



**NAN HUA PRIMARY SCHOOL**  
**CONTINUAL ASSESSMENT 1 2014**  
**PRIMARY FIVE**  
**SCIENCE**

Name : \_\_\_\_\_ ( )

Class : Primary 5 / \_\_\_\_\_

Date : 4 March 2014

Duration : 1 h 45 min

<b>MARKS</b>	
Sect A:	/ 60
Sect B:	/ 40
<b>Total :</b>	<b>/ 100</b>

Parent's Signature : \_\_\_\_\_

**Section A: (30 x 2marks = 60marks)**

For each question from 1 to 30, 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 of the following is the reason why living things need to reproduce?
- (1) Living things need to provide food for other living things.
  - (2) Living things need to ensure continuity of their own kind in this world.
  - (3) Living things need to compete with other living things for air, food and water.
  - (4) Living things need to increase their numbers to compete with other kinds of living things.

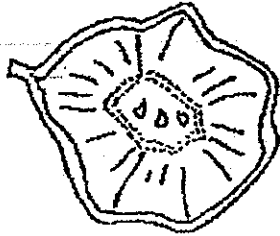
2. Grandpa bought a mango from the fruit stall and shared the fruit with Jonathan. Jonathan observed that the fruit had only one seed and had fleshy, sweet-smelling flesh. He took the seed and planted it in their backyard. After several years, the tree bore fruit. Jonathan tasted the fruit and made some observations.

Which of the following could be the observations he had made?

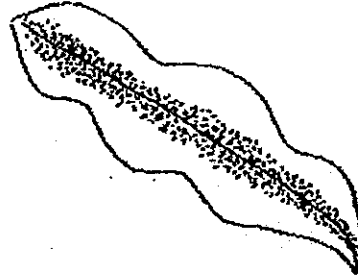
- A The fruit had one seed and was fleshy and sweet-smelling.
- B The shape of the fruit was similar to the fruit of the parent plant.
- C The fruit had no seed and tasted differently from the fruit of the parent plant.

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

3. Julia and her classmates made a list of observations on two plants in their school garden below.



Fruit of Plant A



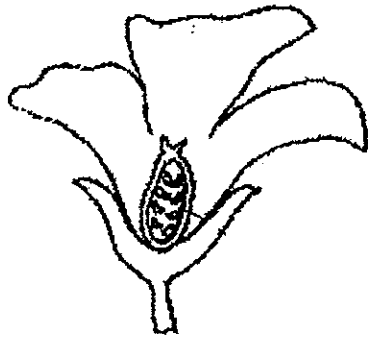
Leaf of Plant B

Plant A	Plant B
<ul style="list-style-type: none"> <li>• bears fruit with wing-like structure</li> <li>• flowers are yellow and slightly-scented</li> </ul>	<ul style="list-style-type: none"> <li>• has spore bags under leaves</li> <li>• found on tree branches</li> </ul>

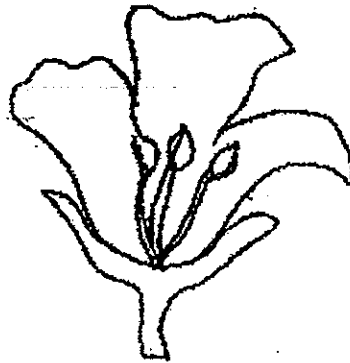
Which of the following statements correctly describes Plant A and Plant B?

- (1) Both plants depend on insects for pollination.
- (2) Plant A has seeds in the fruit while Plant B has spores in the spore bag.
- (3) Plant A has flowers to attract insects to disperse the fruit while Plant B has to depend on wind to disperse the spores.
- (4) The spores of both plants are carried by the wind away from the parent plants, to reduce competition with the parent plants.

4. The diagrams below show the cross-sections of two flowers, A and B.



Flower A

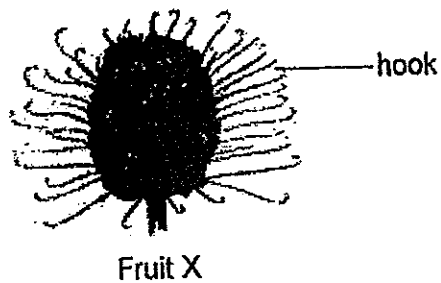


Flower B

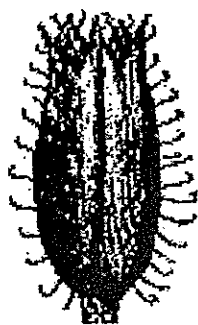
Based on the diagrams, which of the following statements is correct?

- (1) Both Flowers A and B will develop into fruit.
- (2) Both Flowers A and B are needed in the process of sexual reproduction.
- (3) Flower A will receive the egg while Flower B will receive the pollen grain.
- (4) Insects such as bees help to transfer pollen grains from Flower A to Flower B.

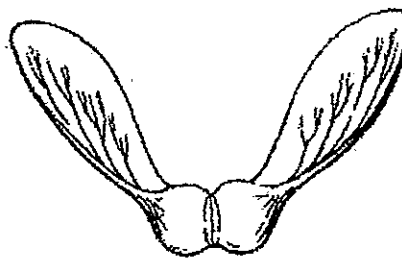
5. Juliet did a sketch of the fruit of a plant found in her garden as shown below.



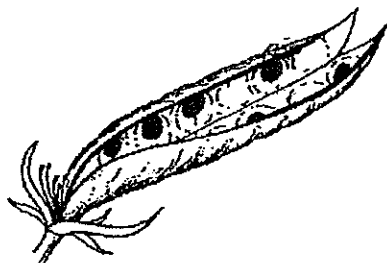
By observing the structures of the following fruits below, which one is most likely to have similar method of dispersal as Fruit X?



(1)



(2)

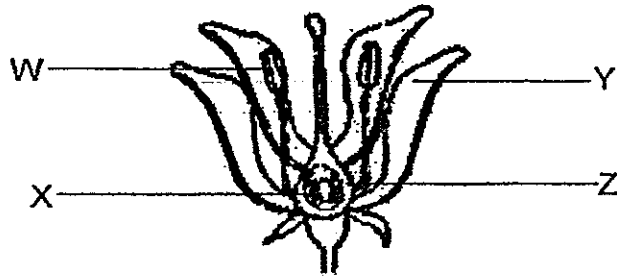


(3)



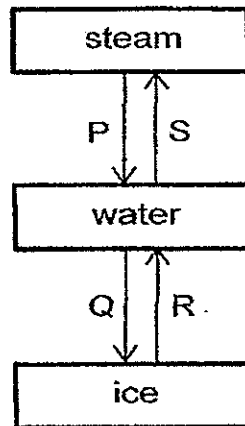
(4)

6. Which of the following parts of the flower will form parts of the fruit?



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

7. Study the diagram below.

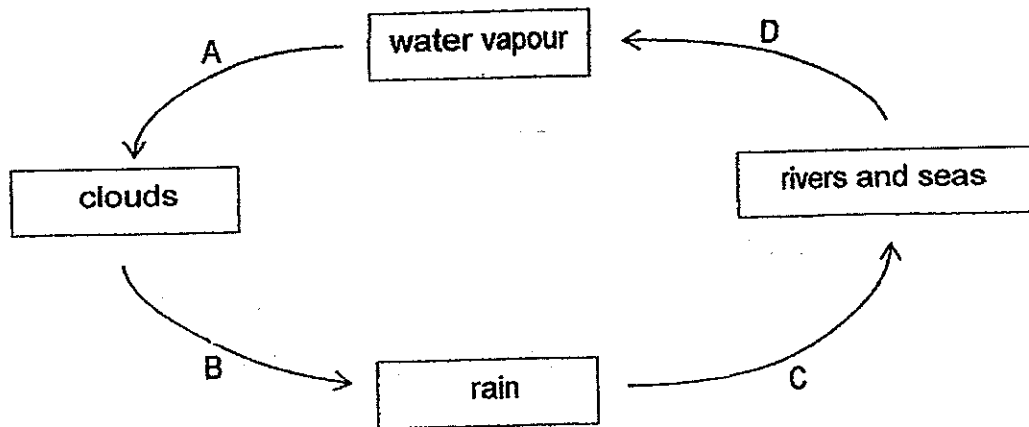


Arrows P, Q, R and S represent processes that cause a change in the state of water. Which of the following processes involve gain heat?

*heat gain*

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

8. The diagram below shows the water cycle.



At which stage(s) of the water cycle is/are there heat loss?

- (1) A only
  - (2) B only
  - (3) A and C only
  - (4) B and D only
9. A class was discussing the importance of water cycle to living things.. Some pupils wrote the following statements below.

Michael: Without the water cycle, plants cannot get water to make food.

Norman: Water cycle supplies water which is home to many living things.

Osman : Water cycle provides a constant supply of freshwater to the Earth.

Which of the pupils made the correct statement(s)?

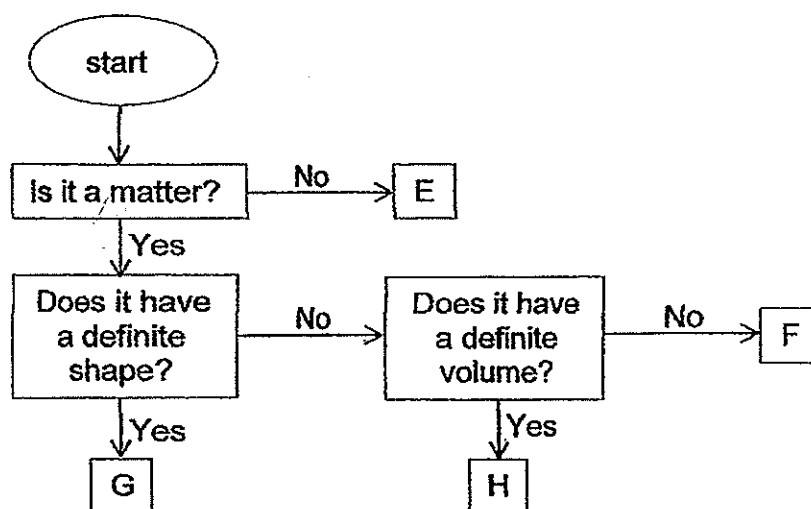
- (1) Osman only
- (2) Osman and Norman only
- (3) Michael and Norman only
- (4) Michael, Norman and Osman

10. Which of the following activities are ways to help in the conservation of water?

- A Repair any water leaks in the house immediately.
- B Use a water-efficient washing machine to do laundry.
- C Rubbish should be burnt before dumping into the sea.

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

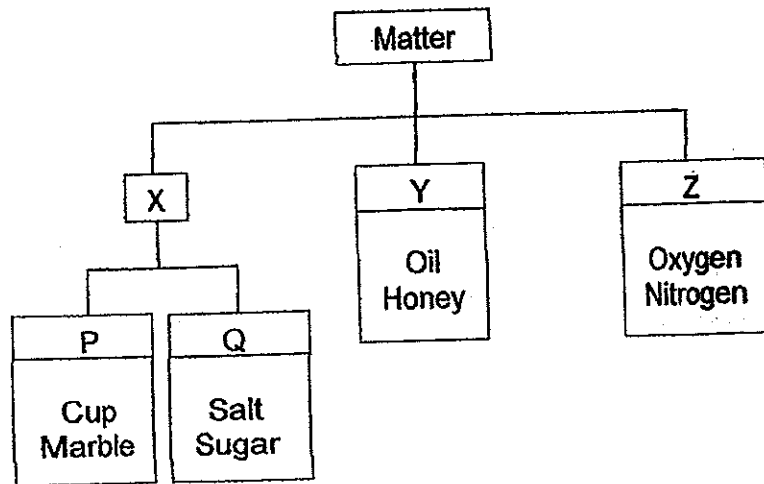
11. Study the chart below.



What could E, F, G and H be?

	E	F	G	H
(1)	heat	ice	oxygen	milk
(2)	heat	shadow	ice	milk
(3)	shadow	oxygen	ice	milk
(4)	shadow	oxygen	milk	ice

12. Gopal was given a list of matter to classify. He grouped them according to the chart shown below.



Which of the following describes groups P, Q, X, Y and Z?

- (1) Z can be compressed but P, Q and Y cannot be compressed.
- (2) X and Y have fixed masses but Z does not have a fixed mass.
- (3) P and Y cannot be compressed but Q and Z can be compressed.
- (4) X and Z take the shape of the container while Y has a definite shape.

13. Study the diagram of a flower below.



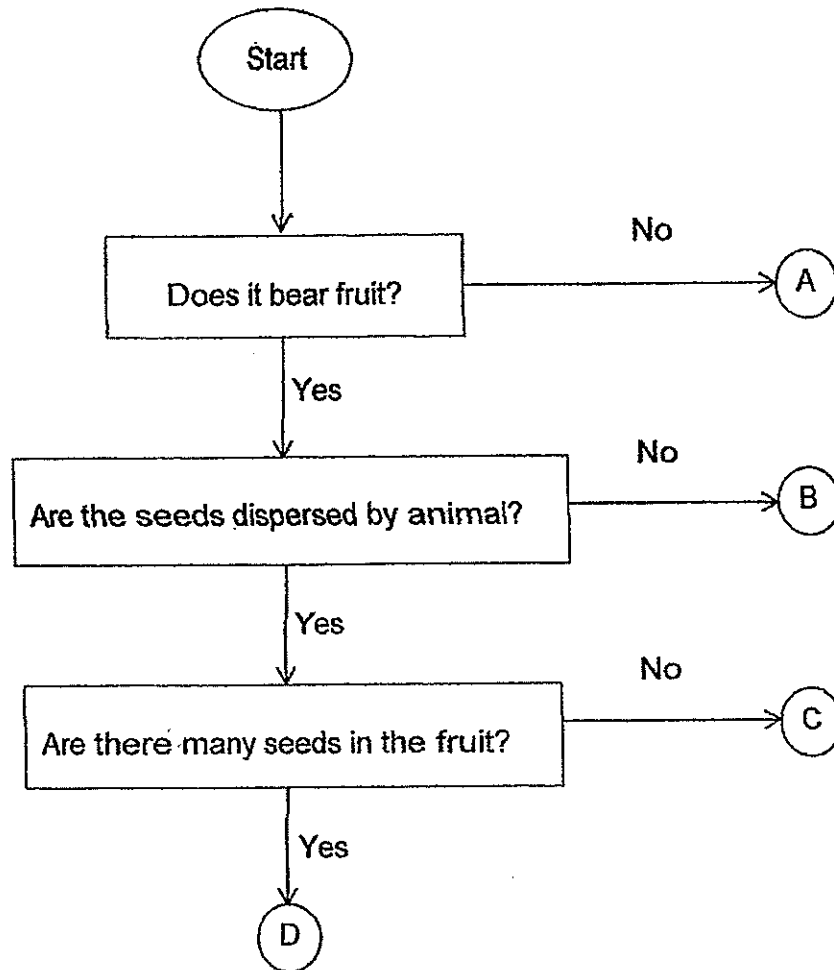
Which of the following statements best describe the flower?

- A The anthers are hanging out of the flower.
- B The flower is most likely pollinated by insects.
- C The flower has both the male and female reproductive parts.

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



14. Study the chart below.

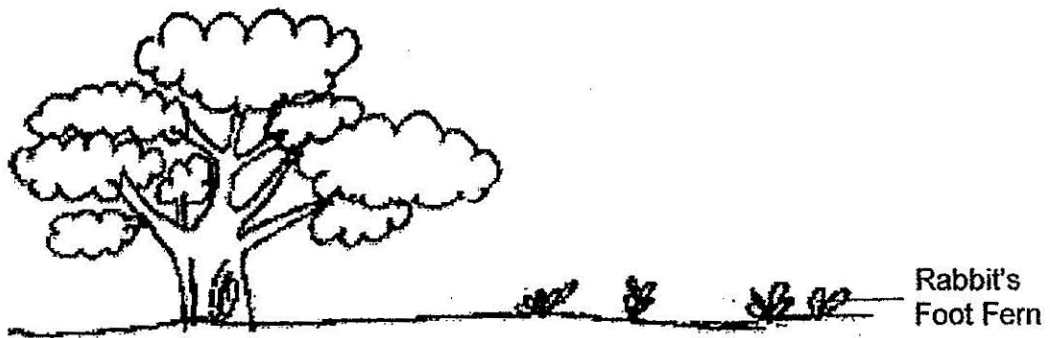


Which of the following correctly represent A, B, C and D?

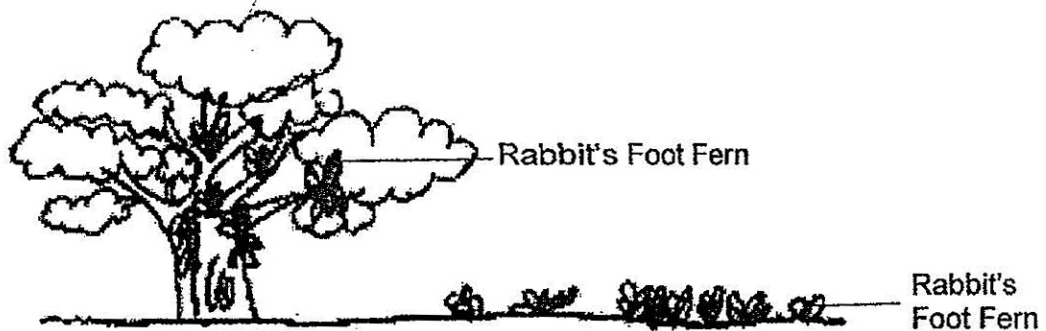
	A	B	C	D
(1)	stag's horn fern	angsana	papaya	coconut
(2)	stag's horn fern	coconut	papaya	rambutan
(3)	mushroom	angsana	rambutan	papaya
(4)	mushroom	coconut	rambutan	angsana

15. In 2011, the National Park Board planted a row of Rain Trees along Junior Road. There is a plot of undeveloped land along Junior Road.

Two years later, Rabbit's Foot Ferns were spotted growing on the branches of the Rain Trees although no one has planted them.



Rain Tree in 2011



Rain Tree in 2013

What could be the most likely explanation to the growth of the Rabbit's Foot Fern on the Rain Trees?

- (1) The spores of the Rabbit's Foot Fern were carried by the wind to the branches of the trees.
- (2) The water from the ground evaporated and carried the spores of the Rabbit's Foot Fern to the Rain Tree.
- (3) Birds fed on the spore bags and flew to the trees to excrete their waste containing undigested spores on the branches.
- (4) Insects visited the flowers of the Rabbit's Foot Fern and carried the pollens on their body, which were deposited on the branches when they landed on the branches.

16. The diagram below shows the cross-section of a germinating seed.



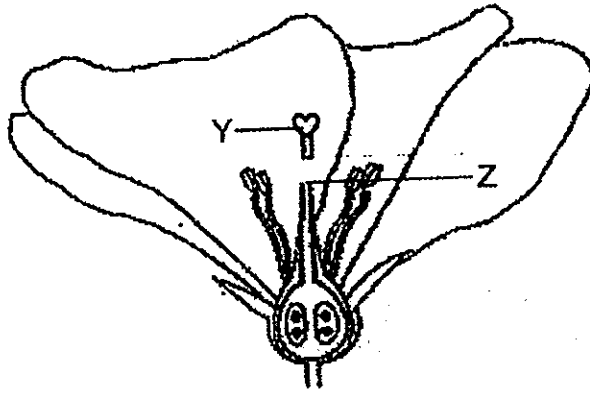
Which of the following statements is true about the function of each part?

- (1) G develops first to take in water.
  - (2) F stores food made by the seedling.
  - (3) E provides food for the germinating seed.
  - (4) H provides nutrients for the seed to germinate before the first leaves appear
17. Some types of flowers bloom at night. They rely on nectar-feeding bats and moths for pollination.

What could most likely be the characteristics of such flowers?

- (1) They are brightly coloured.
- (2) They are small and non-scented.
- (3) They are big and sweet-smelling
- (4) They have stigma hanging out of the flower.

18. Study the cross-section of a flower below.

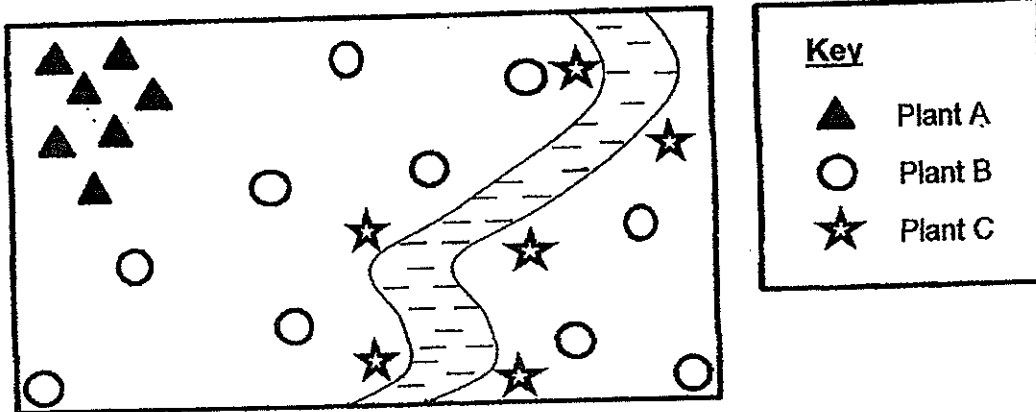


Mrs Tan cuts the flower part Y at Z. She leaves the flower intact on the plant. After some time, she observes that the flower develops into a fruit. What could be the possible explanation(s) for her observations?

- A Pollen grains can still land on Z.
- B Insects could have carried the pollen grains into the ovary.
- C Fertilisation has already occurred before flower part Y is cut at Z.

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

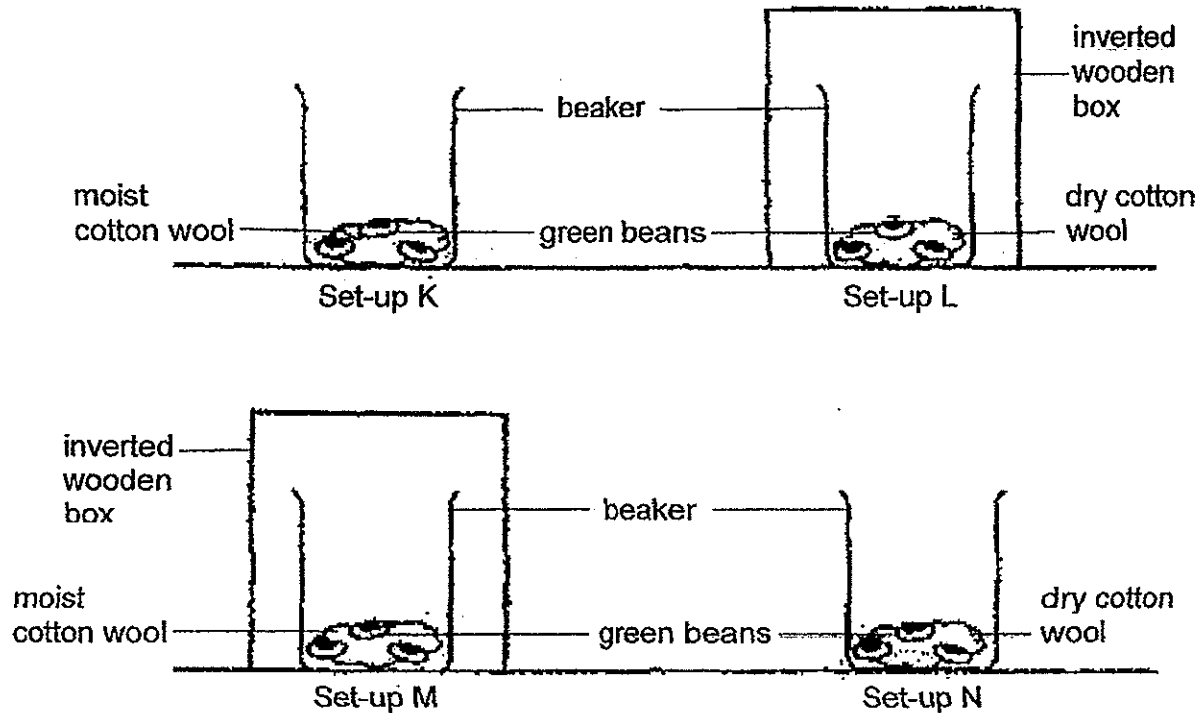
19. A scientist visited a village by a river and observed the plants in the surrounding. He found three types of plants in that area and drew a diagram showing the locations of the three types of plants as shown below.



Which of the following statements describes the three types of plants, A, B and C, correctly?

- (1) Plant B has fruit with fibrous husk.
- (2) Plant C has fruit with wing-like structure.
- (3) Plant C has fleshy and juicy fruit with seeds.
- (4) Plant A has fruit that split open when ripened.

20. Nina wants to grow some green bean seeds. She prepares four set-ups shown below and places them in a room at a temperature of 27°C.



Which of the following set-ups will the green bean seeds germinate?

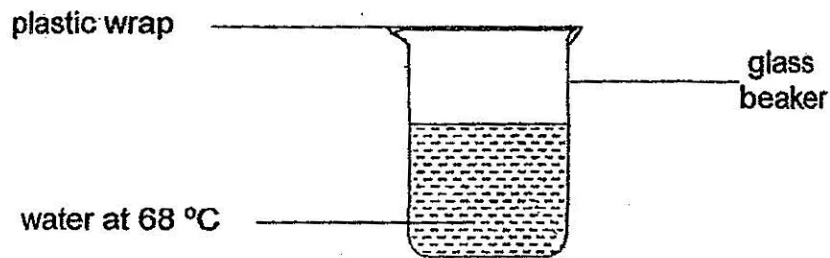
- (1) Set-ups K and N only
- (2) Set-ups K and M only
- (3) Set-ups L and N only
- (4) Set-ups L and M only

21. The table below shows the comparison between plants that are reproduced by seeds and by spores. Which of the following comparisons is/are true?

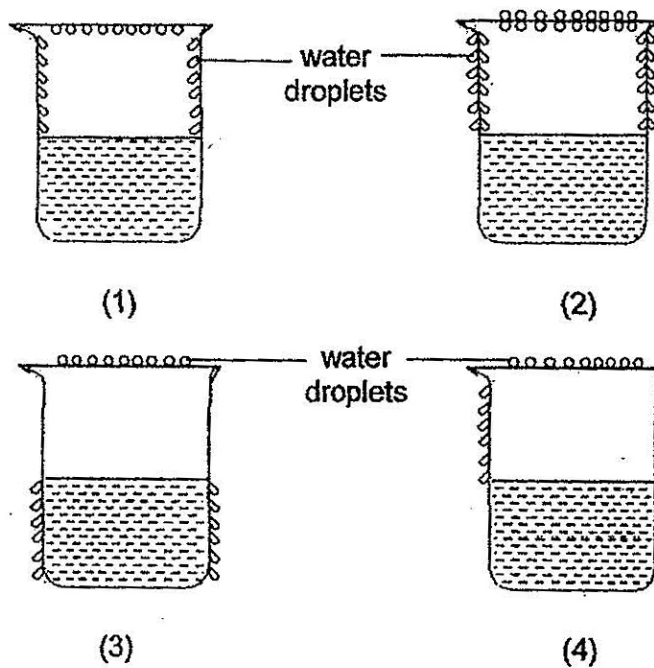
Comparison	Plants reproduced by spores	Plants reproduced by seeds
A	Non-flowering	Flowering
B	Spores are tiny and light.	Seeds are big and heavy.
C	Pollination occurs before fertilisation.	Pollination occurs before fertilisation.

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

22. A beaker of water at  $68^{\circ}\text{C}$  was left on the table in the Science Laboratory at a room temperature of  $28^{\circ}\text{C}$ .

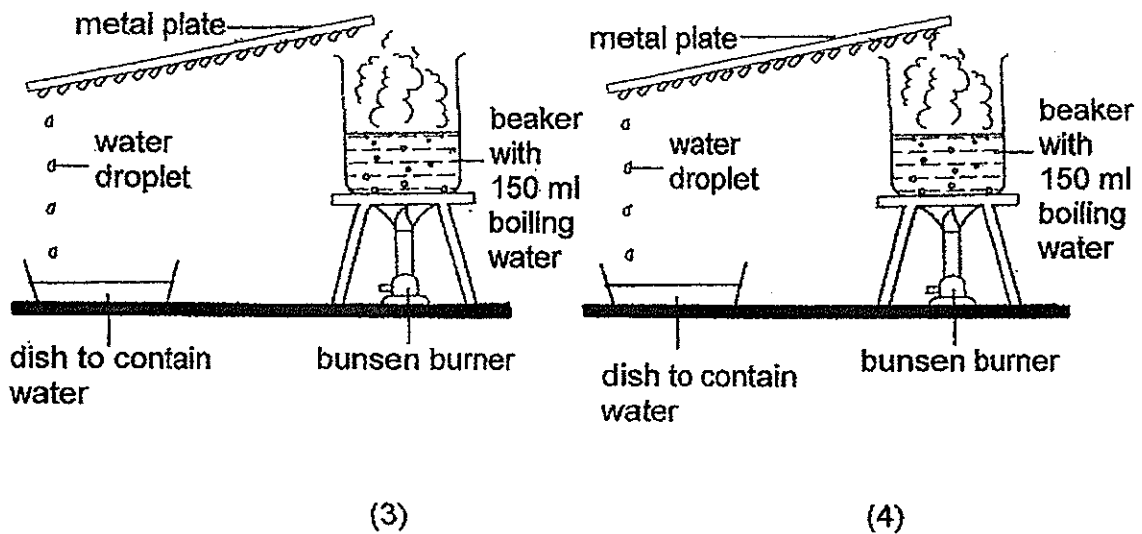
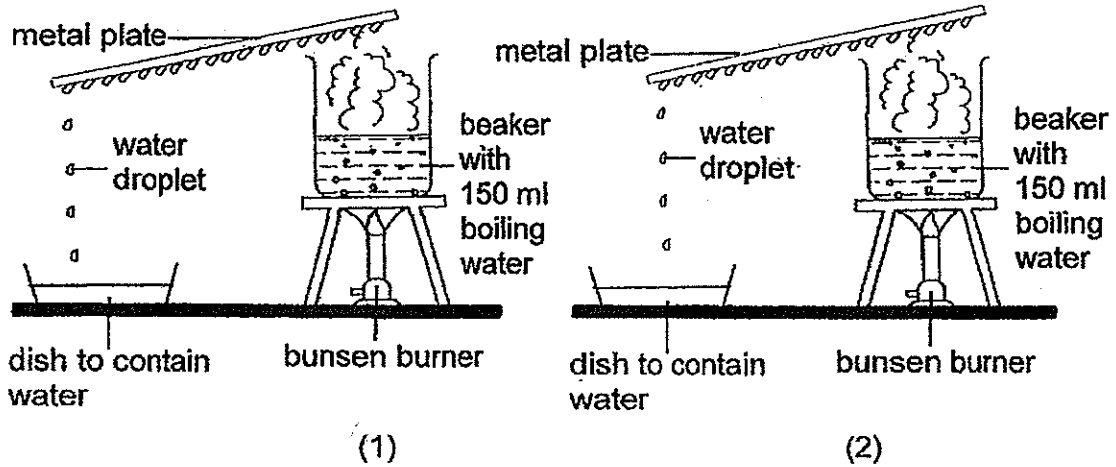


Which of the following could be the observation after one minute?

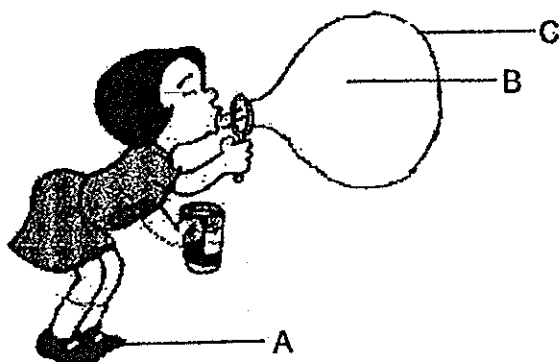


23. Observe the four set-ups below. The length of the metal plate above the beaker in contact with the steam is varied in the set-ups. The water droplets form on the surface of the metal plate will slide down and is collected in the dish at the end of the metal plate. Each beaker contains 150 ml of water and is boiled with the same intensity of heat over the same period of time.

Which of the following set-ups will have the least amount of water collected in the dish over the same period of time?



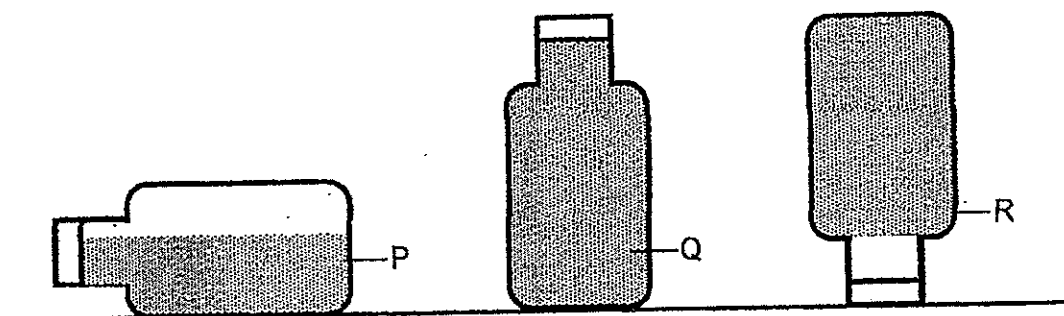
24. A girl is blowing soap bubble as shown in the picture below.



Which of the following classify the matter correctly?

	Solid	Liquid	Gas
(1)	A	B	C
(2)	B	C	A
(3)	C	A	B
(4)	A	C	B

25. Three matter, P, Q and R, are placed in similar containers on a table as shown in the diagram below.



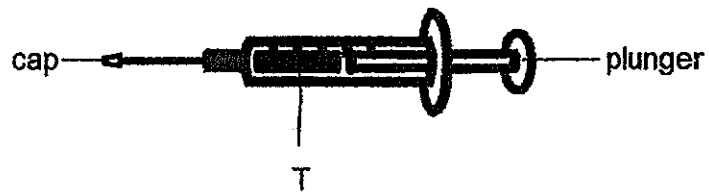
Based only on your observation, which of the following statement(s) is/are definitely true about P, Q and R?

- A Matter P is a gas.
- B Matter R is a solid.
- C Matter Q is a liquid.
- D Matter P, Q and R are the same matter at different states.

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



26. Afifah placed matter T into a syringe as shown below.



When Afifah pushed in the plunger, she found that she could push in the plunger easily. Which of the following could matter T be?

- A water
- B honey
- C cooking oil
- D carbon dioxide

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

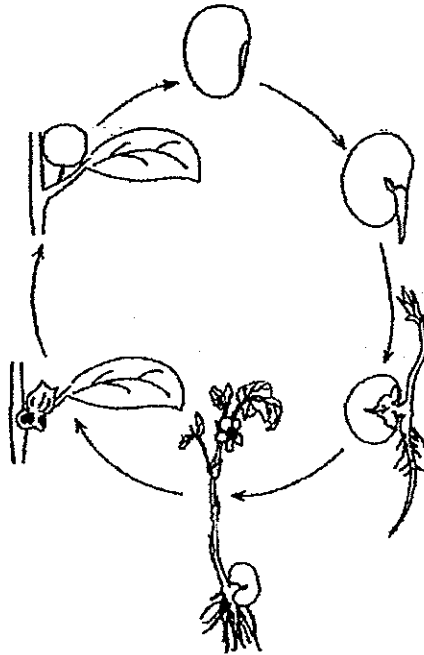
27. The table below shows the types of food eaten by the adults and their young for 4 types of animals.

Animal	Food for the adult	Food for the young
E	green plants	green plants
F	small fish	small fish
G	planktons	mother's milk
H	rats	rats

Based on the information given, which of the following conclusions can be made about the four animals?

- (1) Animal E is a plant-eater.
- (2) Animal G spends part of its life on land.
- (3) All the animals have a 4-stage life cycle.
- (4) The young of the animals resembles their parents in appearance when they eat the same kind of food.

28. The diagram below shows the development of a flowering plant.

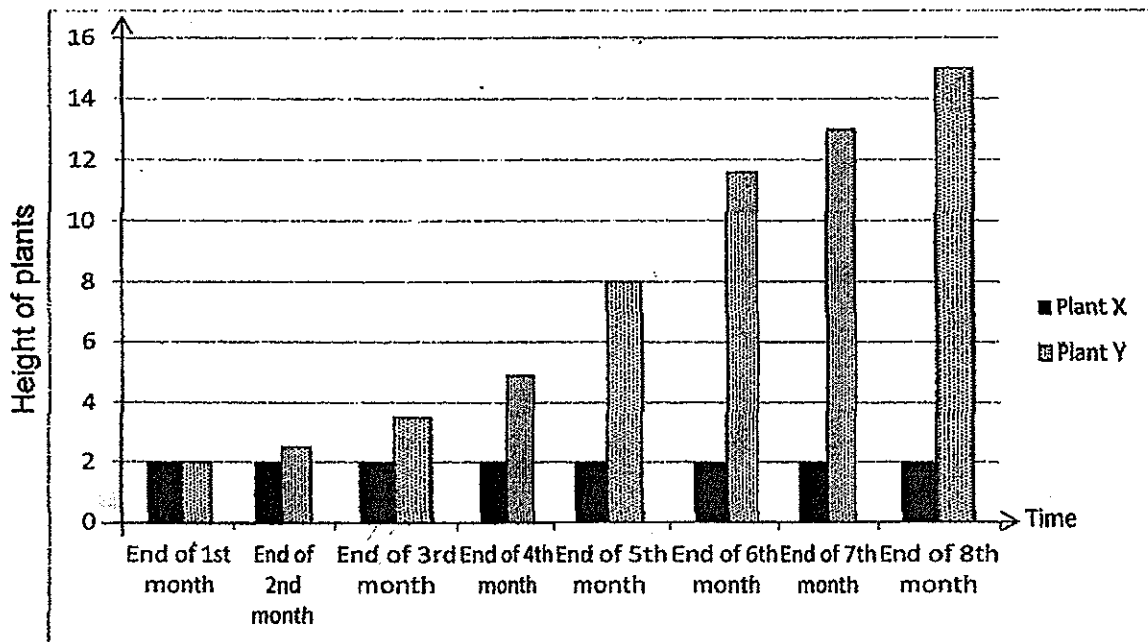


Which of the following statements best describes the flowering plant above?

- (1) Fertilisation has taken place.
- (2) The plant has a 6-stage life-cycle
- (3) The fruit of the plant is sweet-smelling.
- (4) The fruit of the plant germinates into a seedling.

29. Two plants, X and Y, are placed in two similar pots of soil. The two pots are placed by the window of a room. The two pots of plants are given the same amount of water each day. Their growth is recorded in the graph shown below.

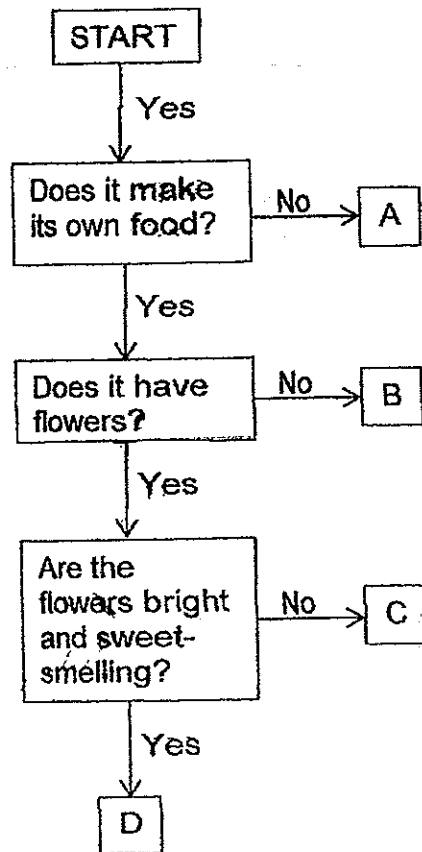
**Height of plants measured over 8 months**



Based on the graph above, which of the following statements is true about the two plants?

- (1) Plant X can reproduce but not Plant Y.
- (2) Plant Y is a living thing but not Plant X.
- (3) Plant X needs air and water but not Plant Y.
- (4) Plant Y has reached its maximum height of growth.

30. Study the chart of below.



Based on the information given by the chart above, where will you place 'fungi'?

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



NAN HUA PRIMARY SCHOOL  
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Name : \_\_\_\_\_ ( )

Class : Primary 5 / \_\_\_\_\_

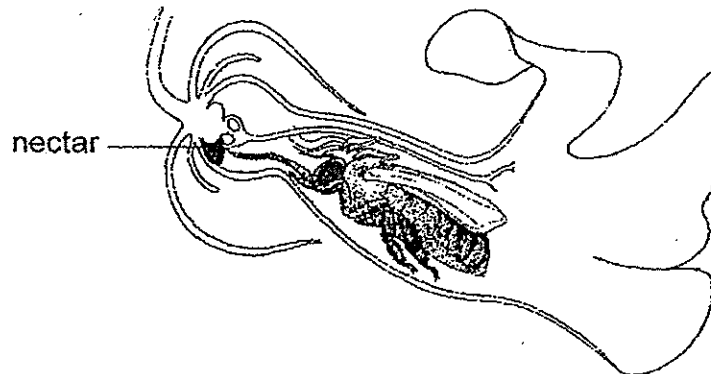
MARKS	
40	

**Section B: (40marks)**

Write your answers to question 31 to 44.

The number of marks available is shown in brackets [ ] at the end of each question or part question.

31. Many insects visit flowers and many of them helps in the pollination of flowers. The diagram below shows a flower containing nectar and a bee that visits the flower for its nectar.



- (a) State two possible features of the flower that attract the bee to it. [2]

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- (b) Explain clearly how the bee helps in the process of pollination. [1]

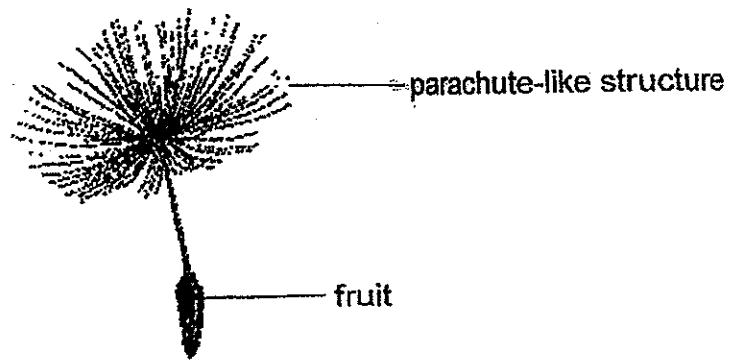
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Score	3
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32. As Mother was cleaning the house, she found a tiny fruit on the floor. She was very surprised as she did not have such a plant in her garden.

The diagram below shows the fruit that Mother had found.



(a) How do you think the fruit was dispersed?

[1]

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(b) Explain how the parachute-like structure helps the fruit to be dispersed. [1]

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Score	2
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33. Mike wanted to find out if the temperature of the surrounding affects the rate of evaporation of water. He prepared a few containers as shown in the table below for his experiment.

Study the table below.

Container	Volume of water used (ml)	Surrounding temperature (°C)	Presence of wind
E	60	20	no wind
F	60	20	strong wind
G	60	30	no wind
H	80	20	no wind
I	80	30	strong wind

(a) Which of the containers, E, F, G, H and I, should he use for his experiment? [1]

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(b) In order to carry out a fair test, list two other variables, other than the volume of water used and the presence of wind, that Mike needs to keep constant during the experiment. [2]

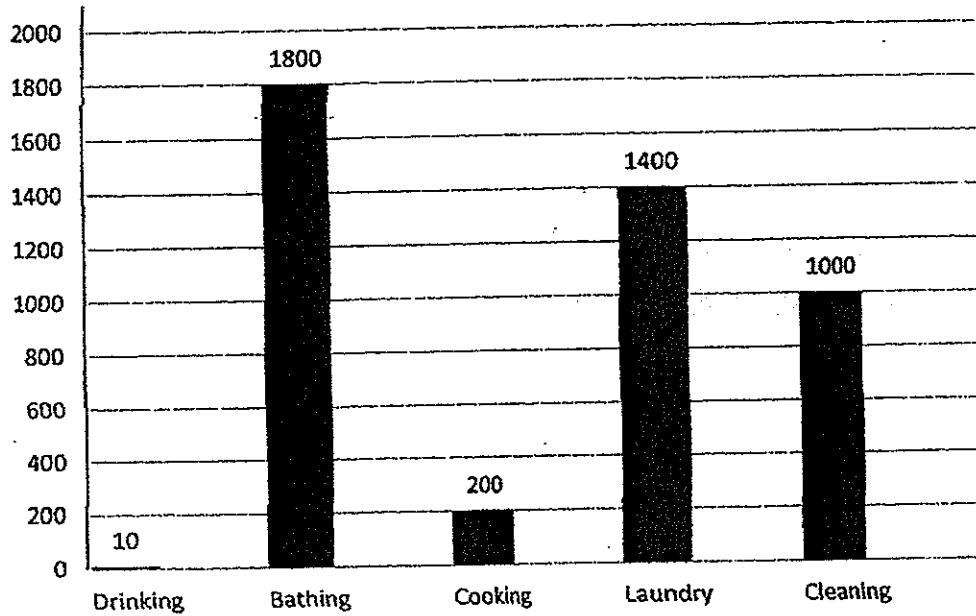
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Score	3
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34. The bar graph below shows the amount of water used by Mr Kumar, his wife and his son in a day.



(a) Based on the activities shown in the graph above, list two ways that Mr Kumar's family can do to reduce the amount of water used in a day. [2]

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(b) Explain why do we need to conserve water although three-quarter of the Earth is covered with water. [1]

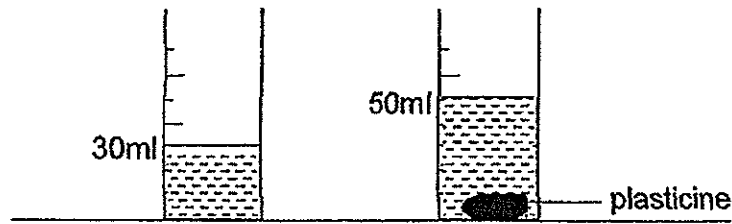
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Score	3
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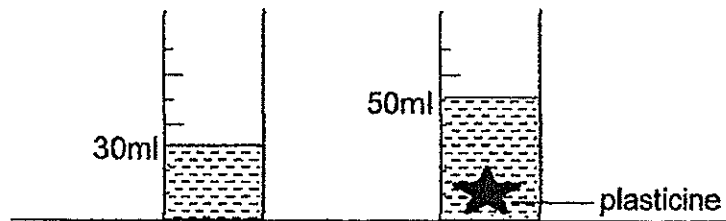
35. A measuring cylinder is filled with 30 ml of water. A piece of plasticine is placed into the measuring cylinder. The water level rises to 50ml.



(a) Based on the observation above, what can you infer about the property of the piece of plasticine? [1]

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(b) The plasticine is taken out of the measuring cylinder and moulded into a different shape. It is placed back into the measuring cylinder of water and the water level rises to 50ml again as shown in the diagram below.

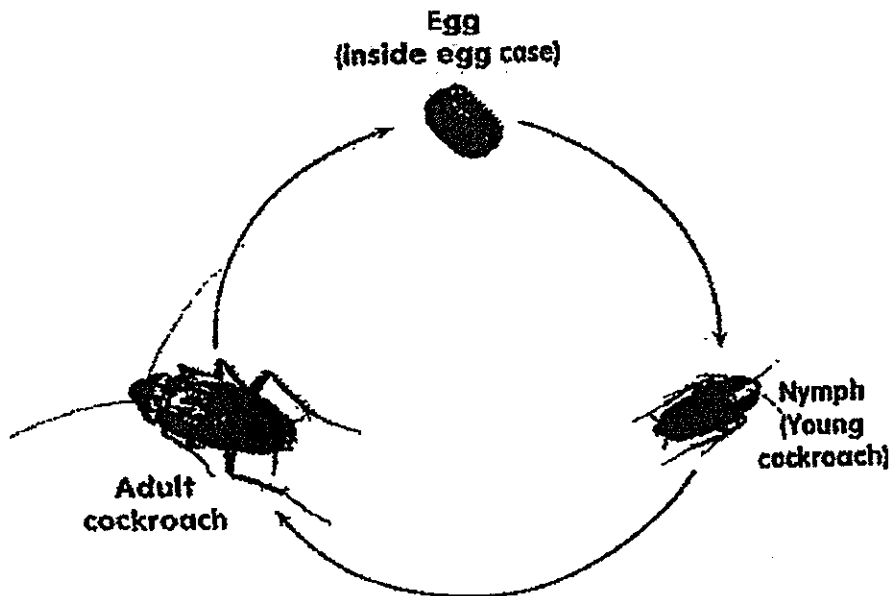


What property of plasticine does this experiment show? [1]

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Score	2
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36. The diagram below shows the stages in the life cycle of a cockroach.



(a) At which stage, nymph or adult, is the cockroach more difficult to kill? Explain your answer. [1]

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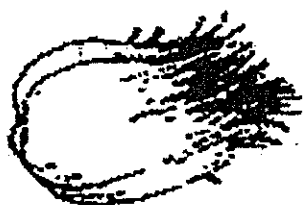
(b) A cockroach has a 3-stage life cycle while a butterfly has a 4-stage life cycle. Other than the number of stages in the life cycle, state another difference between the life cycle of a cockroach and a butterfly. [1]

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Score	2
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37. Study the diagram of fruit H below.



Fruit H



Cross-section of Fruit H

fibrous husk

Mr Lim observed Fruit H floating in the water near the seashore.

(a) Explain why the fruit can float in water.

[1]

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Mr Lim took Fruit H home and planted its seed in his garden. He watered it everyday and the seed also received a good amount of sunshine.

(b) Was the seed of Fruit H able to germinate? Explain your answer.

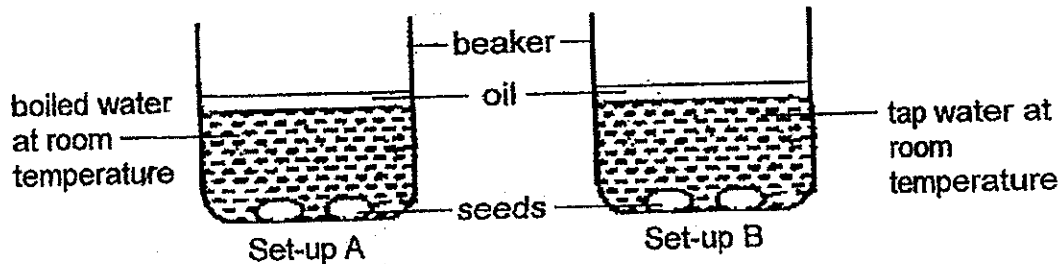
[1]

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Score	2
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38. A group of students conducted an experiment with the following set-ups. The water in Set-up A was boiled to remove the oxygen in the water.



(a) What was the aim of the experiment? [1]

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(b) Which set-up, A or B, would the students expect the seeds to germinate? Explain your answer.

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(c) Besides preventing water from evaporating, state another purpose of the layer of oil. [1]

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(d) What change(s) should the students make to the set-up(s) if they want to find out if water is needed for seed germination? [1]

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Score	4
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39. Some plants produce edible fruits with tiny seeds. These seeds can be swallowed by birds that feed on the fruits of these plants. The undigested seeds are passed out in the birds' droppings. Hence the birds help in the dispersal of the seeds of these plants.

(a) State two advantages of this method of seed dispersal. [2]

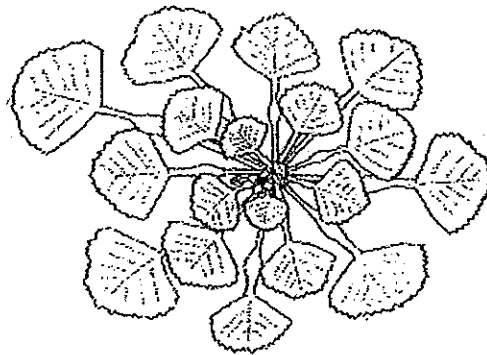
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Plants need sunlight to make food in order to grow. The picture below shows a plant from the top view.



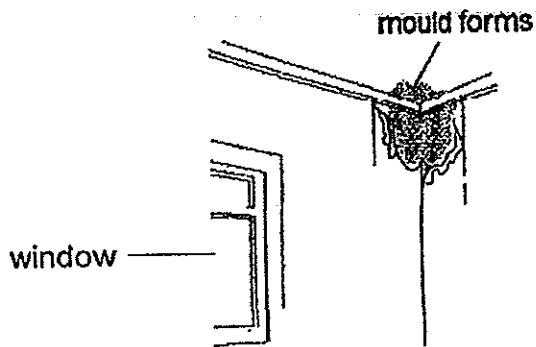
(b) Explain why the leaves of the plant are arranged in this way. [1]

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Score	3
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40. Ali and his family members shower with warm water every day. One day, Ali is shocked to notice a patch of mould growing at the top corner of the bathroom wall as shown in the diagram below.



- (a) State the conditions present in the bathroom that make the growth of mould possible. [1]

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- (b) Explain how the mould starts to form at the top corner of the bathroom wall. [1]

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- (c) Explain how taking warm showers everyday causes the top corner of the bathroom wall to be moist. [2]

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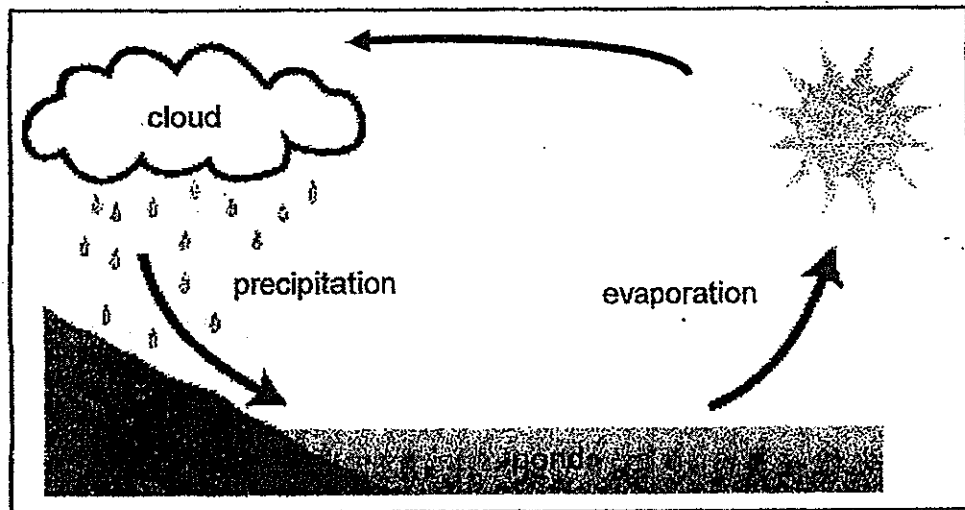
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Score	4
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41. Study the diagram of the water cycle below.



The land and pond shown in the diagram were owned by Farmer Brown. Farmer Brown used water from the pond to water his plants every day. There were also some water plants and animals living in the pond.

Recently, there was a prolonged period of drought. There was no rainfall for a period of two months. Farmer Brown noticed that the water plants and animals living in the pond decreased in number.

(a) What do you think happened to the amount of water in the pond?  
Explain why. [2]

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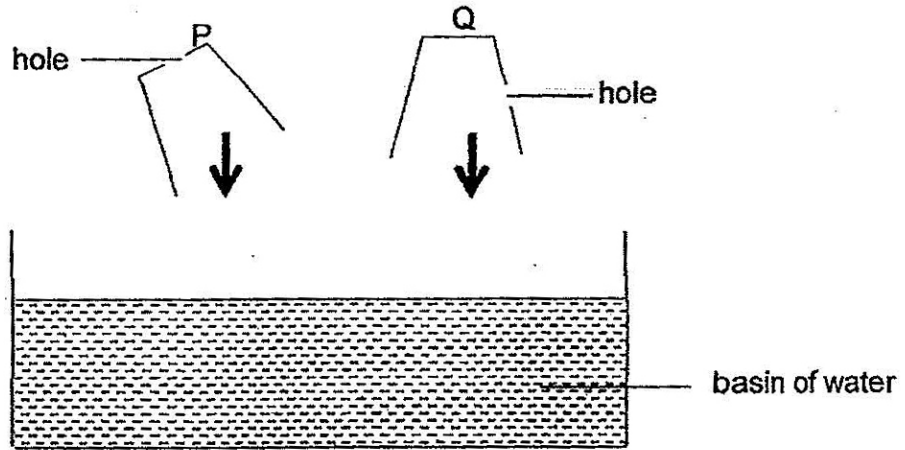
(b) Based on the diagram above, explain why the water cycle is important to the living things in the pond. [1]

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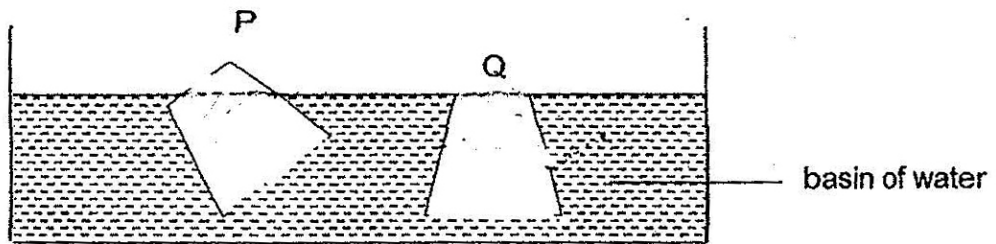
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Score	3
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42. Paul prepared two cups with a hole in each of them and a basin of water. He pushed each cup down in the direction indicated by the arrows.



(a) In the diagram below, draw the water levels for cups P and Q respectively



(b) Explain the changes to the water levels in each cup.

[2]

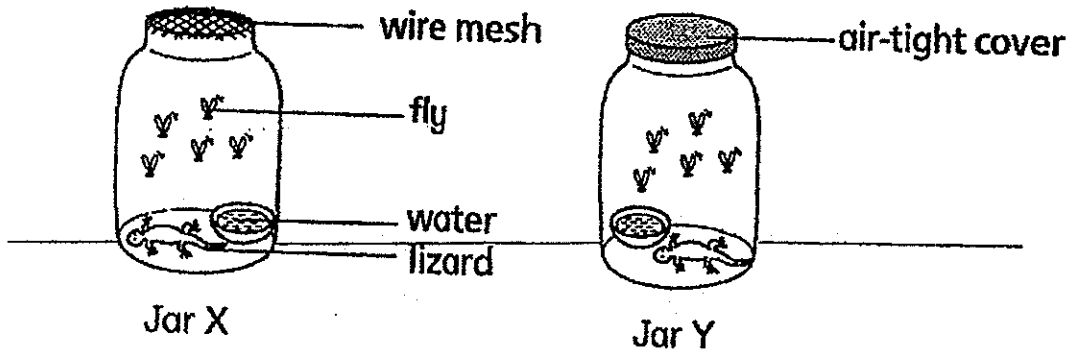
Cup P: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Cup Q: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Score	$\frac{3}{2}$
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43. Study the set-ups below.



(a) After a few hours, the lizard in Jar Y dies. Explain why. [1]

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(b) After a few days, there were no more flies left in Jar X and the lizard was dead too. What can you conclude from this observation about living things? [1]

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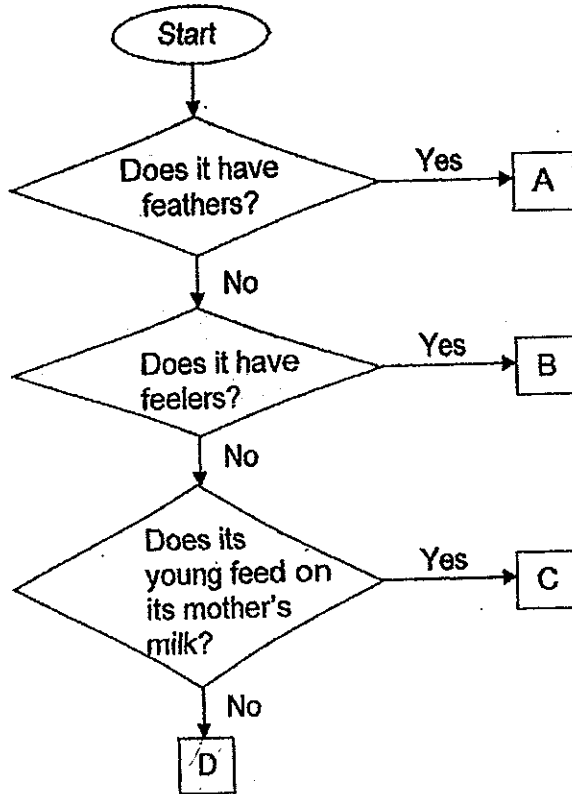
(c) Suggest a way to keep the lizard in Jar X alive for a longer period of time. [1]

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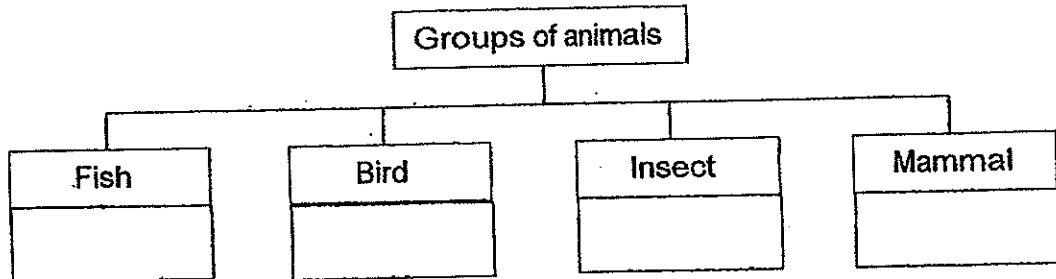
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Score	3
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44. Study the flow chart below.



(a) A, B, C and D represent four different types of animals. Classify the animals under the headings by writing the letters A, B, C and D, in the boxes provided below. [2]



(b) Some animals lay many eggs at one time. What is the advantage of laying many eggs at one time? [1]

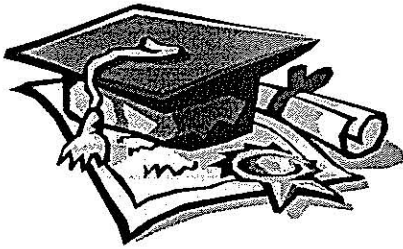
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(c) Which two groups of animals are most likely to lay many eggs at one time? [1]

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# ANSWER SHEET

**EXAM PAPER 2014**  
**SCHOOL : NAN HUA**  
**PRIMARY : P5**  
**SUBJECT : SCIENCE**  
**TERM : CA1**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
2	2	2	2	1	3	4	1	4	2	3	1	3	3	1	1	3

Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30
2	4	2	1	1	3	4	2	1	1	1	2	1

**31)a)It is brightly coloured and scented.**

**b)When the bee went into the flower to collect nectar, pollen grains will stick onto the bee. When the bee goes to another flower to collect nectar, the pollen grains will drop onto the stigma of another flower.**

**32)a)The fruit was dispersed by wind.**

**b)The parachute-like structure helps the fruit to stay afloat in the air for a longer period of time so the fruit can be dispersed further away from parent plant.**

**33)a)Containers E and G.**

- b)1)Exposed surface area of container.**
- 2)Temperature of water at the beginning.**
- 3)Type of beaker C same material.**
- 4)exposed surface area of the opening of the container.**

34)a)They can take a shower instead of a bath and they can use a rag to do cleaning instead of using a hose.

b)Only one percent of the world's water is clean and able to use.

35)a)Plasticine has a volume.

b)Plasticine has a definite volume.

36)a)Adult. The adult cockroach can fly while the nymph cannot so the adult cockroach can escape more easily.

b)The young of the cockroach resembles its adult while the young of the butterfly does not resemble its adult.

37)a)The fruit has a fibrous husk so it can trap air making the fruit float on water.

b)Yes, the seed has warmth water and oxygen to germinate.

38)a)The students wanted to find out if oxygen is needed for seed germination.

b)Set-up B. There is dissolved oxygen in the tap water.

c)To present oxygen from the air to enter in the water.

d)They should remove the water in set-up A and oil from set-up A and B.

39)a)The decomposed dropping would provide nutrients for the young seedling. The seed can be dispersed further away from the parent plant to reduce competition for light, space, water and nutrients.

b)The leaves will have more exposed surface area to capture more sunlight to make food.

40)a)Warmth, moist and oxygen.

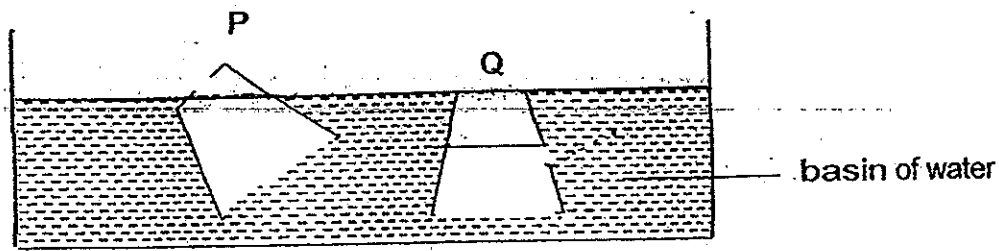
b)The spores in the air may land at the corner. Then, when the conditions are suitable, the mould will germinate.

c)When the water gain heat, it will evaporate. The warm water vapour would come into contact with the cooler surface of the bath room, Then, the warm water vapour will lose heat and condense of the bath room moist.

41)a)The water in the pond decreases in volume. The water in the pond has evaporated but there is no cool condition so no water vapour has condensed into water droplets has no rain is returned to the pond.

b)The water cycle provides a constant supply of fresh water for the living things in the pond.

42)a)



42)b) Cup P: The air in the cup escaped from the hole made at the top so the cup allows the water to occupy the space previously occupied by air.

Cup Q: When water entered cup Q, some of the air escapes through the hole however the air in the cup has trapped, occupying the space above the hole level, thus the water level in the cup stayed at the hole level.

43)a) The cover of Jar Y is air-tight, so air cannot enter the Jar after some time the air in Jar Y will be used up by the lizard, hence there is no oxygen for the lizard to survive.

b) Living things need food to survive.

c) Add more flies into Jar X.

44)a) D, A, B, C

b) By laying many increases eggs at one time, it increases the chance of more of the eggs being hatched and developed into adults.

c) B and D.

