



**NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 1 2015
PRIMARY FIVE
SCIENCE**

Name : _____.()

Class : Primary 5 / ____

Date : 26 February 2015

Duration : 1 h 45 min

MARKS	
Sect A:	/ 60
Sect B:	/ 40
Total :	/ 100

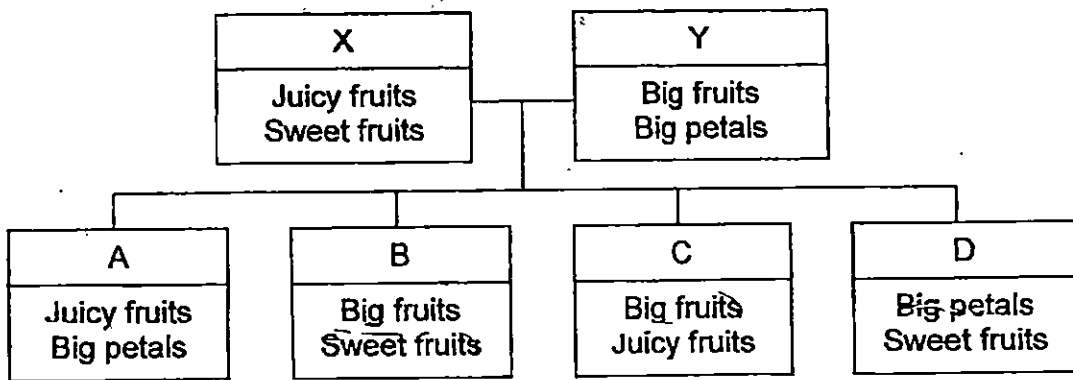
Section A: (30 x 2marks = 60marks)

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. What is the importance of reproduction?

- (1) Organisms need to reproduce to ensure continuity of its own kind.
- (2) Organisms need to disperse its young to ensure continuity of its own kind.
- (3) Organisms need to move to a new area to ensure continuity of its own kind.
- (4) Organisms need to prevent competition with its young for air, food and water to ensure continuity of its own kind.

2. The diagram below shows the characteristics of parent plants, X and Y.

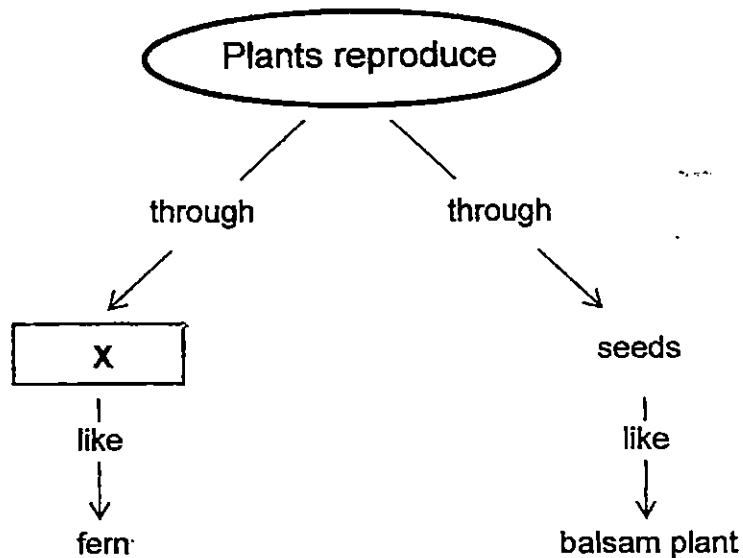


A, B, C and D are offsprings of Plant X and Plant Y. When A, B, C and D grew into adult plants, two of them were used to breed a new young plant V, which has big, sweet and juicy fruits.

Which of the two plants A, B, C and D are parents of V?

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

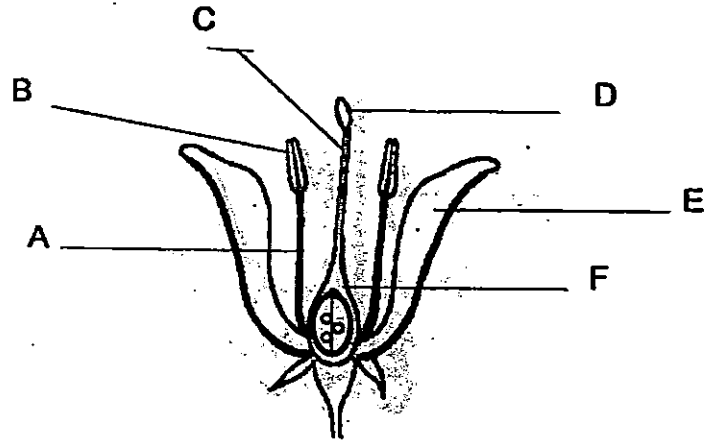
3. Study the chart below.



Which of the following can X be?

- (1) seeds
- (2) mould
- (3) spores
- (4) pollen grains

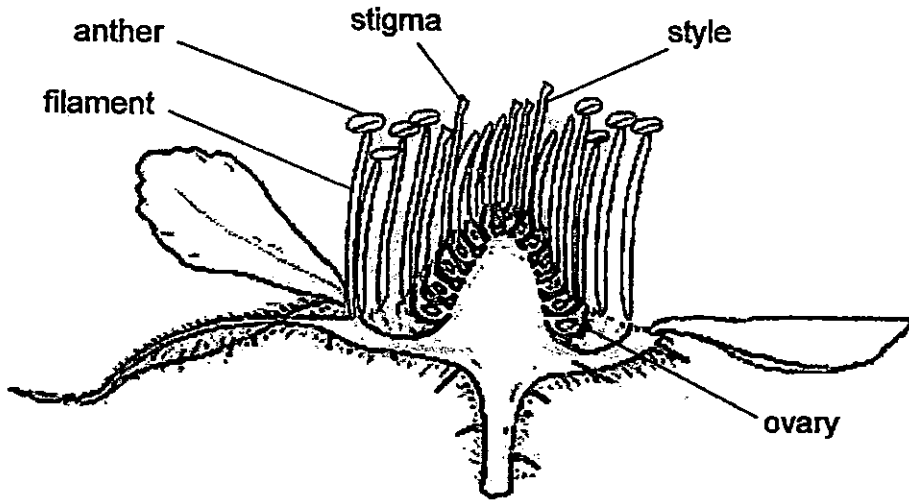
4. The diagram below shows the cross-section of a flower.



Which are the female reproductive parts of the flower?

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

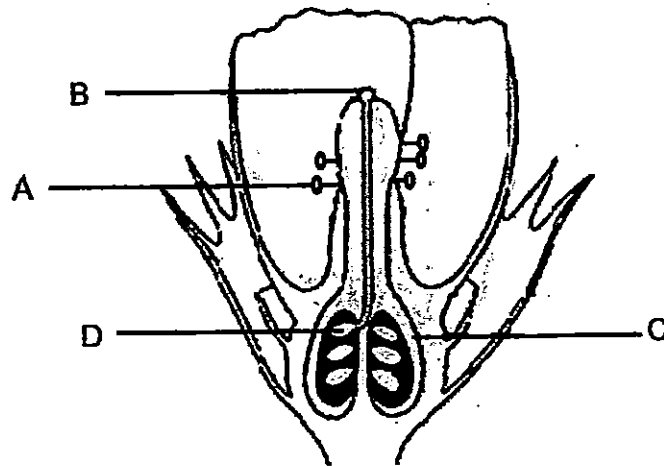
5. The diagram below shows the cross-section of a raspberry flower.



For fertilisation to occur, what is the path taken by the male sex cell after pollination of the flower?

- | | | | | |
|-----------|---|--------|---|---------------|
| 1) anther | → | stigma | | |
| 2) stigma | → | style | | |
| 3) stigma | → | style | → | ovary |
| 4) anther | → | stigma | → | style → ovary |

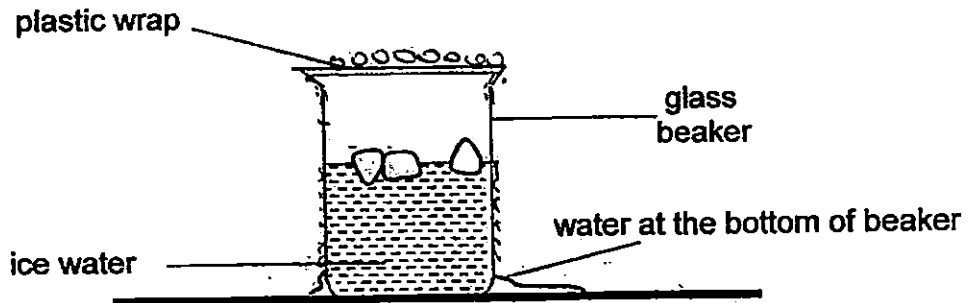
6. The diagram shows a cross-section of a flower.



Based on the diagram, in which of the labelled parts will fertilization take place?

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

7. A beaker of ice water was left on the table in room temperature.

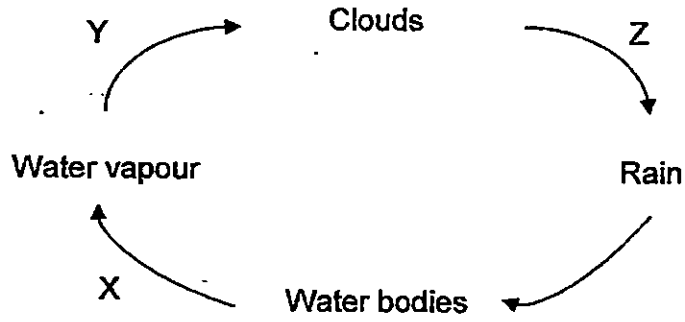


Which of the following statement(s) is/are correct?

- A The water in the glass beaker will evaporate after some time.
- B Water droplets will be formed on the underside of the plastic wrap.
- C The formation of water at the bottom of the beaker needs water vapour in the surrounding air.

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

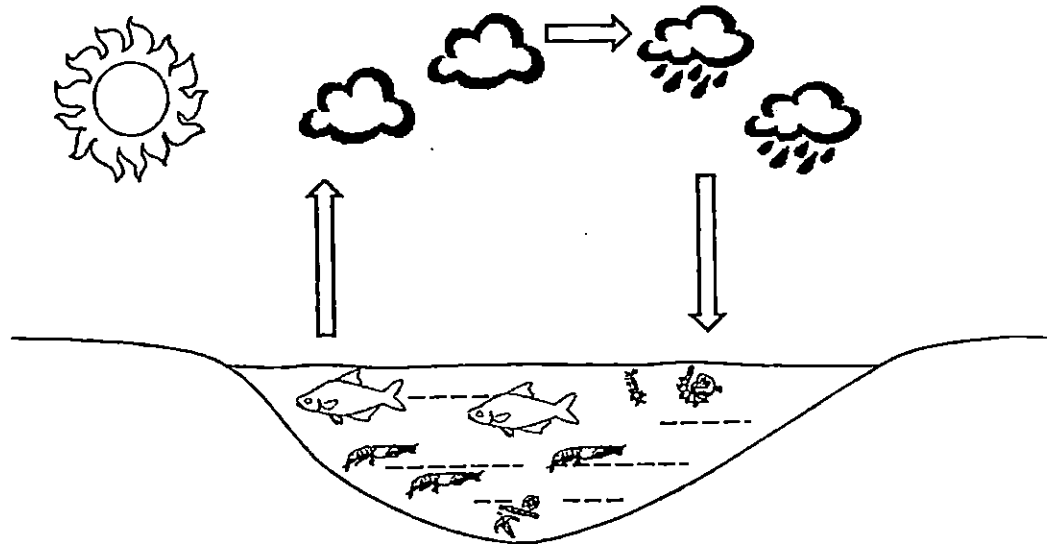
8. The diagram below shows the changes in state in the different stages in the water cycle.



Which of the following correctly shows what takes place at X, Y and Z?

	X	Y	Z
(1)	Gain heat	Lose heat	Change of state
(2)	Gain heat	Lose heat	No change of state
(3)	Lose heat	Gain heat	Change of state
(4)	Lose heat	Gain heat	No change of state

9. The diagram shows the water cycle.



Why is the water cycle important to the aquatic organisms in the pond?

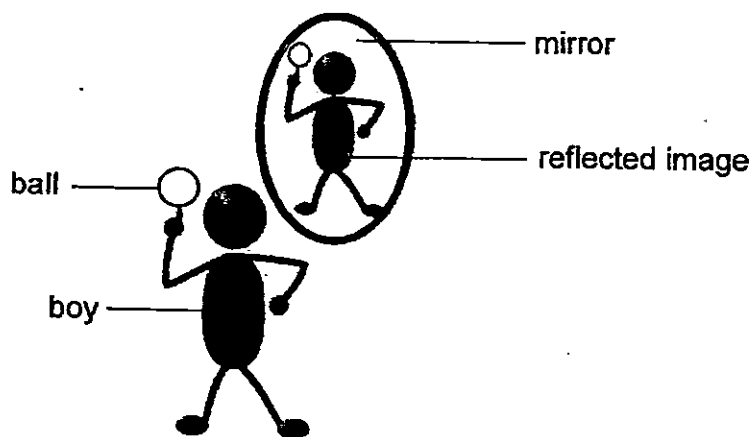
- (1) It provides a continuous supply of water for the organisms to live in.
- (2) It provides a continuous supply of water to keep the body of all the organisms wet.
- (3) It provides a continuous supply of water to keep temperature of the pond constant.
- (4) It provides a continuous supply of water for the organisms to keep their body temperature down.

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

- A Use a water-efficient washing machine to do laundry.
- B Watering plants at noon instead of early morning hours.
- C Use a toilet system that has half-flush and full-flush options.

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

11. Study the diagram below.

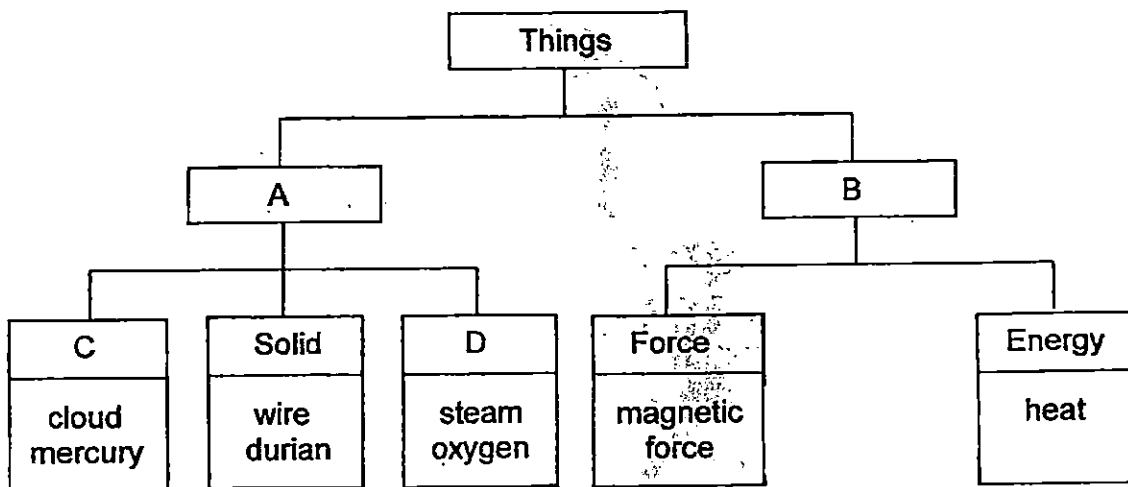


Which of the items below is/are not a matter?

- A boy
- B ball
- C mirror
- D reflected image

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

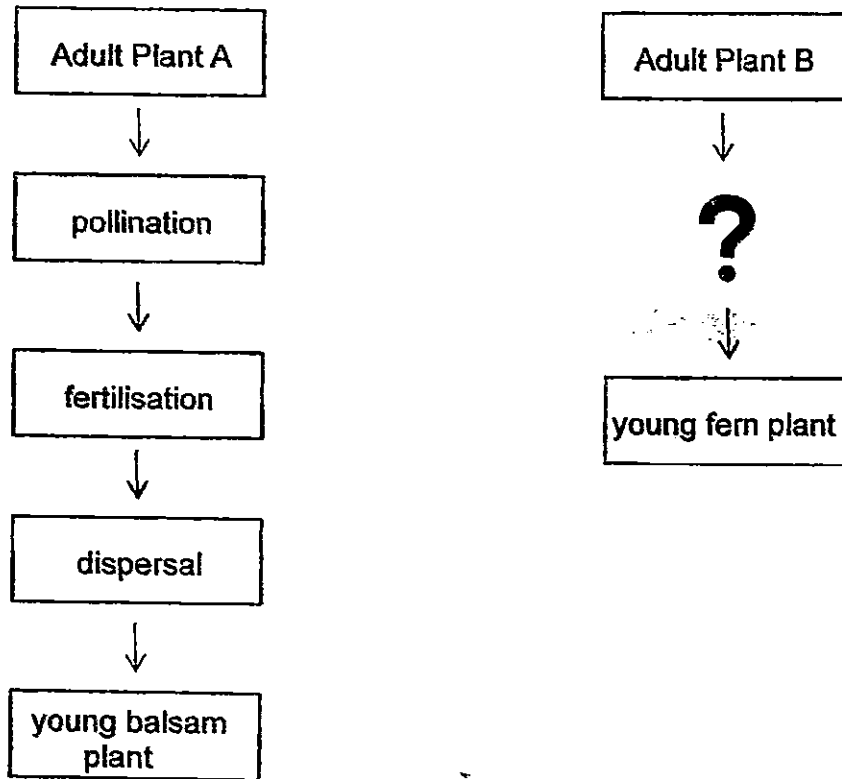
12. Study the classification chart below.



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

	A	B	C	D
(1)	Matter	Non-living	Gas	Liquid
(2)	Living	Non-living	Liquid	Air
(3)	Matter	Non matter	Water	Air
(4)	Matter	Non matter	Liquid	Gas

13. The diagrams show the reproduction processes of two different plants. The reproduction processes are all stated for Plant A.



Which one of the following shows the missing reproduction process(es) of the fern plant?

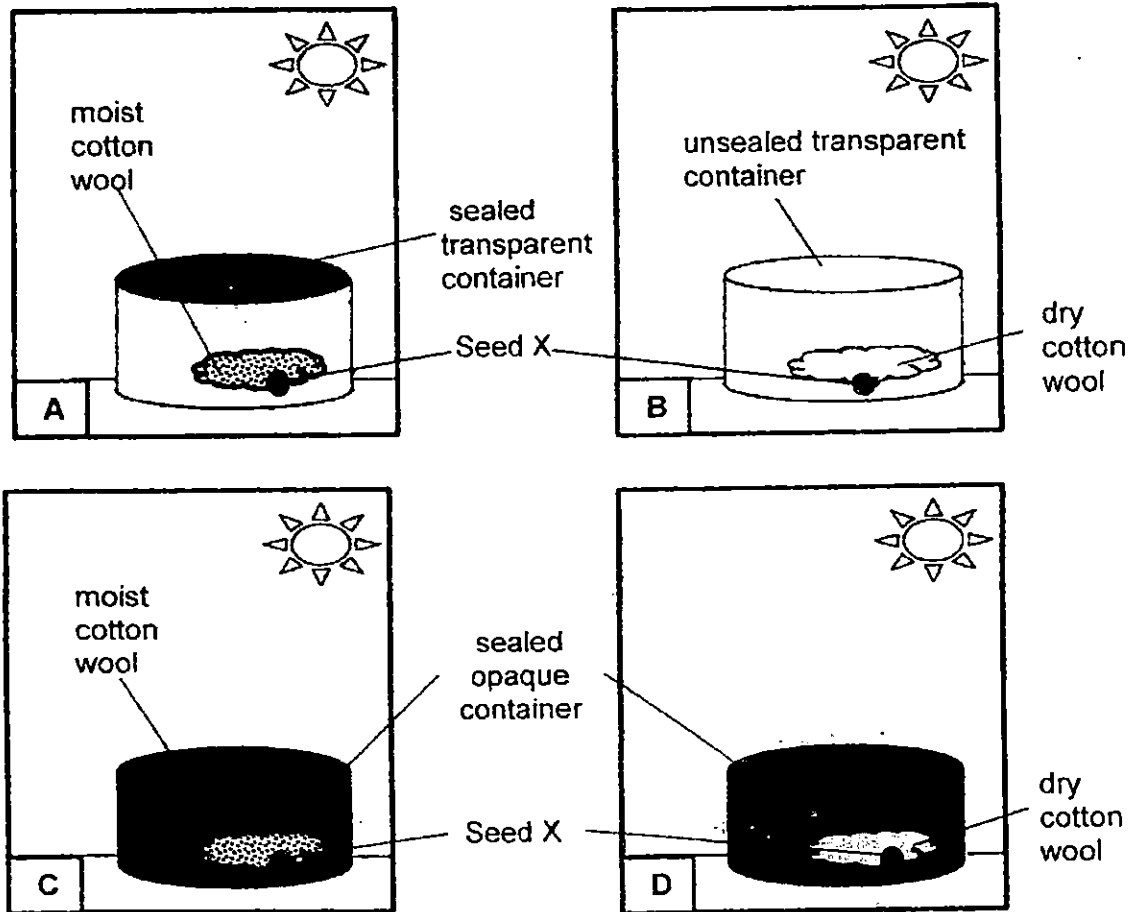
- (1) dispersal
- (2) fertilisation → dispersal
- (3) dispersal → fertilisation
- (4) pollination → fertilisation → dispersal

14. Which of the following statement(s) about germination is/are correct?

- A When a seed starts to germinate, the shoot appears first.
- B The baby plant is found enclosed between the seed leaves.
- C A seed left in the freezer can remain inactive until the conditions are favourable for germination.

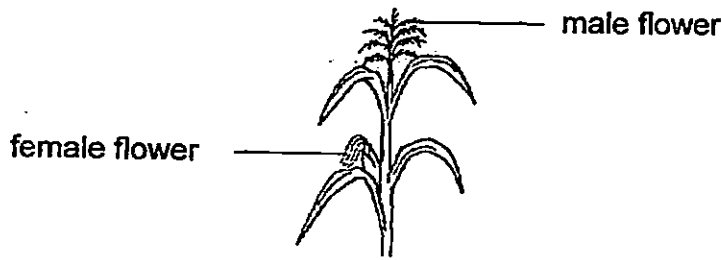
- (1) B only
- (2) A and C only
- (3) B and C only
- (4) A, B and C

15. Priya wants to determine if sunlight is essential for the germination of seeds. Of the following four setups, which two should she use to conduct her experiment?

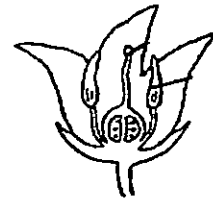


- 1) Setups A and B
- 2) Setups A and C
- 3) Setups B and C
- 4) Setups B and D

16. Four pupils observed two different plants in a garden. They made some statements on the flowers of both plants. The diagrams below show the flowers of the two different plants.



Flowers of Plant G



Flower of Plant H

- Alice All three flowers have both male and female parts on it.
Bella Only the female flower of Plant G and the flower of Plant H will develop into fruits.
Celine Fertilisation is required in both the female flower of Plant G and the flower of Plant H before seeds can develop.
Dave Since Plant G has both the male and female flowers on it, there is no need for pollination.

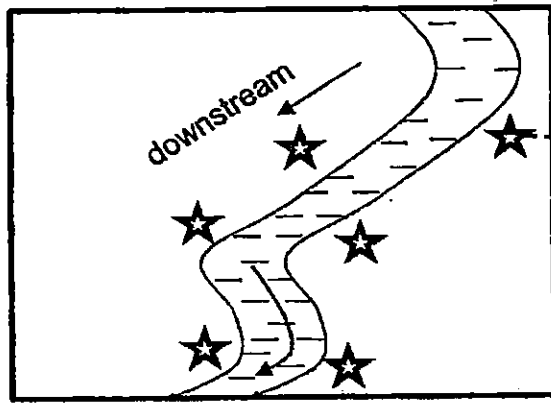
Which pupil(s) made a correct statement?


- 1) Alice only
 - 2) Bella and Celine only
 - 3) Celine and Dave only
 - 4) Bella, Celine and Dave only
17. The female flesh flies are commonly found on dead bodies of animals. Some flowers depend on these female flesh flies for pollination.

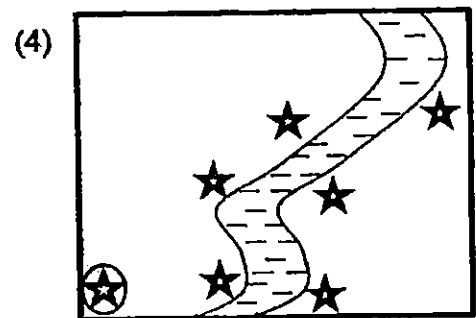
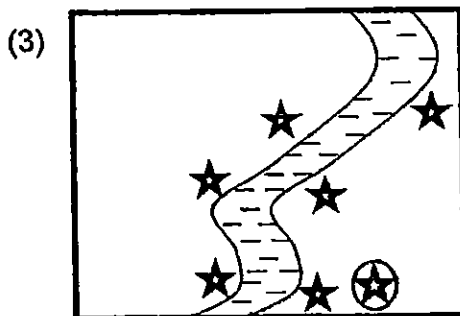
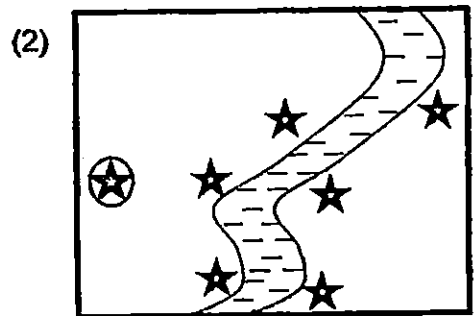
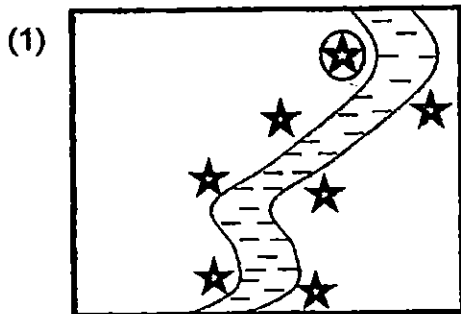
What could most likely be the characteristics of such flowers?

- (1) They have small flowers.
- (2) They are sweet-smelling.
- (3) They do not have any scent.
- (4) They have strong and unpleasant scent.

18. The diagram shows part of an island where the seedlings of a type of plant are growing.



Which one of the following correctly shows the location of the parent plant, , of the seedlings?

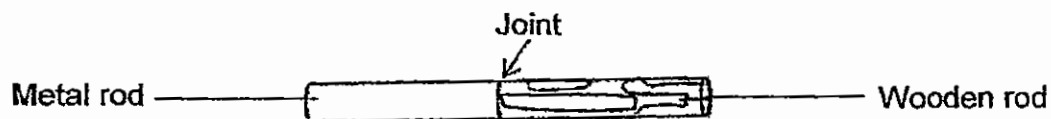


19. A type of flower only blooms at night. Some of them only bloom once a year for a single night. The night-blooming flower has a distinct characteristic that ensures pollination will take place.

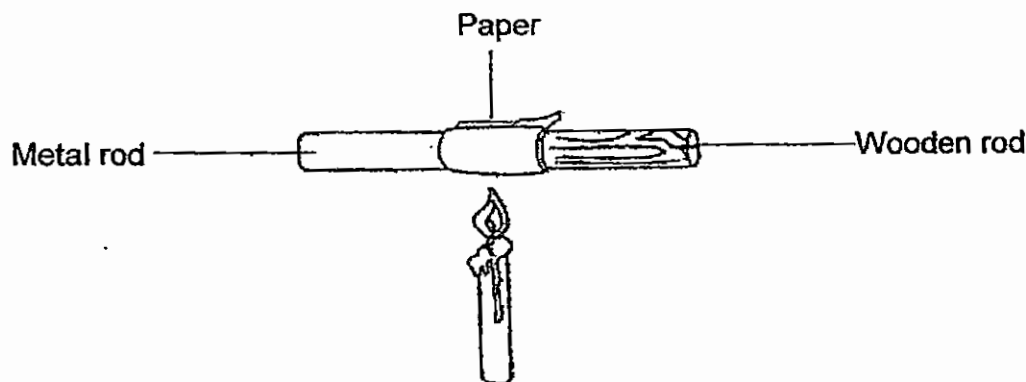
For the purpose of-pollination, which of the following characteristics of the night- blooming flower and its pollinators are correct?

	Characteristics of night-blooming flower	Characteristics of night-blooming pollinators
(1)	It is brightly-coloured	They are active at night
(2)	It has a strong scent	They are active at night
(3)	It has ^{is} dull-coloured	They are only active in the day
(4)	It has large amount of pollen	They have keen sense of smell

20. Sally joined a metal and a wooden rod together.



She then wrapped a piece of paper around the section where the 2 rods were joined as shown in the diagram below.

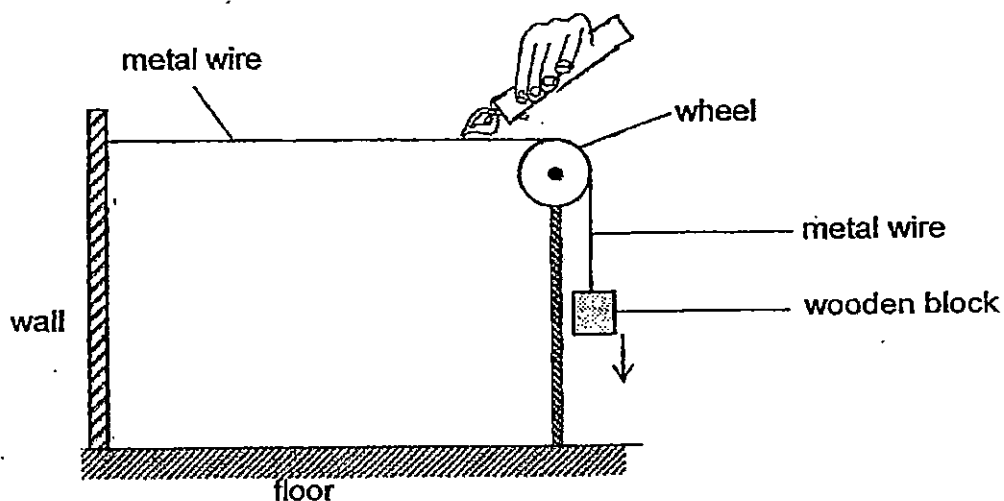


She heated the joint for a few seconds and found that the section of paper around the metal rod showed no sign of being burnt, but the section of paper around the wooden rod appeared slightly burnt.

Which one of the following can she conclude from the experiment?

- (1) Wood burns paper while metal does not.
- (2) Metal and wood burn at different temperatures.
- (3) Metal is able to conduct heat away faster than wood.
- (4) Metal conducts heat to wood and caused the wood to burn.

21. Ali set up an experiment as shown in the diagram below.



Ali heated the metal wire for 45 minutes. He observed that the wooden block moved a little in the direction of the arrow as shown above.

Which one of the statements is the correct explanation for his observation?

- (1) The metal wire lost heat and contracted.
- (2) The metal wire gained heat and expanded.
- (3) The wooden box lost heat and contracted.
- (4) The wooden box gained heat and expanded.

22. The table below shows the melting points and boiling points of 3 substances, X, Y and Z.

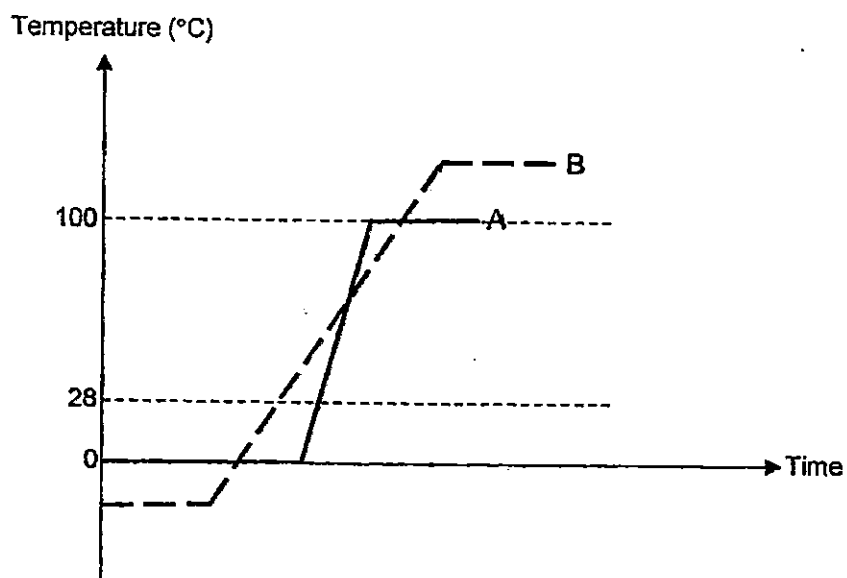
Substance	Melting point ($^{\circ}\text{C}$)	Boiling point ($^{\circ}\text{C}$)
X	7	51
Y	32	83
Z	75	114

Which of the following statements are correct?

- A Substance X is a gas at 60°C .
- B Substance Y is a liquid at 70°C .
- C Substance Z is a solid at 120°C
- D From melting point to boiling point, all 3 substances need to gain heat to change state.

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

23. Study the graph below carefully.



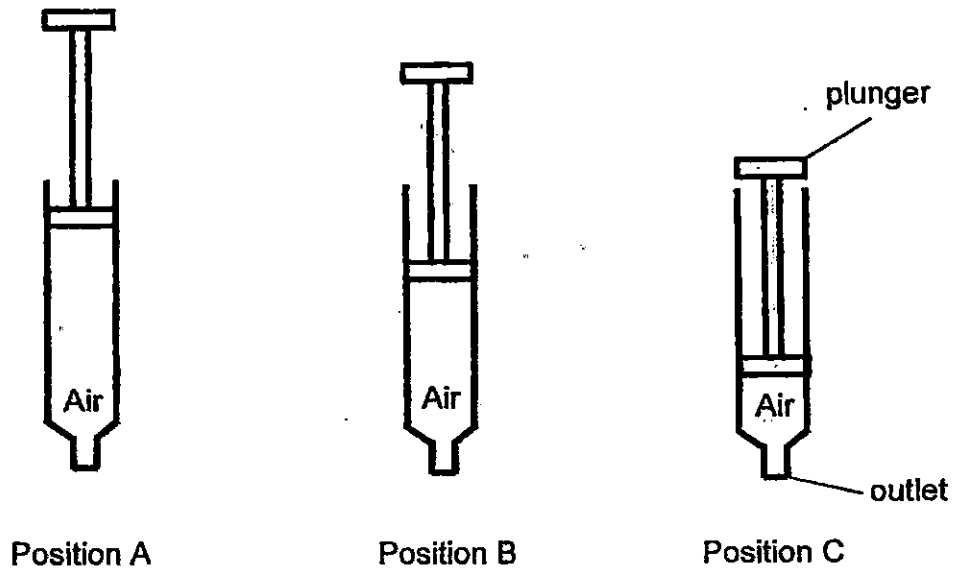
A and B are different types of substances.

Which of the following statement(s) about A and B is/are correct?

- A At 100°C, both Substance A and Substance B will become steam.
- B Substance B takes a longer time to boil compared to Substance A.
- C All of Substance A has to be in the liquid state before its temperature starts to rise.

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

24. A syringe is sealed at its outlet and its plunger is pushed towards the outlet to three different positions as shown in the diagrams below.



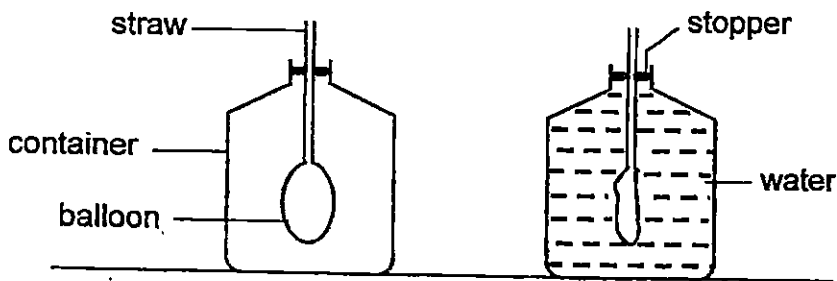
The syringe was weighed three times, each time with the plunger in the different positions as shown above.

Which of the following statements are **incorrect**?

- A The mass of the air in the syringe at position A is greatest.
- B The mass of the air in the syringe at position A, B and C is the same.
- C The volume of the air in the syringe at position C is the least.
- D The volume of the air in the syringe at position A, B and C is the same.

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

25. Ali prepared a set-up as shown below. He inflated the balloon through the straw. The balloon inflated slightly. Next, he released all the air in the balloon and filled the container with water before sealing it with a stopper. Then he blew air into the balloon again, but the balloon did not inflate at all.

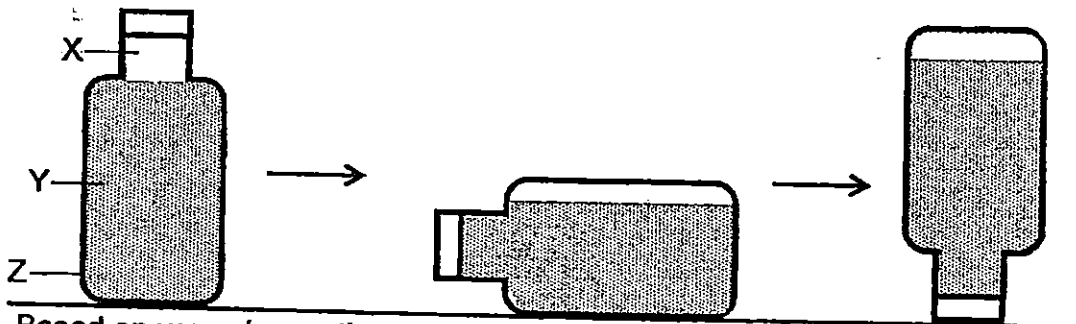


Based on his observation on the experiment, Ali made some notes. Which statement(s) is/are correct?

- A Air occupies space.
- B Water has a definite mass.
- C Water has a definite volume.

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

26. Matters X and Y are placed in Matter Z which is put on a table as shown in the diagram below. Matter Y does not fill up Z completely. The bottle is turned on its side and then inverted upside down consecutively without stopping.

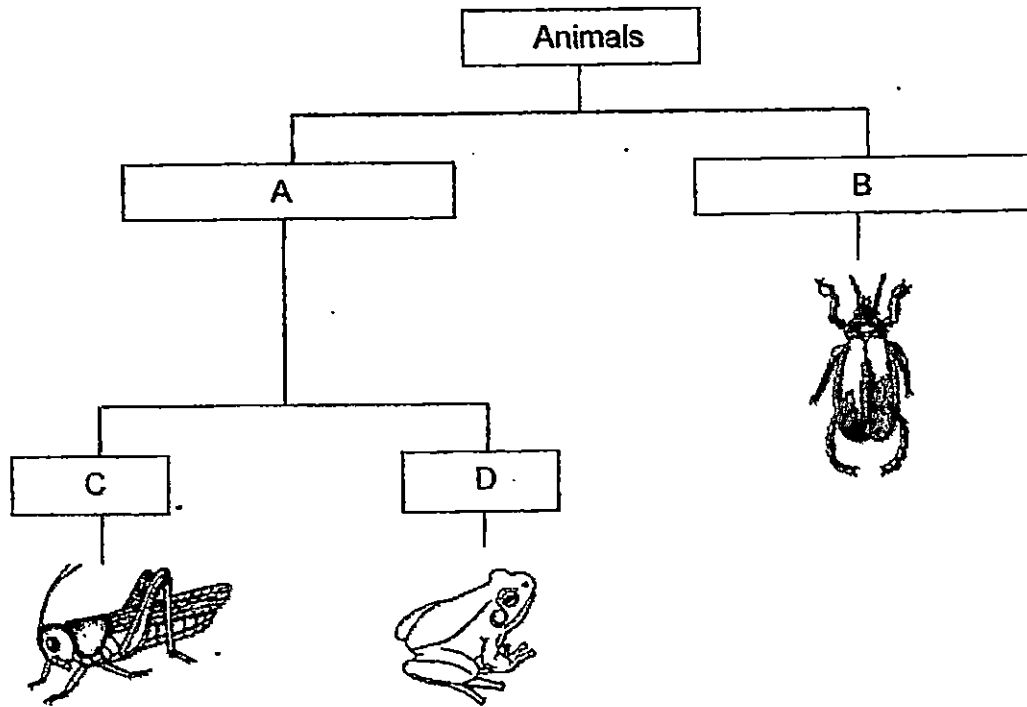


Based on your observation, which of the following statements are correct about X, Y and Z?

- A Matter X is ^{could be} a gas
- B Matter Y is ~~is~~ liquid.
- C Matter Z is definitely a solid.
- D Matter Y is at different states when Z is placed on its bottom, on its side or inverted upside down.

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

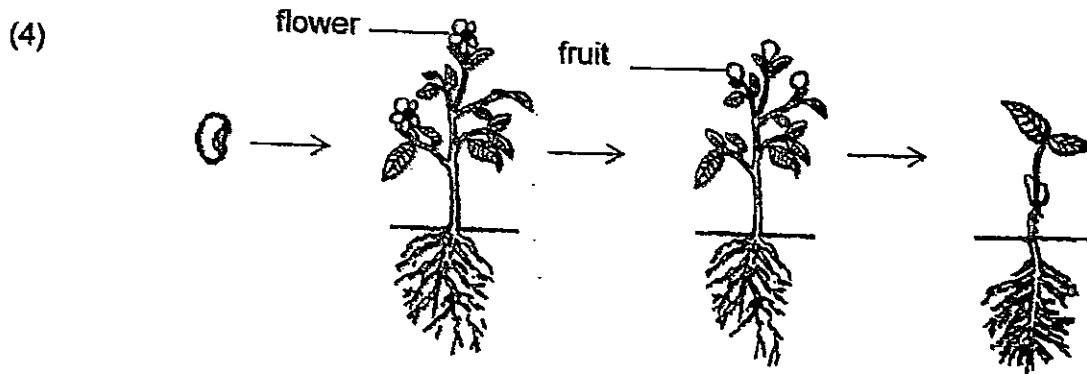
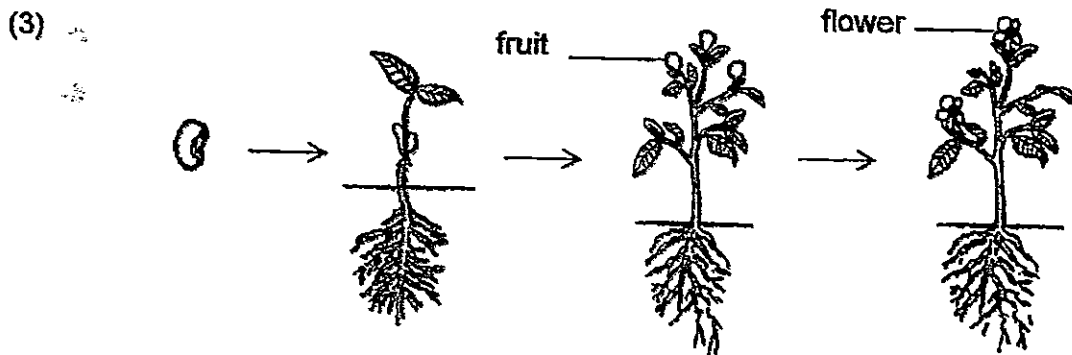
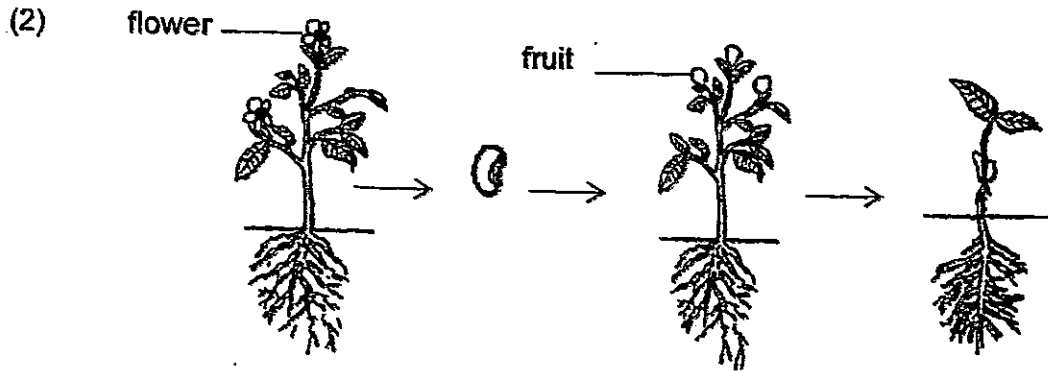
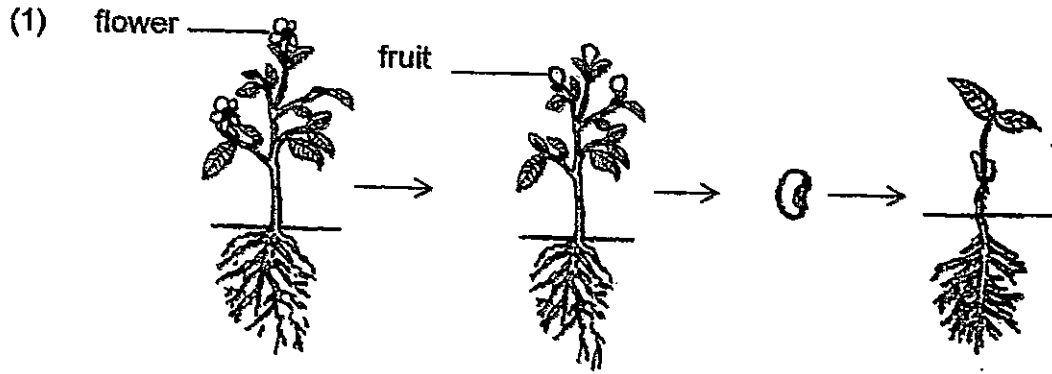
27. Study the classification chart below.



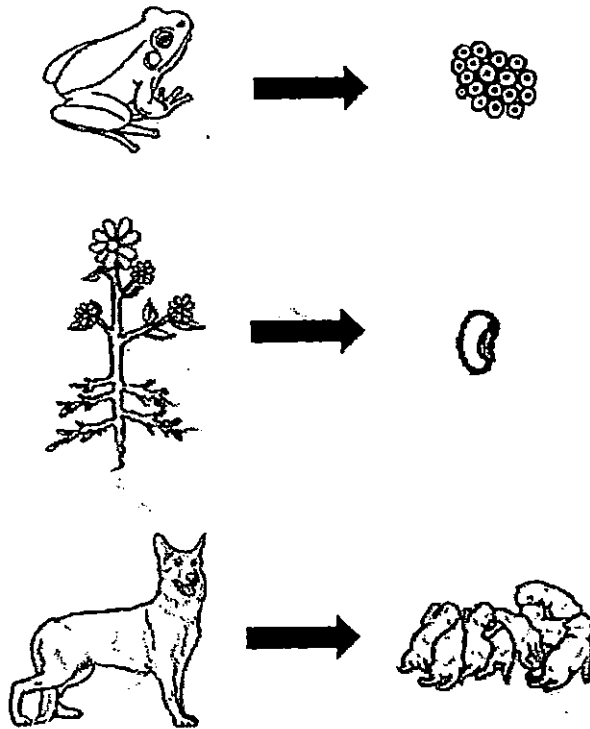
Which one of the following correctly represents A, B, C and D?

	A	B	C	D
(1)	4-stage life cycle	3-stage life cycle	Young resembles adult	Young does not resemble adult
(2)	3-stage life cycle	4-stage life cycle	Young resembles adult	Young does not resemble adult
(3)	4-stage life cycle	3-stage life cycle	Lays eggs	Lays eggs
(4)	4-stage life cycle	3-stage life cycle	Lives on land	Lives in water

28. Which one of the following diagrams shows the correct life cycle of a flowering plant?



29. Study the diagrams on the different types of living things.

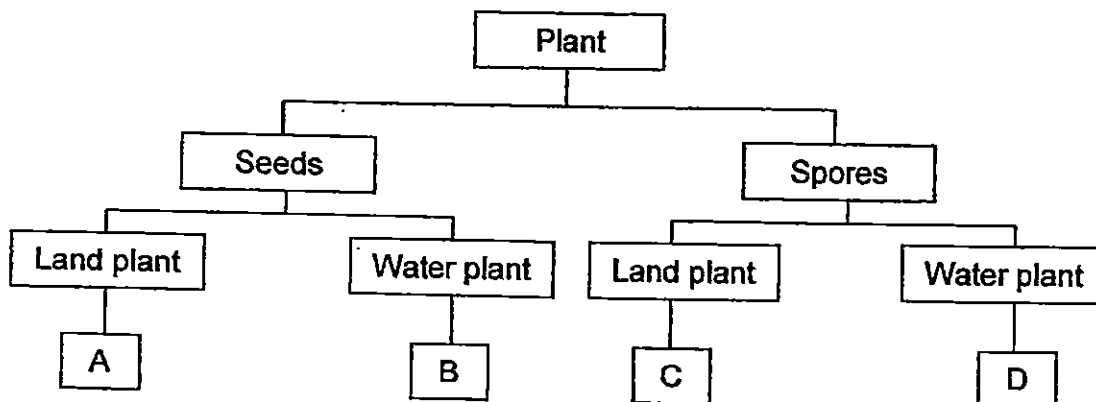


Based only on the diagrams above, what can living things do?

- (1) Living things can grow.
- (2) Living things can reproduce.
- (3) Living things can respond to changes.
- (4) Living things have 2-stage life cycle only.

30. The following table gives information on four plants, ▲, ●, ■ and ●. A tick (✓) shows that the plant has the characteristics.

Characteristics \ Plant	▲	●	■	●
Has flowers		✓		✓
Does not have flowers	✓		✓	
Fully submerged in water		✓	✓	



Based on the information above, which one of the following best represents the four plants ▲, ●, ■ and ● respectively?

	Plant ▲	Plant ●	Plant ■	Plant ●
(1)	A	D	B	C
(2)	B	C	A	D
(3)	C	B	D	A
(4)	D	A	C	B



NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 1 2015
PRIMARY FIVE
SCIENCE

Name : _____ ()

Class : Primary 5 / _____

MARKS	
40	

Section B: (40marks)

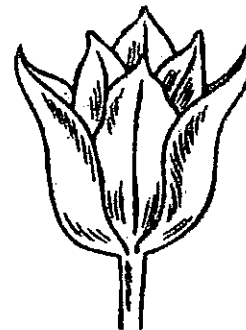
Write your answers to question 31 to 44.

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

31. Flowers are important for reproduction process. The diagrams below show two different types of full-bloomed flowers with the male and female reproductive parts still intact.



Flower A



Flower B

- (a) On flower A, circle and label the part of the flower where the pollen grain should land for pollination to take place. [1]

- (b) Name the agent of pollination for Flower A and Flower B. [2]

Flower A - _____

Flower B - _____

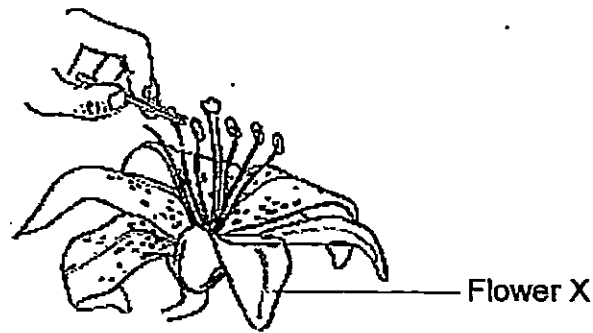
- (c) Based on the diagrams, state one difference between the two flowers that result in the way the flowers are pollinated. [1]

Score	4
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32. Mr Tan breeds flowers as a hobby. He decides to produce a new type of flower with Flower X and Flower Y.

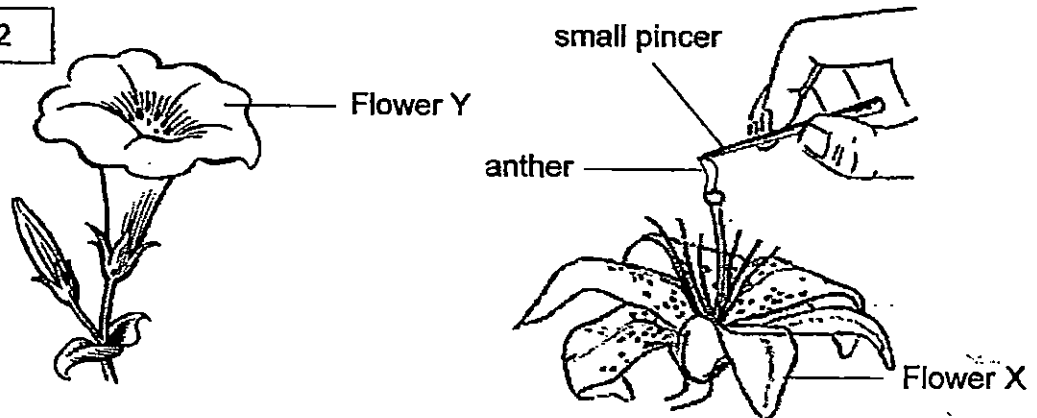
~~Flower X only has anthers on it.~~ The diagram below shows Mr Tan removing all the anthers on Flower X.

Step 1



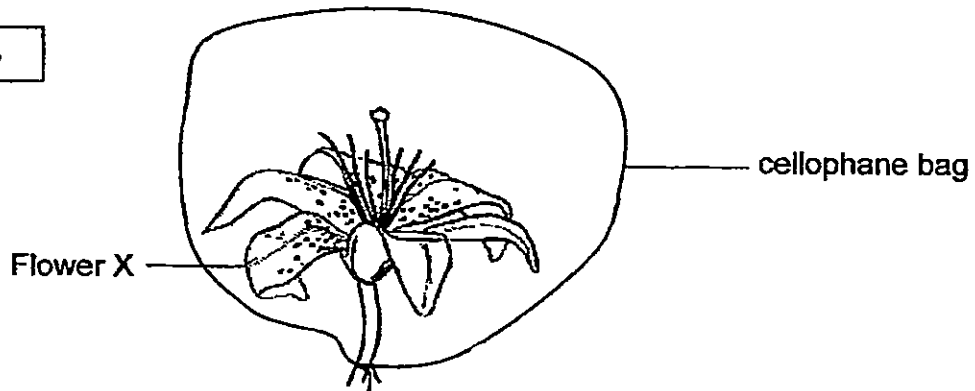
Next, he took a mature anther from Flower Y and brushed it on one part of Flower X.

Step 2



Lastly, he covered Flower X with a cellophane bag.

Step 3



(a) In step 1, give a reason why the anthers from Flower X need to be removed completely so that a new type of flower could be produced? [1]

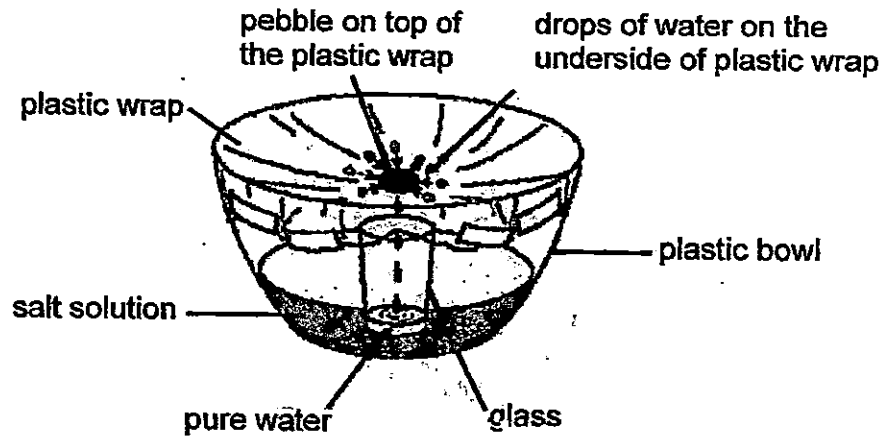
Score	1
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(b) Name the reproduction process that Mr Tan was trying to copy in step 2. [1]

(c) A few days after step 3, Mr Tan thought that the plant was dying as the base of the flower swelled, the male part and some of the female parts of the flower dried up. Will he be able to get the seeds of the new type of flower? Explain what had happened. [1]

Score	2
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33. Susan set up a model. She dissolved 3 grams of salt in 20 ml of tap water. The salt solution was placed in the plastic bowl. Then the set-up was left in a sunny location.



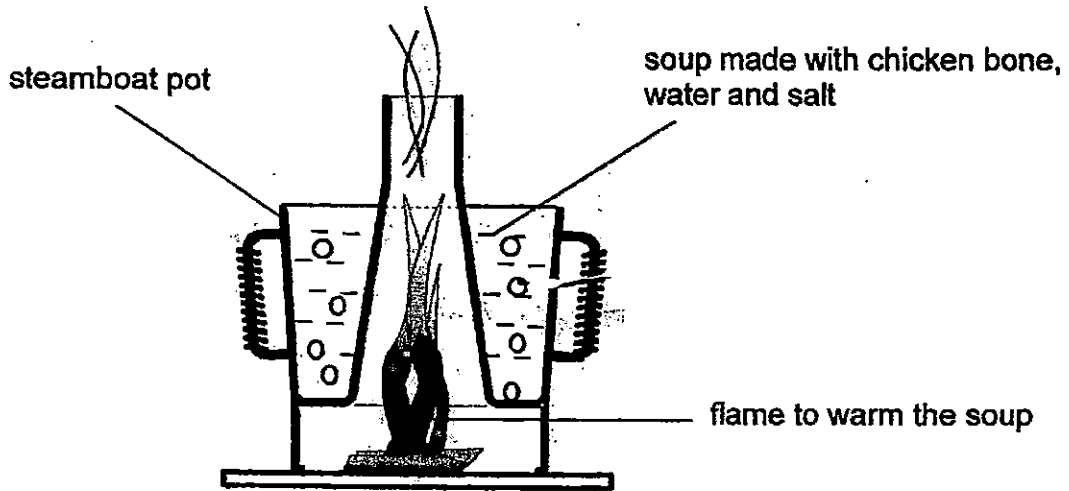
- (a) After several days, it was observed that only white powdery substance was left in the plastic bowl. Susan tasted the white powdery substance and found that it was salty. She also weighed the white powdery substance and found that it weighed 3 grams.

What had happened to the water in the plastic bowl?

[1]

Score	1
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Susan had steamboat with her family. After an hour through the meal, she realized that the amount of soup decreased and the soup was getting more and more salty.

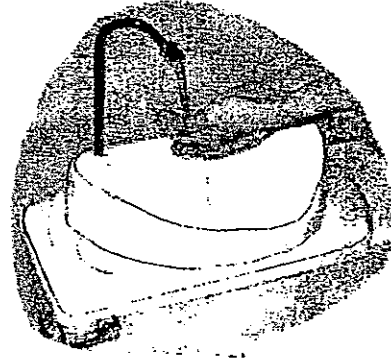


(b) Explain why the soup turned more salty

[2]

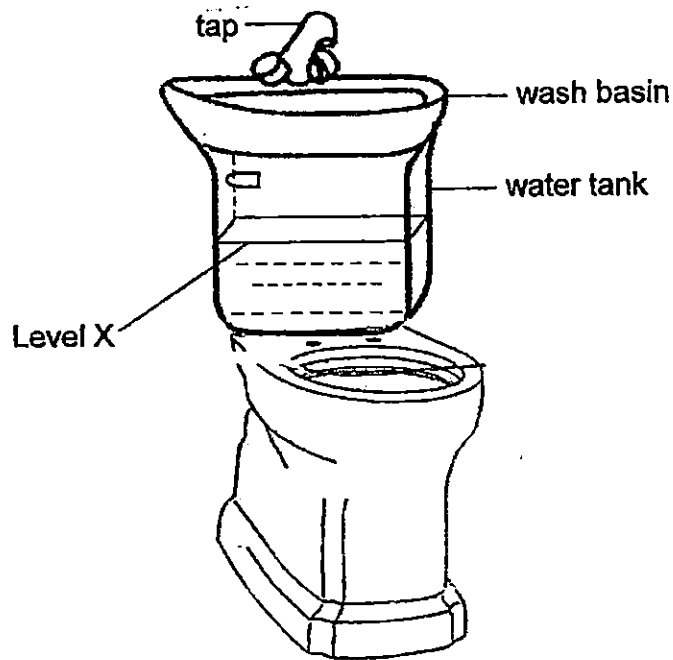
Score	2
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34. The diagram below shows how we can save water at home after using the toilet. The water from the wash basin will flow down the pipe to the water tank of the toilet bowl. The water in the water tank is used to flush the toilet.



- (a) Give a reason how this system of flushing the toilet can help to save water? [1]

Score	1
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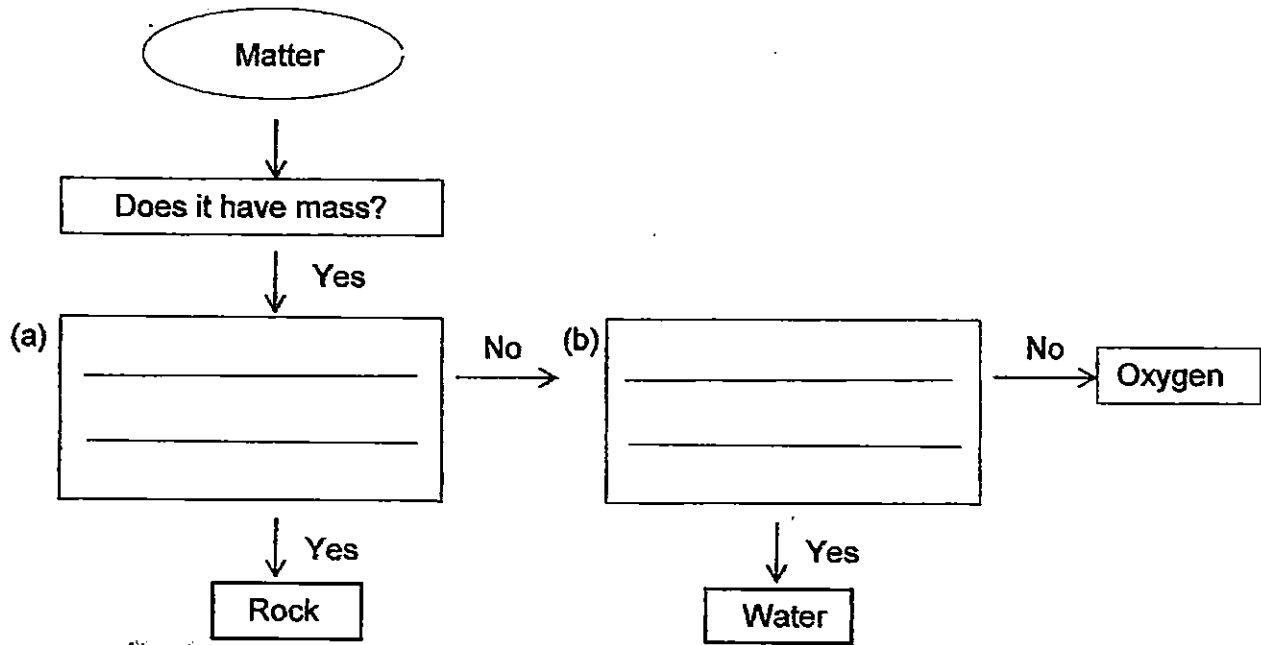


After flushing, water refills the tank and the tank will stop filling when the water reaches level X.

(b) Explain how more water can be saved by putting stones in the above water tank? [2]

Score	2
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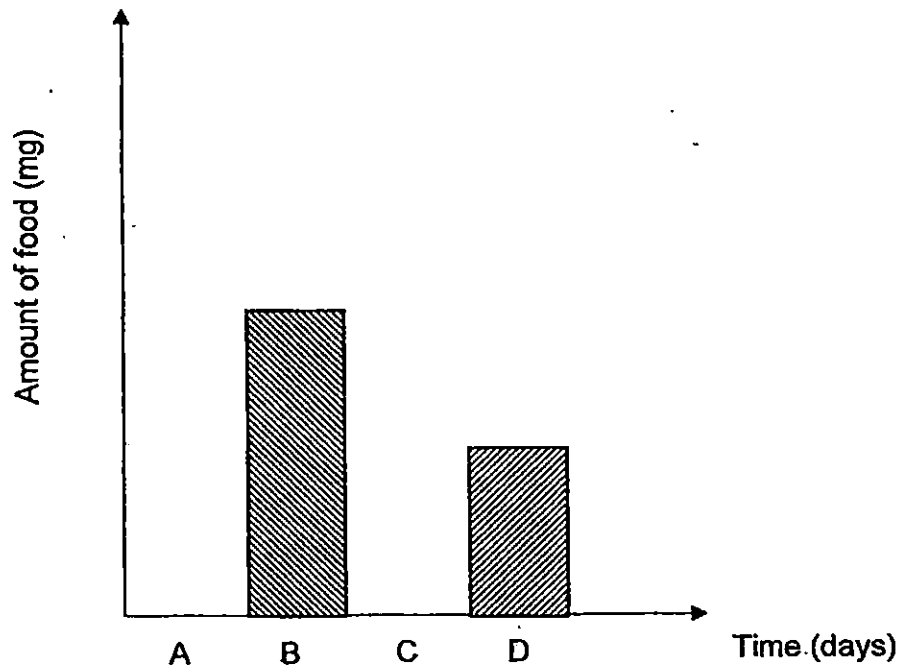
35. Study the flow chart below.



Complete the flow chart by filling in the correct questions in part (a) and (b). [2]

Score	2
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36. In an experiment, the same amount of food is fed to Organism X throughout its 4-stage life cycle. The type of food given is based on the preference of food at different stages of its life cycle. A graph is then plotted to show the amount of food taken in.

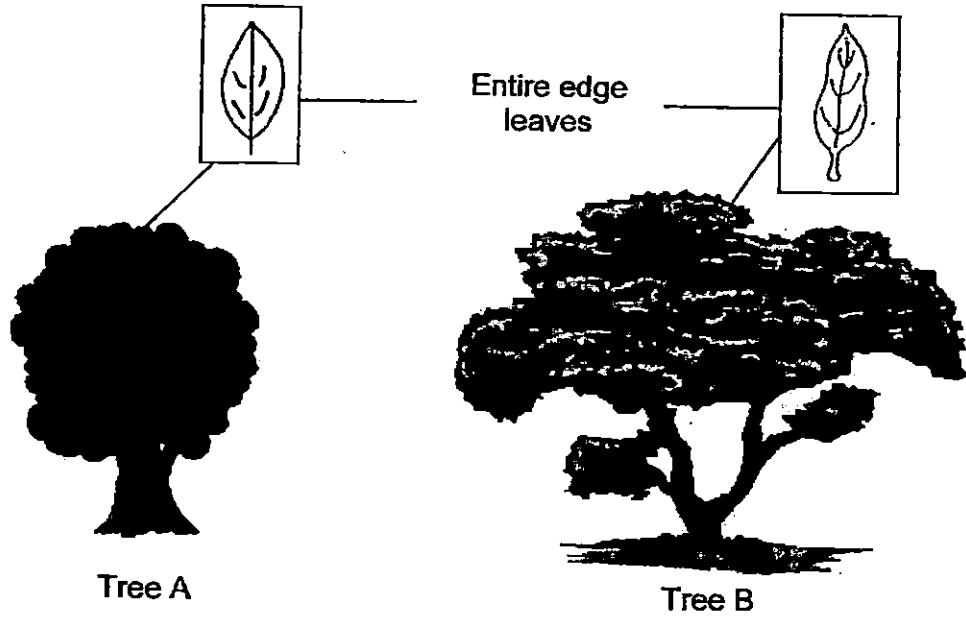


- (a) Which part of the graph represents the larva stage? [1]

- (b) Based on the information provided, give a reason for your answer in part (a) [1]

Score	2
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37. Study the diagrams of two adult trees below.

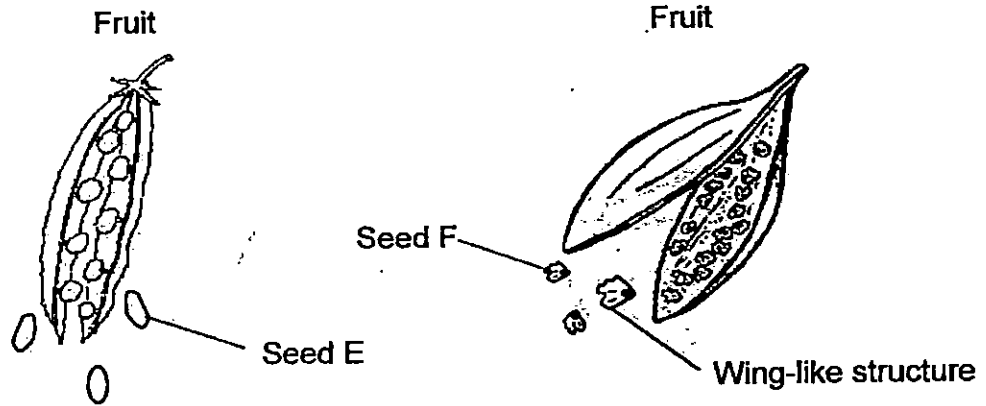


(a) If the parent trees are Tree A and B, write down the characteristic that the offspring, Plant X, will definitely have. [1]

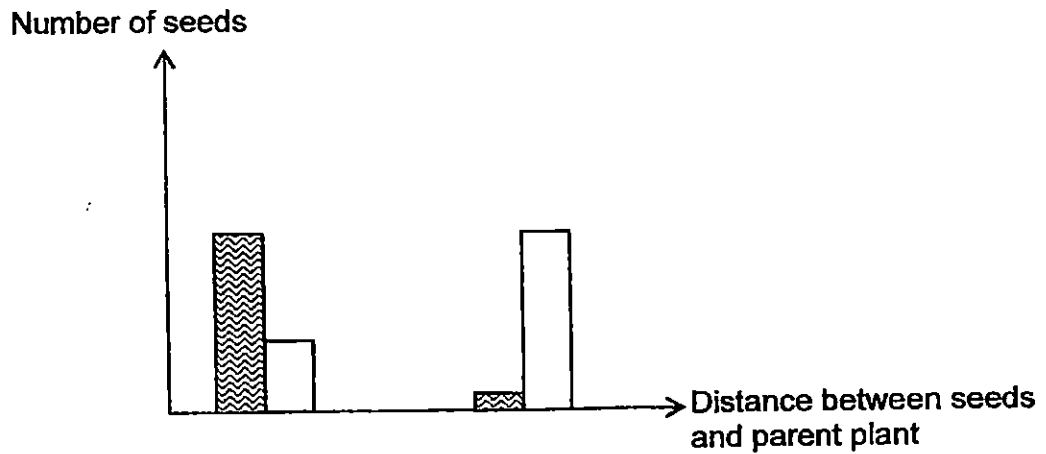
(b) Explain your answer for part (a). [1]

Score	2
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38. The diagrams below show how the seeds of two different types of fruit are dispersed when the fruits ripen and split.



Study the graph below which shows how far the seeds are dispersed from the parent plant.



(a) Which seeds, E and F, are represented by  and  respectively? [2]

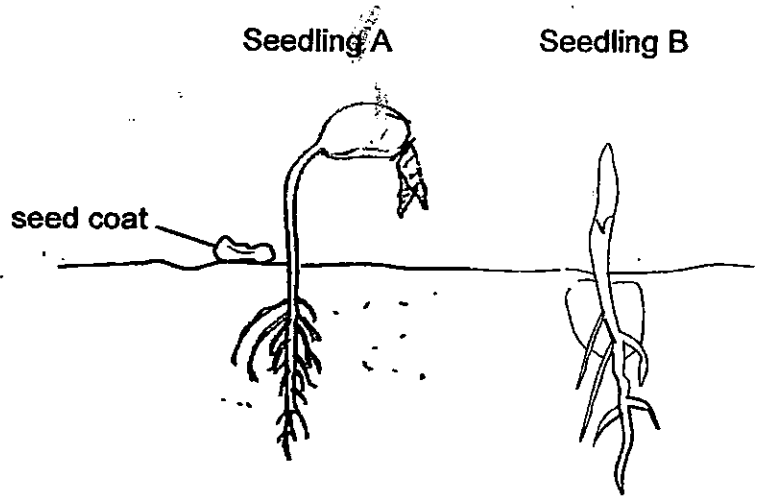
 _____  _____

(b) State 1 difference in the characteristic between Seed E and F. Explain how this characteristic helps in the dispersal of Seed F compared to Seed E. [2]

Score	4
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of

39. The diagrams below show two different types seedling.

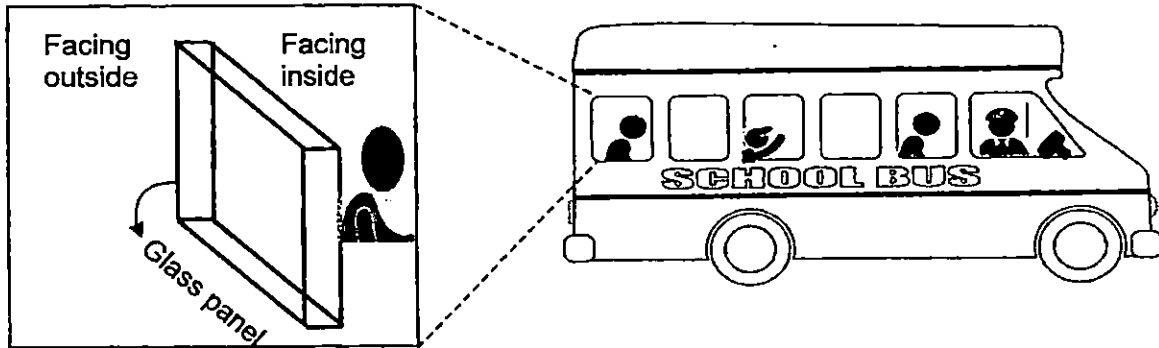


(a) On the diagrams above, label the part that provides food for Seedling A and Seedling B as "X". [2]

(b) Based on the diagrams above, how will the mass of the seed leaf change during germination? Will it increase, decrease or remain the same? Explain your answer. [2]

Score	4
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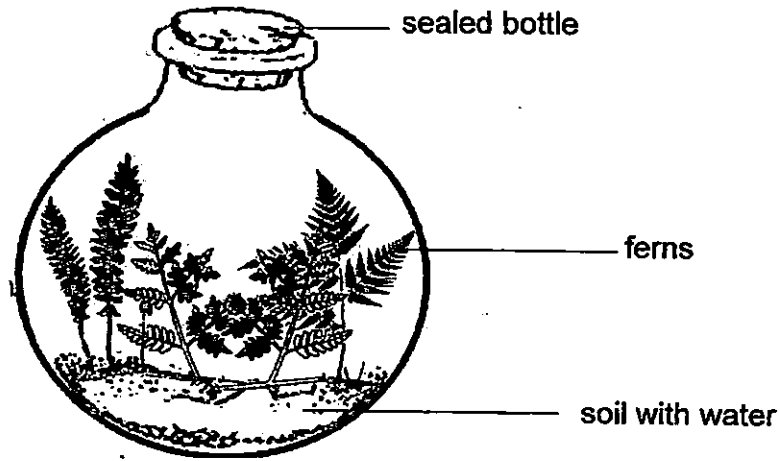
40. The temperature of the surrounding air outside the air-con bus is 32°C , while the temperature inside the bus is 25°C . Water droplets are found on the glass panels of the bus.



- (a) After the bus started moving on the road for a while, water droplets are observed on the glass panel. On which side of the glass panel will the water droplets be found? [1]

- (b) What condition must be present on the glass panel in order for water droplets to be formed? Explain. [2]

41. The bottle garden is prepared by putting garden soil and plants into a bottle. Suitable amount of water is added to the soil before the bottle is sealed. The bottle is never opened and the plants in the bottle are able to survive for years without adding any more water. Inside the bottle, water droplets are often found along the side of the bottle.



- (a) Explain how the water in the soil helps in the formation of the water droplets along the side of the bottle? [2]

- (b) Give a reason why the water droplets are important in the bottle garden? [1]

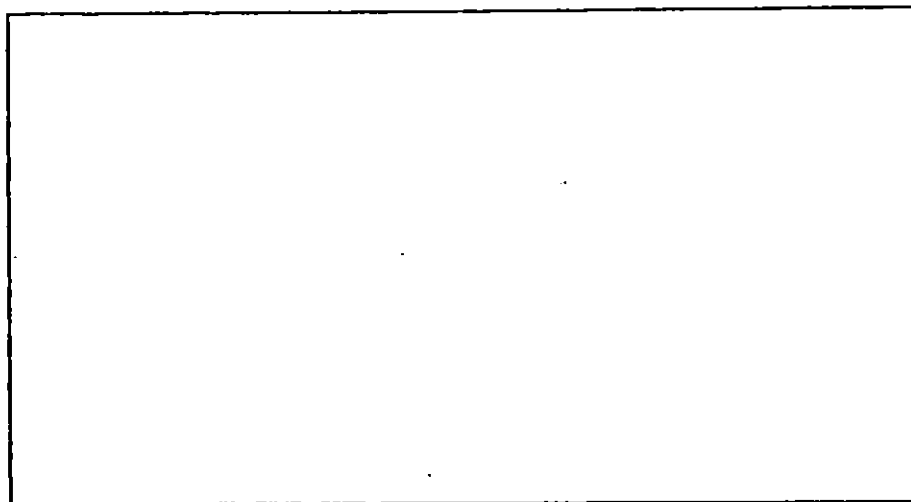
Score	3
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42. John wants to prove that Object X has mass. He is given some materials to conduct his experiment and he does not need to use all the items.

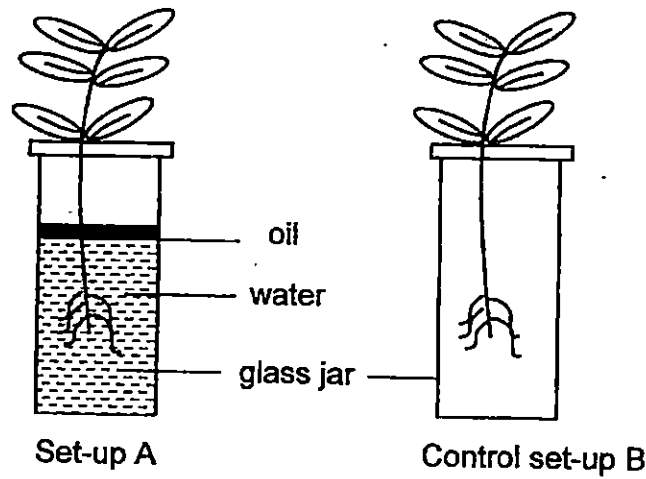
The diagram shows a rectangular box containing several items. At the top left is a displacement can. In the top center is a beaker with horizontal dashed lines representing water, labeled 'a beaker of 400 ml of water'. At the top right is a measuring cylinder with vertical scale markings. In the center is an equal-arm balance. At the bottom left is a rounded rectangle labeled 'Object X'. Below each of these five items is a small square box for a tick mark. Below the equal-arm balance is a larger square box for drawing a setup.

(a) Put a tick in the box(es) for the item(s) that he will need for the experiment. [1]

(b) Draw in the box below to show how the set-up should look like for him to confirm that Object X has mass. [1]



43. Mary set up an experiment to find out if plants need water to survive.

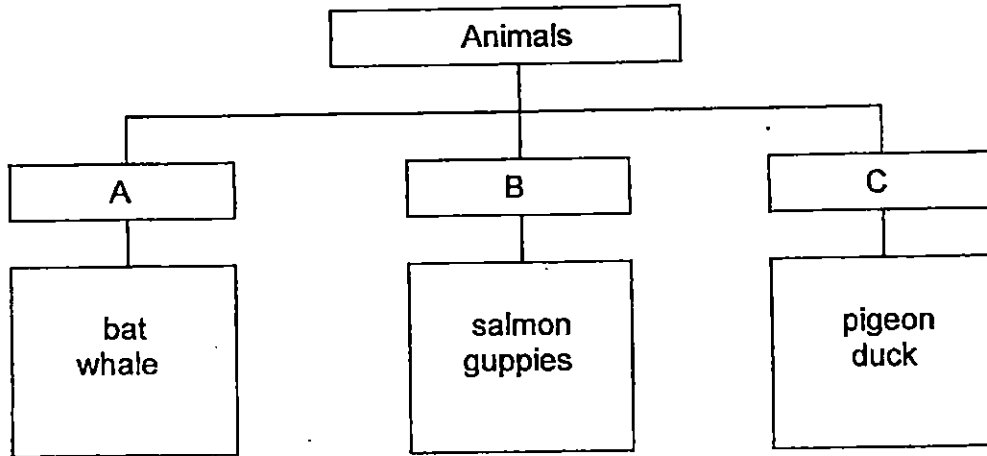


(a) What is the purpose of the control set-up?

(b) What observation should Mary make in order to come to a conclusion for her experiment? [1]

Score	2
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44. Study the classification chart below.



(a) Write down the correct headings for A, B and C.

[1]

A

B

C

(b) Which group should penguin belong to?

[1]

(c) State one characteristic that is found only in the animals in Group C.

[1]

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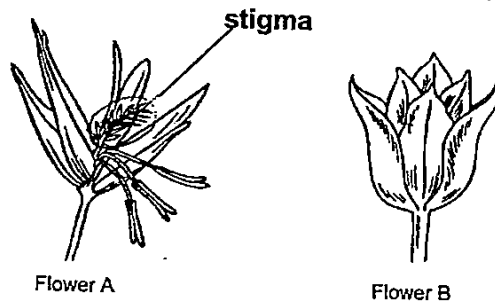
Score	3
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LEVEL : PRIMARY 5
SCHOOL : NAN HUA PRIMARY SCHOOL
SUBJECT : SCIENCE
TERM : CA1

Q 1	Q 2	Q 3	Q 4	Q 5	Q 6	Q 7	Q 8	Q 9	Q 10
1	3	3	3	3	4	3	2	1	2
Q 11	Q 12	Q 13	Q 14	Q 15	Q 16	Q 17	Q 18	Q 19	Q 20
1	4	1	3	2	2	4	1	2	3
Q 21	Q 22	Q 23	Q 24	Q 25	Q 26	Q 27	Q 28	Q 29	Q 30
2	4	3	2	3	3	2	1	2	3

Q31a. SEE PICTURE



Q31b. Flower A – wind Q31b. Flower B – animals

Q31c. Flower A has anthers hanging out of the flower but flower B have anthers and stigma inside the flower.

Q32a. It is to prevent self – pollination.

Q32b. Pollination

Q32c. Yes, the ovary swelled as it was developing into a fruit and the ovules are developing into seeds.

Q33a. To get white powdery substance, salt, has to heat solution to dryness (no water left / all water to be evaporated)

Q33b. Only the water in the soup gained heat and boiled. With less water, the soup became salty.

Q34a. The used water for washing hands can be reused for flushing toilet so that lesser water will be wasted.

Q34b. Stones takes up space and have a definite volume. If stones were placed in, lesser water would be needed to fill water tank until Level X, thus , we can save water using that way.

Q35a. Does it has a definite shape ?

Q35b. Does it has a definite volume ?

Q36a. B. Q36b. The larva eats the most amount of food.

Q37a. Entire edge leaves.

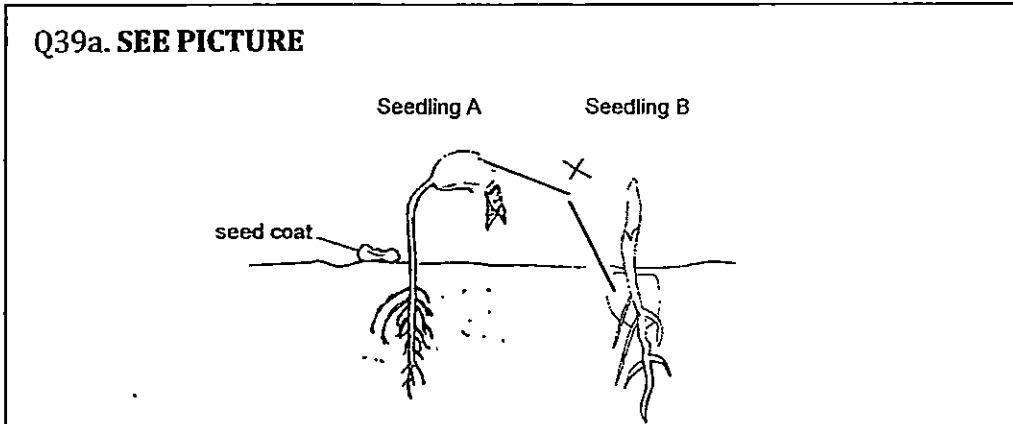
Q37b. Since both the parents trees have entire edge leaves, the characteristic will also be passed down to the offspring.

Q38a. Shaded box – Seed E

Q38a. Unshaded box – Seed F

Q38b. Seed F has wing like structure but Seed E does not. The wing like structure allows seeds to stay afloat in the air for a longer time to be dispersed further away from parent plant and other seedlings to avoid overcrowding and competition for nutrients , sunlight , water and space.

Q39a. **SEE PICTURE**



Q39b. The mass will decrease because the seedling cannot make its own food yet, so it depends on the seed leaves for food / nutrients.

Q40a. The water droplets will be found facing outside of the bus.

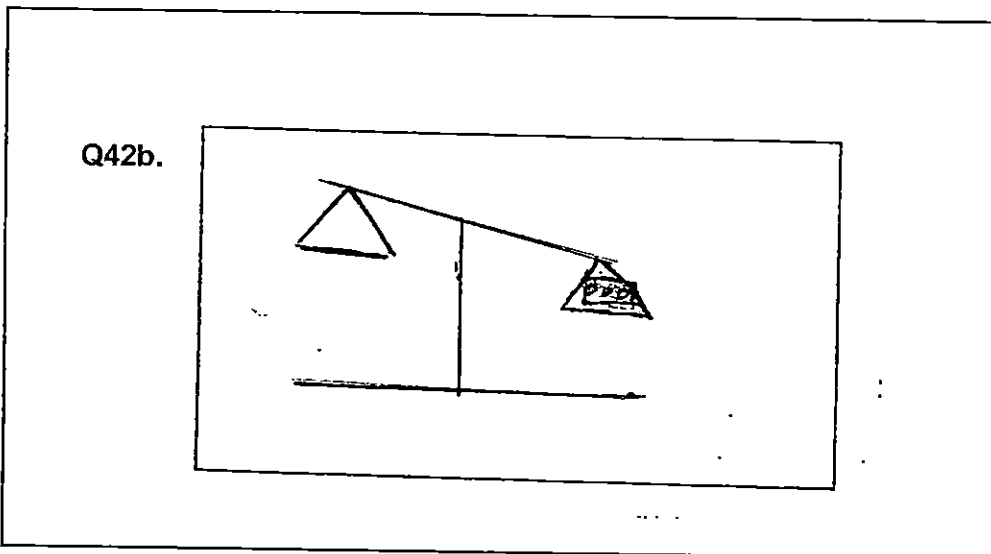
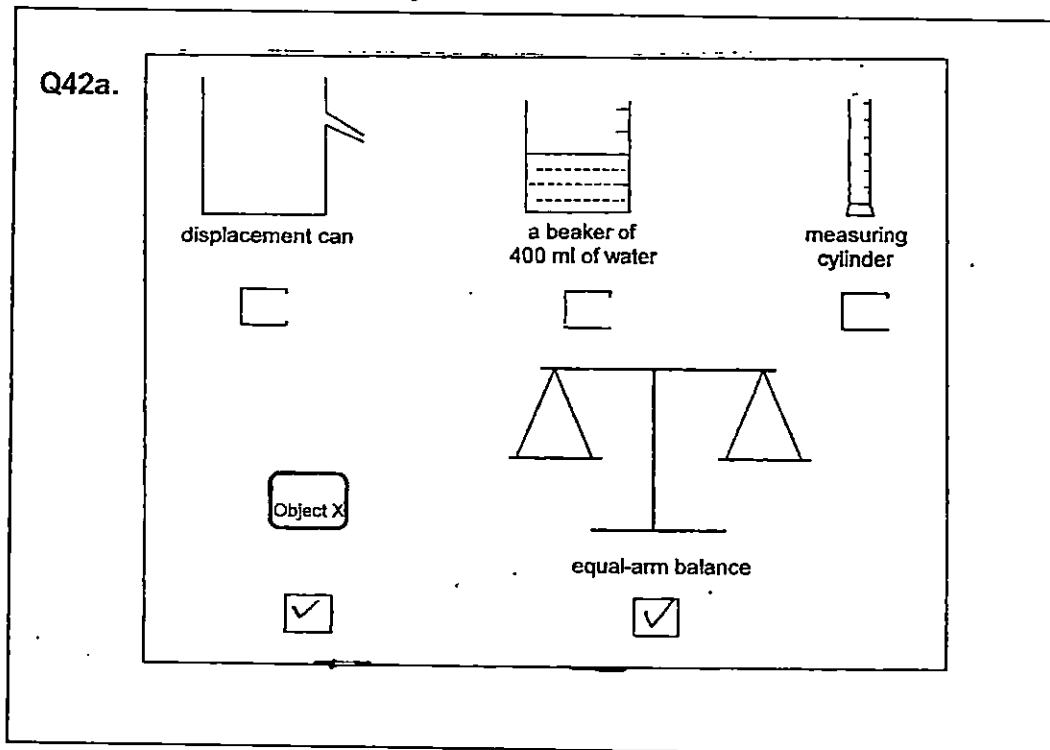
Q40b. The glass panel must be cooler than the water vapour outside the bus. To allow the water vapor outside the bus to lose heat and condense into water droplets.

Q41a. The water in the soil will evaporate into water vapour. The water vapour condense into water droplets when it came into contact with the cooler surface of the bottle.

Q41b. The ferns in the bottle take in water to make food.

Q42a. SEE PICTURE

Q42b. SEE PICTURE



Q43a. The control is for comparison with set up A in order to confirm that plants need water to survive.

Q43b. Plant in set up A will survive but plant in set up B will wither and die.

Q44a. A - mammal Q44a. B - fish Q44a. C - birds

Q44b. Group C Q44c. They have feathers.

THE END