



NAN HUA PRIMARY SCHOOL  
CONTINUAL ASSESSMENT 1 - 2011  
PRIMARY FIVE  
SCIENCE

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

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

Date : 2 March 2011

Duration : 1 hr 45 min

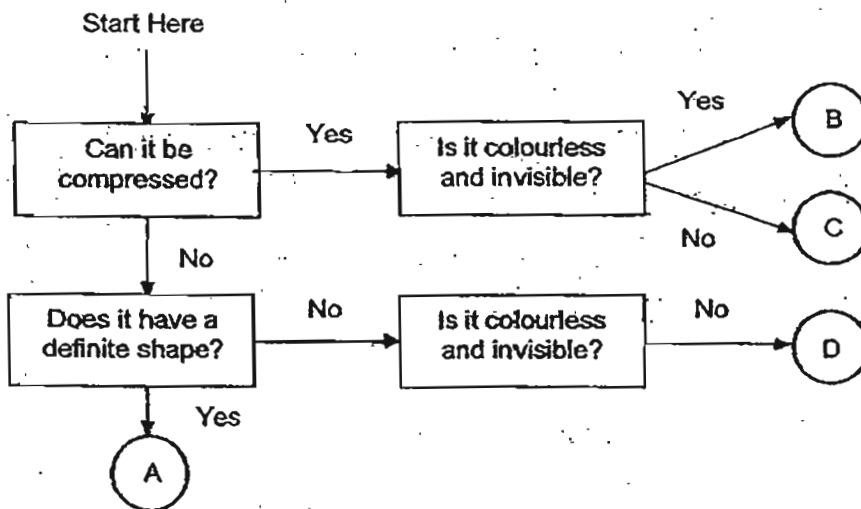
MARKS	
Sect A:	/ 60
Sect B:	/ 40
<b>Total :</b>	<b>/ 100</b>

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

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

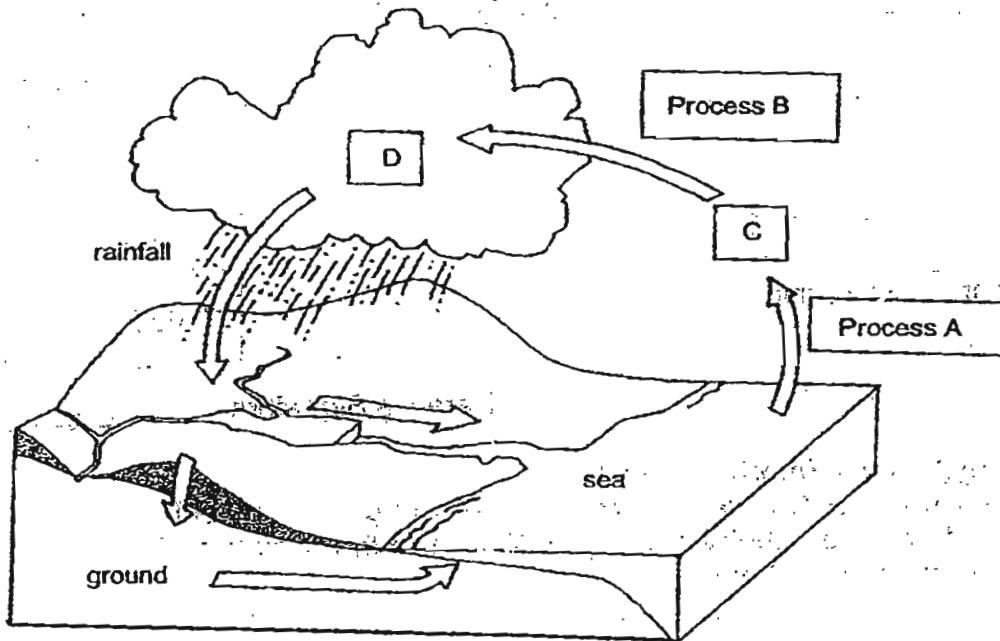
For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

1. Study the flow chart below. Which one of the following letters, A, B, C or D, best represents steam?



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

2. The diagram below shows the water cycle. A and B are processes while C and D represent the state of water in the cycle.



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

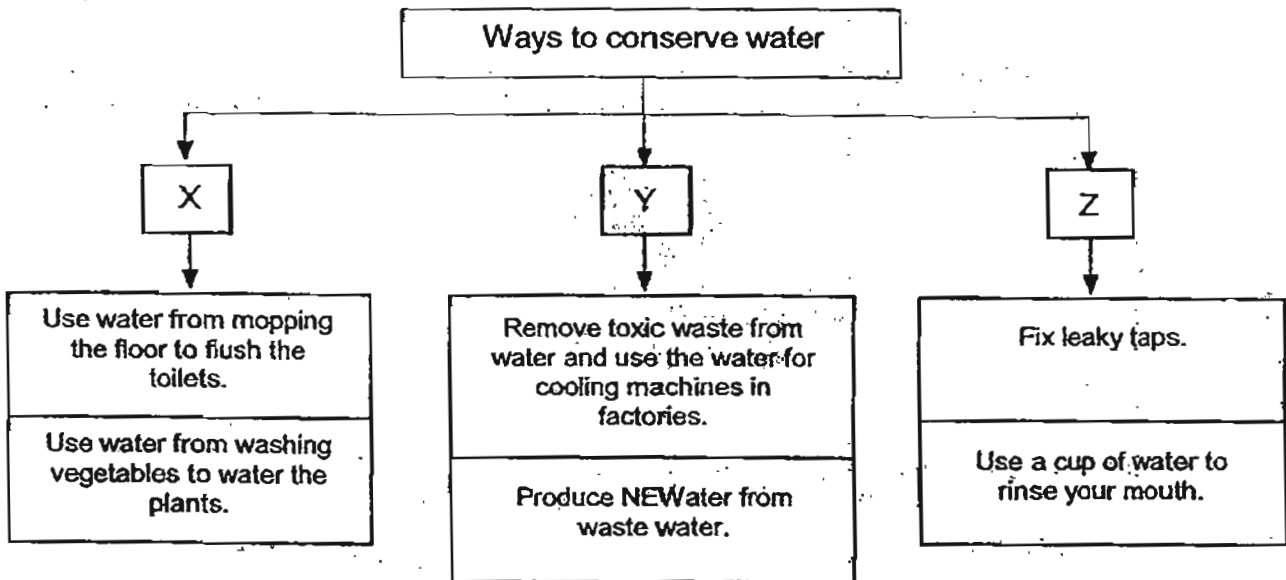
	Processes		State of water	
	A	B	C	D
(1)	Condensation	Evaporation	Gas	Liquid
(2)	Condensation	Evaporation	Liquid	Gas
(3)	Evaporation	Condensation	Gas	Liquid
(4)	Evaporation	Condensation	Liquid	Gas

3. Which of the following statements illustrate the importance of water in humans correctly?

- A Water in our saliva softens the food we eat thus enabling us to swallow our food more easily.
- B Water in the large intestine contains digestive juices to help break down starch into sugars.
- C Water is needed in the digestion and absorption of food in the small intestine.

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

4. The classification table below shows how different activities aim to conserve water could be grouped into different categories.



What could the headings for X, Y and Z be?

	X	Y	Z
(1)	Reduce	Reuse	Recycle
(2)	Reduce	Recycle	Reuse
(3)	Recycle	Reuse	Reduce
(4)	Reuse	Recycle	Reduce

5. Which one of the following life processes prevents living things from becoming extinct?

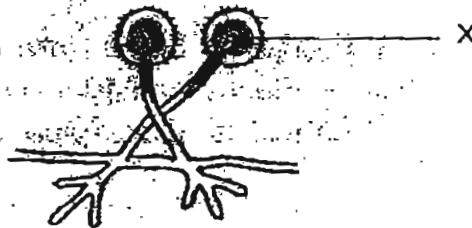
- (1) Growth
- (2) Movement
- (3) Reproduction
- (4) Response to stimulus

6. The seeds of a plant contain the genes of the parent plant. This ensures that the new plants would have the same characteristics as the parents. What are some characteristics that can be passed down?

- A Colour of flower
- B Number of fruits
- C Shape of leaves

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

7. Study the diagram of the common bread mould.



What is present in the part marked "X"?

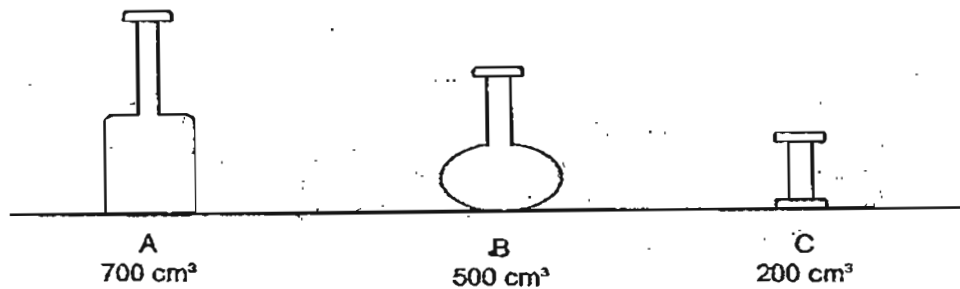
- (1) cap
- (2) fruit
- (3) spore
- (4) spore bag

8. Jenny wants to collect some spores from the bird's nest fern so that she can look at the spores under a microscope. Which part of the fern plant should she collect the spores from?

- A The roots of the fern plant.
- B The surface of the fern leaf.
- C The underside of the fern leaf.

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

9. Clara pumped  $300 \text{ cm}^3$  of air into each of the containers A, B and C below. What is the volume of air in each container after she pumped in the air?



	A	B	C
(1)	$300 \text{ cm}^3$	$300 \text{ cm}^3$	$300 \text{ cm}^3$
(2)	$700 \text{ cm}^3$	$500 \text{ cm}^3$	$200 \text{ cm}^3$
(3)	$1000 \text{ cm}^3$	$800 \text{ cm}^3$	$500 \text{ cm}^3$
(4)	$300 \text{ cm}^3$	$300 \text{ cm}^3$	$200 \text{ cm}^3$

10. Joshua recorded the properties of items A, B, C and D as shown below. Study the information given and identify A, B, C and D.

A

Matter	x
Definite Shape	x
Definite Volume	x
Can be compressed	x

B

Matter	✓
Definite Shape	✓
Definite Volume	✓
Can be compressed	x

C

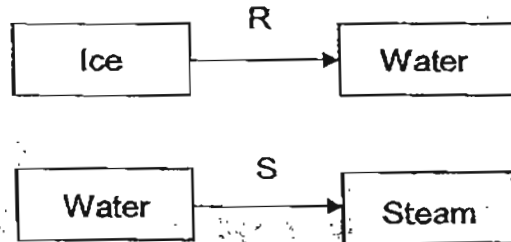
Matter	✓
Definite Shape	x
Definite Volume	✓
Can be compressed	x

D

Matter	✓
Definite Shape	x
Definite Volume	x
Can be compressed	✓

	A	B	C	D
(1)	Wind	Coin	Water	Oxygen
(2)	Wind	Coin	Oxygen	Water
(3)	Heat	Water	Coin	Oxygen
(4)	Heat	Coin	Water	Oxygen

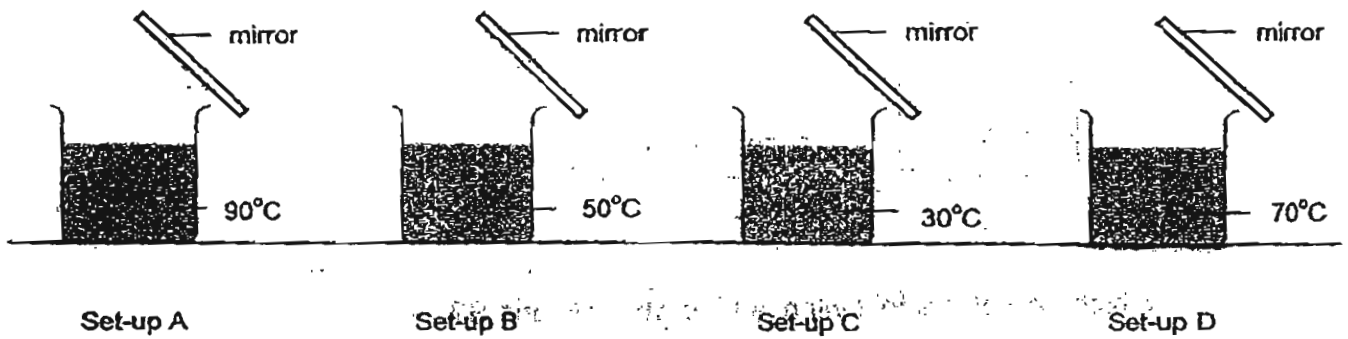
11. The diagram below shows the changes in the state of water.



Which one of the following is true about R and S?

- A Heat is gained during both processes R and S.
  - B Heat is gained during Process R but heat is lost during Process S.
  - C The temperature of ice remains the same during Process R but the temperature of water increases during Process S.
  - D The temperature of water remains the same during Process S but the temperature of ice increases during Process R.
- (1) A only  
(2) B only  
(3) A and C only  
(4) B and D only

12. John set up an experiment to observe condensation taking place in a room with a constant temperature of  $28^{\circ}\text{C}$ .

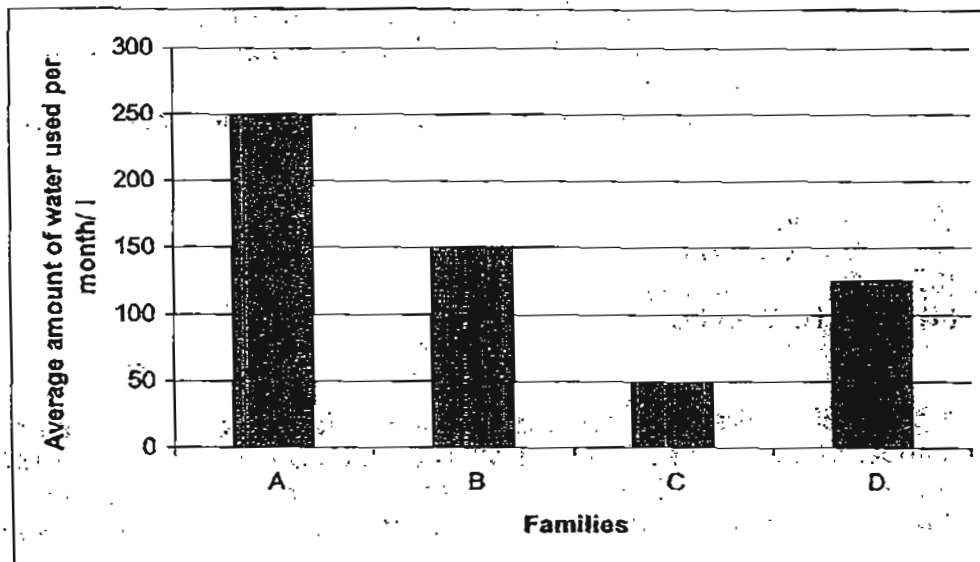


In which set-up, A, B, C or D, would the greatest number of water droplets be seen on the mirror?

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



13. As part of a class activity, Ms Tan asked her pupils to compare the amount of water used by 4 families, A, B, C and D. The graph below shows the average amount of water used by the 4 families in a month.



What could be the possible reasons for the 4 families spending different amounts of water?

- A Only Families B and D are small families
- B Family A has the largest number of members.
- C Family C was away on a holiday for 25 days in this month.
- D Members of Family A have a habit of taking long showers of at least an hour.

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

14. Which of the following activity/activities show(s) how we can help to reuse water?

- A Use rain water to wash vegetables.
- B Collect water from a leaking tap to cook.
- C Use water from a bath tub after a person has taken his bath to water plants.
- D Use water that is drained out from the washing machine to wash the toilet.

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

15. A group of children had some balsam and bean seeds. They put an equal number of balsam seeds in Jars W and X and an equal number of bean seeds in Jars Y and Z. Then they pour equal amount of water in each of the 4 jar. They recorded the conditions of the set up in the table below.

Jar	Type of seed	Type of soil used	Where the jar was placed
W	Balsam	Garden soil	In the shade
X	Balsam	Sand	In sunlight
Y	Bean	Garden soil	In the shade
Z	Bean	Sand	In sunlight

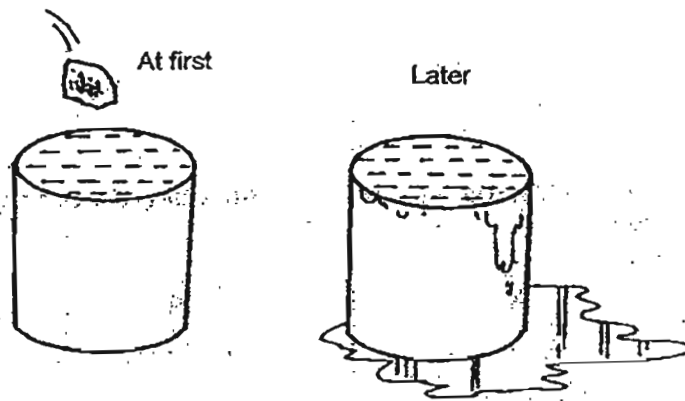
Which 2 jars should the children compare in order to find out whether balsam or bean seeds grow into seedlings faster?

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

16. Spores are usually scattered by \_\_\_\_\_.

- (1) water
- (2) wind
- (3) animals
- (4) splitting action

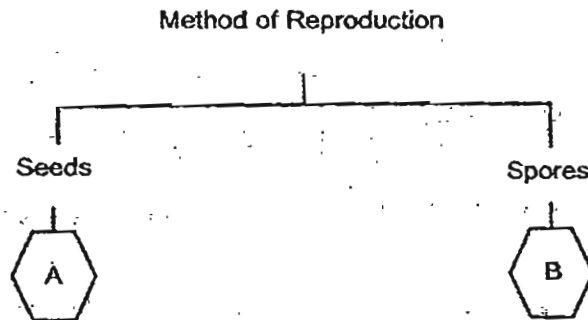
17. Study the diagram below. A stone is carefully lowered into a beaker full of water.



The diagram shows that \_\_\_\_\_.

- A both water and stone have mass.
  - B water has a fixed shape and volume.
  - C the stone occupies space and has no fixed volume.
  - D water has no definite shape and the stone occupies space.
- (1) A only
  - (2) D only
  - (3) A and D only
  - (4) B and C only

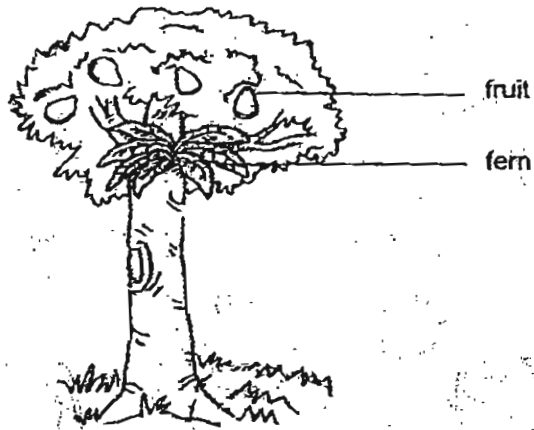
18. A and B are classified according to the methods of reproduction.



Which of the organisms shown in the table below best represent A and B respectively?

	<b>A</b>	<b>B</b>
(1)	Moss	Mushroom
(2)	Tree Fern	Moss
(3)	Chilli	Tree Fern
(4)	Water Melon	Papaya

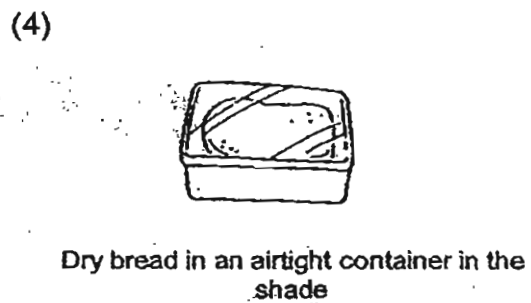
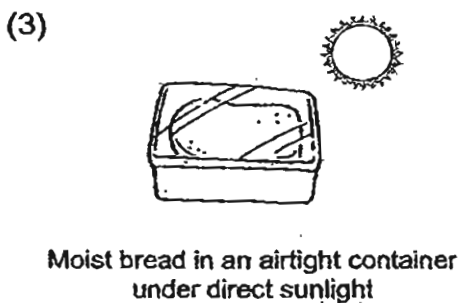
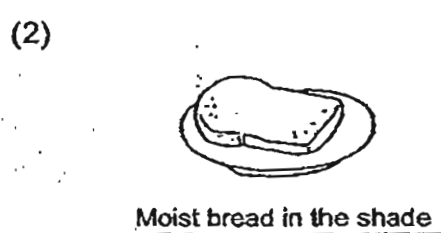
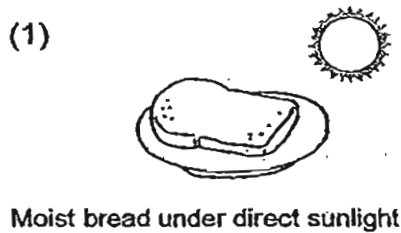
19. The diagram below shows a fern growing on the trunk of a certain fruit tree.



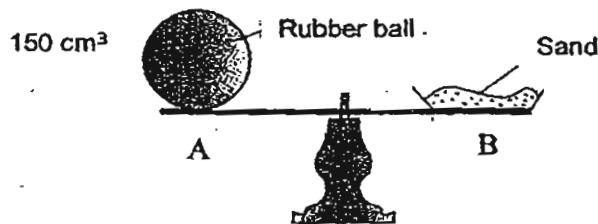
In what ways are the fern and fruit tree similar?

- A Both are non-flowering plants.
  - B Both have roots to take in water and minerals.
  - C The leaves of both plants capture sunlight to make food.
- (1) A only  
(2) B only  
(3) A and C only  
(4) B and C only

20. An experiment was done to see how fast bread mould will grow under different conditions. Which one of the following pieces of bread is most likely to turn mouldy in the shortest time?



21. A fully inflated rubber ball with a volume of  $150 \text{ cm}^3$  was placed at one end, A, of a balance as shown below. Sand was added to the part at B until it balanced.



What will happen to the balance if  $50 \text{ cm}^3$  of air is pumped into the rubber ball?

- (1) B will move downwards
- (2) A will move downwards
- (3) A and B will remain balanced
- (4) B will move up and then move down

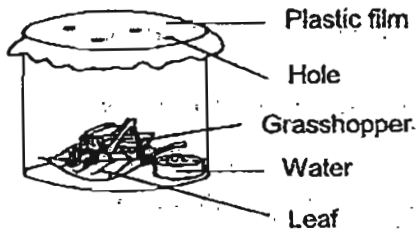
22. Which of the following statements is/are true?

- A Mass is the amount of matter an object has.
- B Volume is the amount of space a body occupies.
- C The mass of an object does not change when it is heated.

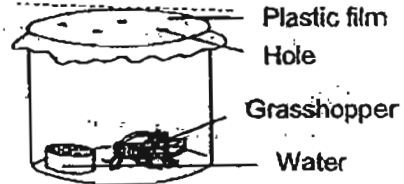
- (1) A only
- (2) B only
- (3) A and B only
- (4) A, B and C

23. Ken placed four grasshoppers in four different containers as shown below. All four containers are sealed with a plastic film. In which of the containers would the grasshopper still be alive after a week?

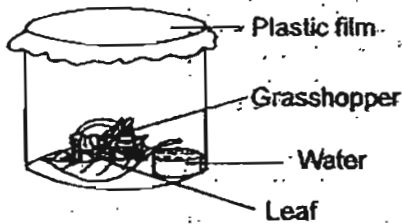
(1)



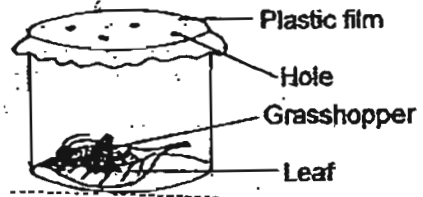
(2)



(3)

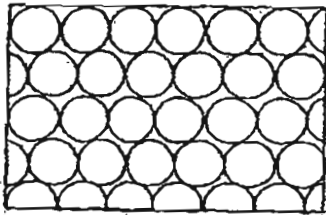


(4)

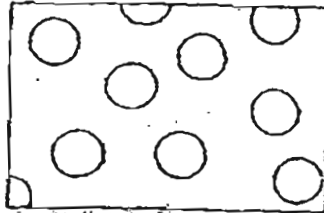


24. Solids, liquids and gases are all made up of microscopic particles, but the particles in the three different states behave differently.

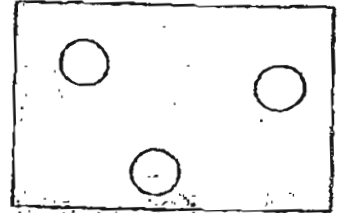
The following diagrams represent the arrangement of these particles in its different states, A, B and C, at room temperature.



State A



State B



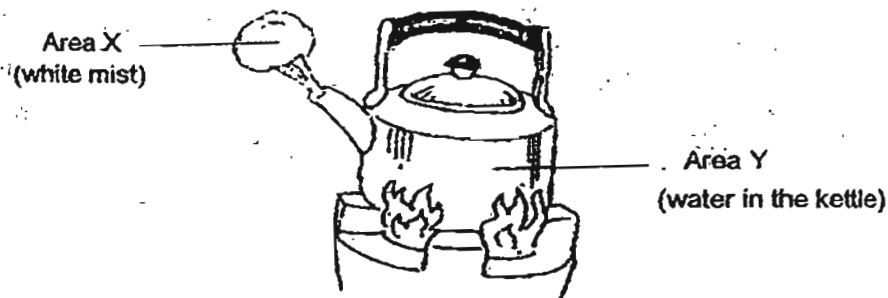
State C

Particles in the solid state are packed close together in a regular pattern.

Particles in the liquid state are close together with no regular pattern.

Particles in the gaseous state are well separated with no regular arrangement.

Based on the information above, what is the most likely arrangement of particles in the respective areas X and Y of a kettle of water in the process of boiling?



	Area X	Area Y
(1)	State A	State C
(2)	State B	State B
(3)	State C	State B
(4)	State C	State C



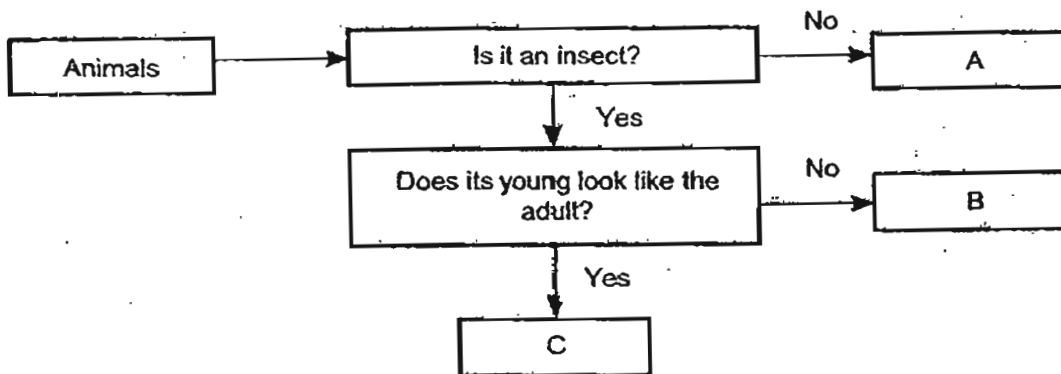
25. The table below shows the melting and boiling points of four substances.

Substance	Melting point (°C)	Boiling point (°C)
W	- 15	85
X	20	100
Y	- 45	20
Z	10	95

At which one of the following temperatures are the four substances in the same state?

- (1) - 10°C
- (2) 10°C
- (3) 50°C
- (4) 105°C

26. Study the flow chart below carefully.



Which of the following is correct?

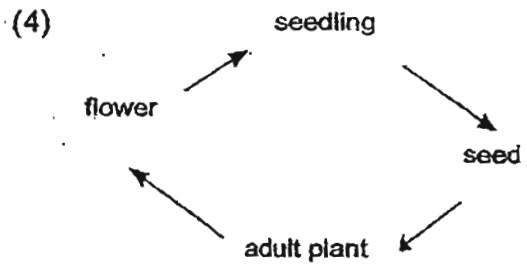
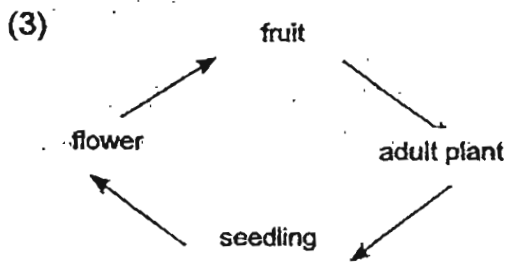
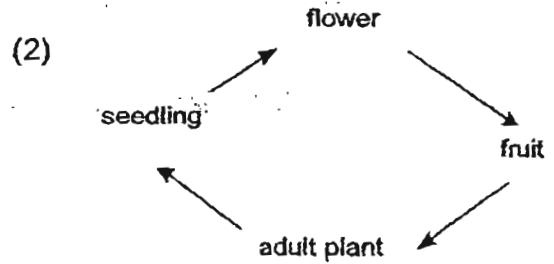
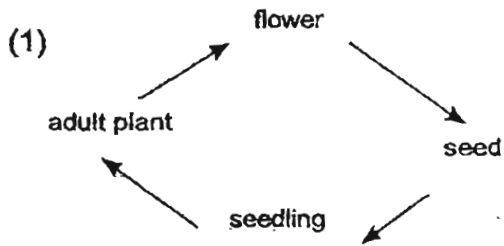
	A	B	C
(1)	Cockroach	Butterfly	Cat
(2)	Cat	Butterfly	Cockroach
(3)	Cat	Cockroach	Butterfly
(4)	Butterfly	Cockroach	Cat

27. Which of the following statements describe the life cycles of both a frog and a dragonfly?

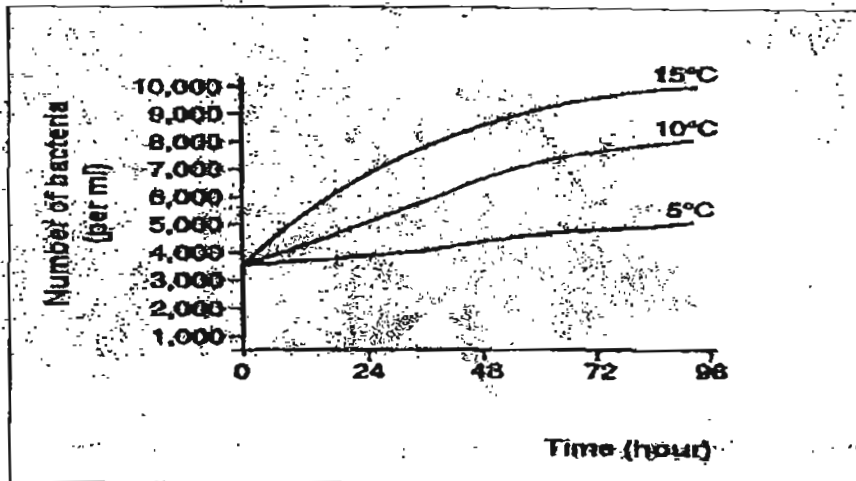
- A They have 3-stage life cycles
- B The adults care for their young
- C Their young breathe through gills

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

28. Which of the following correctly shows the life cycle of a flowering plant?



29. The graph below represents the results of an investigation on the growth of three identical strains of bacteria, a type of microorganism, at different temperatures.



What can you infer from the graph?

- A Bacteria cannot grow at 5°C.
  - B Bacteria grow well at 15°C than 5°C.
  - C Temperature affects the growth of bacteria.
- (1) A only  
(2) A and B only  
(3) B and C only  
(4) A, B and C

30. The picture below shows a bee.



Which part of the bee is most helpful in identifying it as an insect?

- A Number of legs
- B Number of wings
- C Location of antennae
- D Presence of 3 body parts

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



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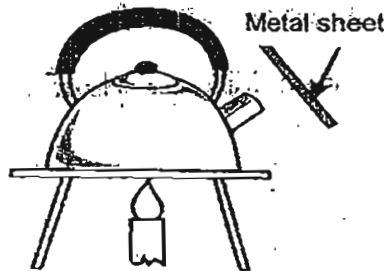
MARKS	
Sect B:	/ 40

**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. Jenny placed a metal sheet a short distance away from the spout of a boiling kettle of water as shown below.

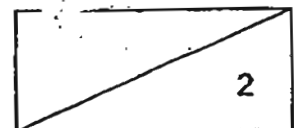


- (a) Water droplets are seen <sup>on</sup> the metal sheet after some time. Explain how these water droplets are formed. [2]

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(b) Jenny observed that the water droplets formed on the <sup>metal sheet</sup> mirror decreased after some time. Explain her observation. [1]

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(c) Jenny's mum bought a packet of vegetables from the market and she placed it in the refrigerator immediately when she reached home. After a few hours, she took the packet of vegetables out from the refrigerator to cook it for lunch. She discovered that there were tiny water droplets on the inner side of the packet. Explain clearly where did the water droplets come from. [1]

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32(a) How are seeds and spores similar? [1]

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32(b) Why are seeds and spores important to plants? [1]

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33. Mr Tan, a durian farmer, bought a new <sup>plot</sup> plot of land. He had seeds from 2 parent plants, X and Y. Parent plant X was strong and has sweet and juicy fruits. Parent plant Y was strong and had non-fleshy fruits. Which seed should Mr Tan sow in his new plot of land so that he could harvest to get high sale? Why? [2]

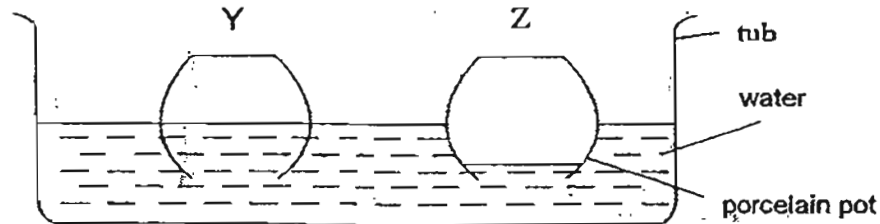
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34. Two porcelain pots are inverted into a tub of water. The 2 pots are similar in every way except that one has 3 holes and the other one has no hole at the base.



- (a) Identify the pot (Y or Z) which has 3 holes and the one which has no hole at the base respectively and write in the blank below. [1]

(i) Three holes: Pot \_\_\_\_\_

(ii) No hole: Pot \_\_\_\_\_

- (b) Explain your answer in part (a). [2]

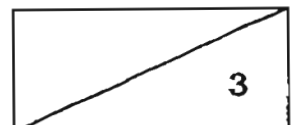
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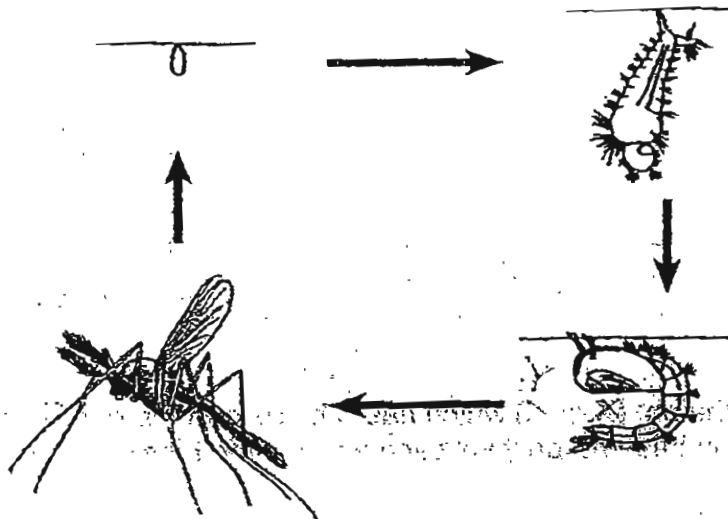
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35. The diagram below shows the life cycle of a mosquito.



(a) State one way in which this insect is harmful to humans. [1]

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(b) At which stage of the life cycle is it the most difficult to kill? Why? [1]

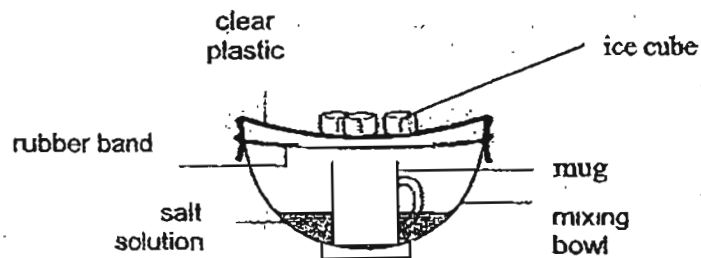
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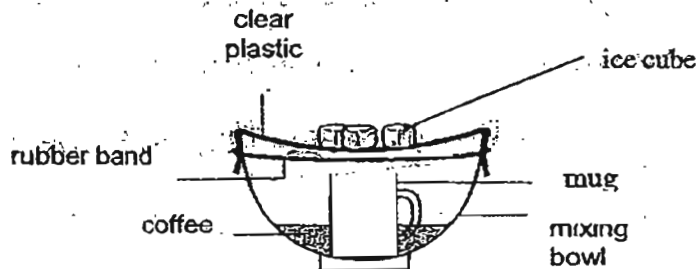




36. Mandy set up two experiments A and B as shown below and placed them under the Sun.



Set-up A



Set-up B

- (a) What is the purpose of the ice cubes? [1]

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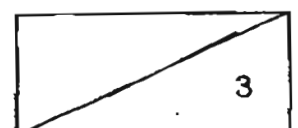


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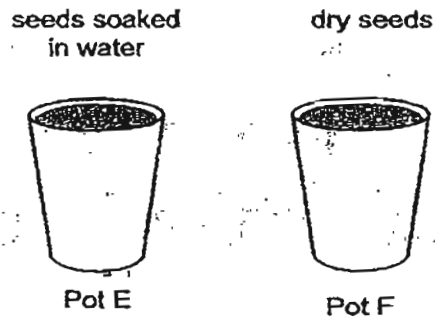
- (b) What would be collected in the mug after 20 minutes for set-up A and set-up B? [2]

Set-up A: \_\_\_\_\_

Set-up B: \_\_\_\_\_



37. Joseph had 2 pots of dry soil. He bought a packet of seeds and soaked half of the seeds in water before scattering them on the soil in Pot E. He scattered the other half of dry seeds directly on another similar pot of soil, F.



The seeds in pot E grew into seedlings but the seeds in pot F did not.

- (a) Explain why the seeds in pot F did not grow into seedlings. [1]

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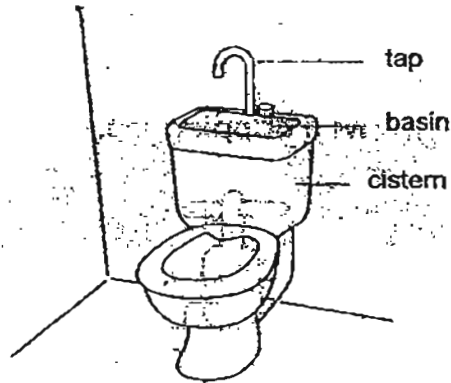
- (b) What can you conclude from this experiment? [1]

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38(a) Study the diagram below. John washes his hands at the basin and the water flows into the cistern.

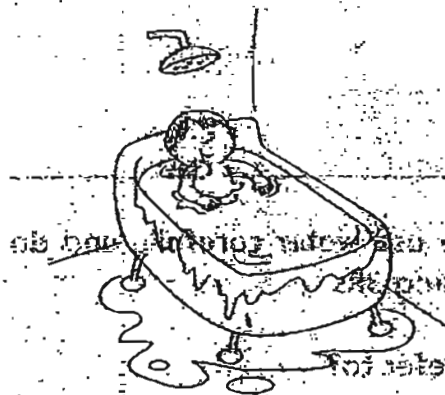


How is water conserved by using this eco-friendly cistern? [1]

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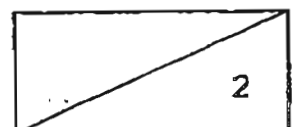
38(b) Look at the diagram below.



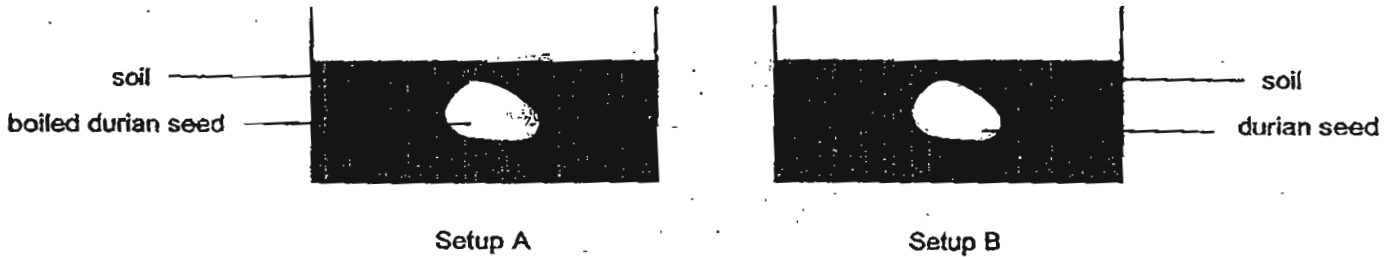
Suggest a way that the boy can do in order to conserve water. [1]

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39. William knows that he can reproduce durian trees from seeds. He wants to find out if a seed will grow after it is boiled in water. He prepares 2 set-ups as shown below.



(a) List 2 variables that William must keep the same in order <sup>to</sup> ensure that the test is fair. [2]

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

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

(b) Which seed (in Set-up A or Set-up B) will not grow after 2 weeks? [1]

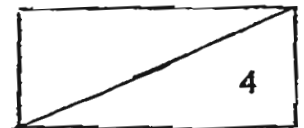
\_\_\_\_\_

\_\_\_\_\_

(c) Give a reason for your answer in (b) [1]

\_\_\_\_\_

\_\_\_\_\_



40(a) The table below shows the number of a type of fish in a pond over a period of 5 months.

Month	Number of fish
January	26
February	30
March	33
April	38
May	44

(i) Based on the table above, how has the number of fish changed over the 5 months? [1]

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(ii) This particular type of fish only feeds on hydrilla plants grown in the pond. What will happen to the fish if all these hydrilla plants in the pond died? Give a reason for your answer. [1]

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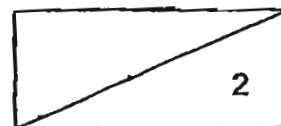
40(b) James fed 4 young bullfrogs, W, X, Y and Z, with different numbers of crickets every day.

The other conditions were kept exactly the same. The masses of each of the 4 bullfrogs were taken every week. The results are shown in the table below.

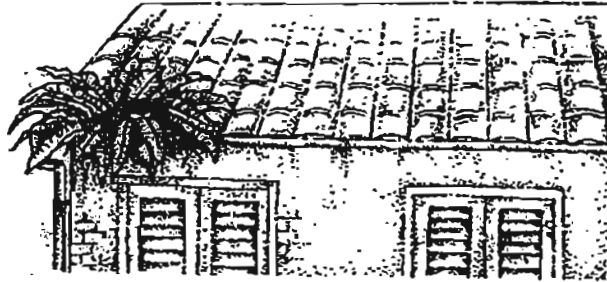
Bullfrog	Number of crickets eaten everyday	Mass of bullfrog (g)			
		1 <sup>st</sup> week	2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week
W	4	31	31	32	33
X	7	31	32	33	35
Y	13	31	33	36	Dead
Z	22	31	34	Dead	-

(i) From the data given in the table above, what is the most suitable number of crickets James should give to the bullfrogs if he wants to increase their masses the fastest without harming them? [1]

(ii) Bullfrogs Y and Z died in the 3<sup>rd</sup> week and 4<sup>th</sup> week after the start of the experiment. Provide a reason for the death of the 2 bullfrogs based on the data in the table above. [1]



41. As Tammy was looking up at the roof of her house, she spotted some bird's nest ferns growing on the roof as shown in the diagram below.



- (a) How did the bird's nest fern manage to grow on the roof of the house? [1]

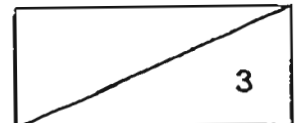
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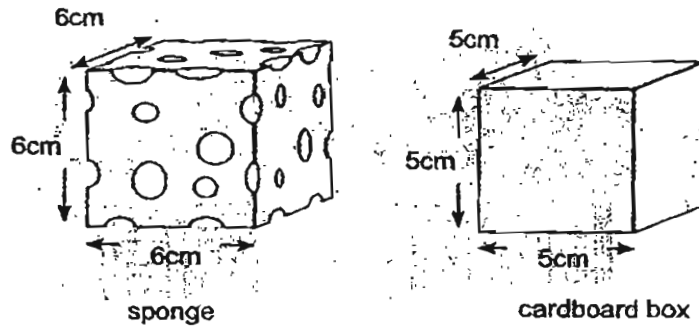
- (b) State two similarities between the bird's nest fern and moss. [2]

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42. James has a piece of sponge and a box as shown below.



(a) Do you think it is possible to squeeze the sponge into the box? Give a reason for your answer. [1]

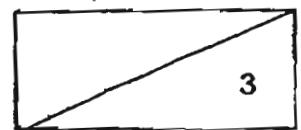
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(b) James believes that the sponge is a solid. Is he correct? Give a reason for your answer? [2]

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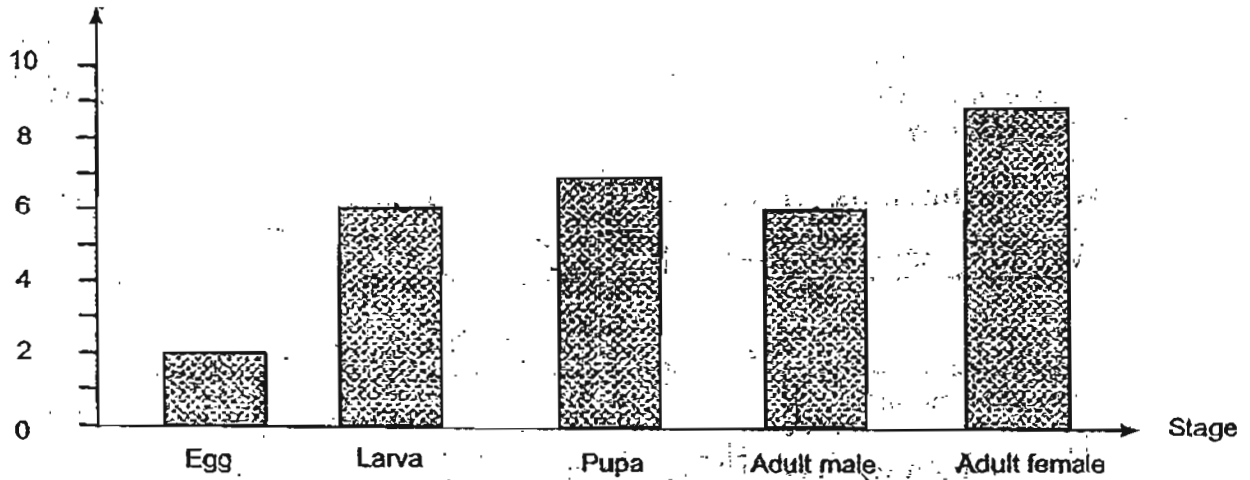
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43. The graph below shows the number of days in each stage of the life cycle of an insect.

Number of days



- (a) How many stages are there in the life cycle of this insect? [1]

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- (b) How many days does it take for the insect to become an adult after the egg hatches? [1]

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- (c) How many more days does the adult female live than the adult male? [1]

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44. The table below describes 4 categories of animals.

Animal	Outer Covering	Legs	Feelers	Wings	Fins	Beak
W	Hair	2	-	2	-	-
X	Scales	-	-	-	8	-
Y	Feathers	2	-	2	-	1
Z	*Exoskeleton	6	2	2	-	-

\* An exoskeleton is an external skeleton that supports and protects an animal's body

(a) Which animal is most likely a mammal? Why do you think so? [1]

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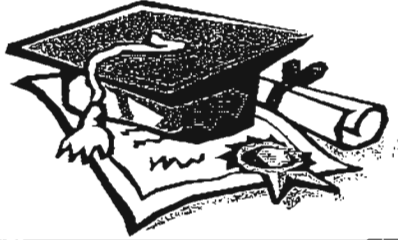
(b) If animal Z is an insect, name 2 other characteristics of insects that are not given in the table. [2]

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END OF PAPER



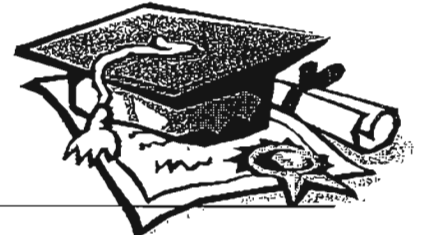


# ANSWER SHEET

**EXAM PAPER 2011**

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

**TERM : CA1**



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

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

31)a)The water in the kettle gains heat and evaporate to form steam. The steam rises and when it comes in contact with the cool surface of the metal sheet, it loses heat and condenses to form water droplets on the metal sheet.

b)Because when the evaporate water touches the cool surface of the metal sheet, it gains heat from the evaporate water and would slow down the rate of evaporate.

c)The water vapour trapped in the packet lose heat and condenses into water droplets when it comes into contact with the cool inner surface of the packet.

32)a)They both grow into a plant or fern.

b)They ensure the continuity of their own kind.

33)Parent plant X. Seeds from delicious fruit usually produce plants that bear the same kind of delicious fruit as plants pass on the characteric to their young when they reproduce.

34)a)i)Y ii)Z

b)The water level in pot Y higher as it has 3 holes, allowing air to escape from the pot and water in the tubrise up to take it place. The water level in pot Z is lower as air is occupying the space since there are no holes for it to escape.

35)a)When they bite us they may transfer germs to our body and we may fall sick.

b)The adult stage. Because it has wings and can fly around easily hence, the adult stage is the most difficult to kill.

36)a)It is to cool the plastic sheet so as to provide a cool surface for condensation to occur.

b)A: Water

B: Water

37)a) Dry seeds do not have sufficient water for it to grow.

b) Seed needs water to germinate.

38)a) The water for washing hands is collected in the cistern and reused for flushing the toilet.

b) Do not fill the tube up to the brim before you 20 in you only need to fill it to the half.

39)a) i) The amount of water. ii) The number of seeds.

b) The seed in Set-up A.

c) When the seed is boiled, it kills the seed therefore the seed will not grow.

40)a) i) The number of fish has increased.

ii) The fish will die. Because when they will eat up all the food sources, they will have no more food and would die of hunger.

b) i) 7 crickets.

ii) They ate too much therefore they died.

41)a) Spores were carried by wind to the roof.

b) They are both non-flowering plants.

42)a) Yes. The sponge has a lot of air spaces and air can be compressed.

b) Yes. The sponge has a definite shape and volume.

43)a) 4.

b) 13.

c) 3.

44)a) W. It's outer covering has hair.

b) Has antennas and has three body parts.