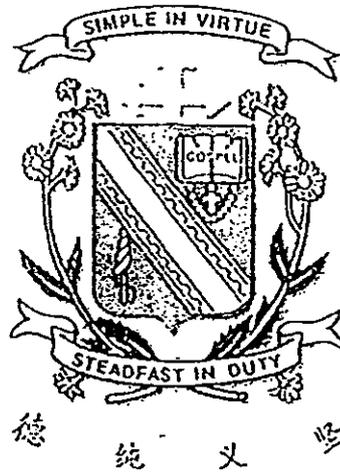


Name : \_\_\_\_\_ (    )

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

## CHIJ ST NICHOLAS GIRLS' SCHOOL



**Primary 5**  
**Continual Assessment 1 – 2012**  
**SCIENCE**  
**BOOKLET A**  
**29<sup>th</sup> February 2012**

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

30 questions  
60 marks

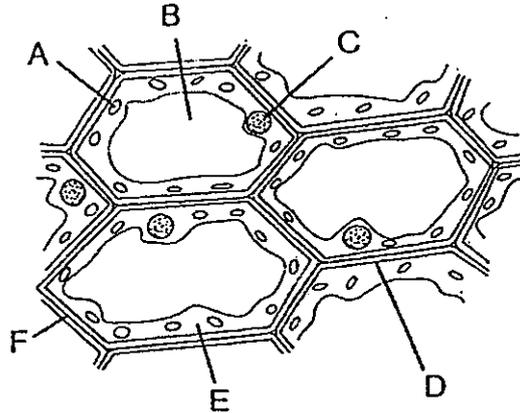
Do not open this booklet until you are told to do so.  
Follow all instructions carefully.  
Answer all questions.  
Shade your answers in the Optical Answer Sheet (OAS) provided.

This paper consists of 15 printed pages.

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

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

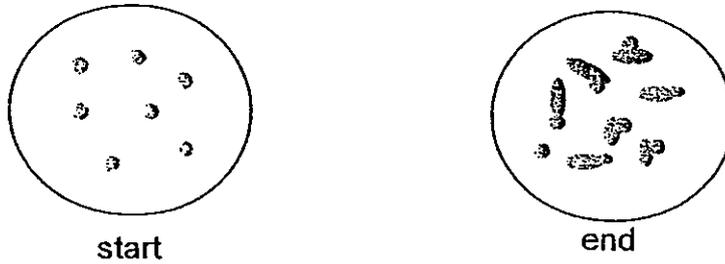
1. The diagram below shows parts of plant cells.



Which of the following parts of the cells have been matched correctly to the information provided in the table below?

	Can only be found in plant cells	Can be found in both plant and animal cells	Allow some substance to pass through the cell
1)	C	A, B, E	F, D
2)	B, C	A, E	F, D
3)	A, F	C, D, E	D
4)	A, B	C, D, E, F	F

2. Aaron placed some single-celled organisms in a beaker of water and left it in the open for 1 day. The diagram below shows the top view of the organisms at the start and end of the experiment.

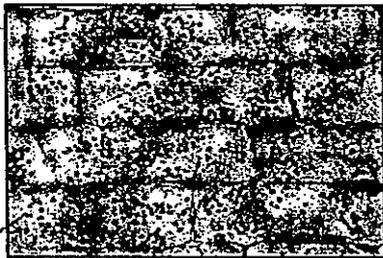


He observed that the number and size of the organisms had increased after 1 day. Which of the following could have caused the changes?

- A Growth of cells
- B Reproduction of cells
- C Death of cells

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

3. The pictures below show two different types of cells, T and R, viewed from a microscope.



cell type T



cell type R

Based on the pictures above, which of the following best describes cell types, T and R?

	cell type T	cell type R
1)	make their own food	do not make their own food
2)	does not have a regular shape	have a regular shape
3)	feed on decaying matter	make their own food
4)	has nucleus	has no nucleus

4. Karen wanted to observe her cheek cells through a microscope. Below are the different steps she needed to take in order to observe the cells.

- A Turn the fine focus knob to get a clearer image.
- B Place the slides on the stage.
- C Prepare the specimen.
- D Turn the coarse focus knob
- E Switch on the light source.
- F Select the correct lens.

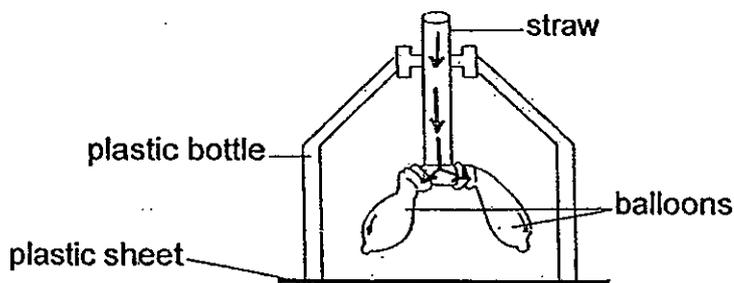
Which of the following is the correct sequence of steps she should take?

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

5. When we breathe in, we inhale different types of gases including oxygen. What happens to the gases that the body cannot use?

- (1) They are exhaled without being circulated around the body.
- (2) They will be circulated around the body and then exhaled out.
- (3) The digestive system will absorb them and use them to create energy.
- (4) The lungs will change some of them into oxygen for the body to use.

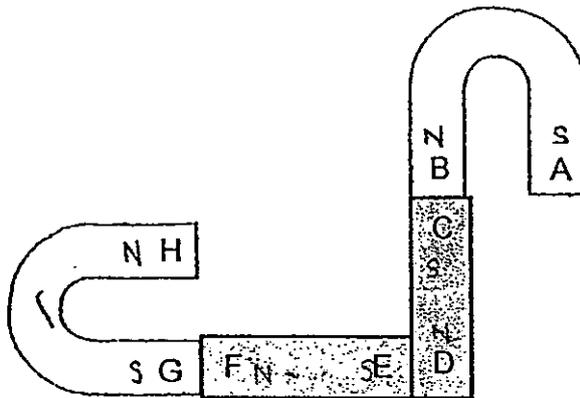
6. Steve makes a model of the human respiratory system as shown below.



Which of the following shows the correct observation of the balloons and plastic sheet when air is blown through the straw?

	Balloons	Plastic sheet
(1)	deflate	moves downwards
(2)	deflate	moves upwards
(3)	inflate	moves upwards
(4)	inflate	moves downwards

7. The diagram below shows two bar magnets and two U-shaped magnets.



Based on the diagram above, which of the following statement(s) about the poles of the magnet is/are true?

- A Pole A and E are like poles
- B Pole H will repel poles F and D
- C Pole D will repel pole G and be attracted to pole B
- D Pole E will repel pole G and be attracted to pole H

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

8. Fatimah conducted a test to find out the strength of 4 magnets. She picked steel paper clips using 4 identical bar magnets. The results were then tabulated in the table shown below.

Magnets	Distance between one pole of the magnet and the steel paper clips	Number of paper clips attracted
W	2 cm	10
X	2 cm	11
Y	3 cm	11
Z	4 cm	14

Based on the results shown above, arrange in an ascending order, the strength of the magnets.

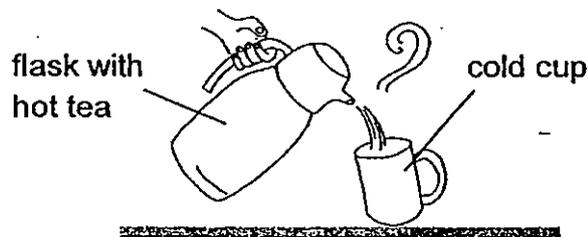
- (1) W, Y, X, Z
- (2) Z, Y, X, W
- (3) W, X, Y, Z
- (4) Z, Y, W, X

9. Milton wants to increase the strength of his electromagnet. Which of the following can help to make his electromagnet stronger?

- A Change to a thicker wire.
- B Increase the number of batteries used
- C Increase the size of the magnetic material used.
- D Increase the number of coils around the electromagnet

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

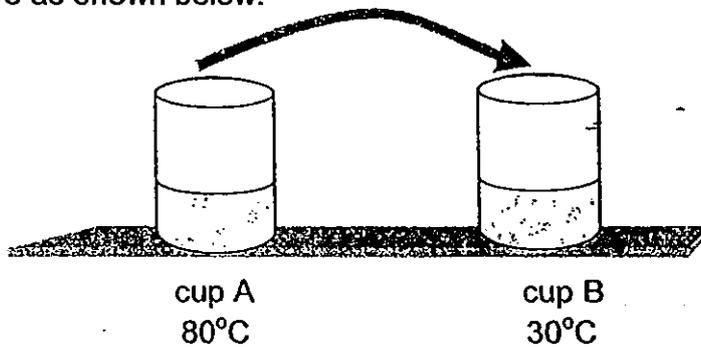
10. Eloise pours some hot tea into a cold cup as shown below.



Which of the following correctly describes the heat transfer that takes place?

	Gain heat	Lose heat
1)	cold cup	hot tea in the cup
2)	flask with hot tea	cold cup
3)	hot tea in the cup	cold cup
4)	cold cup and flask with hot tea	hot tea in the cup

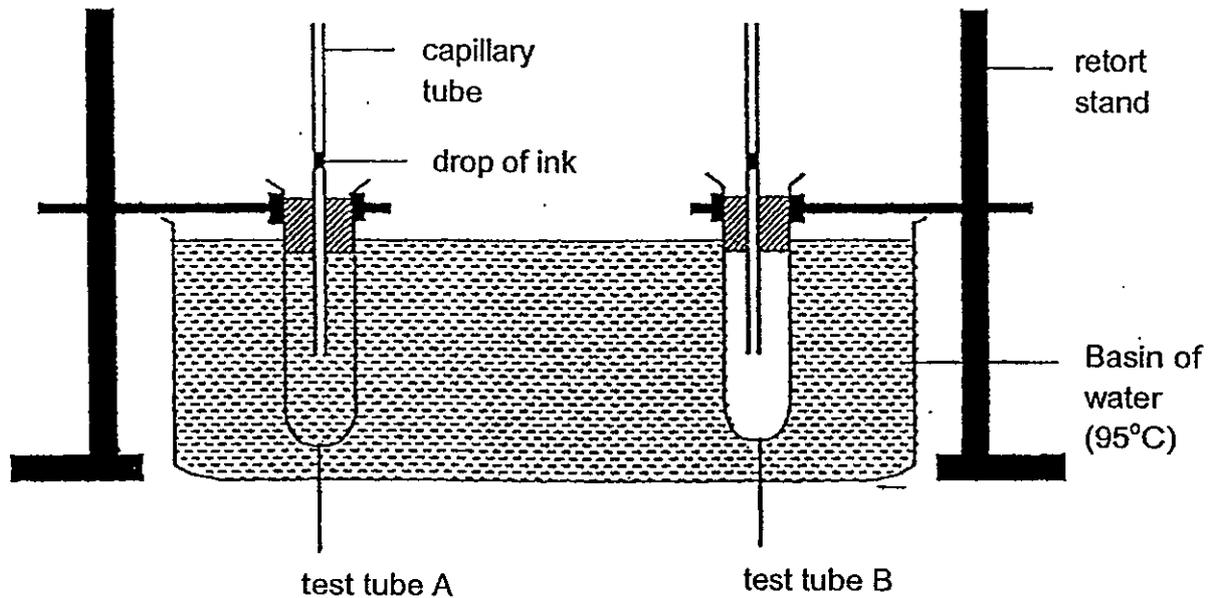
11. Kenneth poured some water into two cups. The water is of different temperature as shown below.



What is likely to be the final temperature of the water if he were to pour all the water in cup A into cup B?

- 1) About 20 °C
- 2) About 60 °C
- 3) About 80 °C
- 4) About 110 °C

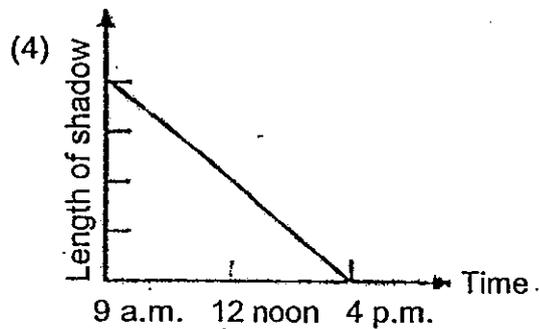
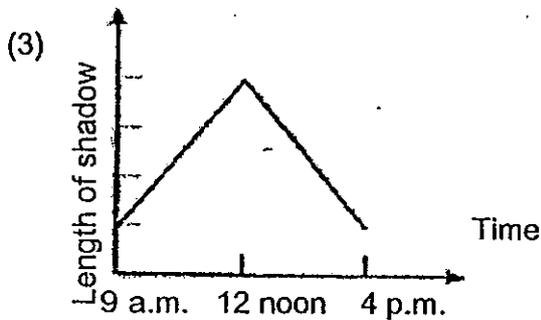
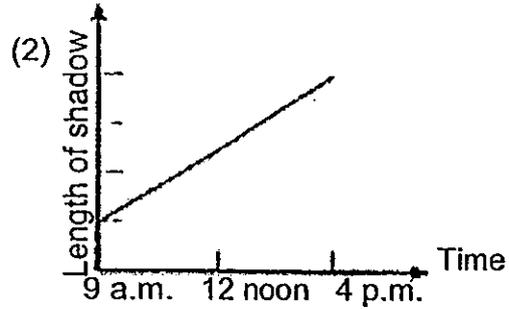
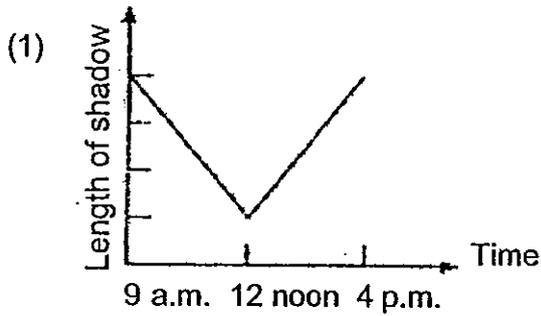
12. Two capillary tubes, with a drop of ink at the same level, were placed in test tubes A and B. Test Tube A was full of water but test tube B was empty. Both test tubes were then immersed in a basin of water at  $95^{\circ}\text{C}$  for about 10 minutes.



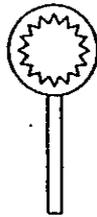
Which of the following best describes the observation of the set-up above 10 minutes later?

- 1) The drop of ink in both test tubes A and B rises together.
- 2) The drop of ink in test tube A rises while the drop of ink in test tube B drops.
- 3) The drop of ink in test tube B rises first while the drop of ink in test tube A rises later.
- 4) The drop of ink in test tube A rises while the drop of ink in test tube B remains the same.

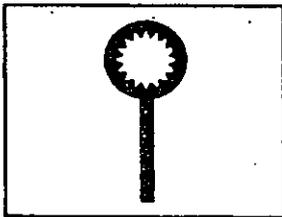
13. Daniel studied the shadow of the lamppost at different time of a day. He then recorded the length of the shadow. Which of the following graphs correctly shows the changes in the length of a shadow cast during the day?



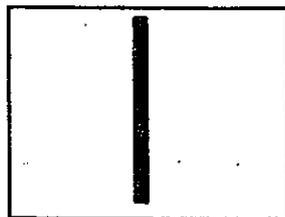
14. Anthony shone some light from various directions at a bubble blower shown below.



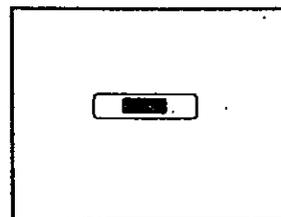
Which is/are possible shadow(s) of the bubble blower when light is shone at it?



shadow A



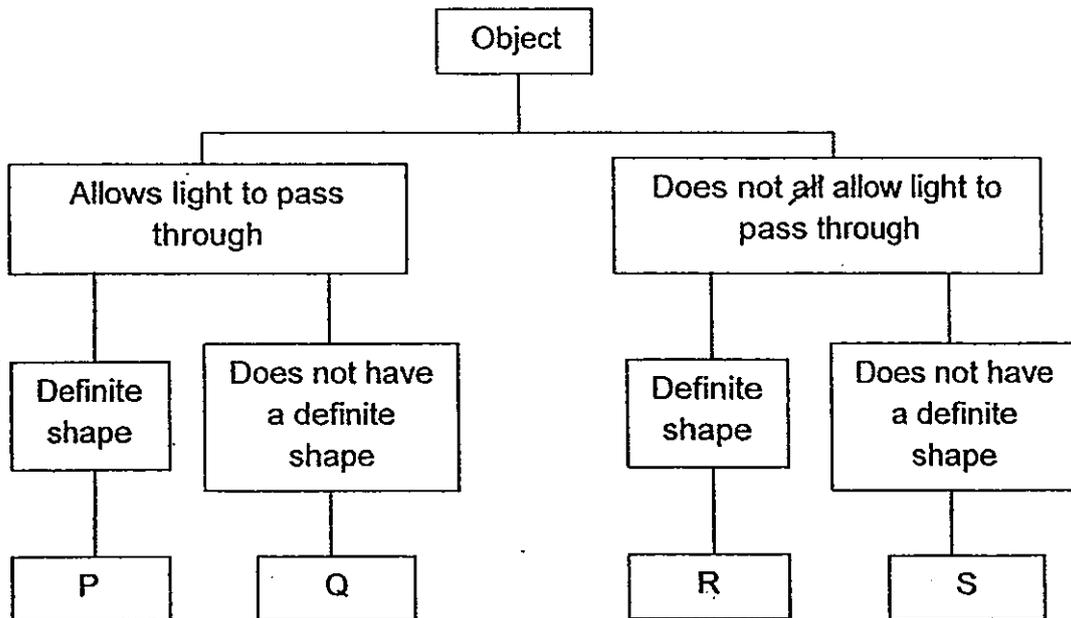
shadow B



shadow C

- 1) Shadow A only
- 2) Shadow C only
- 3) Shadows A and B only
- 4) Shadows B and C only

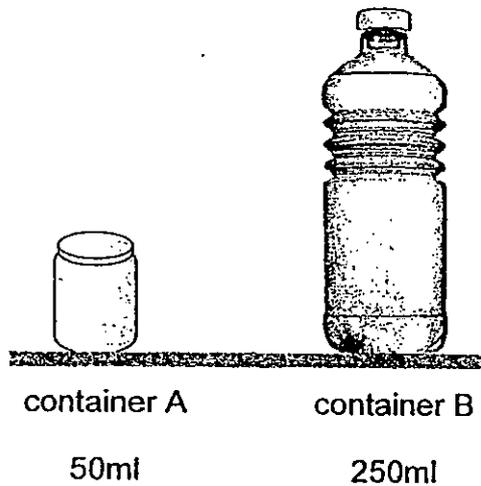
15. Study the classification chart below.



Which of the following best represents P, Q, R and S?

	P	Q	R	S
1)	Water	Air	Orange juice	Clay
2)	Mirror	Plasticine	Clay pot	Coffee
3)	Fish tank	Steam	Tracing paper	Water
4)	Spectacle lens.	Water	Wooden ruler	Melted chocolate

16. Vera prepared two different containers as shown below.

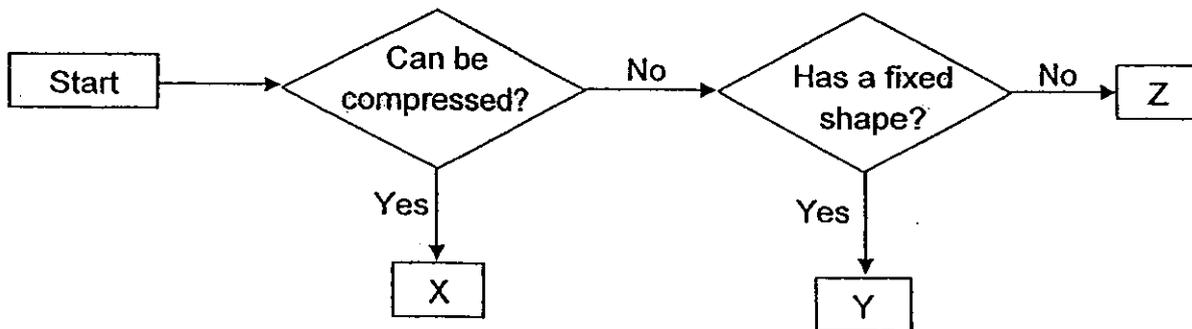


Below are some comments Vera made after observing the setup above. Which of these comments that she has made is/are correct?

- A I can compress the air in both containers.
- B Container A contains less air than container B.
- C The air from container A can take the shape of container B.

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

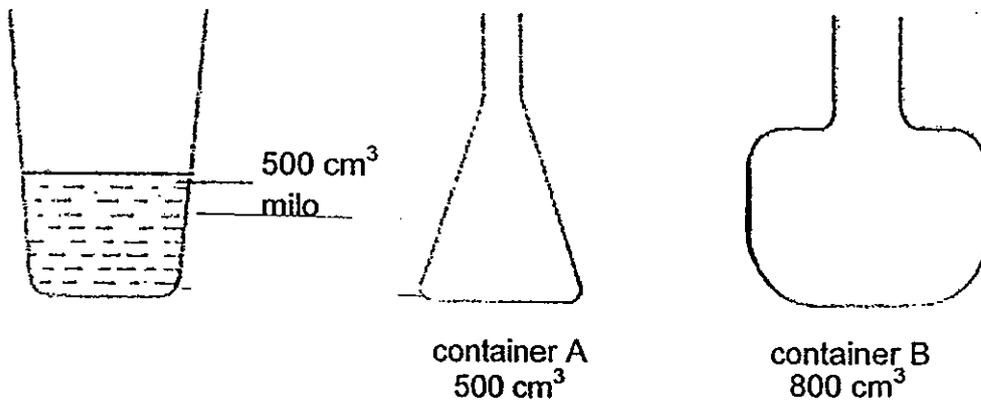
17. Study the flow chart below.



Which one of the following statements best represents substance X, Y and Z?

	X	Y	Z
1)	Water	Air	Diamond
2)	Air	Diamond	Water
3)	Diamond	Water	Air
4)	Air	Ruler	Oxygen

18. Xiao Xi poured the same amount of milo from the cup into containers A and B.

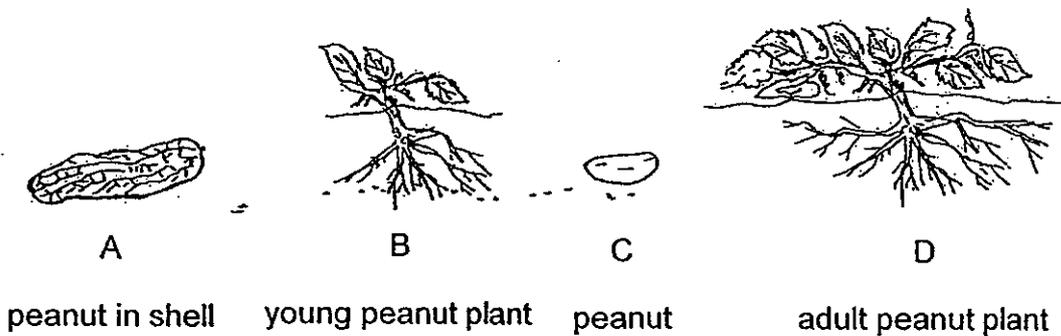


Which one of the following statements best describes what she found out?

- A The shape of the milo is the same in both containers.
- B The volume of the milo is the same but its shape changes.
- C The milo rose to the same level when poured into each container.
- D The milo is able to fill completely each of the containers when poured.

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

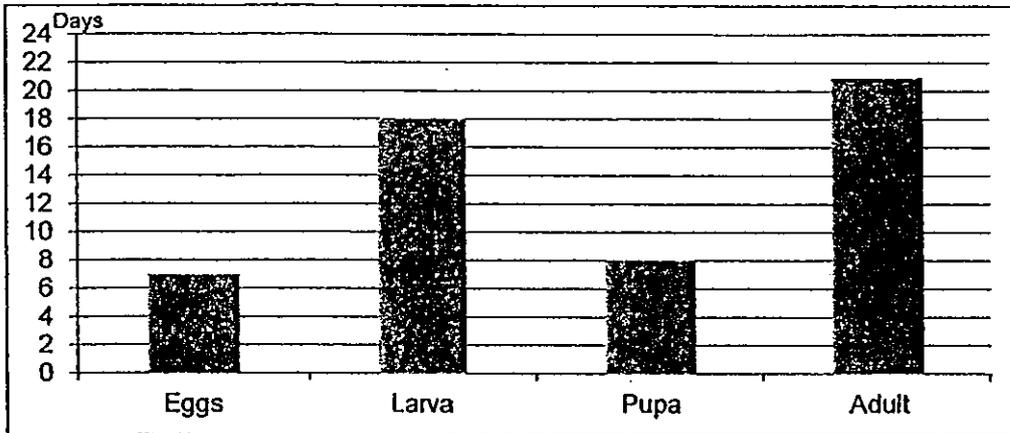
19. The diagram below shows the different stages of the life cycle of a peanut plant.



Which of the following correctly order the stages of the life cycle of the peanut plant?

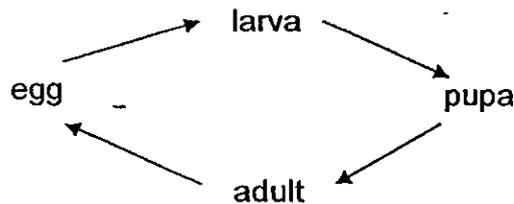
- 1) A, C, B, D
- 2) B, A, C, D
- 3) C, B, A, D
- 4) D, C, A, B

20. The graph below shows the number of days a certain type of butterfly spends at various stages of its life cycle.



Based on the graph, which one of the following statements is true about the life cycle?

- 1) It spends the least number of days as a pupa
  - 2) It spends the most number of days as a larva
  - 3) It takes 18 days for the egg to hatch into a larva
  - 4) It takes 33 days for the egg to become a butterfly
21. The diagram below shows the different stages of the life cycle of an animal.



Which of the following animal(s) do/does not go through the life cycle as shown above?

- A Frog
- B Chicken
- C Mosquito
- D Cockroach

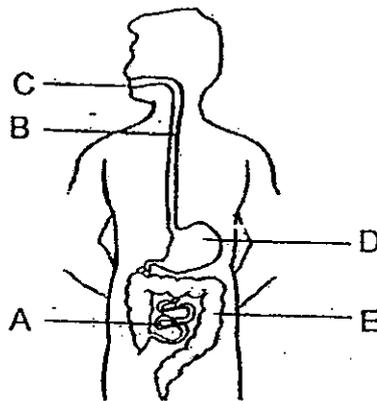
- (1) C only
- (2) A and B only
- (3) C and D only
- (4) A, B and D only

22. Which of the following statements is/are true about the function of the roots of plants?

- A Help the plant to make food
- B Transport food to the plant parts.
- C Absorb water for the plant to stay alive.
- D Prevent the plant being wash away by rainwater.

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

23. The diagram below shows the human digestive system.



In which of the following does digestion occur?

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

24. Paul made the following statements about the human body system.

- A A human body is only made up of 3 types of body systems.
- B The large intestine absorbs the nutrients from the digested food.
- C The skeletal system works together with the muscular system to allow movement.

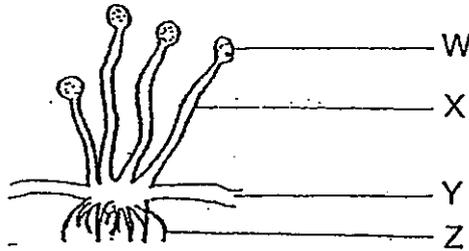
Which of the above statement(s) is/are true of the human body system?

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

25. Which of the following options under the headings is classified wrongly?

	Digestive system	Respiratory Circulatory system
(1)	Mouth	Nose
(2)	Gullet	Windpipe
(3)	Anus	Stomach
(4)	Small intestine	Lungs

26. Study the diagram of the bread mould below.



Which part, W, X, Y or Z enables the bread mould to reproduce?

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

27. Which of the following sentence(s) about bacteria and fungi is/are true?

- A Some fungi are edible.
- B Moulds only grow on dry substances.
- C Bacteria cannot grow in bright places.
- D Fungi and bacteria can cause food to decay.

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

28. John did some studies on two animals X and Y. He recorded his observation in the table below.

	Animal X	Animal Y
It has 3 body parts	✓	✓
Lays egg on land	✓	✓
There are 3 stages in its life cycle	✓	

Which of the following best represents Animal X and Y?

	Animal X	Animal Y
1)	Ant	Grasshopper
2)	Toad	Butterfly
3)	Cockroach	Ant
4)	Grasshopper	Mosquito

29. The objects below are matched to the different materials they can be made from. Which of the following objects is matched incorrectly?

	Objects	Materials
(1)	Key	Iron, steel
(2)	Skirt	Cotton, silk
(3)	Computer	Wood, rubber
(4)	Handbag	Plastic, leather

30. Steve conducted a scratch test to compare the hardness of materials P, Q, R and S. The following results were obtained.

- Material S can scratch material P.
- Material Q can scratch material S.
- Material Q can scratch material R.

Which one of the following conclusion is not possible to tell?

- (1) Material P is the softest.
- (2) Material Q is the hardest.
- (3) Material S is harder than material P.
- (4) Material Q is harder than material P.

End of Section A

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

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

# CHIJ ST NICHOLAS GIRLS' SCHOOL



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## Primary 5 Continual Assessment 1 – 2012 SCIENCE

### BOOKLET B

29<sup>th</sup> February 2012

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

14 questions  
40 marks

Do not open this booklet until you are told to do so.  
Follow all instructions carefully.  
Answer all questions.

This paper consists of 14 printed pages.

Booklet A	60
Booklet B	40
Total	100

Parent's Signature/Date

**Section B: 40 marks**

For questions 31 to 44, write your answers in this booklet.

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

31. Ivan was given three types of cells, Cell A, Cell B and Cell C, to observe under the microscope. He recorded his observations in the table shown below.

Cell parts observed	Cell A	Cell B	Cell C
Nucleus	√	√	√
Cell Wall	X	X	√
Chloroplast	√	X	X
Cell Membrane	√	√	√

- a) Ivan's teacher remarked that he has made a mistake in one of his observations. Which cell did he observe wrongly? [1]

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- b) Explain your answer. [1]

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Ivan took cell B and cell C and placed them in a beaker of sugar solution. He observed the cells again an hour later and found out that cell B has burst and cell C did not.

- c) Explain why cell B burst. [2]

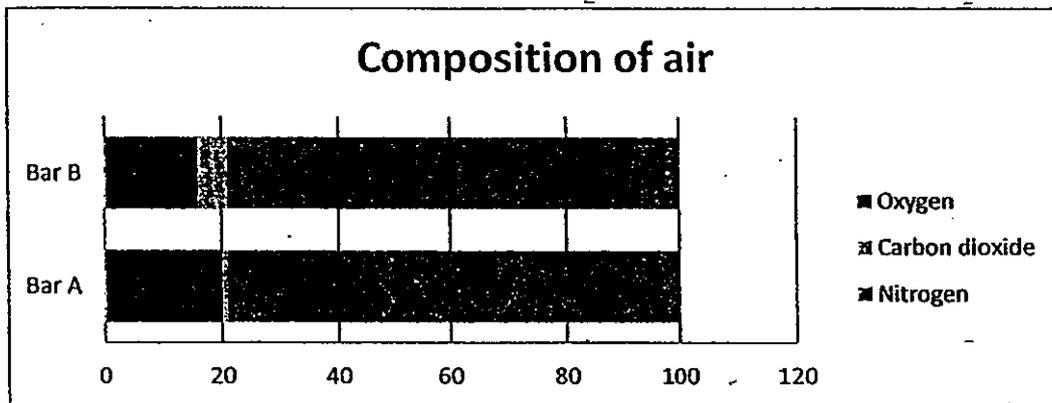
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32. Read the statements in the following table about cells. Indicate with a tick (✓) whether they are true or false. [2]

	Statement	True	False
(i)	All cells must have a nucleus.		
(ii)	Not all plant cells have chloroplast.		
(iii)	Paramecium and yeast are examples of single-celled organisms.		
(iv)	An organ is made up of more cells than a tissue.		

33. The bar chart below shows the composition of inhaled and exhaled air of a person.



- a) Which bar, A or B, represents the composition of exhaled air? Explain your choice. [1]

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- b) Besides the composition of air, write down one other difference between inhaled and exhaled air. [1]

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34. James carried out 4 different activities, P, Q, R and S, over a period of time. He then measured his breathing rate and pulse rate after completing each activity. His observations are recorded in the table below.

activity	breathing rate (no. of times inhaled and exhaled per minute)	pulse rate (no. of beats per minute)
P	19	81
Q	12	54
R	30	135
S	20	112

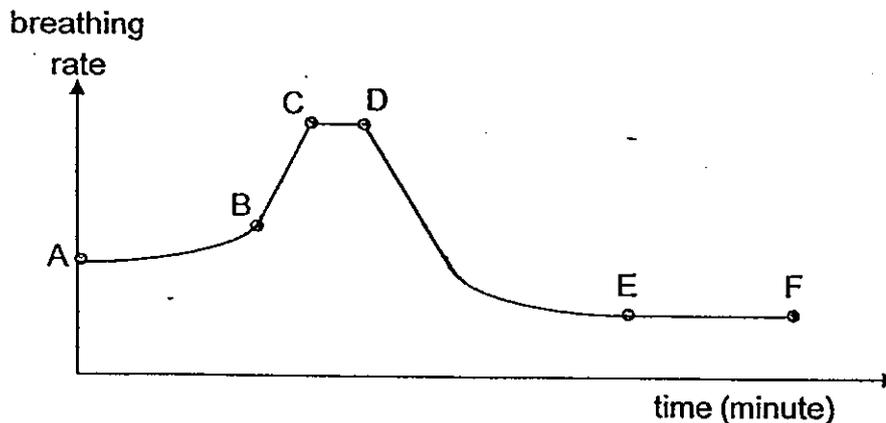
- a) Based on his observation above, what is the relationship between his pulse rate and his breathing rate? [1]

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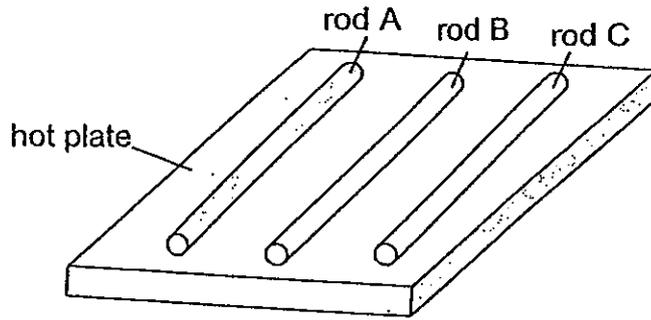
- b) He repeated the activities on a separate occasion, this time only recording his breathing rate, at regular intervals, over a period of time (as shown in the graph below).



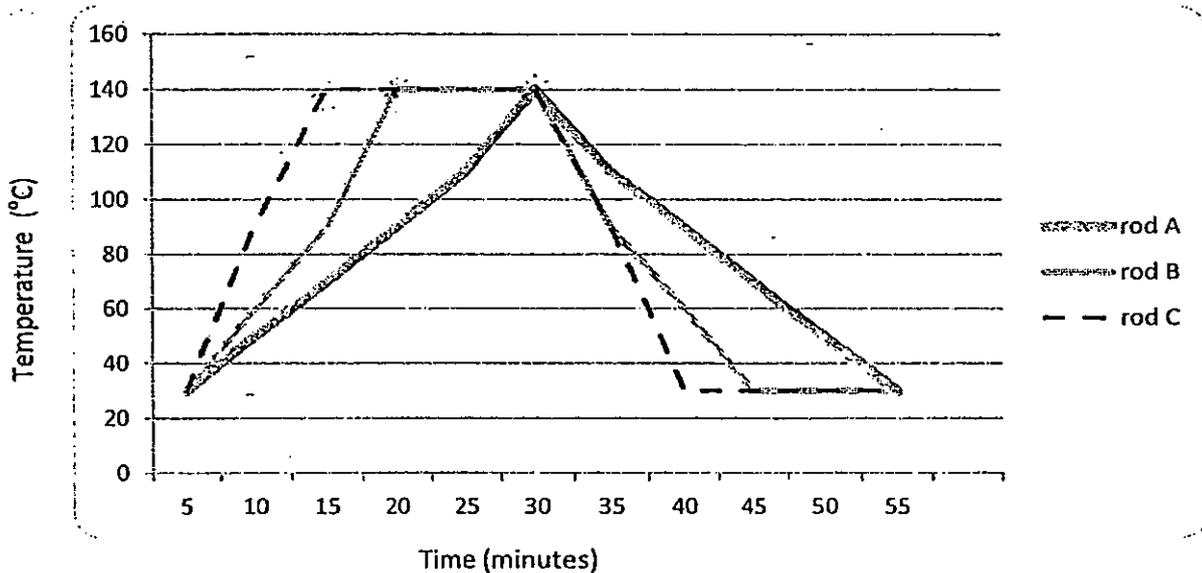
Based on the graph, complete the table below by writing down the portion of the graph (e.g. AB, AC, BE...) that best indicates his breathing rate for each activity. [2]

Activity	Points on the graph
Resting	
Jogging	
Sprinting	
Cooling down	DE

35. Haikal heated three rods of similar size on a hot plate as shown in the set up below. The rods are made of different materials.



The temperature of each rod was monitored and noted. After a while, all three rods were allowed to cool. Haikal then noted the time taken for each rod to cool down and plotted the following graph.



a) Based on the diagram above, which rod is the best conductor of heat? Explain your answer. [1]

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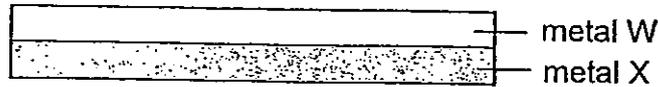
b) Haikal wanted to make a pair of chopsticks with one of the rods. Based on the graph above, which rod, A, B or C, should he use? Explain your answer. [1]

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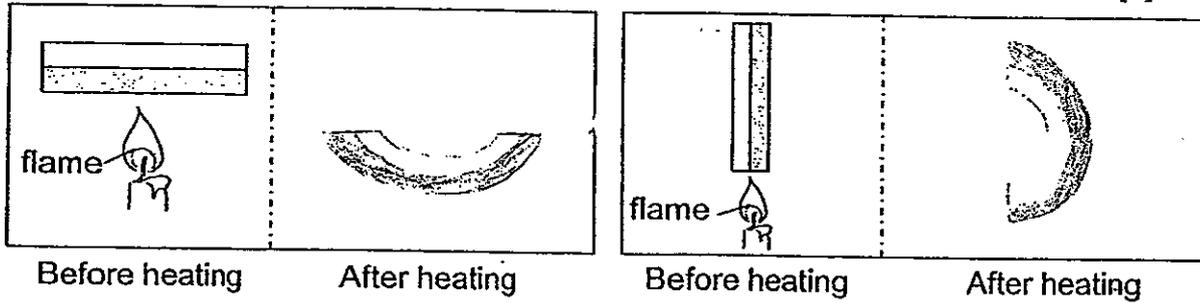


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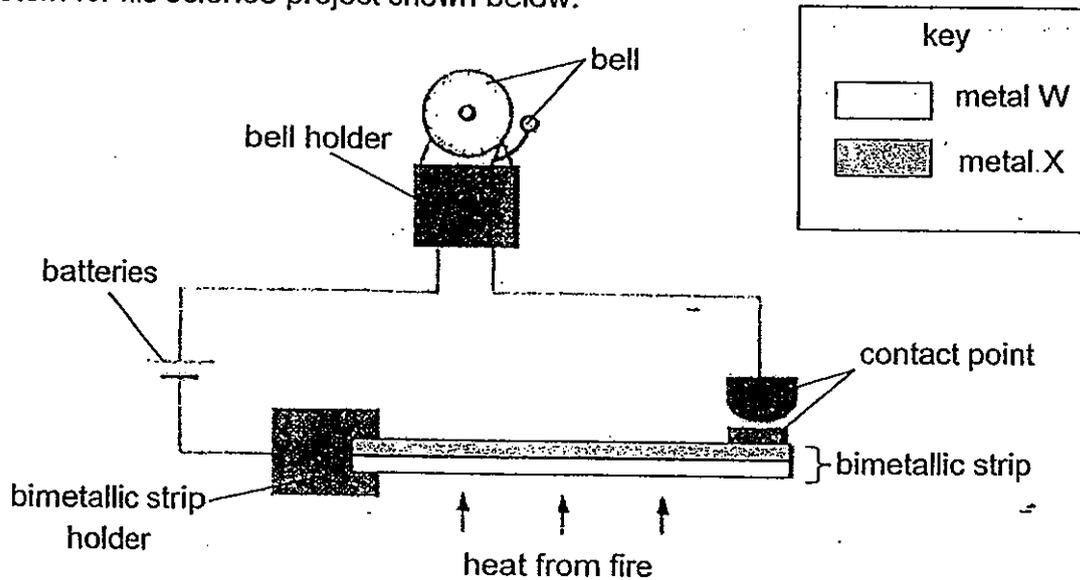
36. A bimetallic strip consists of two metals attached firmly to each other. In the bimetallic strip below, metal X expands at a faster rate than metal W when heated.



- a) If a flame is positioned at two different points of the bimetallic strip, draw in the boxes provided below, how the bimetallic strip will look like after heating. [2]



Ken wanted to use the same type of bimetallic strip to construct a fire alarm system for his science project shown below.



When the bimetallic strip gets heated up by the fire, it will bend and the two contact point will touch to allow electricity to flow through. This will cause the bell to ring.

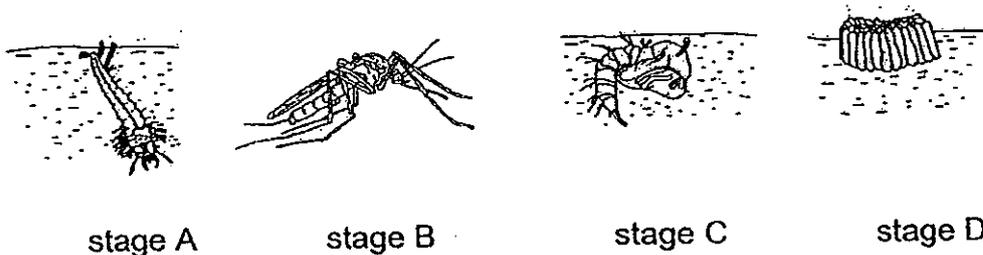
- b) Ken's teacher commented that there is a mistake in his setup. Identify the mistake and explain your answer. [2]

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37. The diagram below shows the different developmental stages of a mosquito.



a) Based on the diagram shown above, re-arrange the developmental stages of the mosquito correctly. [1]

\_\_\_\_\_

b) Name the developmental stages A and C of the mosquito shown above. [1]

stage	name
A	
C	

c) Suggest one method to control the population of mosquitoes at stages A and C. [1]

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

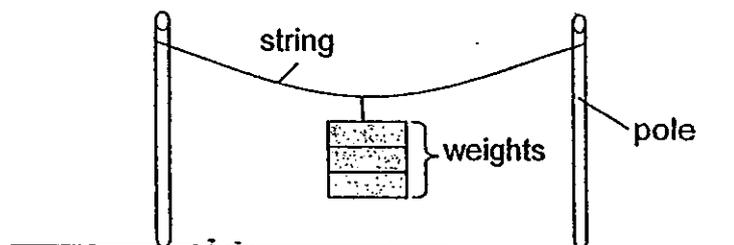
38. The table below shows the melting point and boiling point of four different substances.

Substance	Boiling point	Melting point
R	78 °C	-144 °C
S	100 °C	0 °C
T	444 °C	112 °C
U	300 °C	45 °C

The substances are then placed in an oven that is pre-heated and set at 105 °C. In the table below, indicate with a tick (✓), the state of the substances 20 minutes later. [2]

Substances	Solid state	Liquid state	Gaseous state
R			✓
S		✓	
T	✓		
U	✓		

39. James set up an experiment as shown below. He stretched a string tightly across two poles and hung weights on the string until it broke. He then recorded his observation. He repeated the process with two other strings made from different materials and tabulated his results as shown below.

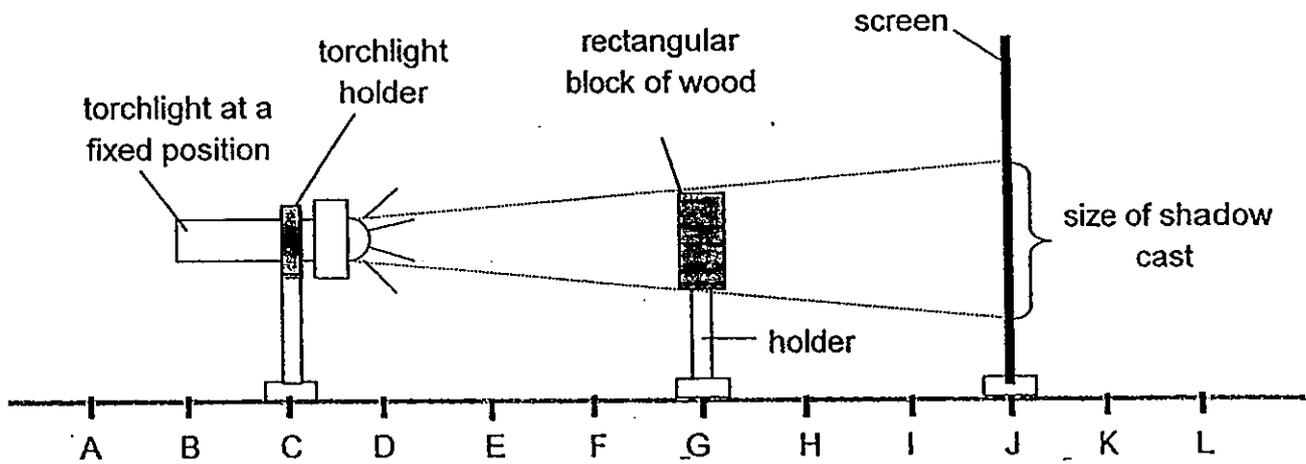


Material of string	Weights needed to break the string (g)
X	100
Y	400
Z	250

- a) What property of the material is James testing? [1]

- b) Based on your answer in (a), what is the aim of his experiment? [1]

40. Kenny made some markings A to L, at regular intervals, on a platform. He then positioned 3 objects on it. The torch was placed at position G, the wooden block at G and the screen at J. A shadow was cast on the screen as shown when the torch was switched on.



- a) If Kenny were to shift the torch to position E on the platform, write down two differences he will notice in the shadow cast? [1]

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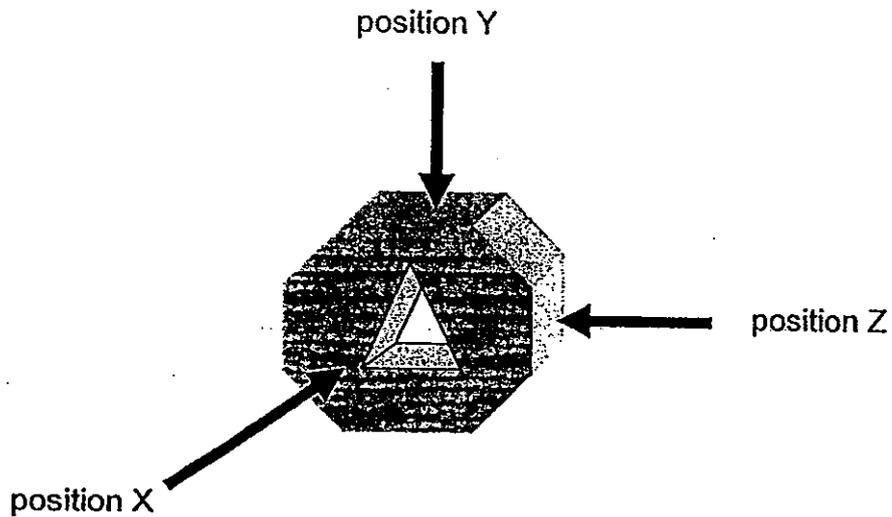
- b) If Kenny wants to create the smallest possible shadow on the screen, where on the platform should he position the 3 objects? [1½]

Position of torch : \_\_\_\_\_

Position of wooden block : \_\_\_\_\_

Position of Screen : \_\_\_\_\_

Kenny took another wooden block of similar size and cut out a triangle shape in the centre as shown below. He then shone a torch from 3 different positions, X, Y and Z.



c) In the space provided, sketch and shade the shadow cast for the different positions of the torch. [1½]

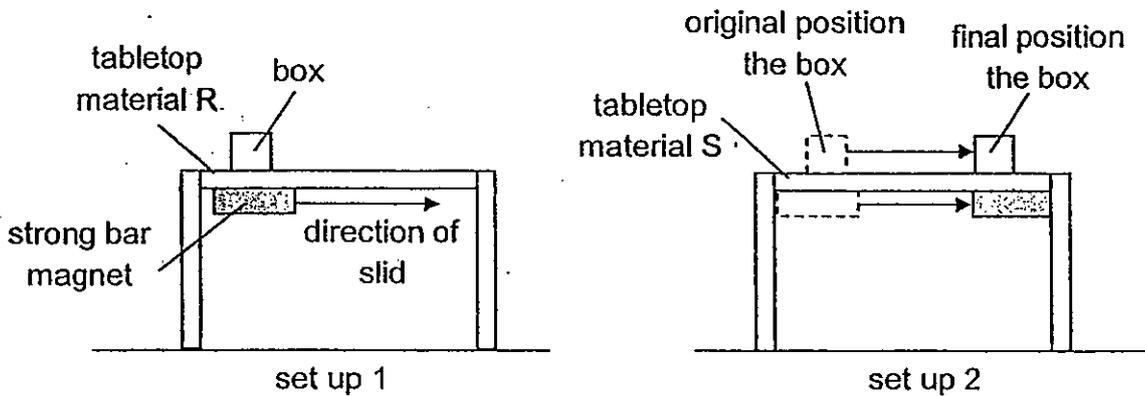
Three empty rectangular boxes are provided for drawing shadows. Each box is a simple rectangle with a thin black border, intended for the student to sketch and shade the shadow cast by the block from the specified torch position.

torch at position X

torch at position Y

torch at position Z

41. Erica wanted to find out which tabletop material allows magnetic force to pass through. She set up an experiment as shown below.



Erica then slid a strong magnet across the underside of each table in the direction as indicated by the arrow. She observed that only the box in set up 2 moved while the box in set up 1 remained in its original position.

- a) What is the variable changed? [1]

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- b) Give an example of a material that could be used to make the tabletop in set up 2. [1]

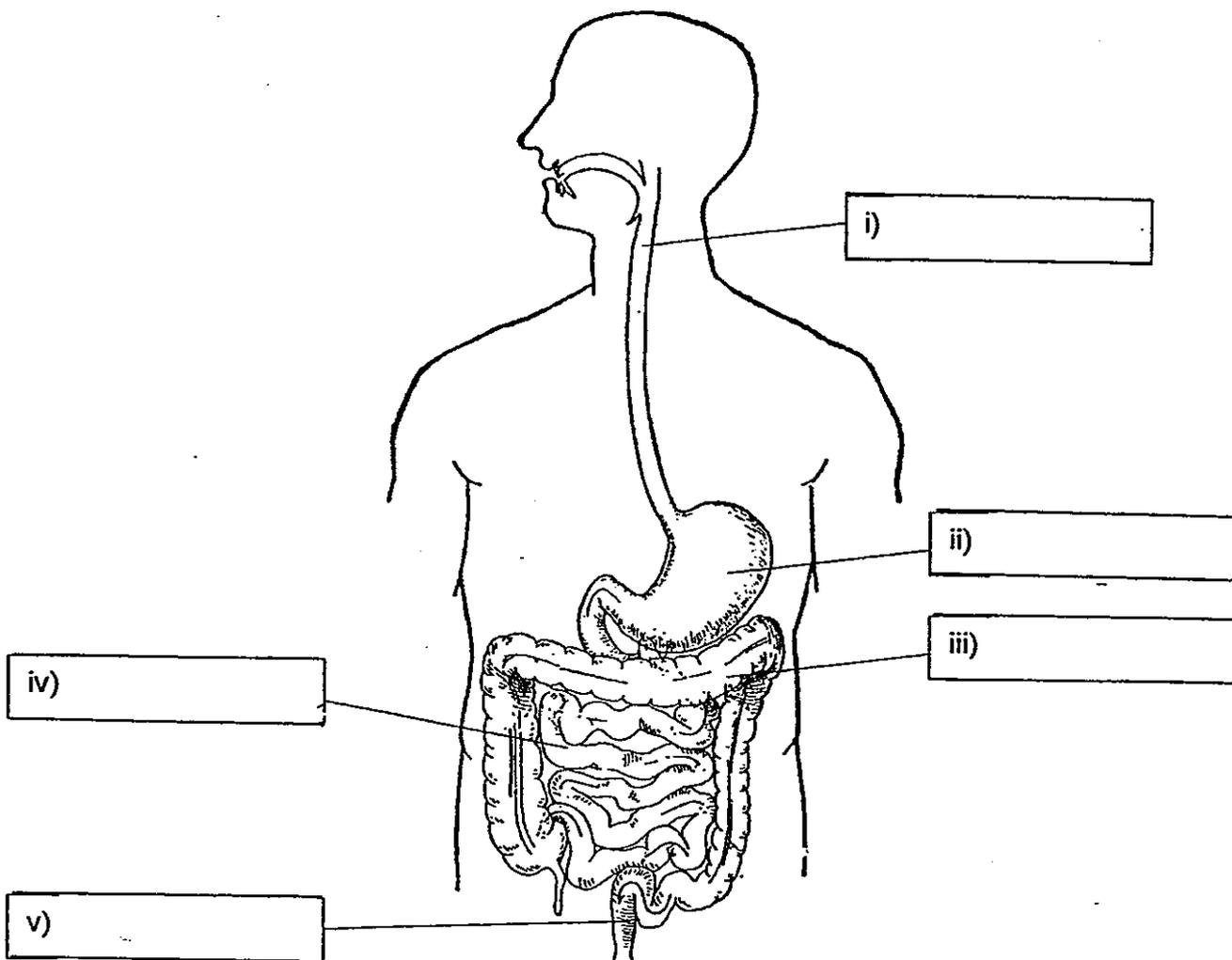
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- c) Explain your choice for part (b) of your answer. [1]

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42. The diagram below shows the human digestive system



a) Complete the diagram by filling in the blanks with the correct parts of the digestive system. [2½]

b) Name the parts of the digestive system where the digestion of food begins and ends. [1]

begin: \_\_\_\_\_

end: \_\_\_\_\_

43. Three students, Tom, Alice and Cindy, were talking about mosses. The following are comments made by them.

Tom: Mosses are fungi.

Alice: Mosses are plants and have similar characteristics as ferns.

Cindy: ~~Moses~~ can bear flowers and fruits.  
Mosses

a) Who has made a correct comment? Explain your answer. [1]

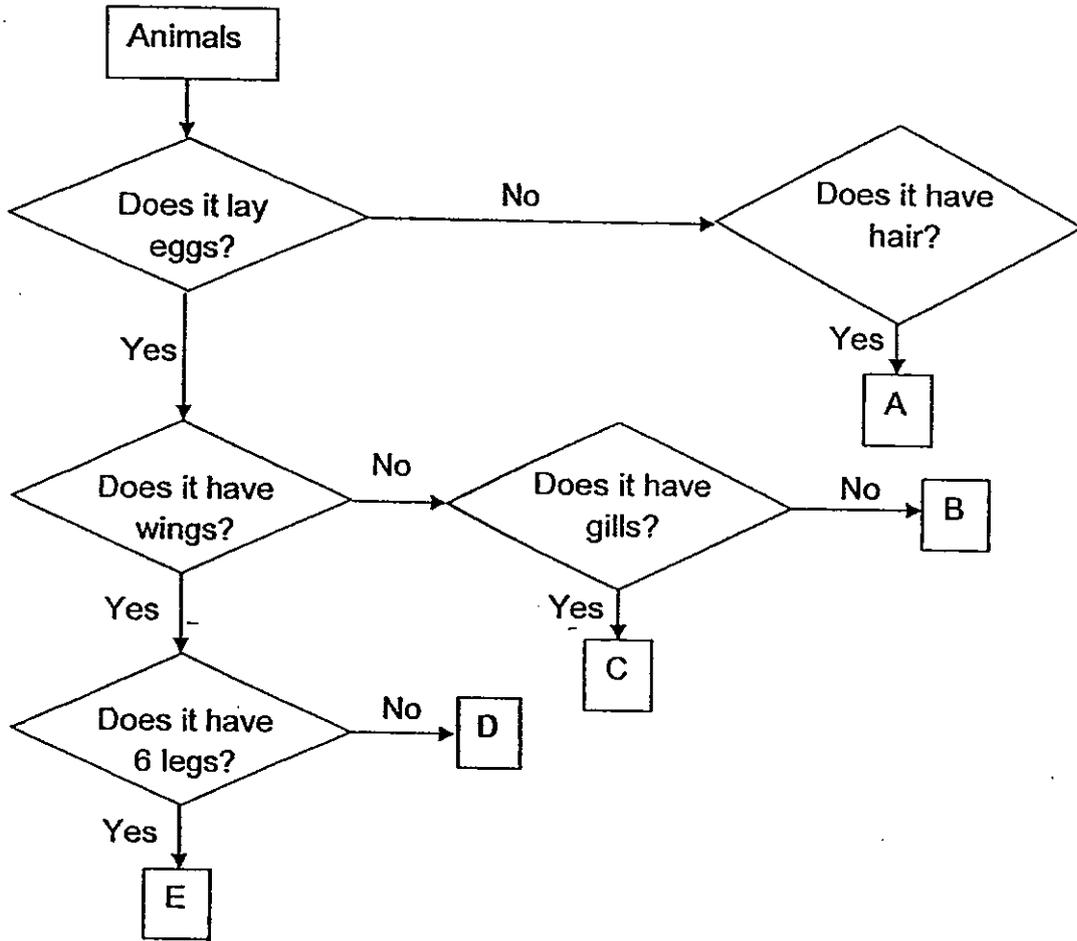
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b) Put a tick (✓) in the boxes below to indicate the condition(s) needed for mosses to grow. [1½]

Condition	Tick (✓) if condition is needed
Air	✓
Sunlight	✓
Moisture	✓

44. Study the flowchart below.



Based on the information given in the flow chart above, write down the correct letter, A, B, C, D or E, that best matches the animals given below. [3]

Animal	Alphabet
Dogs	
Eagle	
Goldfish	
Chicken	
Crocodile	
Cockroach	

END OF PAPER



# **ANSWER SHEET**

**EXAM PAPER 2012**

**SCHOOL : CHIJ**

**SUBJECT : PRIMARY 5 SCIENCE**

**TERM : CA1**

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

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

31)a)Cell A.

b)Cell A has chloroplasts which can be found in most plant cell. All plant cells have a cell wall while cell A does not have, causing his observation to be wrong.

c)Cell B does not have a cell wall which gives the cell a regular shape, causing cell B to burst. The sugar solution entered the cell and since it does not have cell wall, it burst.

32)i)F ii)T iii)T iv)T

33)a)Bar B. The air we breathe out contains more carbon dioxide than the air we breathe in.

b)Inhaled air contains more oxygen than exhaled air.

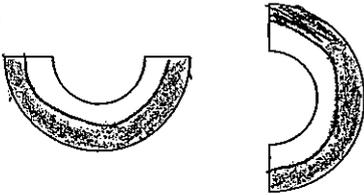
34)a)The higher his pulse rate, the higher his breathing rate.

b)EF, AB, BD, DE

35)a)Rod C. It took the shortest time to be heated up and cooled down.

b)Rod A. It is a poor conductor of heat so when using it to pick up hot food, one's fingers would not be burned.

36)a)



b) Metal W of the bimetallic strip should be the one above while metal X should be the one below. As when it is heated, metal X would curve more than metal W, causing the bimetallic strip to bend outwards, completing the circuit.

37)a) Stage D, A, C, B

b) A : larval C : pupal

c) Pour a layer of oil on the surface of the water.

38)R : Gaseous state

S : Gaseous state

T : Solid state

U : Liquid state

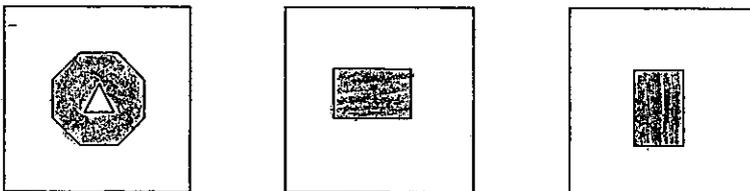
39)a) James is testing the strength of the material.

b) The aim of the experiment is to find out which material of string is the strongest.

40)a) The shadow will be bigger and blurred.

b) A K L

c)



41)a) The material of the tabletop.

b) wood.

c) Magnetism can pass through wood, which is a non-magnetic material.

42)a) i) gullet ii) stomach iii) large intestine iv) small intestine v) rectum

b) mouth / small intestine

43)a) Alice. Mosses are non-flowering plants and are not fungi. It is produced from spores and can make their own food like ferns.

b) Air, Sunlight, Moisture

44) A , D, C, D, B, E