



**NAN HUA PRIMARY SCHOOL  
CONTINUAL ASSESSMENT 1 2009  
PRIMARY FIVE  
SCIENCE**

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

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

Date : 11 March 2009

Duration : 1 hr 45 min

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

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

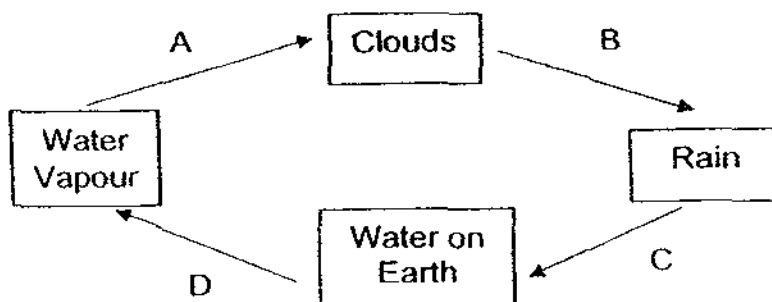
**Section A: (30 x 2marks = 60marks)**

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 takes place when an ice cube is melting?

- (1) It loses heat.
- (2) It condenses.
- (3) It changes into a liquid.
- (4) Its temperature increases.

2. The following diagram shows a water cycle



Which of the following arrows are correctly matched?

	Heat gain	Heat loss
(1)	B	A
(2)	D	A
(3)	A	D
(4)	C	D

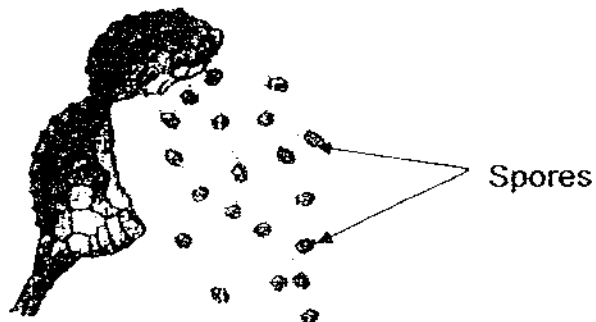
3. Why is water important to all living things?
- (1) Water allows living things to float.
  - (2) Water helps to dissolve substances.
  - (3) Water is essential for washing and cleaning.
  - (4) Water enables living things to carry out life processes.
4. Why would water pollution be a serious problem for Singapore?
- A: We have limited water resources.  
B: Water pollution has adverse effects on the environment and the lives of our people.  
C: A large sum of money will have to be spent to clean up the polluted water bodies.  
D: Polluted water will project a bad image to visitors from other countries.
- (1) A and B only
  - (2) A, B and C only
  - (3) A, C and D only
  - (4) A, B, C and D
5. What would happen to the plants if they can no longer reproduce?
- (1) Plants will become extinct.
  - (2) Plants will continue to exist.
  - (3) Plants will move to another place.
  - (4) Plants will grow taller to reach more sunlight.
6. Ali had a balsam plant flowering in his garden. He removed some of the seeds from the fruit of his balsam plant and planted them in a separate plot in his garden. Some weeks later, he noticed that the seeds had grown into young plants. Which of the following would he observe about the young plants?
- (1) The young plants were of a different colour.
  - (2) The young plants had leaves of a different shape.
  - (3) The young plants looked similar to the parent plant.
  - (4) The young plants will develop into an adult plant which will not bear flowers.

7. Bala found an interesting plant in the school garden as shown in the picture below. He plucked one of the leaves and took it back to the science laboratory to observe further.



He found Part X on the underside of the leaves as shown in the diagram above. What does Part X refer to?

- (1) Seeds
  - (2) Spores
  - (3) Stomata
  - (4) Spore bags
8. The picture below shows spores being released from a fern.



Which of the following characteristics of the spores helps it to be scattered far away from the parent fern?

- (1) The spores are big and light.
- (2) The spores are big and heavy.
- (3) The spores are small and light.
- (4) The spores are small and heavy.

9. Which of the following is **not** matter?

- (1) Brick
- (2) Wind
- (3) Shadow
- (4) Water bottle

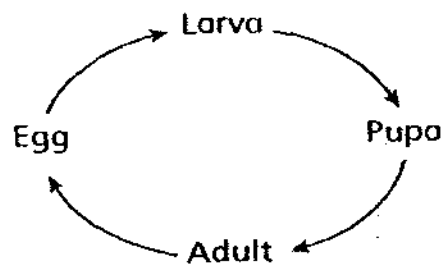
10. The table below shows the results of an experiment on three substances, A, B and C.

Properties	A	B	C
Has a definite shape	✓	x	x
Has a definite mass	✓	✓	✓
Has a definite volume	✓	x	✓

Which of the following substances above is/are a solid(s)?

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

11. The diagram below shows the different stages of the life cycle of an animal.



Which of the following animals go through the life cycle as shown above?

- (1) Frog
- (2) Human
- (3) Mosquito
- (4) Cockroach

Study the information below and answer question 12 and 13.

Christina conducted an experiment to investigate how the presence of wind affects the rate of evaporation of water. She obtained two containers and filled them with water. She then placed the containers in locations as described in the table below.

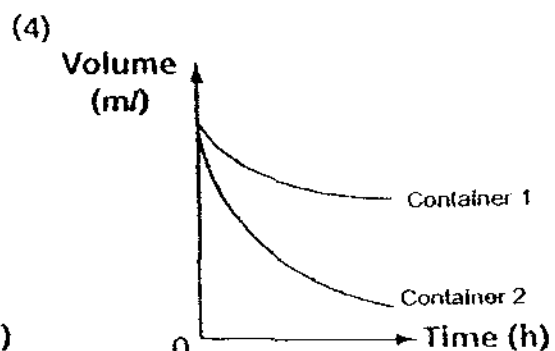
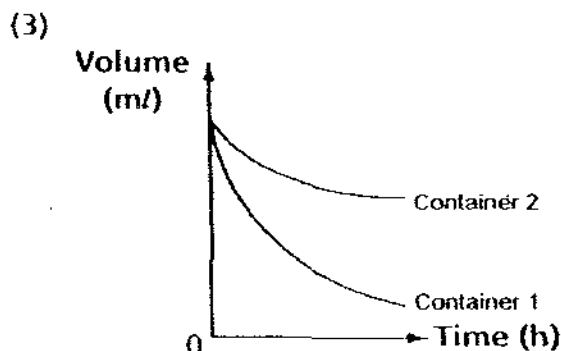
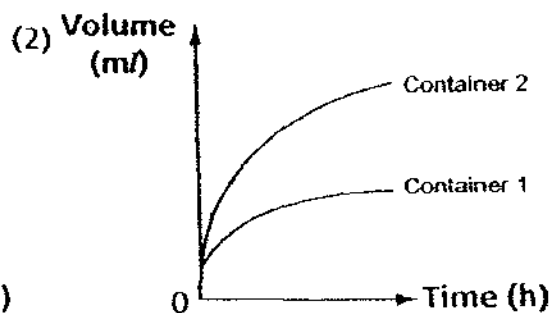
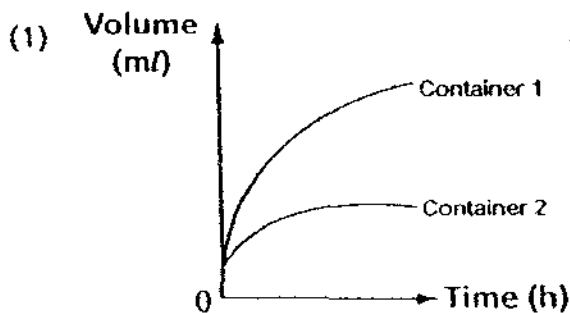
Container	Location
Container 1	Corridor outside her classroom on a windy day
Container 2	Inside the classroom where there was no wind

12. Which of the following variables must be kept **constant** to ensure that the experiment conducted was fair?

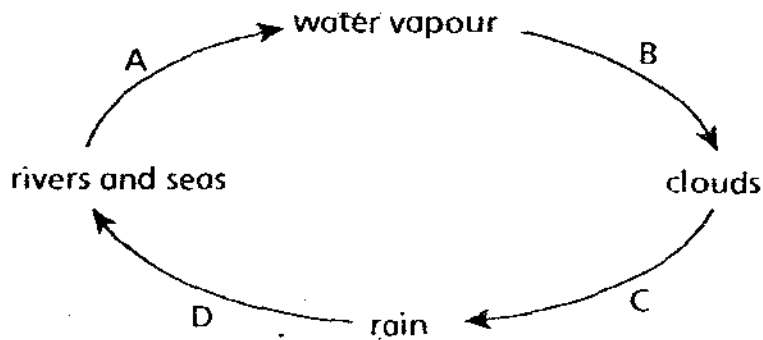
- A: The presence of wind
- B: The type of containers used
- C: The temperature at both locations
- D: The amount of water in the containers before the experiment began

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

13. Assuming that Christina had conducted a fair test, which of the following graphs correctly represents the amount of water left in the containers over some time?



14. The diagram below shows a representation of the water cycle.



Which of the following correctly shows the processes of evaporation and condensation?

	Evaporation	Condensation
(1)	A /	B /
(2)	A /	C
(3)	B	C
(4)	C	D

15. Which of the following statements about the importance of water to plants is true?

- A: Water helps keep the plant firm.
- B: Plants use water as a raw material during photosynthesis.
- C: Water helps dissolve mineral salts in the soil which are then absorbed by the plant.

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

16. Which of the following would cause water pollution?

- A: Recycling water
- B: Dumping waste into the sea
- C: Littering into lakes and rivers
- D: Treatment of sewage before releasing water into the sea

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

17. Mango trees in a plantation were infected with disease that prevented them from reproducing. The population of trees in the plantation was studied over a period of one year. The results of the study carried out in year 2007 are shown in the table below.

Month	Population of mango trees
January	122
April	100
July	81
October	62

Based on the information above, which of the following are true?

- A: The mango trees became extinct.
- B: The disease affected the population of mango trees.
- C: There will be no mango trees left in the plantation by January 2008.
- D: The inability to reproduce reduced the population of mango trees in the plantation.

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

18. How are the seed of an orange and the spores of a fern similar?

- (1) They grow into flowers
- (2) They can grow into new plants.
- (3) They provide nutrients for the plants.
- (4) They are produced by flowering plants.

19. During which process will an adult durian tree pass its characteristics to its young?

- A: Germination
- B: Reproduction
- C: Dispersal of seeds

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

20. Bala went overseas for a year and returned to his home to find ferns growing in his garden. He was certain that he did not plant the ferns himself. He wondered where they had come from.

Which of the following statements would possibly explain how the ferns got into his garden?

- (1) The spores were carried into the garden by wind.
- (2) The spores were carried into the garden by rain water.
- (3) The spores came from an apple tree in his neighbour's garden.
- (4) The spores were landed in his garden through the birds' droppings.

21. Which of the following reproduce from spores?

- A. Mango
- B. Banana
- C. Peat moss
- D. Bird's nest fern

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

22. Plants that reproduce by spores may produce thousands of spores at a time. Which of the following statements explain why plants produce such a large number of spores?

A: A large number of spores will ensure dispersal by wind.

B: A large number of spores will allow the plant to cover a large area of land.

C: A large number of spores will increase the chance that a new plant is grown.

D: A large number of spores will ensure good use of energy produced during photosynthesis.

(1) A only

(2) B and C only

(3) A, B and C only

(4) A, B, C and D

23. John had a basketball which was fully inflated. He pumped the ball with more air. He realized that the size of the ball remained unchanged but it became harder and heavier. What does his observation show?

A: Air has mass.

B: Air occupies space.

C: Air can be compressed.

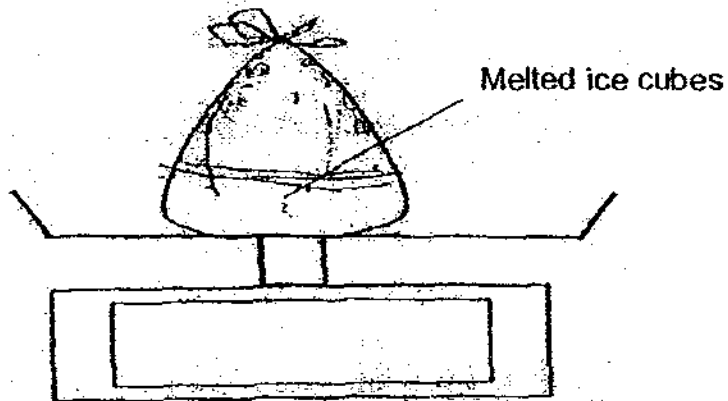
(1) A only

(2) A and C only

(3) B and C only

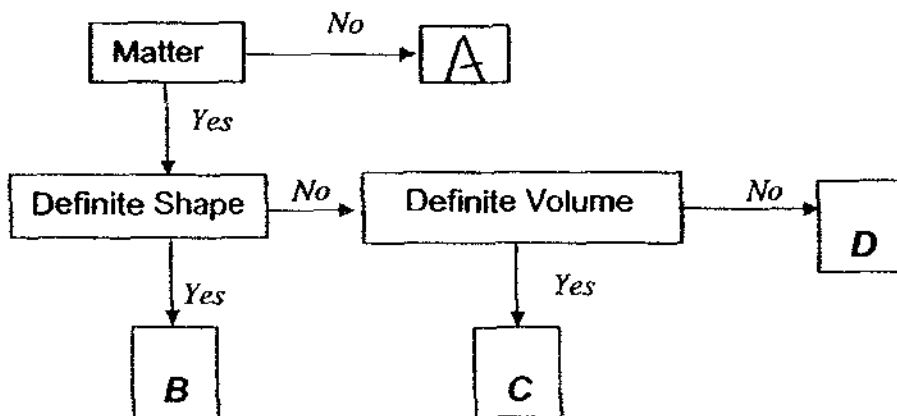
(4) A, B and C

24. Lulu placed a bag of ice cubes weighing 58g on an electronic scale as shown in the diagram below.



Which of the following best shows the reading on the scale when all the ice cubes in the bag have completely melted?

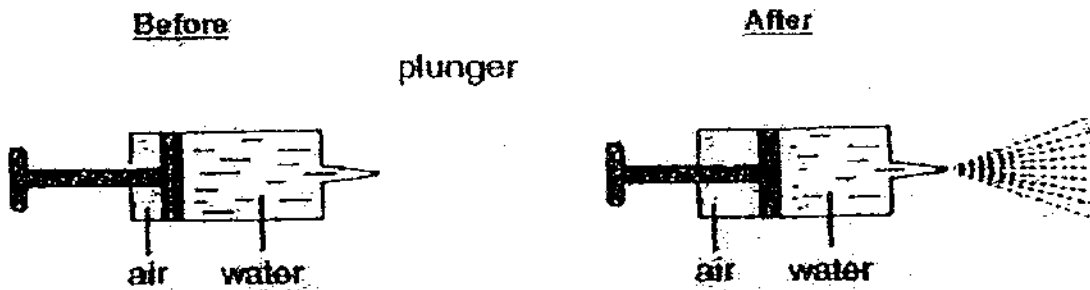
- (1) 50g
  - (2) 55g
  - (3) 58g
  - (4) 65g
25. Study the flow chart below.



Which one of the following best represents water vapour in the flow chart?

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

26. A syringe is filled with water. When its plunger is pushed, a jet of water shoots out in the direction as shown in the picture below.

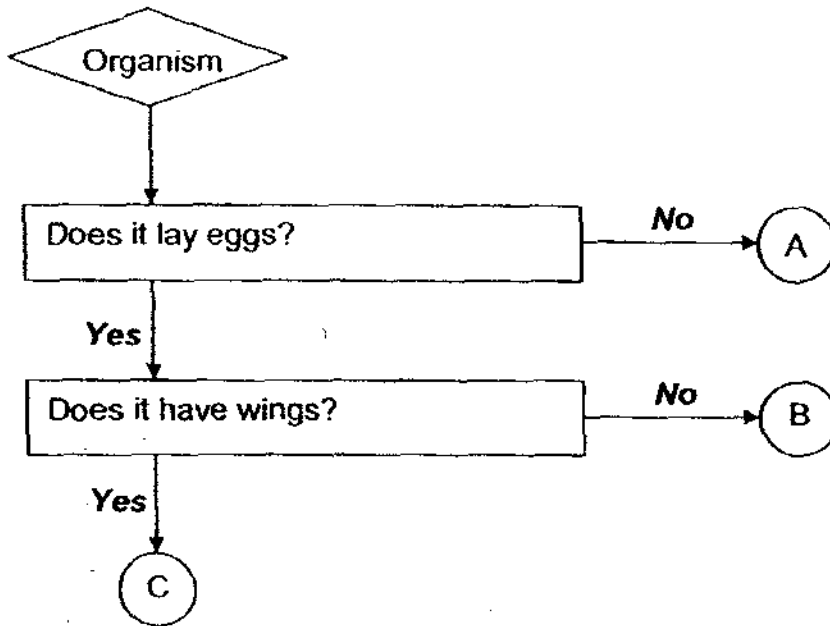


What has happened to the volume of water and the air in the syringe?

- A: The volume of air has increased.
- B: The volume of air remained constant.
- C: The volume of water has increased.
- D: The volume of water has decreased.

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

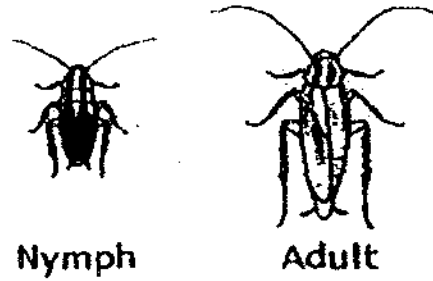
27. Study the flow chart below carefully



Which of the following best represents A, B and C respectively?

	A	B	C
(1)	Duck	Mosquito	Human
(2)	Mosquito	Cockroach	Horse
(3)	Horse	Human	Dog
(4)	Human	Frog	Mosquito

28. The picture below shows an adult cockroach and its nymph.



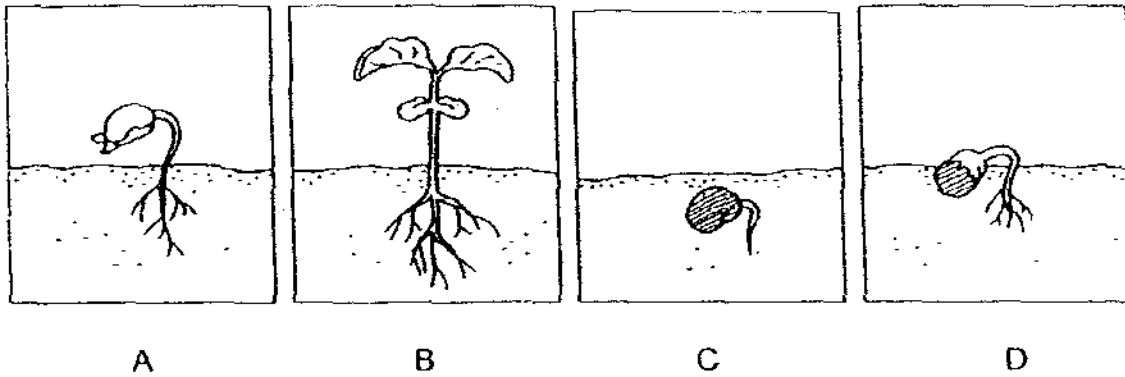
Which of the following are similarities between the adult cockroach and its nymph?

- A: Both can fly.
- B: Both look alike.
- C: Both have feelers.
- D: Both moult several times.

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

Study the information below and answer question 29 and 30.

The stages of a seedling's growth are shown below. They are not shown in the correct order.



29. Arrange the stages of growth in the correct order.

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

30. At which stage(s) is/are the seedling able to make its own food?

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



NAN HUA PRIMARY SCHOOL  
CONTINUAL ASSESSMENT 1 2009  
PRIMARY FIVE  
SCIENCE

MARKS	
	40

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

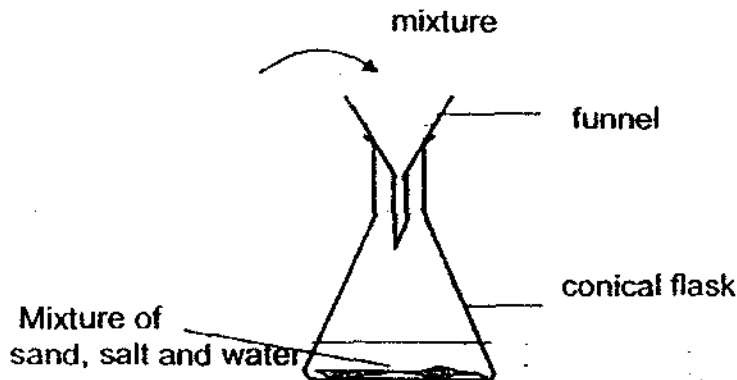
Class : Primary 5 / \_\_\_\_\_

**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. Marcus was given a bottle of mixture containing sand, salt and water. He tried to separate the mixture to get back all the sand, salt and water respectively. First, he placed a filter funnel over a flask and poured in the mixture hoping to obtain the sand. However, he noticed that there was still sand in the conical flask.



- (a) What do you think <sup>Marcus</sup> Jonathan should have done in order to prevent the sand going into the flask? [1]

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Score	1
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31(b) After Marcus had corrected his mistake, he managed to obtain a clear liquid in the flask. Then he decided to obtain the salt by just heating the clear liquid to dryness. His friend pointed to him that he was wrong for he would not be able to obtain the water.

Do you agree? Give a reason for your answer. [1]

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(c) What do you think he should do in order to collect the water? Give a reason for your answer. [2]

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32. The Haleakala Silversword shown below is an endangered species of plant that can be found on the island of Maui. There are very few of such plants left in the world as many of them have been eaten by cows and goats and others have been destroyed by man through vandalism.



(a) Why do living things such as the Haleakala Silversword need to reproduce?[1]

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(b) What would happen to the Haleakala Silversword if it cannot reproduce faster than it is being destroyed? [1]

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Score	5
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33. The diagram below shows a tree.



This species of tree are large, have many branches and shiny green leaves that looked oily.

*were taken*

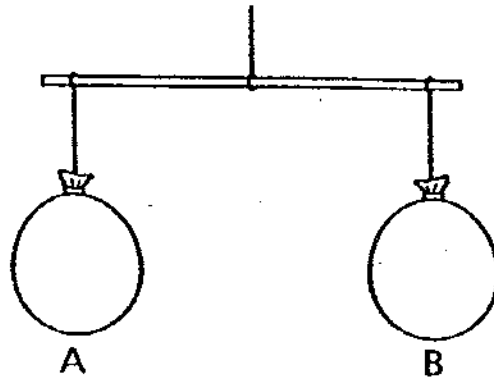
If some seeds from the parent plant and ~~replants~~ *replants* on another plot of land, what characteristics would the young of the tree have when it eventually grows into an adult tree? [2]

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Score	2
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34. Two balloons, A and B, were filled with air and balanced on a straw as shown below. Balloon B is then pierced with a pin and it bursts.



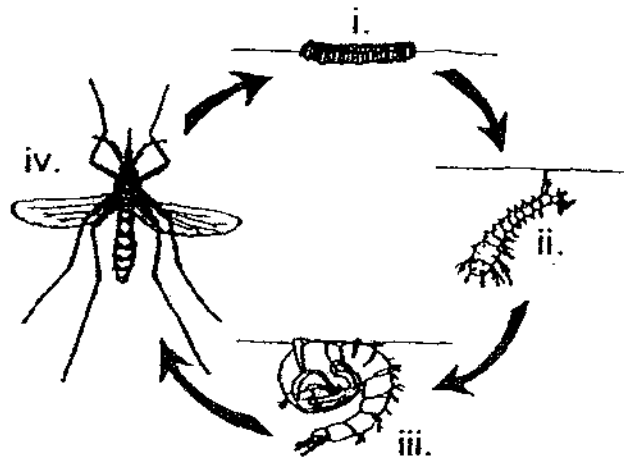
Put a tick (✓) in the correct column for each of the statements.

[3]

Statement	True	False
Balloon A will move downwards.		
The experiment shows that air has mass.		
The experiment shows that air occupies space.		

Score	3
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35. The picture below shows an adult mosquito. Mosquitoes can spread diseases such as malaria and dengue fever.



(a) Label the different stages of the life cycle of the mosquito accordingly as shown in the diagram above. [2]

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

(iv) \_\_\_\_\_

(b) State one way you can prevent mosquitoes from breeding at home. [1]

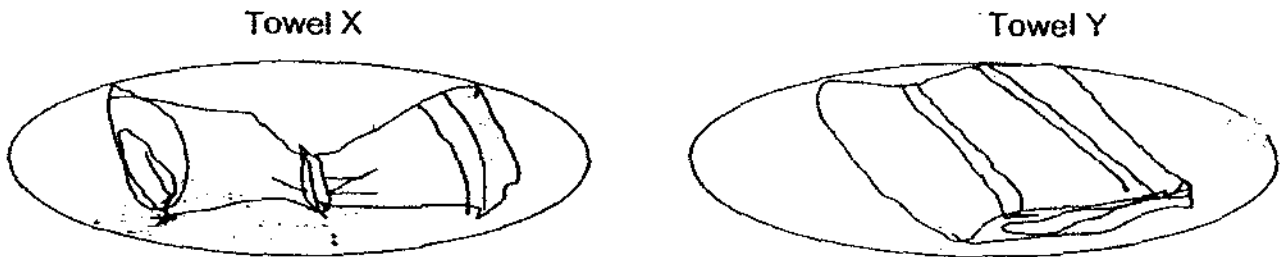
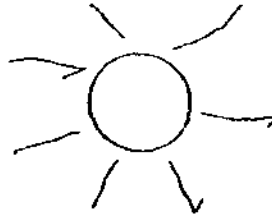
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Score	3
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36. The diagrams below shows two identical towels X and Y. They have been soaked in 55 ml of water and the initial mass of each towel is recorded.

Then towel X is rolled up and tied with a string before it is placed on a tray. Towel Y is folded and put on a tray. Both towels are placed at the balcony. The mass of each towel X and Y is measured again after half an hour.



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

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(b) Identify 2 variables that have been kept constant in the above experiment [1]

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(c) The results of the above experiment are recorded in the table below.

Towel	Mass at first (g)	Mass after half an hour (g)
X	55	43
Y	55	47

Based on the results table above, what process has taken place to result in a difference in the mass of the two towels after half an hour? [1]

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Score	3
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37. The picture below shows fish that has been dried.



The presence of some micro-organisms which act on food causes them to decay or rot. Drying is a method used to prevent decay so that food is suitable for consumption.

(a) Why is dried fish unable to decay? [2]

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The picture below shows a goldfish in a bowl.



(b) Give two reasons why water is important to the goldfish. [2]

(i) 

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(ii) 

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Score	<hr/> <hr/> 4
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38. Duckweed is a small, green flowering plant that floats on the surface of water. The National Environment Agency noticed that the population of duckweed in Clementi Lake had been decreasing over the last few months. They realized that there were 4 factories have been dumping waste water into Clementi Lake.

They took waste water samples from the 4 factories and conducted an experiment to test which factory was dumping waste water that was most harmful to the duckweed. They placed duckweeds in a 4 beakers and filled them up with waste water from each of the factories. They kept the setups in a laboratory for 10 days. The table below shows the results of the experiment.

	Factory A	Factory B	Factory C	Factory D
Number of duckweeds in the beginning	20	20	20	20
Number of duckweeds after 10 days	10	4	23	13

(a) Based on the data above, which factory has been dumping waste water that was most harmful to the duckweed? Give a reason for your answer. [2]

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(b) Based on the data above, which factory had been treating its waste water to ensure that it was safe before dumping it into Clementi Lake. Give a reason for your answer. [2]

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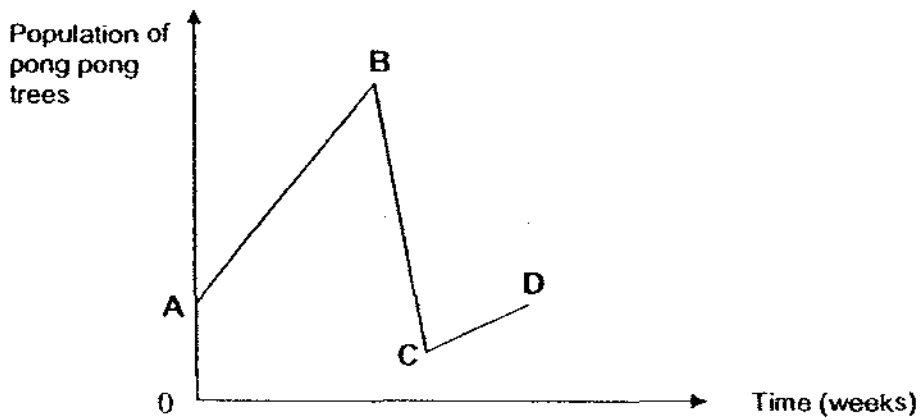
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(c) State two variables that the National Environment Agency must keep constant to ensure that the experiment they conducted was a fair one. [2]

- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_

Score	6
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39. The graph below shows how the population of pong pong trees growing in a forested area in Singapore.



- (a) The area was affected by a forest fire that destroyed many pong pong trees. Which point (A,B, C or D) on the graph shows when the forest fire occurred?[1]

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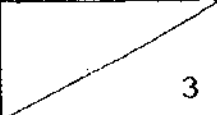
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- (b) Based on the graph, was the population of pong pong trees completely wiped out? Give a reason for your answer. [2]

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Score	
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40. Michelle's father owns an orange plantation in California. She noticed that her father had planted two rows of orange trees. The characteristics of the oranges in row A and B are shown in the table below.

Row A	Juicy and sweet
Row B	Juicy and sour

Her father told her that the characteristics which they possess, has to do with the parent plants of these trees.

- (a) Based on what Michelle's father told her, what can you conclude about the orange tree in row A and row B? [1]

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- (b) If Michelle wanted to grow more trees with oranges that were juicy and sweet, what should she do? [1]

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41. George obtained two identical rocks from a garden that had moss growing on it. He then placed one rock in a room where the air was very humid. He then placed the other rock in a room where the air was dry. One week later, he checked both rocks for the amount of moss left on the rocks.

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

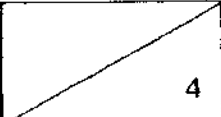
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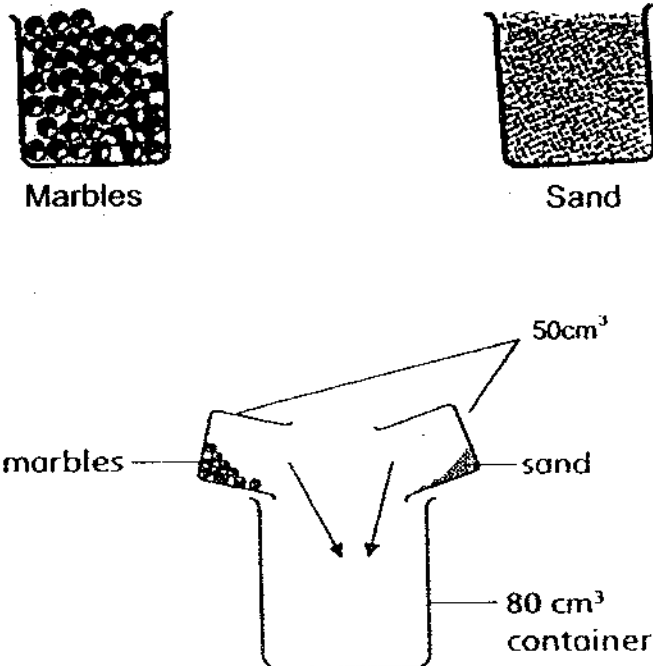
- (b) State one variable that he should keep constant throughout the experiment. [1]

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Score	
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42. Minah had two  $50 \text{ cm}^3$  beakers. One was filled to the brim with marbles and the other with sand. She then emptied the contents of both beakers into an  $80 \text{ cm}^3$  beaker as shown below. She expected the  $80 \text{ cm}^3$  beaker to overflow but it did not.



Explain why the mixture in the container did not overflow.

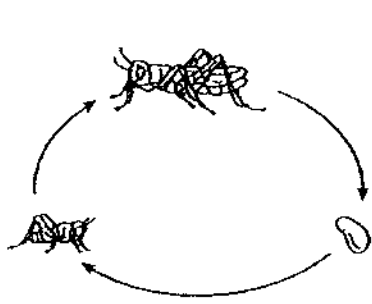
[2]

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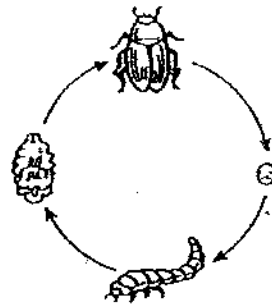
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Score	2
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43. Study the two diagrams below showing the life cycles of a grasshopper and a mealworm beetle.



Grasshopper



Mealworm Beetle

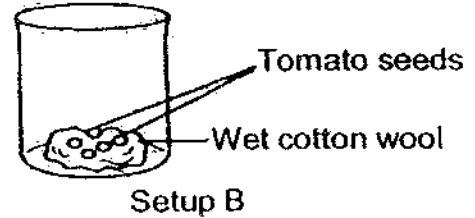
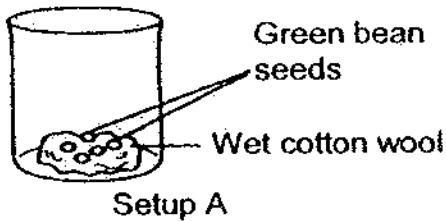
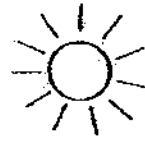
State two differences between their life cycles.

[2]

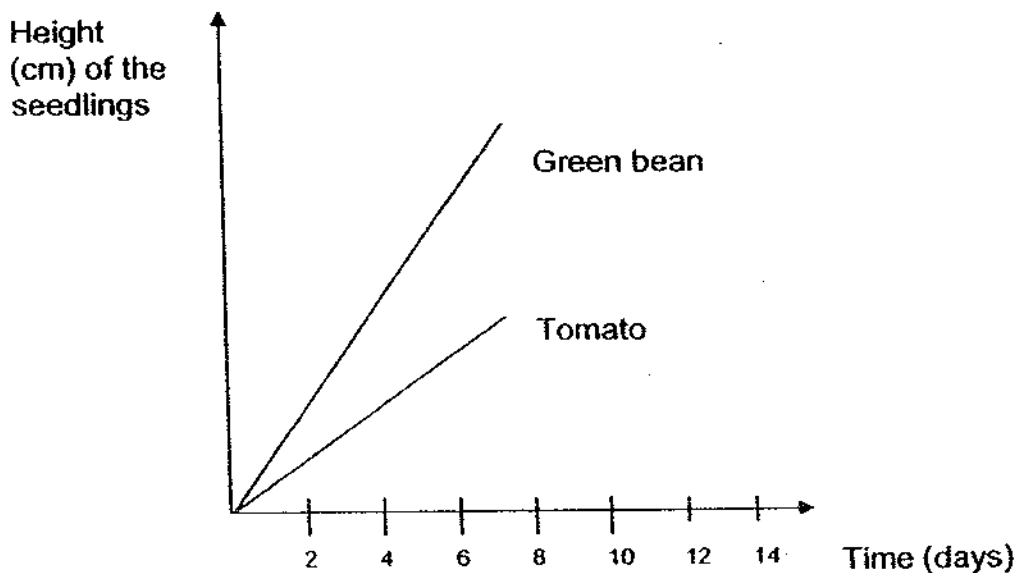
- (a) \_\_\_\_\_  
\_\_\_\_\_
- (b) \_\_\_\_\_  
\_\_\_\_\_

Score	2
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44. April set up an experiment to compare the growth of green bean seeds and tomato seeds. She set the experiment up in her garden and the setups were not disturbed for 14 days.



She then recorded the changes in the height of her young plants over a period of time in the graph shown below.



- (a) For the first 6 days, what was the difference in the growth <sup>rate</sup> of the two young plants? [1]

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- (b) Both seedlings eventually died because they ran out of an essential substance for their survival. What is that substance? [1]

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Score	2
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# **ANSWER SHEET**

**EXAM PAPER 2009**

**SCHOOL : NAN HUA PRIMARY  
SUBJECT : PRIMARY 5 SCIENCE**

**TERM : CA1**

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

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

- 31)a)Line the funnel with filter paper with small hole.  
b)The water will evaporate.  
c)Put a bowl over the flask so that when the water vapour touches the bowl, it will condense into water droplet.
- 32)a)It prevents them from being extinct.  
b)It would become extinct.
- 33)It would be large, have many branches, shiny green leaves and the leaves would be oily.
- 34)T,T,F
- 35)a)i)Eggs ii)Larva iii)Pupa iv)Adult mosquito  
b)Pour away water in containers.
- 36)a)It is to see if the area of exposed surface affects the rate of evaporation.  
b)i)Material of the towel.  
ii)Places where towels are put.  
c)Evaporation has taken place.
- 37)a)It does not have any liquid and micro-organisms need water to survive.  
b)i)It is the goldfish's natural habitat.  
ii)It is used by the fish to break down material.

- 38)a)Factory B. It had the least number of duck weed surviving after 10 days.  
b)Factory C, because the number of duck weed increased.  
c)i)Number of duck weed in the beginning.  
ii)The type of duck weeds.
- 39)a)Point B.  
b)No, because the graph did not show it touch zero and it continued to grow again.
- 40)a)Row A parent plant had juicy and sweet oranges while Row B parent plant had juicy and sour oranges.  
b)After eating a orange from Row A, plant it in the plantation.
- 41)a)To see if humidity affects the growth of mass.  
b)The type of moss.
- 42)The sand filled the space s in between the marble.
- 43)a)The grasshopper has a 3-stage life cycle while a mealworm beetle has a 4-stage life cycle.  
b)The mealworm has a pupa stage but the grasshopper does not.
- 44)a)The green bean plant grew faster than the tomato plant.  
b)Water.