

# METHODIST GIRLS' SCHOOL

Founded in 1887



## CONTINUAL ASSESSMENT 2015 PRIMARY 5 SCIENCE

### BOOKLET A1

Total Time for Booklets A and B: 1 hour 45 minutes

#### INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Shade your answers in the Optical Answer Sheet (OAS) provided.

Name: \_\_\_\_\_

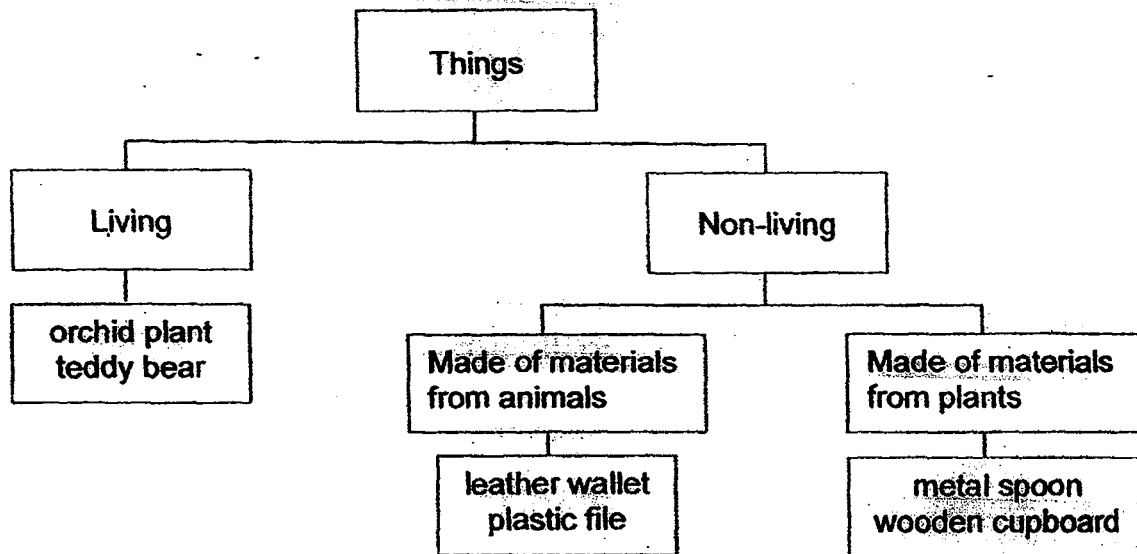
Class: Primary 5 \_\_\_\_\_

Date : 5 March 2015

For each question from 1 to 15, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval on the Optical Answer Sheet (OAS).

[30 marks]

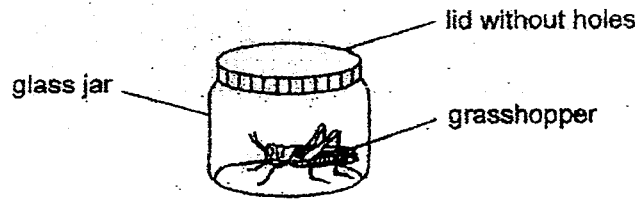
1. Mei Ling draws the following classification diagram to group some of her things.



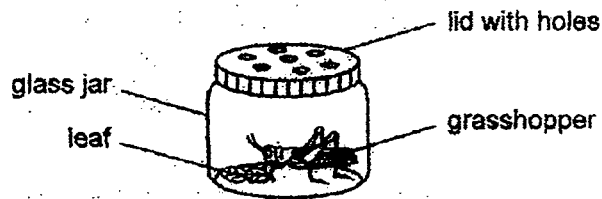
Which of the things have been placed in the correct groups?

- (1) orchid plant, plastic file and metal spoon
- (2) orchid plant, leather wallet and wooden cupboard
- (3) teddy bear, plastic file and metal spoon
- (4) teddy bear, leather wallet and wooden cupboard

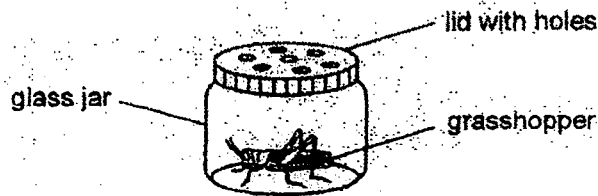
2. Raju set up four jars, P, Q, R and S as shown below. He wanted to find out if a grasshopper needs air and food to survive.



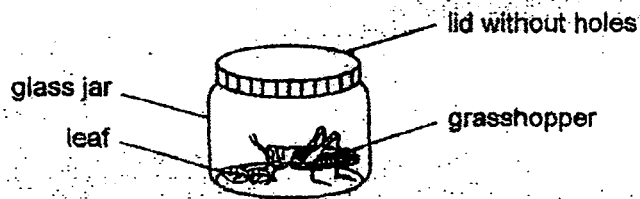
P



Q



R

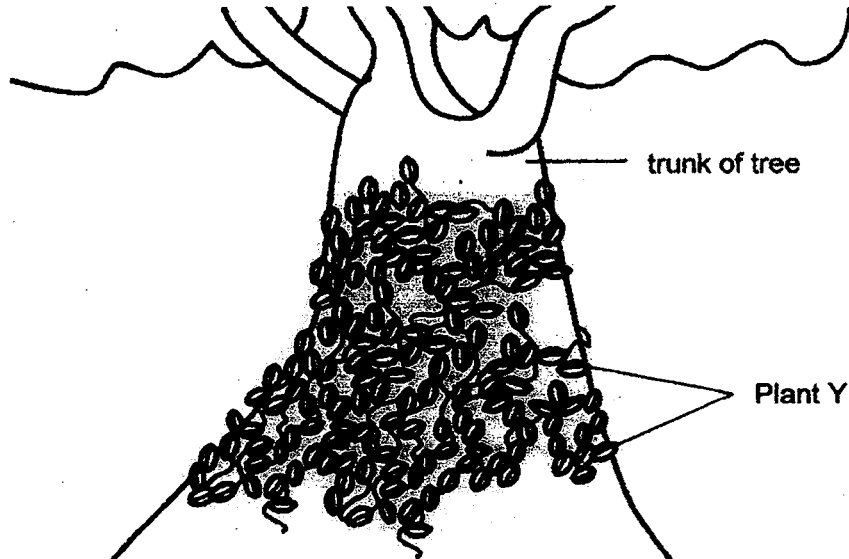
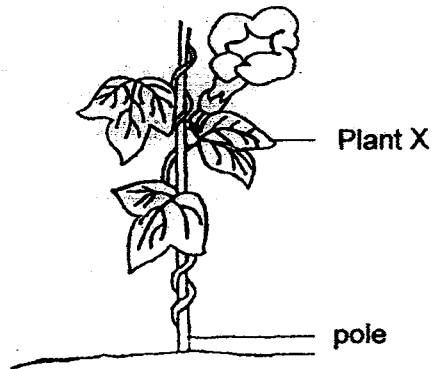


S

Which pairs of jars are the most suitable for carrying out Raju's experiment?

To find out if a grasshopper needs		
	air	food
(1)	P and Q	P and S
(2)	P and S	Q and R
(3)	Q and S	P and S
(4)	Q and S	Q and R

3. The diagram below shows two green plants, X and Y, growing in a garden.



Which of the following statements about both plants, X and Y, is **not true**?

- (1) They have roots.
- (2) They have weak stems.
- (3) They reproduce by spores.
- (4) They have leaves with different edges.

4. John had to classify the four animals shown.  
(The animals are not drawn to scale.)



bat



penguin

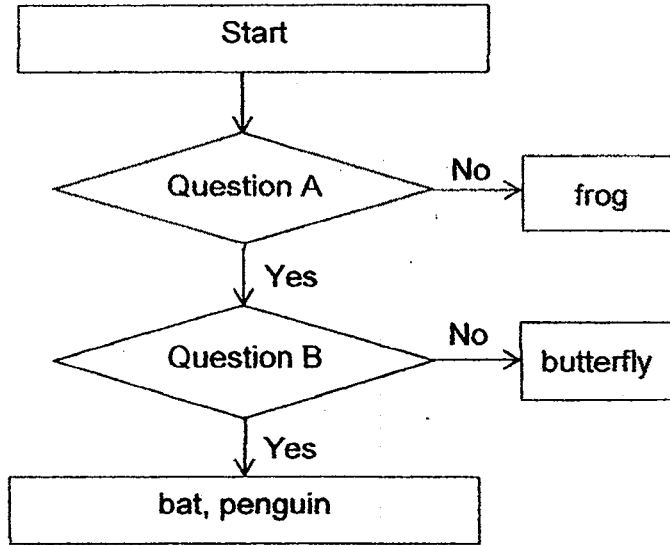


frog



butterfly

He classified them with the help of the flow chart below.



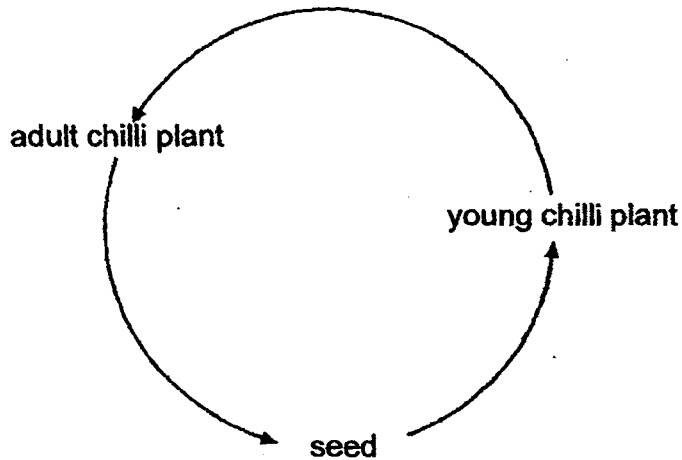
What are the two questions, A and B?

	Question A	Question B
(1)	Do they have wings?	Do they give birth to their young?
(2)	Do they have wings?	Do their young look like the adults?
(3)	Do their young look like the adults?	Do they have wings?
(4)	Do their young look like the adults?	Do they give birth to their young?

5. Which one of the following is true for all bacteria and fungi?

	Bacteria	Fungi
(1)	Harmful	Useful
(2)	Living things	Living things
(3)	Have the same shape and size	Have different shapes and sizes
(4)	Can only be seen using a microscope	Can be seen using the naked eye

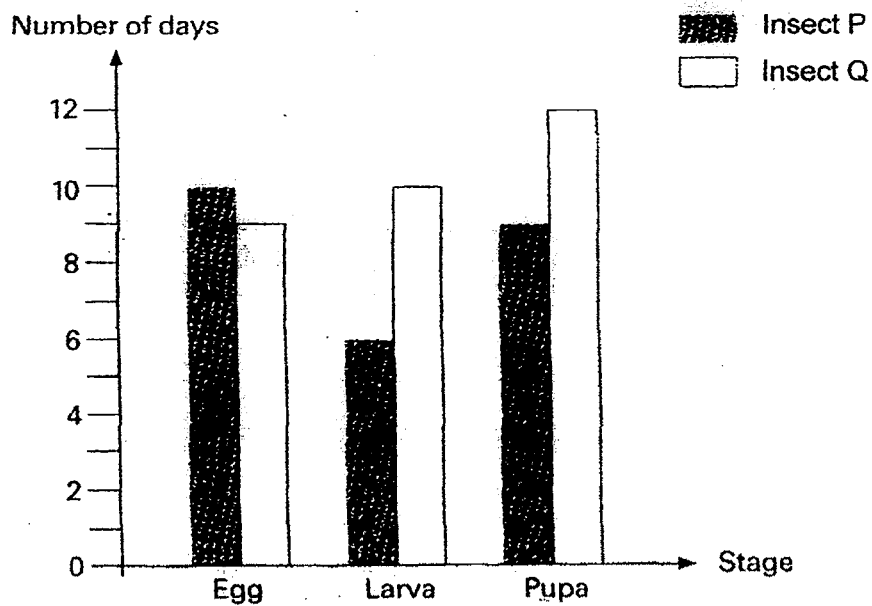
6. The diagram below shows the life cycle of a chilli plant.



Which one of the following statements about the life cycle of the chilli plant is **not true**?

- (1) All chilli plants go through the same life cycle.
- (2) The life cycle of the chilli plant is made up of three stages.
- (3) The life cycle of the chilli plant ensures the continuity of its kind.
- (4) Sunlight is necessary for each stage of growth of the chilli plant.

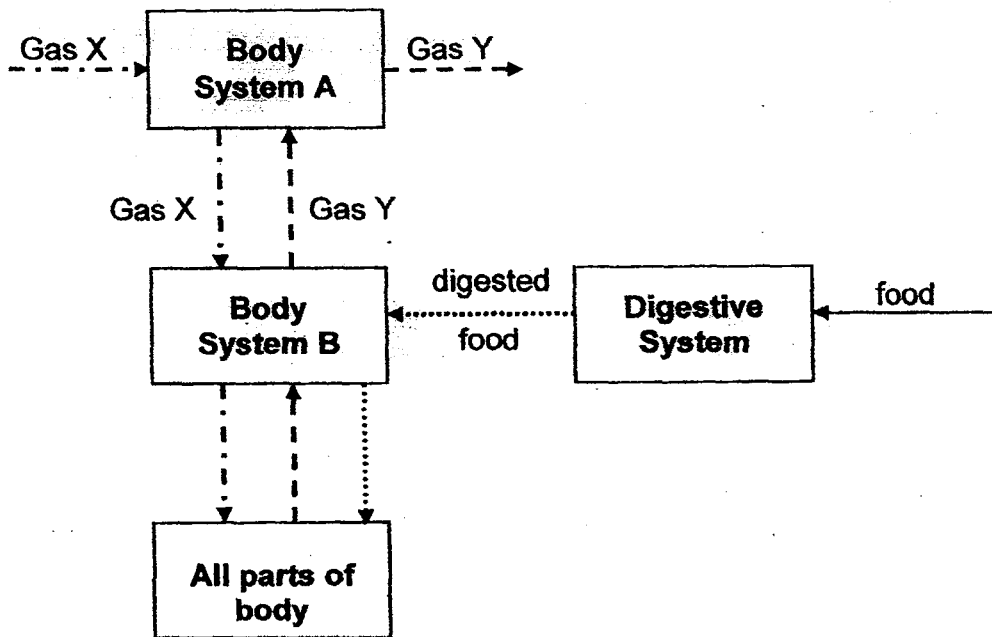
7. The graph below shows the number of days that each stage of the life cycles of insects P and Q lasts.



At which stage respectively, would insects P and Q be on the 17th day after the eggs were laid?

	Insect P	Insect Q
(1)	Larva	Pupa
(2)	Larva	Larva
(3)	Pupa	Pupa
(4)	Pupa	Larva

8. The diagram below shows how our body systems, A, B and the digestive system, work closely together to help our body function properly.



Key :

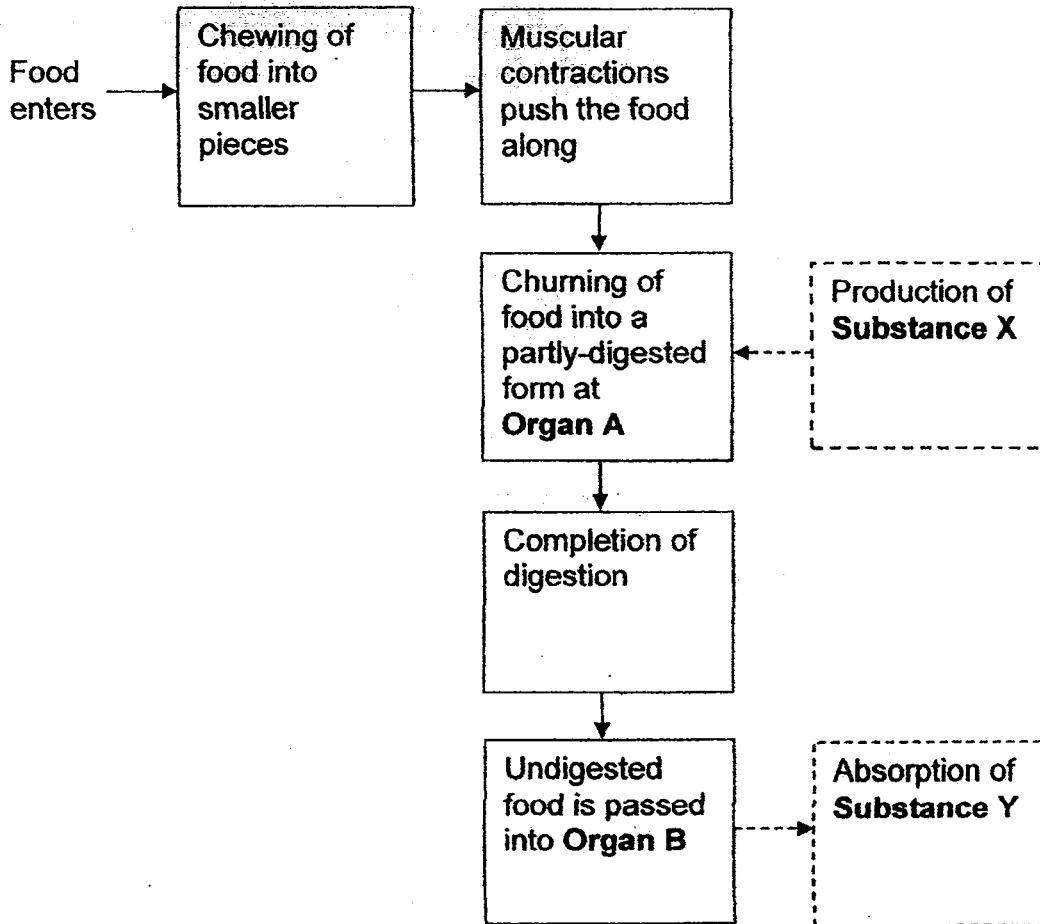
- ←..... Direction of digested food
- ←..... Direction of Gas X
- ←..... Direction of Gas Y

What body systems do A and B represent and what are gases X and Y?

	Body System A	Body System B	Gas X	Gas Y
(1)	respiratory	circulatory	carbon dioxide	oxygen
(2)	circulatory	respiratory	carbon dioxide	oxygen
(3)	respiratory	circulatory	oxygen	carbon dioxide
(4)	circulatory	respiratory	oxygen	carbon dioxide



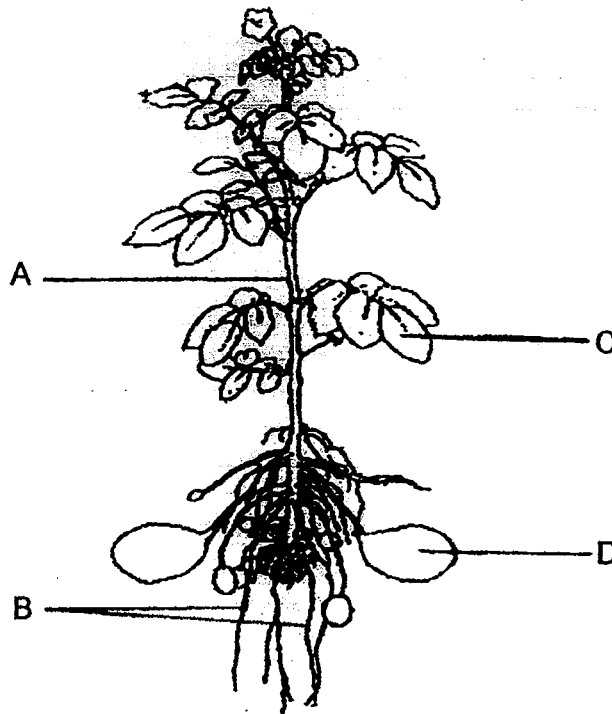
9. The flow chart below shows the processes involved in the human digestive system.



Based on the information given in the flow chart, which one of the following is correct?

	Organ A	Organ B	Substance X	Substance Y
(1)	stomach	large intestine	digestive juice	water
(2)	stomach	anus	saliva	water
(3)	small intestine	large intestine	digestive juice	nutrients
(4)	small intestine	anus	saliva	nutrients

10. Four students, Jane, Ming Wei, Rani and Azman were asked to observe the potato plant below.



Each student made a statement about a certain part of the potato plant.

Jane : The tubes inside A carry food, water and mineral salts from one part of the plant to another.

Mingwei : B supports the plant and keeps it upright.

Rani : C makes food for the plant.

Azman : D absorbs water and mineral salts from the soil.

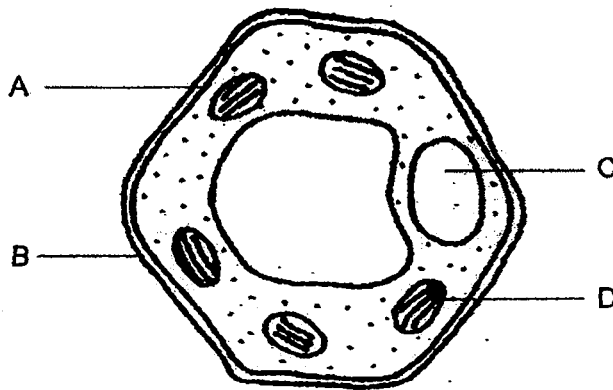
Whose statements are correct?

- (1) Jane and Rani
- (2) Mingwei and Azman
- (3) Mingwei, Rani and Azman
- (4) Jane, Mingwei, Rani and Azman

11. Which one of the following is the basic unit of life for a plant, an animal and a fungi respectively?

	Plant	Animal	Fungi
(1)	cell wall	cell membrane	cell wall
(2)	cell	cell	cell
(3)	chloroplast	cytoplasm	nucleus
(4)	nucleus	nucleus	nucleus

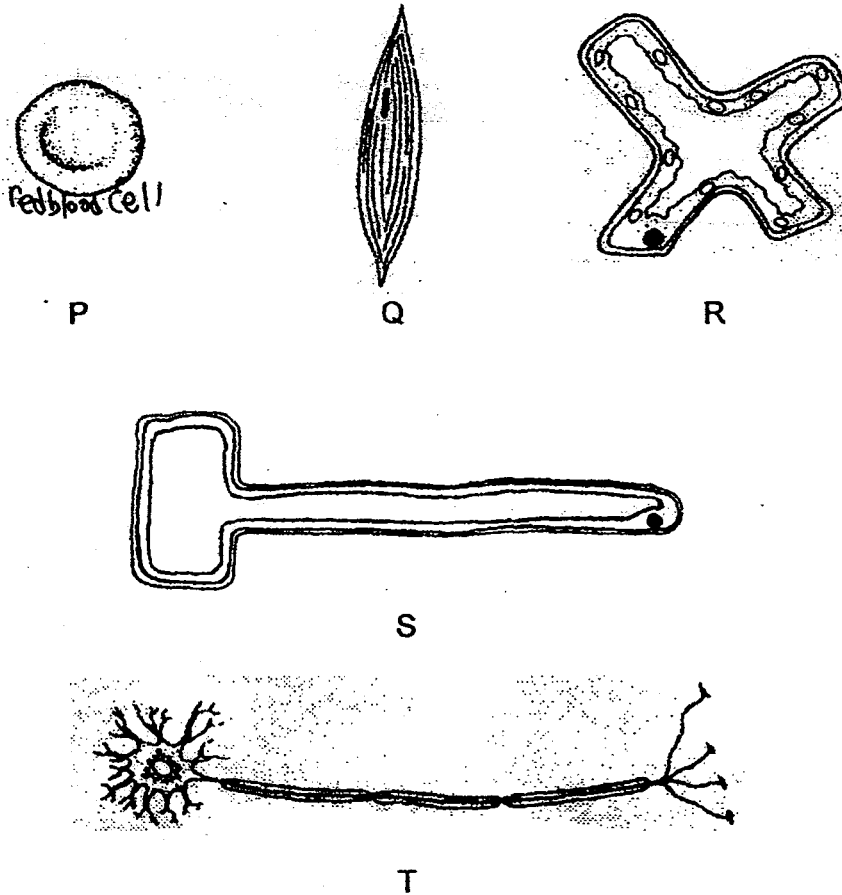
12. The diagram below shows a plant cell.



Which two parts are also found in animal cells?

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

13. Five different types of cells are shown below.



What are cells P, Q, R, S and T?

	Plant Cells	Animal cells
(1)	P and Q	R, S and T
(2)	R and S	P, Q and T
(3)	P, Q and T	R and S
(4)	Q, S and T	P and R

14. Some plant and animal cells are placed in a container filled with liquid P. After some time, the cells are removed and observed. The observations are recorded in the table below.

Plant Cells	Animal cells
Keep their shape	Burst into smaller pieces

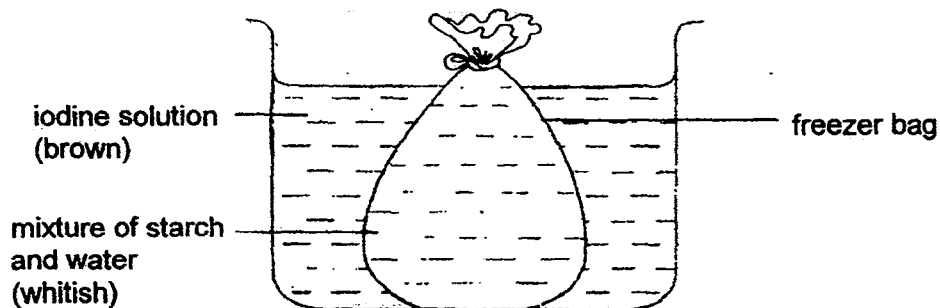
Based on the above observations, which of the following statements are correct?

- A : The cell wall keeps the shape of the plant cell.  
B : The animal cell breaks into smaller pieces because it lacks the cell wall.  
C : The cytoplasm of both the animal and plant cells controls the movement of the liquid in and out of the cell.

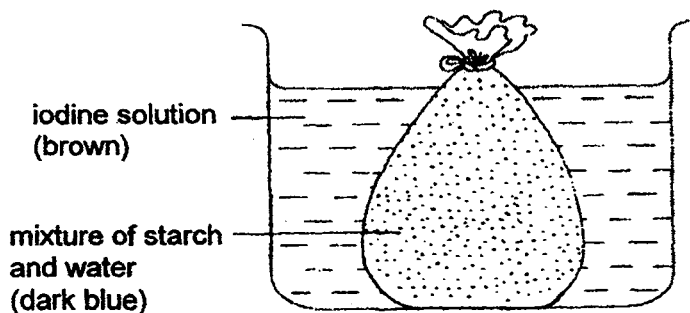
- (1) A only  
(2) B only  
(3) A and B only  
(4) A, B and C

- 15 The following experiment is carried out to investigate the movement of substances in and out of a freezer bag.

Iodine solution is used to test for the presence of starch. If starch is present, the brown iodine solution turns dark blue.



Beginning of experiment



End of experiment

Which of the following statements about the experiment are correct?

- A: Iodine is able to pass through the freezer bag but not starch.
- B: The iodine solution in the beaker remained brown as no starch is present.
- C: The freezer bag is similar to the cell membrane as both allow certain substances to pass through and not others.
- D: The mixture of starch and water turns dark blue at the end of the experiment as starch has been broken down into simple substances.

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

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## CONTINUAL ASSESSMENT 2015 PRIMARY 5 SCIENCE

BOOKLET A2

Total Time for Booklets A and B: 1 hour 45 minutes

### INSTRUCTIONS TO CANDIDATES

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Name: \_\_\_\_\_

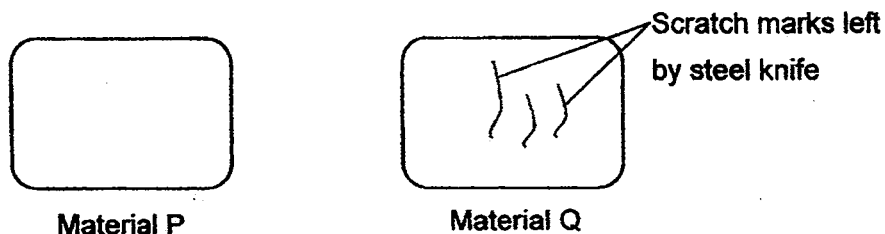
Class: Primary 5 \_\_\_\_\_

Date : 5 March 2015

For each question from 16 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 on the Optical Answer Sheet (OAS).  
(30 marks)

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16. Joey used a steel knife and scraped it against two different materials, P and Q as shown in the diagram below. She noticed that the knife left some scratch marks on material Q but not on material P.



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

- A: Material P is harder than steel.
- B: Material Q is harder than steel.
- C: Material P is stronger than material Q.
- D: Material Q is stronger than material P.

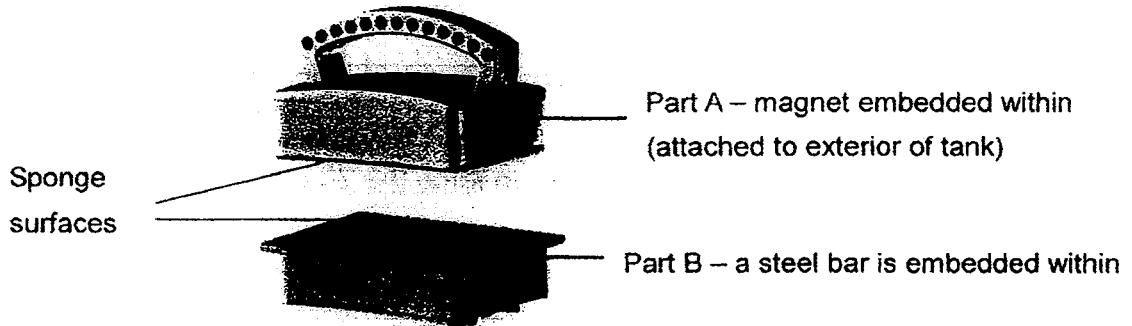
- (1) A only
- (2) B only
- (3) A and C only
- (4) B and D only

17. Which one of the following is not a source of light?

- (1) The Sun
- (2) The Moon
- (3) A lighted bulb
- (4) A candle flame



18. Mr Lee uses a two-piece device as shown below to clean his glass tank. The device allows both sides of the fish tank to be cleaned at the same time. When part A, which has a magnet embedded within, is moved over the glass surface of the exterior of the fish tank, part B follows it, moving over the glass surface of the interior of the fish tank.

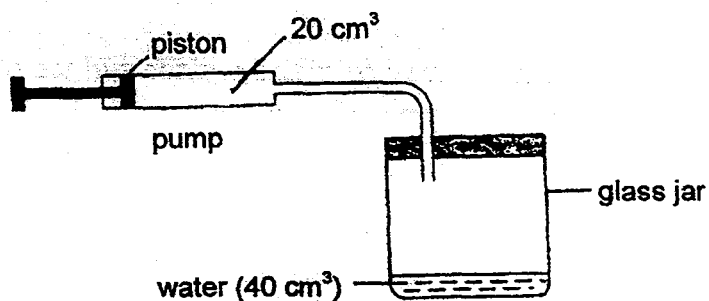


What properties of a magnet are applied in this device?

- A: Magnets repel each other.
- B: Magnets attract magnetic materials.
- C: The magnetic force is the strongest at its poles.
- D: Magnetic force can pass through some materials.

- (1) A and C only
- (2) B and D only
- (3) B, C and D only
- (4) All of the above

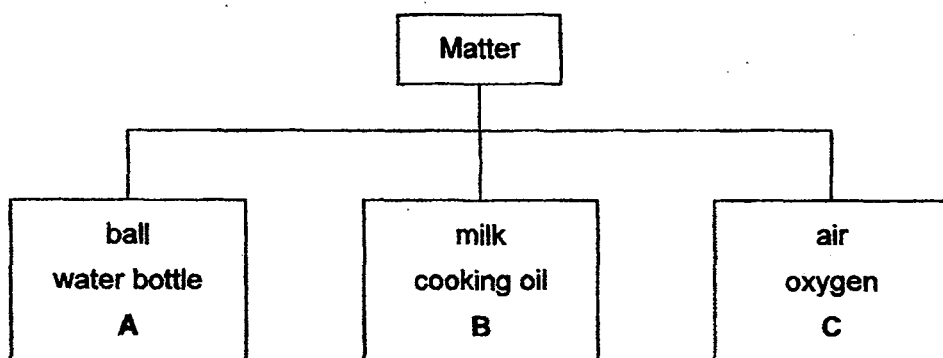
19. An experiment was set up using a pump which is connected to a glass jar as shown below. The volume of the glass jar is  $200 \text{ cm}^3$  and it contained  $40 \text{ cm}^3$  of water.



The piston was pushed in completely to force the  $20 \text{ cm}^3$  of air into the glass jar.  
What is the final volume of air in the jar?

- (1)  $160 \text{ cm}^3$
- (2)  $180 \text{ cm}^3$
- (3)  $200 \text{ cm}^3$
- (4)  $220 \text{ cm}^3$

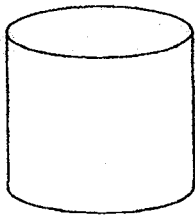
20. Study the classification diagram below.



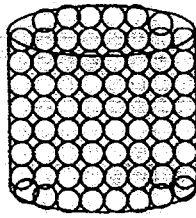
Which of the following objects best represent A, B and C?

	A	B	C
1)	snow	water vapour (gas)	steam
2)	iceberg	mist	cloud
3)	hailstone	fog	steam
4)	ice	steam	cloud

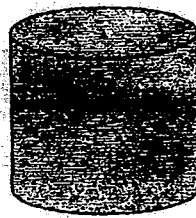
21. Ali added different substances to containers P, Q, R and S as shown below. Each container has a volume of 100ml.



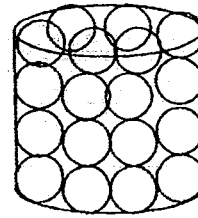
P: air



Q: marbles



R: orange juice



S: tennis balls

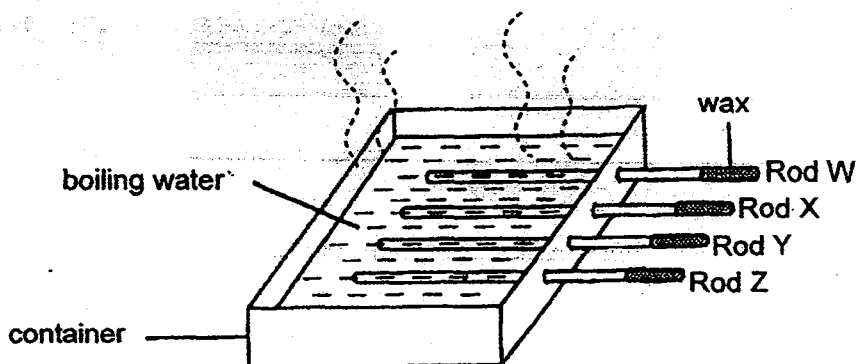
A pot with 50 ml of water is poured into each container at the same time. The speed and amount of water poured in is the same for all containers.

Which of the statements below correctly describe Ali's observations?

- A: The water in container R overflowed first.
- B: The water in container P did not overflow.
- C: Water filled up container P faster than container S.
- D: Water filled up container Q slower than container S.

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

22. Siti set an experiment as shown below to investigate which material is the best conductor of heat. Four rods made of different materials were heated on one end to melt the drop of wax that was on the other end.



The time taken for the drop of wax to melt completely is recorded in the table below.

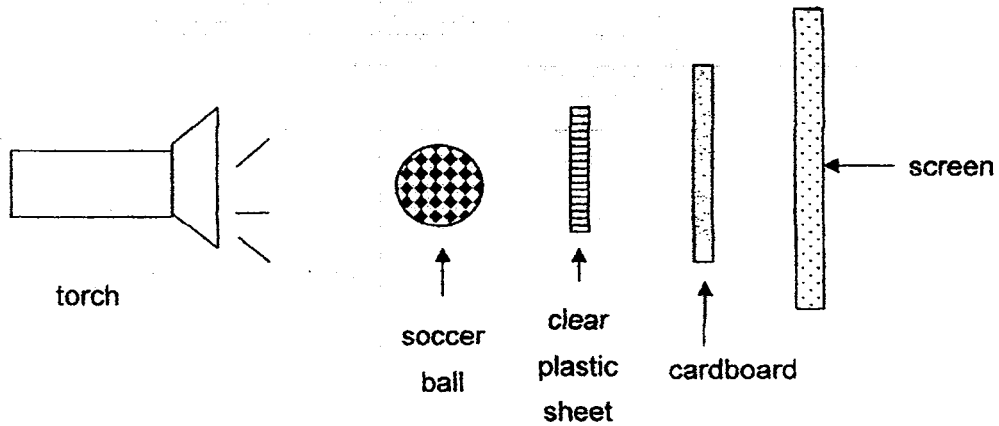
Rod	Time taken for the drop of wax to melt completely (s)
W	120
X	70
Y	190
Z	210

Based on the results above, what conclusions can she draw from the experiment?

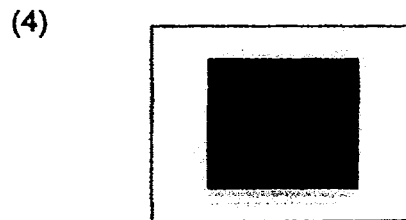
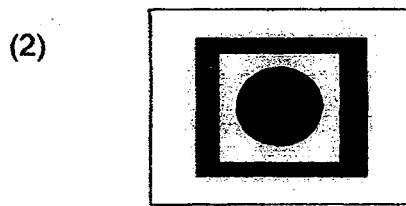
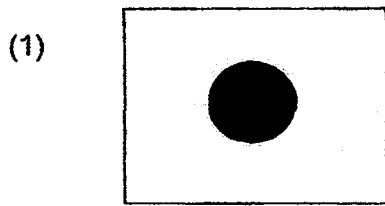
- A: Rod Z is the best conductor of heat.
- B: Rod W is a better conductor of heat than Rod Y.
- C: The four metal rods conduct heat at different rates.
- D: Material for Rod X can be used to make the handle of a frying pan,

- (1) A and C only
- (2) B and C only
- (3) B, C and D only
- (4) All of the above

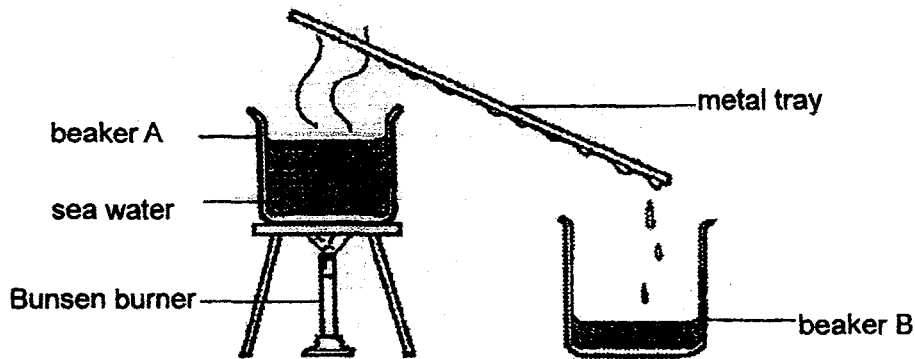
23. The diagram below shows a torch shining at a soccer ball, a square piece of clear plastic sheet and a rectangular piece of cardboard. A shadow is formed on the screen.



Which one of the following is the shadow that will be cast on the screen?



24. Judy set up the experiment as shown below.



She heated some sea water in Beaker A. After a while, droplets of liquid were formed under the metal tray. These droplets then dripped into Beaker B.

Which of the following statements about the above set-up are true?

- A: Pure water is collected in Beaker B.
- B: The steam condenses into water droplets as the metal tray was hot.
- C: The steam can be seen rising from the sea water when it was heated.
- D: Only water evaporates so salt and other impurities will be left in Beaker A.

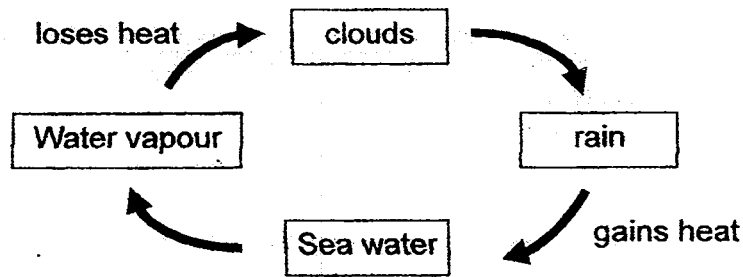
- (1) A and D only
- (2) A, B and C only
- (3) A, B and D only
- (4) B, C and D only

25. Which one of the following actions does not help to conserve water?

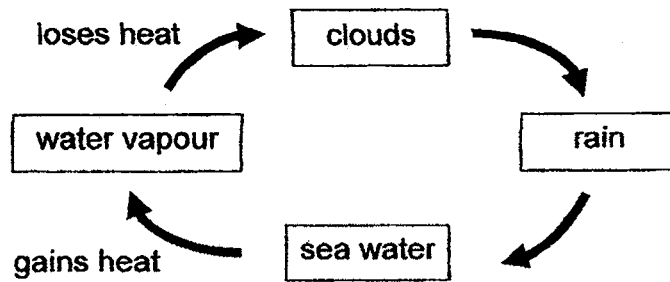
- (1) Conduct water rationing exercise.
- (2) Turn off the tap when you are brushing your teeth.
- (3) Drinking bottled mineral water instead of tap water.
- (4) Use water that was used to wash rice to water the plants.

26. Which one of the following diagrams correctly shows the water cycle?

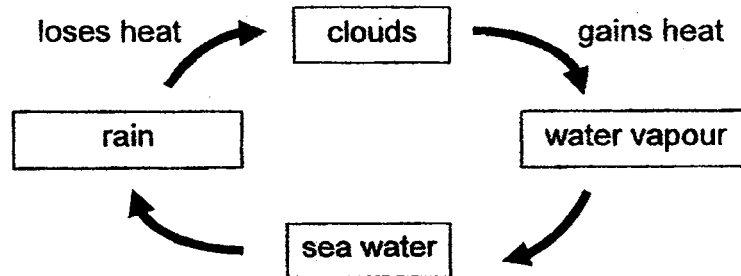
(1)



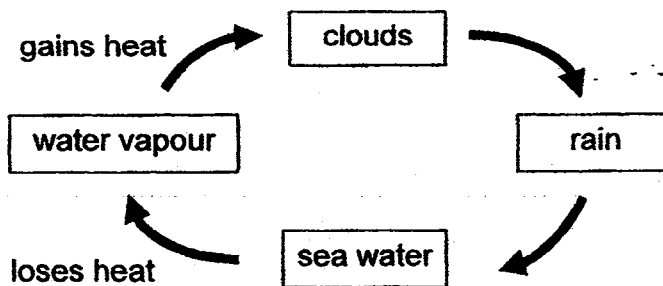
(2)



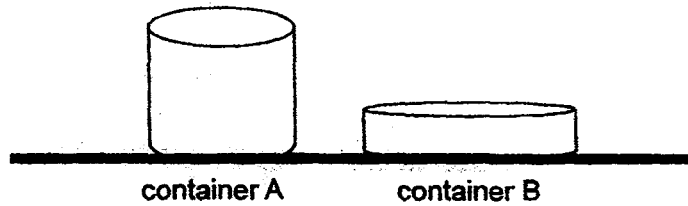
(3)



(4)

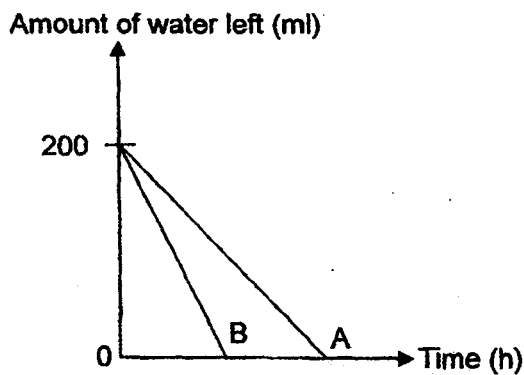


27. Container A and B were each filled with 200ml of water. The containers were placed near the window to allow the water to evaporate. A graph was plotted to show the time taken for the water in each container to evaporate.

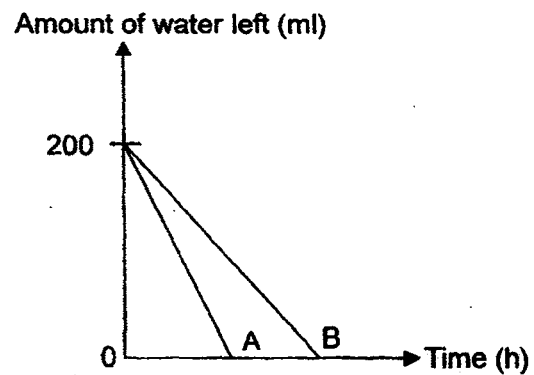


Which graph below shows the results correctly?

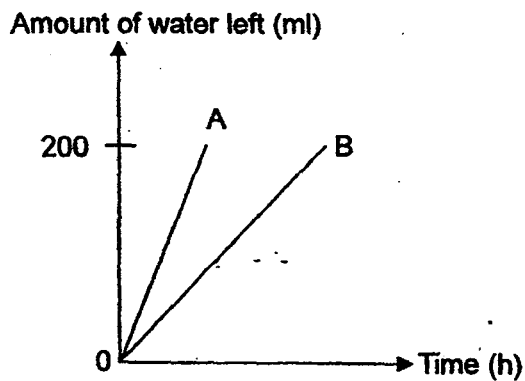
(1)



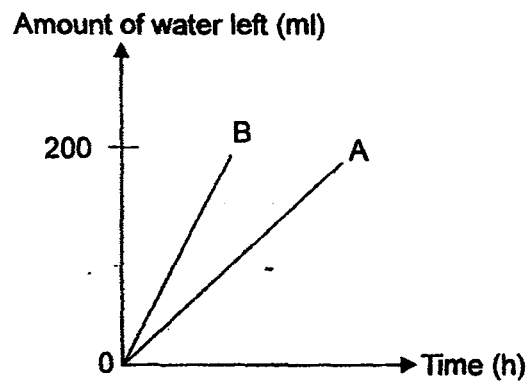
(2)



(3)

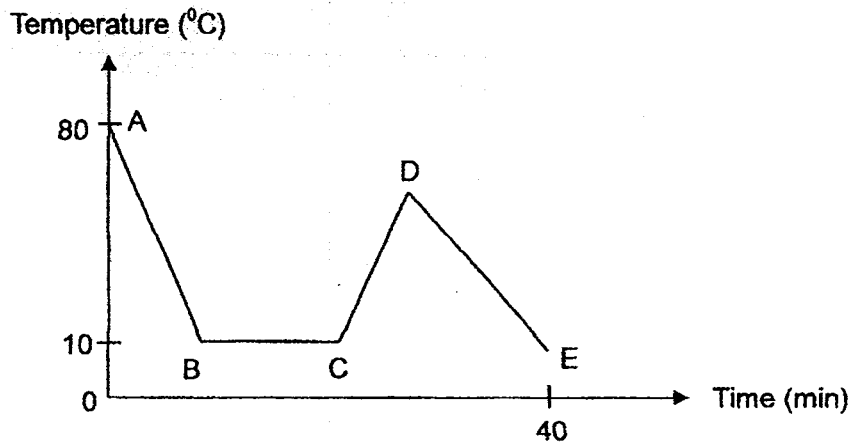


(4)





28. The graph below shows the changes in temperature of a liquid in a beaker over a period of 40 minutes.



Which of the following statements are definitely true?

- W: The boiling point of the liquid is  $80^{\circ}\text{C}$ .  
 X: Line DE shows a loss of heat energy.  
 Y: A heat source was introduced at point D.  
 Z: The temperature of the liquid remained constant at Line BC.

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

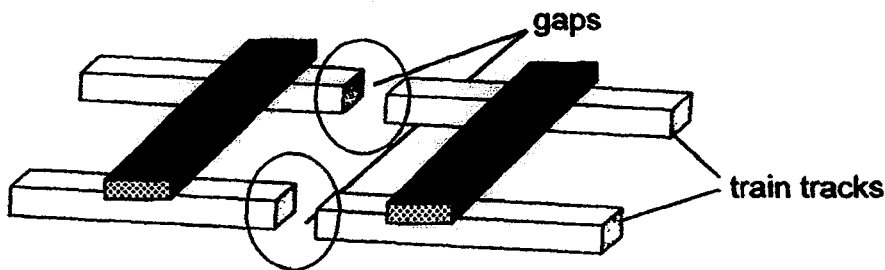
29. The table below shows the melting point and boiling point for three different substances, A, B and C.

Substance	Melting point ( $^{\circ}\text{C}$ )	Boiling point ( $^{\circ}\text{C}$ )
A	80	218
B	0	100
C	39	356

Which one of the following represents correctly the states of substances A, B and C respectively at  $55^{\circ}\text{C}$ ?

	State of substance at $55^{\circ}\text{C}$		
	A	B	C
(1)	gas	solid	liquid
(2)	liquid	liquid	solid
(3)	solid	liquid	solid
(4)	solid	liquid	liquid

30. The diagram below shows part of a train track of the Mass Rapid Transit (MRT) station.



The gaps on the train track allow the \_\_\_\_\_.

- (1) tracks to gain heat on hot days
- (2) tracks to lose heat on cold days
- (3) expansion of the track on hot days
- (4) contraction of the track on cold days

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Founded in 1887



## CONTINUAL ASSESSMENT 2015 PRIMARY 5 SCIENCE

### BOOKLET B1

Total Time for Booklets A and B: 1 hour 45 minutes

#### INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

Name: \_\_\_\_\_

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

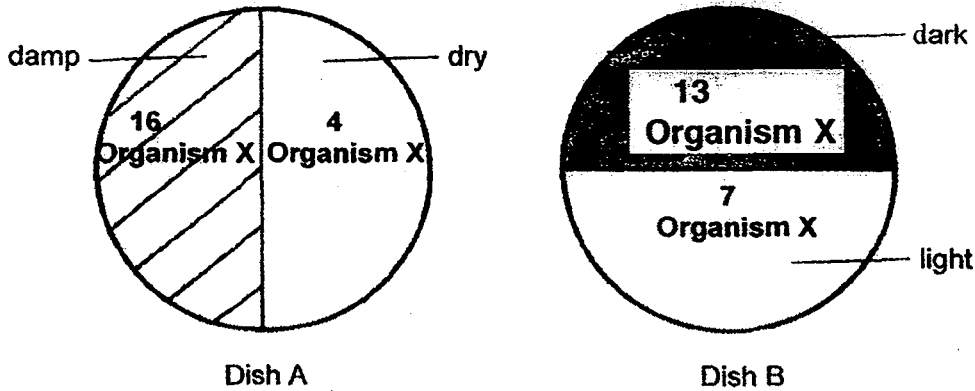
Date : 5 March 2015

Booklet B1	20
Parent's Signature	

For questions 31 to 37, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question. [20 marks]

31. An experiment was carried out to study the preferred environment of organism X. Twenty organism X were put in the middle of Dish A. After thirty minutes, the number of organism X in each section of Dish A was counted.

The experiment was repeated with Dish B using the same number of organism X.

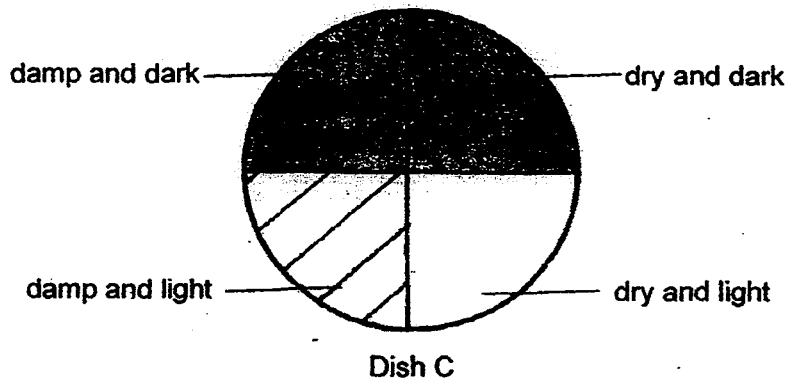


(a) State two characteristics of living things that are shown in the above experiment. [1]

Characteristic 1: \_\_\_\_\_

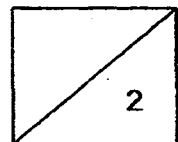
Characteristic 2: \_\_\_\_\_

(b) The experiment was repeated with Dish C using the same number of organism X.



In which area of Dish C would most organism X be found?

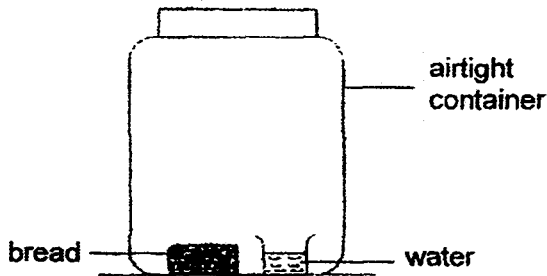
[1]



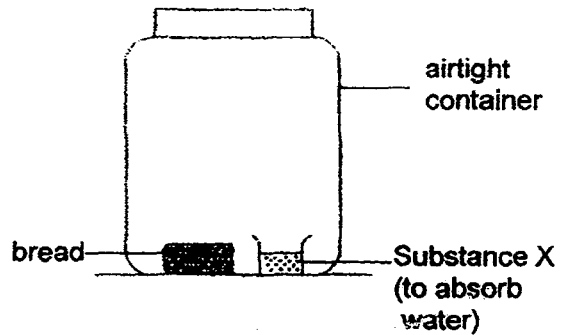
(Go on to the next page)

32. Sarah set up the following experiment to find out the conditions needed to prevent bread from becoming mouldy. She placed a similar piece of bread in each of the containers, A, B, C and D. She put containers A and B in a warm place and containers C and D in a cold place.

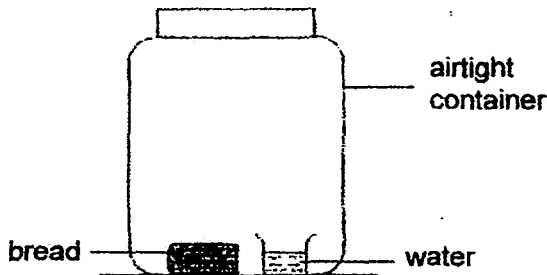
Container A - warm place



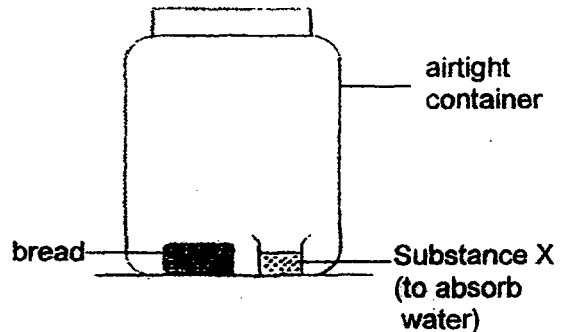
Container B- warm place



Container C- cold place



Container D- cold place



- (a) Besides using similar pieces of bread, name another variable that Sarah must keep the same in the experiment. [1]

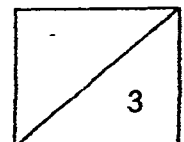
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- (b) In which container, A, B, C or D, would the bread turn mouldy first? Give a reason for your answer. [2]

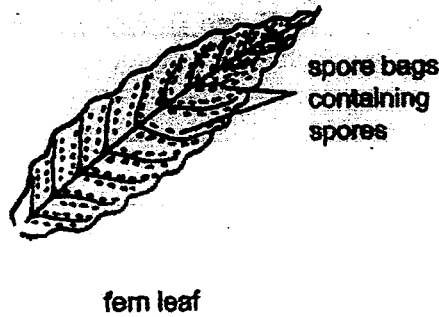
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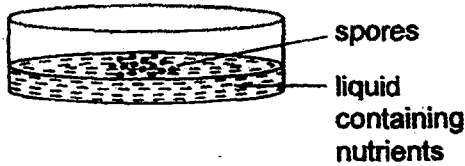


33. Look at the diagram below.

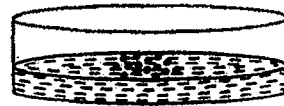


(a) What is the role of the spores in the life cycle of the fern? [1]

(b) An experiment was carried out to find out the conditions under which spores will germinate. Four identical dishes were set up and placed in four different places as shown below.



Dish 1 was in a dark place at 1°C.



Dish 2 was in a bright place at 1°C.



Dish 3 was in a dark place at 30°C.



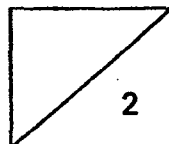
Dish 4 was in a bright place at 30°C.

At the end of the experiment, it was observed that only the spores in dishes 3 and 4 germinated.

Based on this observation only, which condition is necessary for spores to germinate and which condition is not necessary? [1]

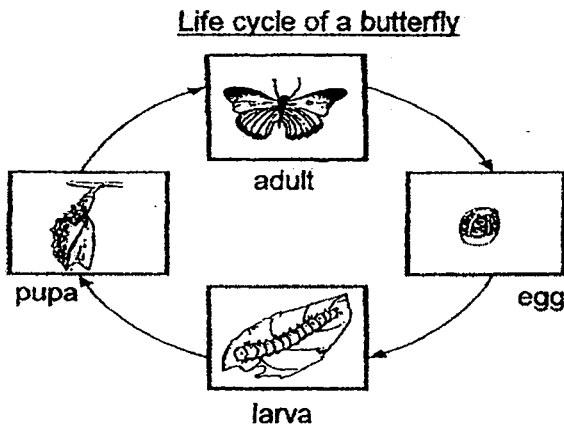
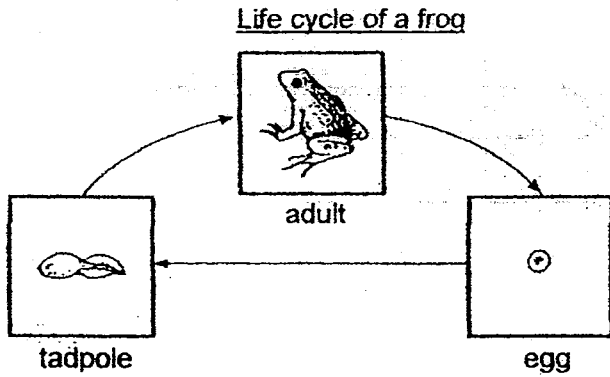
Condition necessary for spores to germinate : \_\_\_\_\_

Condition not necessary for spores to germinate : \_\_\_\_\_



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34. Study the diagrams below.



(a) Why are life cycles important to animals? [1]

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(b) The frog and the tadpole do not feed on the same food. The butterfly and the larva also do not feed on the same food. What is the advantage of this to the adults and their young? [1]

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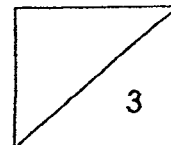
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(c) State a difference between the life cycle of a frog and a butterfly. [1]

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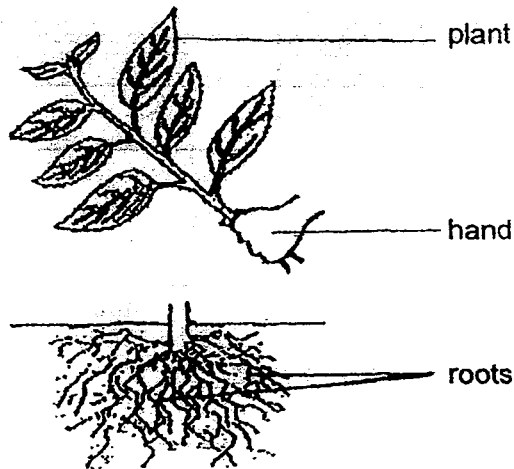


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35. Peter tried to pull out a plant from the ground but was unable to do so. Then he used a knife to cut the plant as shown in the diagram below.



- (a) Based on the fact that Peter was not able to pull out the plant at first, what is the function of the roots? [1]

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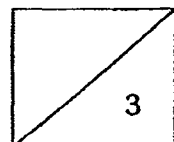
- (b) Peter planted the part of the plant that was cut off in a pot of rich soil. The plant received sufficient water and sunlight.

What happened to the plant after two weeks? Give a reason for your answer. [2]

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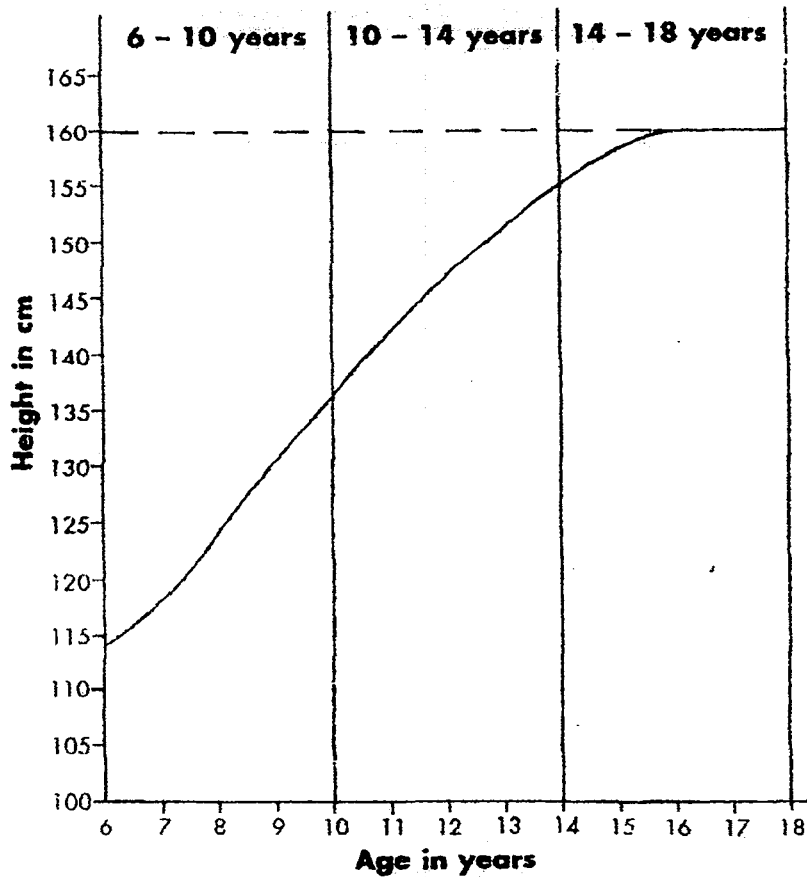
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36. The graph below shows the height of Siti from 6 to 18 years of age.



- (a) What is the relationship between Siti's age and her height? [1]

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- (b) As Siti grows taller, what happens to the number of cells in her body? [1]

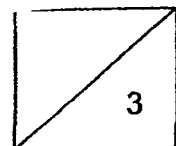
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- (c) Siti stopped growing taller at the age of sixteen. Did Siti's cells still divide when she was sixteen? Explain your answer. [1]

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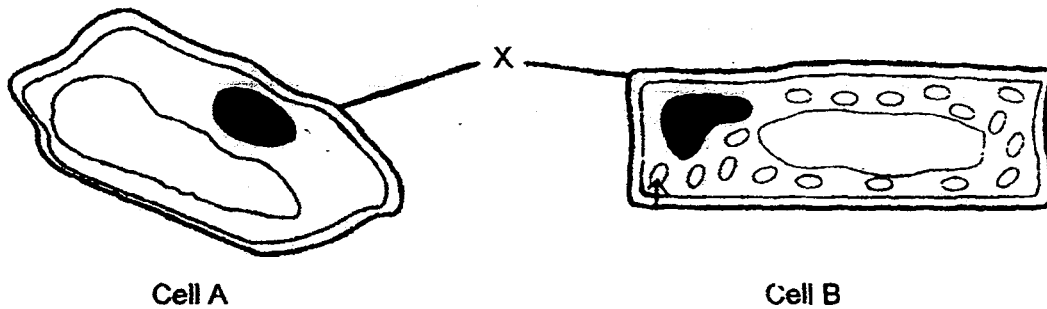


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37. The diagram below shows two different types of cells, A and B, from the same plant.



- (a) What is the function of part X? [1]

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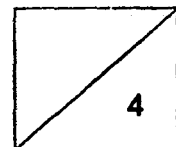
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- (b) In the diagram above, draw in an arrow and name the part of the cell that makes food for the plant. [1]

- (c) In which part of the plant are you likely to find cell A? Give a reason for your answer. [2]

Cell A is likely to be found in the \_\_\_\_\_ of the plant.

Reason : \_\_\_\_\_  
 \_\_\_\_\_



# METHODIST GIRLS' SCHOOL

Founded in 1887



## CONTINUAL ASSESSMENT 2015 PRIMARY 5 SCIENCE

### BOOKLET B2

Total Time for Booklets A and B: 1 hour 45 minutes

#### INSTRUCTIONS TO CANDIDATES

Do not turn over this page until you are told to do so.

Follow all instructions carefully.

Answer all questions.

Write your answers in this booklet.

Name: \_\_\_\_\_

Class: Primary 5. \_\_\_\_\_

Date: 5 March 2015

Booklet A1 & A2	60
Booklet B1	20
Booklet B2	20
Total	100
Parent's Signature	

This booklet consists of 9 printed pages including this page.

For questions 38 to 44, write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part question.

(20 marks)

38. The table below shows the properties of material A, B, C and D.

Material	Waterproof	Strong	Heavy
A	No	No	No
B	No	Yes	No
C	Yes	Yes	Yes
D	Yes	Yes	No

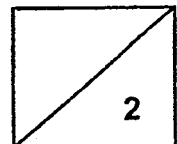
Which material, A, B, C or D is most suitable for making a walking stick? Explain your answer. [2]

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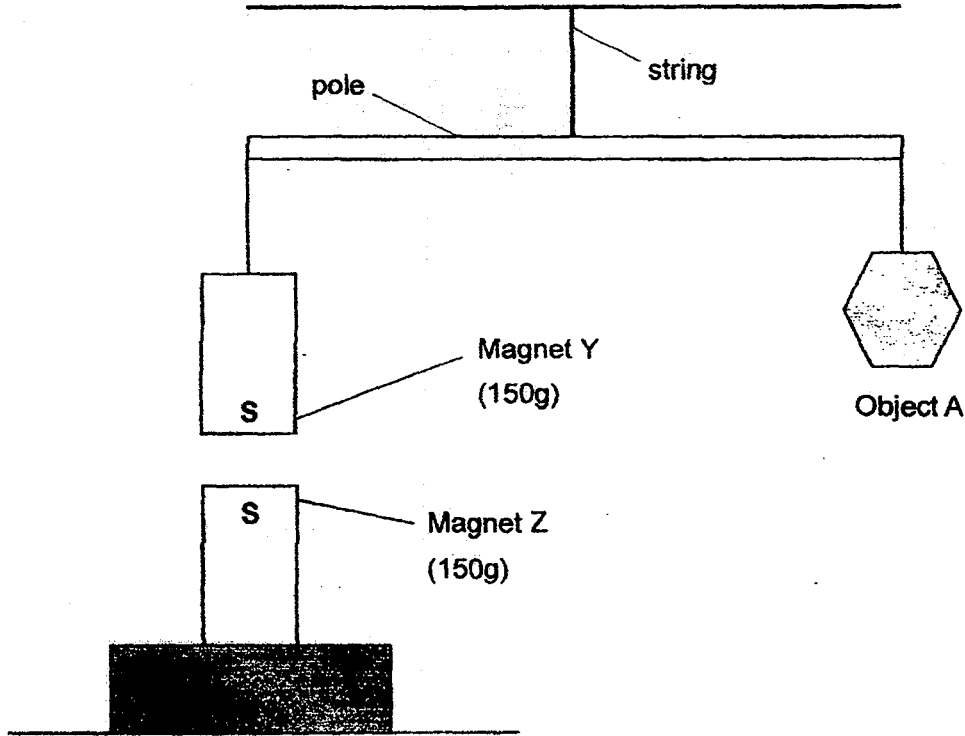
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39. Study the diagram below carefully.



Magnet Z is held securely and resting on a box with its South-seeking pole facing the South-seeking pole of magnet Y. As a result, Object A and Magnet Y are balanced on an equal beam balance.

(a) Is Object A less than or greater than 150g? Explain your answer. [2]

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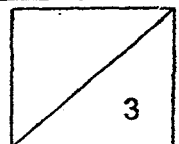
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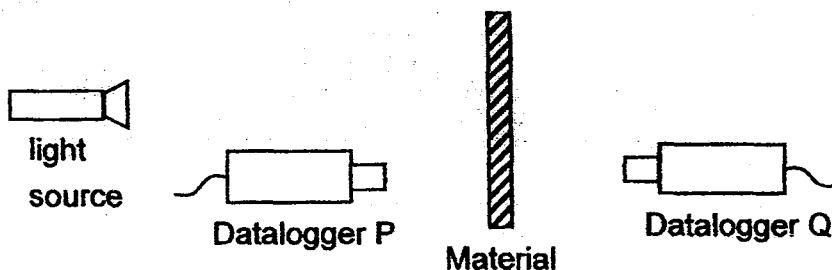
b) What would happen to Object A if Magnet Z is replaced with an iron block? Give a reason for your answer. [1]

---

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40. Mr Lim set up an experiment in a dark room as shown below to test three different materials, A, B and C, one at a time.



He recorded his results from both dataloggers in the table below.

Material	Amount of light (Lux)	
	Datalogger P (Lux)	Datalogger Q (Lux)
A	100	0
B	2100	0
C	30	1900

- (a) Based on his results above, what could Mr Lim conclude about the properties of Materials A and B? [1]

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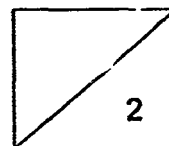
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- (b) Which material, A, B or C most likely has a shiny surface? Give a reason for your choice. [1]

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The safety vest below has a shiny strip S. It is used by construction workers who are required to put them on while doing road works, especially at night. This ensures the workers' safety when drivers on the road spot them in the dark.

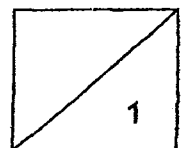


- (c) Explain how strip S could help drivers spot the workers while driving at night. [1]

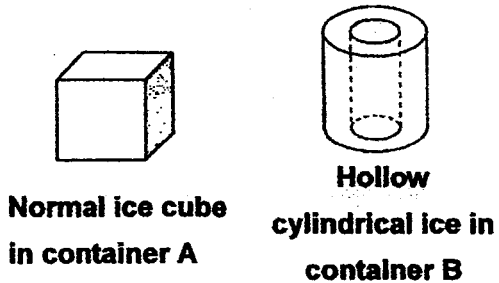
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41. Mrs Tan was preparing a cold dessert for her daughter's birthday party. She put an equal amount of dessert in two identical plastic containers A and B. She then added ten pieces of normal ice cubes in container A and ten pieces of ice in the shape of a hollow cylinder in container B. She measured the temperature of the dessert in each container after 5 minutes and compared these with the initial temperature. She then recorded her findings in the table below.



	Initial temperature	Temperature after 5 min
Dessert with normal ice cube	25°C	11°C
Dessert with hollow cylindrical ice	25°C	5°C

- (a) What can Mrs Tan conclude based on the table above? [1]

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- (b) Give a reason for Mrs Tan's conclusion.

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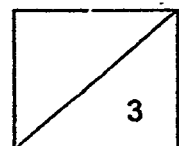
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- (c) Would Mrs Tan be able to keep the dessert cold for a longer period of time in a metal container as compared to the plastic container? Explain your answer. [1]

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42. Diagram 1 below shows three substances X, Y and Z in a container. When more of substance Y is added into the container, the level of substance X changed but not Z, as shown below in Diagram 2.

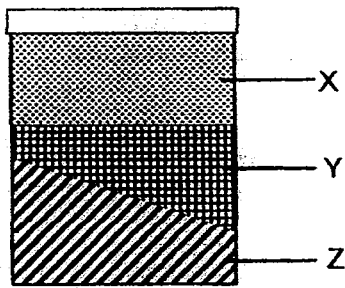


Diagram 1

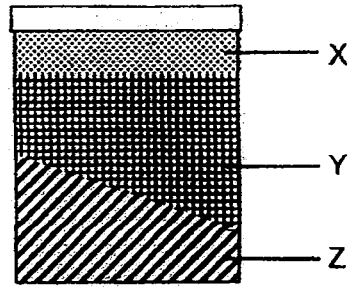


Diagram 2

(a) What is the state of substance X? Explain your answer. [2]

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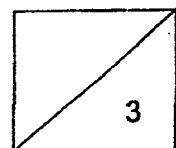
(b) What are the two properties of substance Z as shown by the demonstration? [1]

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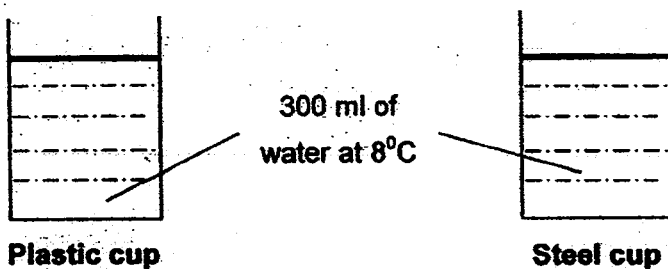
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43. Alan placed two similar cups on a table in the kitchen on a warm day. The two cups contained the same amount of water at the same temperature.



(a) On which cup will water droplets first appear on its outer surface? Explain your answer clearly. [2]

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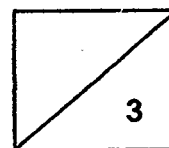
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(b) Describe one difference in the formation of water droplets if the cups of water are now placed in an air-conditioned room at 16°C as compared to room temperature. [1]

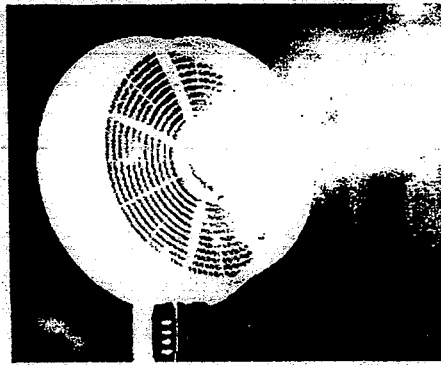
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44. Ahmad finds out that the new mist fans installed in the school canteen will help to keep the canteen cool. The mist fans give out fine water droplets when they are switched on.



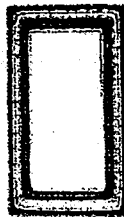
- (a) Explain how the mist fan works to cool the school canteen on a warm day. [1]

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- (b) Ahmad also observed that the mirror in the bathroom turned misty after he has taken a hot shower.



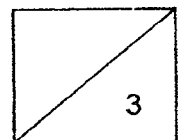
- Why did the mirror turn misty after Ahmad has taken a hot shower? [2]

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions.

2. It is essential to ensure that all entries are supported by appropriate documentation and receipts.

3. The second part of the document outlines the various methods used to collect and analyze data.

4. The final section provides a summary of the findings and conclusions drawn from the study.

5. The results indicate that there is a significant correlation between the variables studied.

6.

**EXAM PAPER 2015**

**LEVEL : PRIMARY 5**

**SCHOOL : METHODIST GIRLS' SCHOOL (PRIMARY)**

**SUBJECT : SCIENCE**

**TERM : CA1**

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

Q31a. Characteristic 1 : Living things move by themselves.

Q31a. Characteristic 2 : Livings respond to changes around them.

Q31b. Damp and dark.

Q32a. She must keep the type of containers the same.

Q32b. Container A. Mould grows in damp and most places. These conditions match container A. Thus, the bread in A would turn mouldy first.

Q33a. The spores grow into young so that the fern can reproduce.

Q33b. **necessary** : warmth

Q33b. **not necessary** : light

Q34a. To ensure the continuity of its own kind.

Q34b. To reduce the competition of food for the young and adult.

Q34c. The life cycle of a frog has three stages in its life cycle while the butterfly has four stages in its life cycle.

Q35a. The roots anchored the plant firmly to the ground.

Q35b. The plant died. The plant could not receive water and mineral salts as there were no roots.

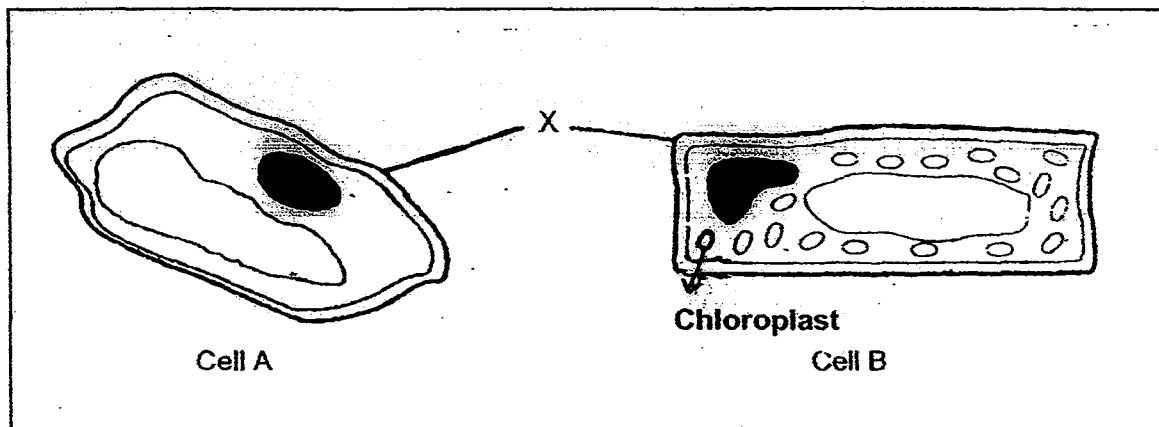
Q36a. As Siti's age increases, her height increases. Beyond the age of sixteen, as her age increases, her height remains constant.

Q36b. The number of cells increase.

Q36c. Yes, the cells still divide to replace old and damaged cells but it happens at a slower rate.

Q37a. To give the cell a regular shape and protect the cell.

Q37b. SEE PICTURE



Q37c. roots.

Reason : The roots do not make food for the plant and do not contain chloroplasts in the cell unlike leaves.

Q38. Material D. It has to be strong so that it can support the person who is using the walking stick. It also has to be light so that old people can carry it around with them easily.

Q39a. Only an object with a mass less than 150g will be able to balance magnet Y as magnet Y and magnet Z are repelling each other.

Q39b. Object A would be rose higher. Magnets attract magnetic materials such as iron. The magnet will then lower itself in order to attract it which makes the other end of the pole balancing object A to rise higher.

Q40a Both materials are opaque.

Q40b. B. Data logger P detected the greatest amount of light as it could reflect the most amount of light.

Q40c. As it is shiny it will reflect the light off strips which reflects into the driver's eyes. As a result, this can help drivers spot the workers while driving at night.

Q41a. The hollow cylindrical ice helps cool down the dessert faster.

Q41b. The hollow cylindrical ice has a larger exposed surface area than the normal ice cube so it gains heat faster.

Q41c. No. Metal is a good conductor of heat so the dessert will gain heat quickly and its temperature will increase.

Q42a. Gaseous state. Gas can be compressed as it does not have a definite shape and volume.

Q42b. Substance Z is a solid as it has a definite shape and volume.

**Q43a. Steel cup.** Steel is a better conductor of heat than plastic so it conducts heat away and the water vapour condenses faster into water droplets.

**Q43b.** The formation of water droplets is slower at room temperature compared to an air - conditioned room.

**Q44a.** The water droplets from the mist fan will gain heat from the surrounding to evaporate, so it cools down the air of the canteen.

**Q44b.** The hot water vapour from the hot water, rise to touch the cooler surface of the mirror. The water vapour then cools and condenses to form tiny water droplets. The tiny water droplets then gather themselves up as mist.

**THE END**

