the iron ball to reach the end of the ramp.
- (4) To find out how the strength of the magnet affects the time taken for the iron ball to reach the end of the ramp.

- 14 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.



When she placed object G at the end of the ramp and released the car from X, the car moved towards object G and was stuck to it.



What could Objects H and G possibly be?

| | H | G |
|-----|---------------|-------------|
| (1) | Iron Ball | Glass Cup |
| (2) | Magnet | Iron Ball |
| (3) | Wood Block | Steel Nail |
| (4) | Electromagnet | Copper Coin |

- 15 Ahmad wanted to find out which magnet, X or Y, was stronger. He placed a paper clip at one end of the table and moved Magnet X closer until it attracted the paper clip. He repeated the same experiment with Magnet Y.



Which of the following variable(s) should he keep constant to ensure a fair test?

- A The same paper clip
- B The shape of the magnet
- C The starting point of the magnet
- D The starting time of the experiment

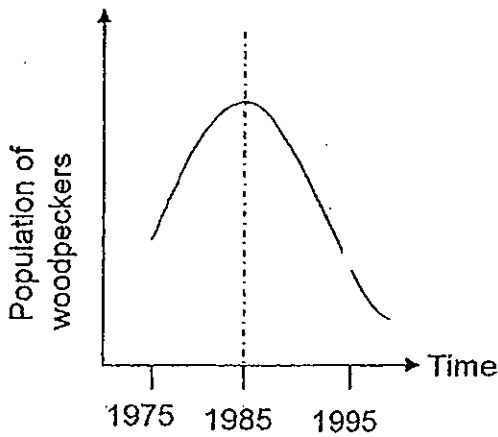
- (1) A only
- (2) A and B only
- (3) A, B and D only
- (4) B, C and D only

End of Booklet A

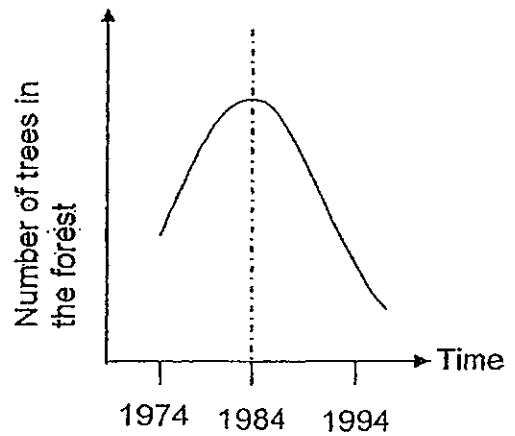
Part II (20 marks)

For questions 16 to 23, write your answers in this booklet. The number of marks available is shown in brackets [] at the end of each question or part question.

- 16 A group of scientists studied the woodpeckers' population and the number of trees in a forest over a period of 20 years. They presented their findings in the graphs as shown below.



Graph A

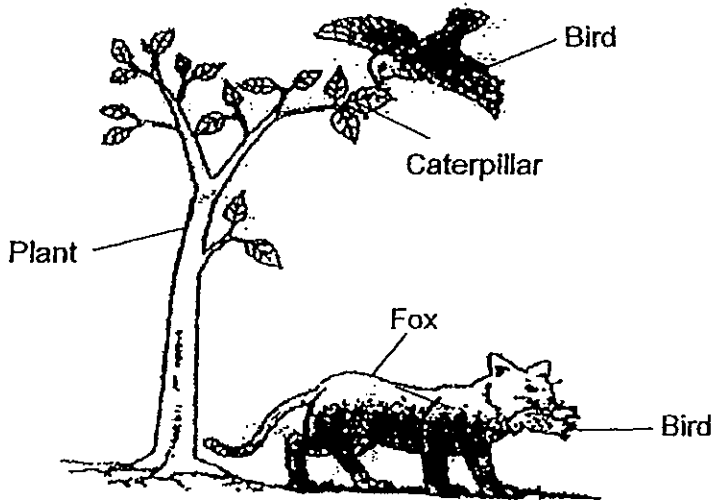


Graph B

- (a) Describe the population of woodpeckers in Graph A over the years. [1]

- (b) Using information from Graphs A and B, explain why the woodpeckers' population decreased from 1985 to 1995. [1]

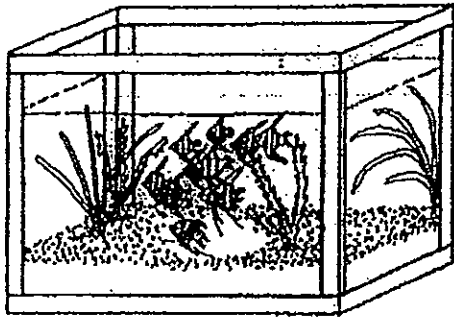
17 Study the picture below carefully.



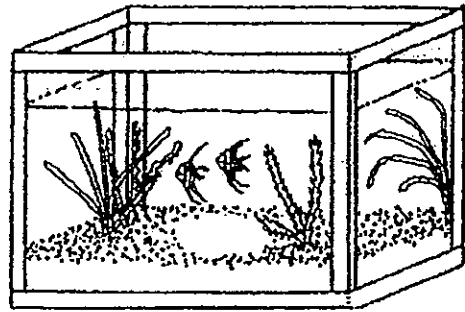
(a) Based on the picture, write down a food chain that includes all the organisms above. [1]

(b) If a forest fire wiped out all the plants in the habitat, what will the birds do in order to survive? [1]

- 18 Mr Lim set up two aquariums, A and B, at home as shown below. The size and material used to make both aquariums were the same. The same amount of food was placed into both aquariums daily.



A



B

He was given more fish of the same type. In which aquarium should he put them? Explain your choice.

[2]

- 19 A, B, C, D, E and F are organisms living in a mangrove. The following are some information about these living things.

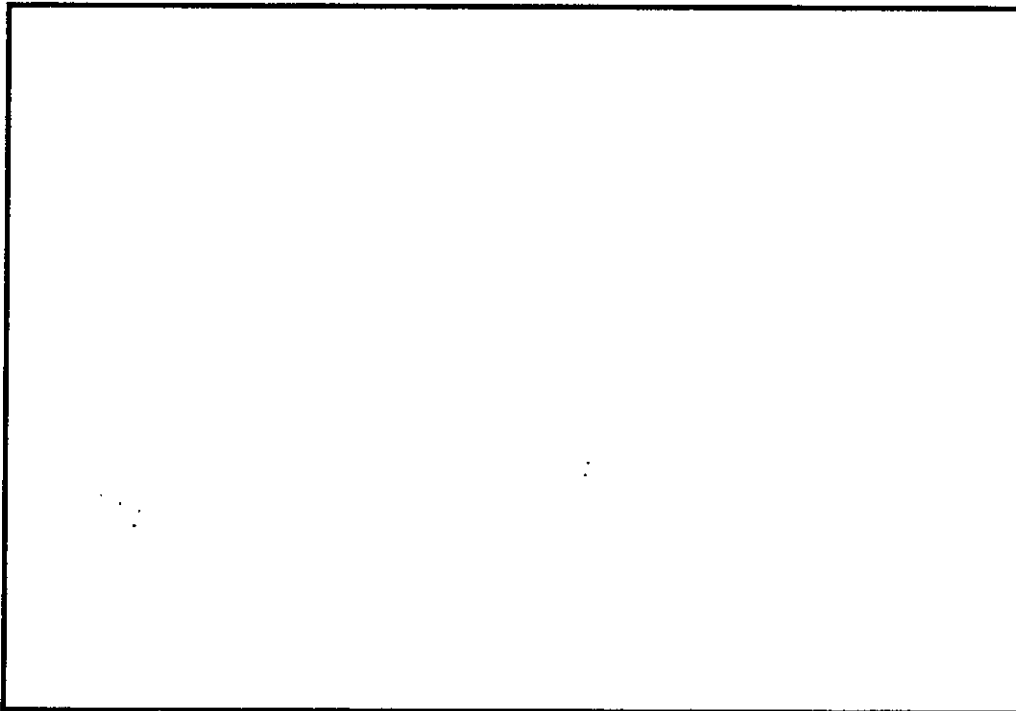
C is eaten by A and E.

A is preyed on by B and D.

F is the predator of B.

There are two herbivores in the food web.

- (a) Use the information above to help you to construct a food web. [2]



- (b) Is A a predator of C? Explain your answer. [1]

- 20 David collected four identical balsam fruits and changed the temperatures in which the fruits were kept. The results are shown in the table below.

| | A | B | C | D |
|------------------------|----|----|----|----|
| Temperature (°C) | 15 | 25 | 30 | 40 |
| Distance Scattered (m) | 0 | 2 | 3 | 4 |

- (a) What is the aim of David's experiment? [1]

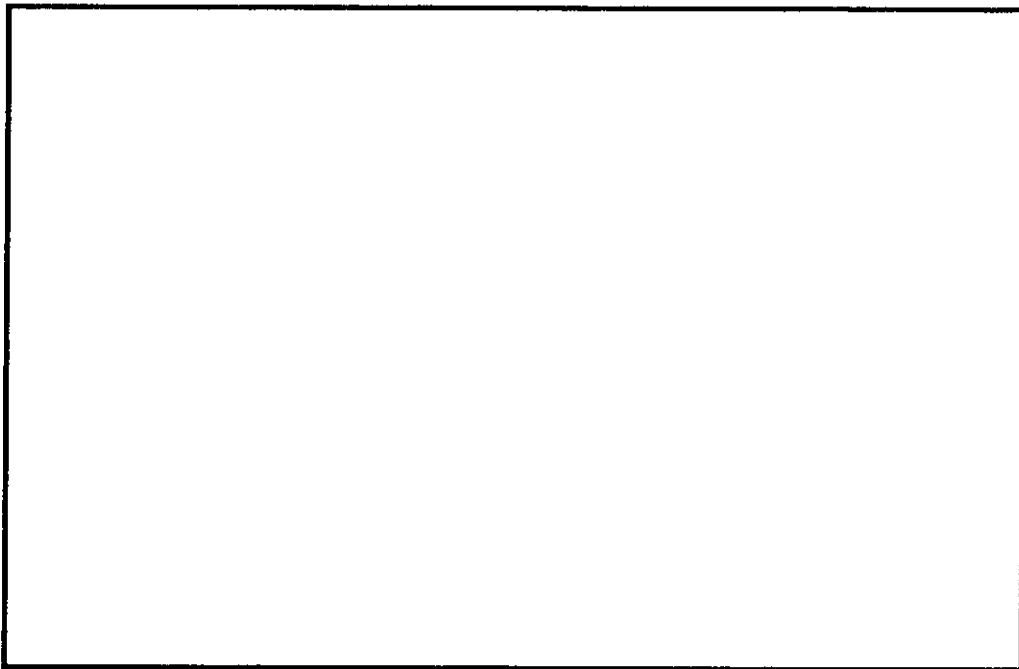
- (b) Which fruit split with the greatest force? Give a reason for your answer. [1]

- (c) Why does David need to ensure that the balsam fruits are similar in size and shape? [1]

21 Fatimah wanted to find out if Organism E prefers to live in dark or bright area. She has the following materials to conduct the experiment.

- Soil
- One open box
- One cardboard
- Five Organism E
- One sheet of glass

(a) In the space below, draw and label how her experimental set-up would look like. [2]



(b) What should Fatimah do in order to make a conclusion? [1]

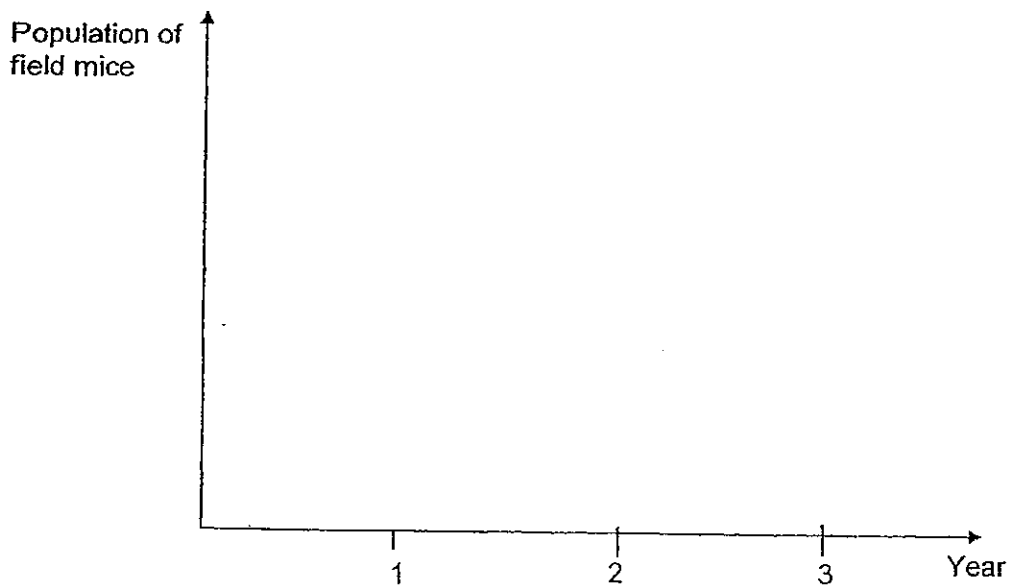
22 Study the food chain below.

Wheat → Field Mouse → Owl

(a) State two physical characteristics of the environment that could slow the growth of wheat plant. [1]

(b) Over the last decade, the number of field mice has continued to increase despite an increase in the number of owls. Give a reason to explain why it is so. [1]

(c) A disease broke out and destroyed half the owl population, what would the population of the field mice be like over the next 3 years? Draw a line graph below to represent the population of field mice over the 3 year period. [1]



- 23 Ashley conducted an experiment to find out how the strength of a magnet is affected when it is dropped. After dropping the magnet, she used the magnet to attract a nail by placing the magnet closer to it. She then counted the number of times a magnet was dropped and measured the pulling distance of the magnet.

The table below shows the results of her experiment.

| Number of drops | 2 | 3 | 4 | 5 |
|-------------------------------------|-----|-----|-----|-----|
| Pulling Distance of the magnet (cm) | 8.0 | 7.5 | 6.0 | 5.8 |

- (a) What happens to the magnet after it is dropped? [1]

- (b) Ashley wants to turn the magnet back to its original strength before it was dropped. Suggest one way in which she can do this. [1]

End of Paper

ANSWER SHEET

EXAM PAPER 2012

SCHOOL : ROSYTH
SUBJECT : PRIMARY 5 SCIENCE

TERM : CA2

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

16)a)The population of the woodpeckers increased from 1975 to 1985 and then decreased rapidly from 1985 to 1995.

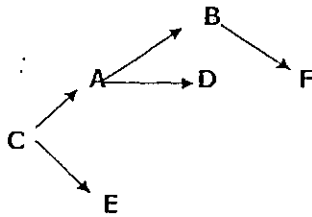
b)The number of trees which provide food for the woodpeckers have decreased.

17)a)Plant→Caterpillar→Bird→Fox.

b)The birds will migrate to a different place in order to survive.

18)Aquarium B. Aquarium B has less fish to fight for food and air.

19)a)



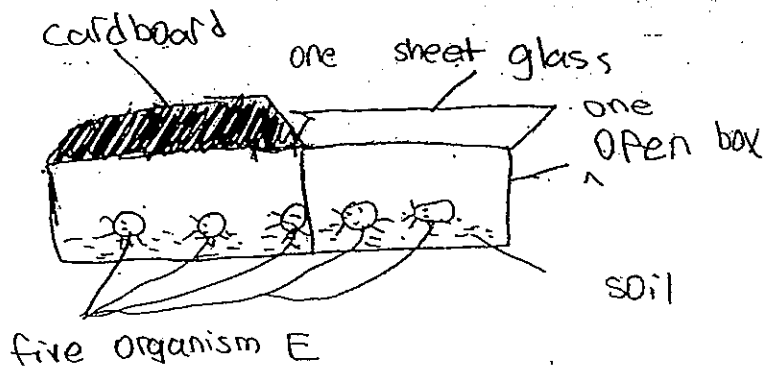
b)No. Plants are food produced and predator are animals that prey on other animals, so animals is not a predator of plants.

20)a)To find out if the temperature where the balsam fruits are kept affects the distance scattered by the seeds.

b)Fruit D. The distance is the greatest.

c)To prove that the changed variable is the only one affecting the result of the experiment.

21)a)

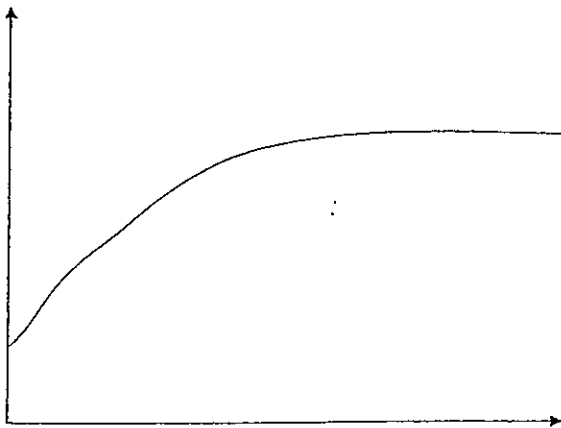


b) Fatimah should record how many of organism E goes to the darker area or brighter area in order to make a conclusion.

22)a) The amount of light and the amount of water.

b) The birth rate of mice is higher than the birth rate of the owls.

c)



23)a) The magnet becomes weaker.

b) Ashley could use another stronger magnet to stroke this magnet to turn it back to its original strength.