Name: _____ ( )

Class: Primary 5 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Primary 5
Continual Assessment 2018
SCIENCE

BOOKLET A

1 March 2018

Total Time for Booklets A and B: 1 hour 15 minutes

15 questions
30 marks

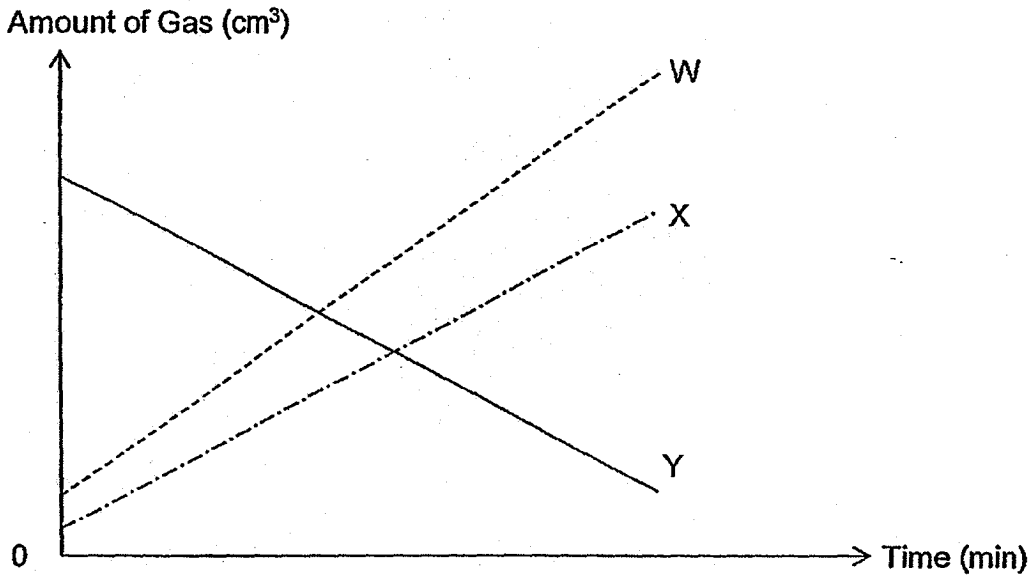
Do not open this booklet until you are told to do so.
Follow all instructions carefully.
Answer all questions.

This booklet consists of 11 printed pages.

Section A (15 x 2 marks = 30 marks)

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 (1, 2, 3 or 4) on the Optical Answer Sheet provided.**

1. The graph below shows the changes in the composition of air in a lift in which 10 people are trapped.



Based on the graph above, which one of the following best represents W, X and Y respectively?

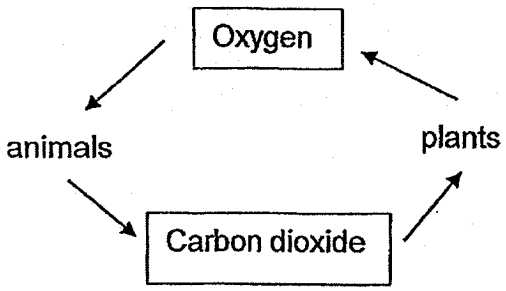
	W	X	Y
(1)	oxygen	water vapour	carbon dioxide
(2)	nitrogen	carbon dioxide	oxygen
(3)	carbon dioxide	nitrogen	water vapour
(4)	carbon dioxide	water vapour	oxygen

2. Which is the correct route taken by blood travelling from a leg to an arm in the human body?

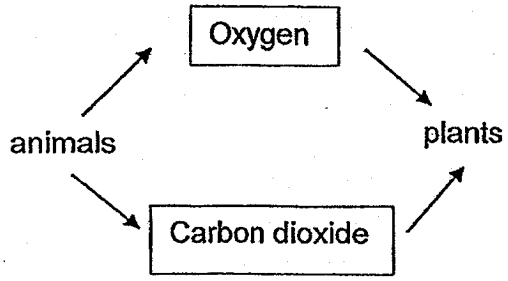
(1) leg → heart → lungs → arm
(2) leg → lungs → heart → arm
(3) leg → lungs → heart → lungs → arm
(4) leg → heart → lungs → heart → arm

3. Which one of the following diagrams shows the exchange of gases between living organisms and the surroundings during the day?

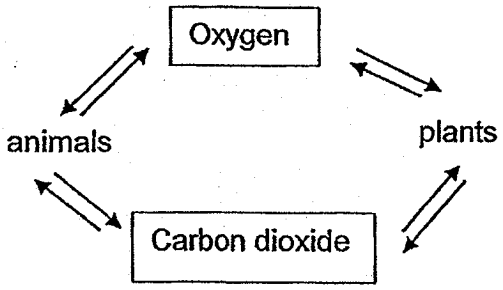
(1)



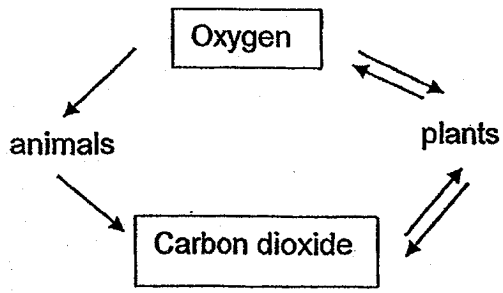
(2)



(3)



(4)

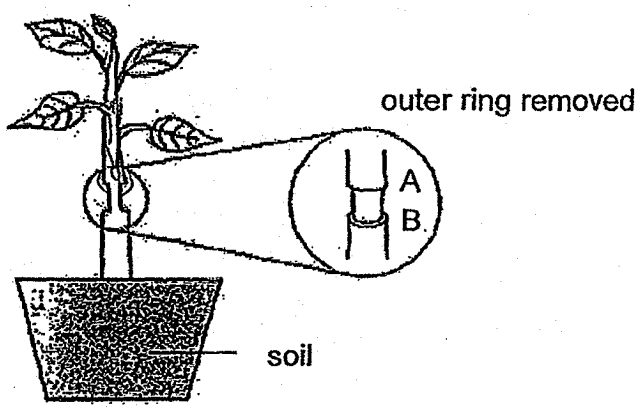


4. Which of the following statements are functions of the blood?

A It keeps the heart pumping.
B It carries nutrients and waste materials.
C It excretes waste materials from the body.
D It carries oxygen and carbon dioxide in the body.

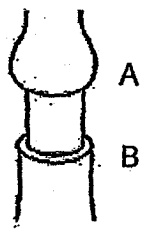
(1) A and B only
(2) B and C only
(3) B and D only
(4) B, C and D only

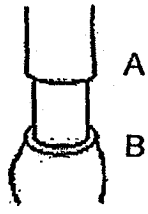
5. Mrs Lee removed an outer ring from the stem of plant Q as shown below. The food-carrying tubes were removed while the water-carrying tubes remained in the stem.

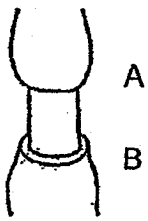


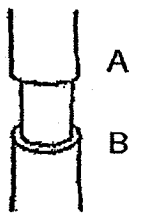
plant Q

Which one of the following diagrams represents the appearance of the stem after a few days?

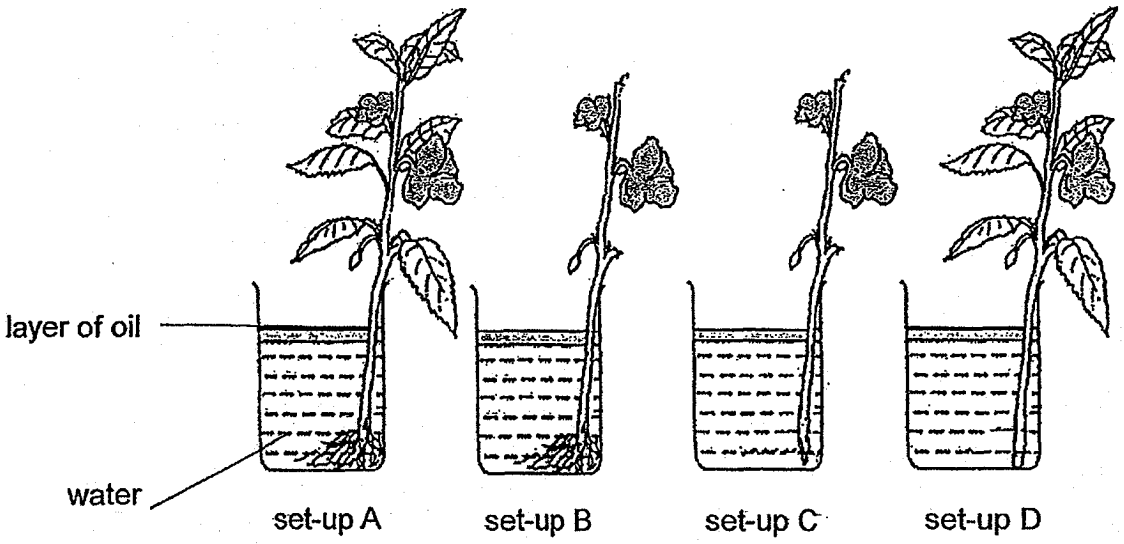
(1)


(2)


(3)


(4)


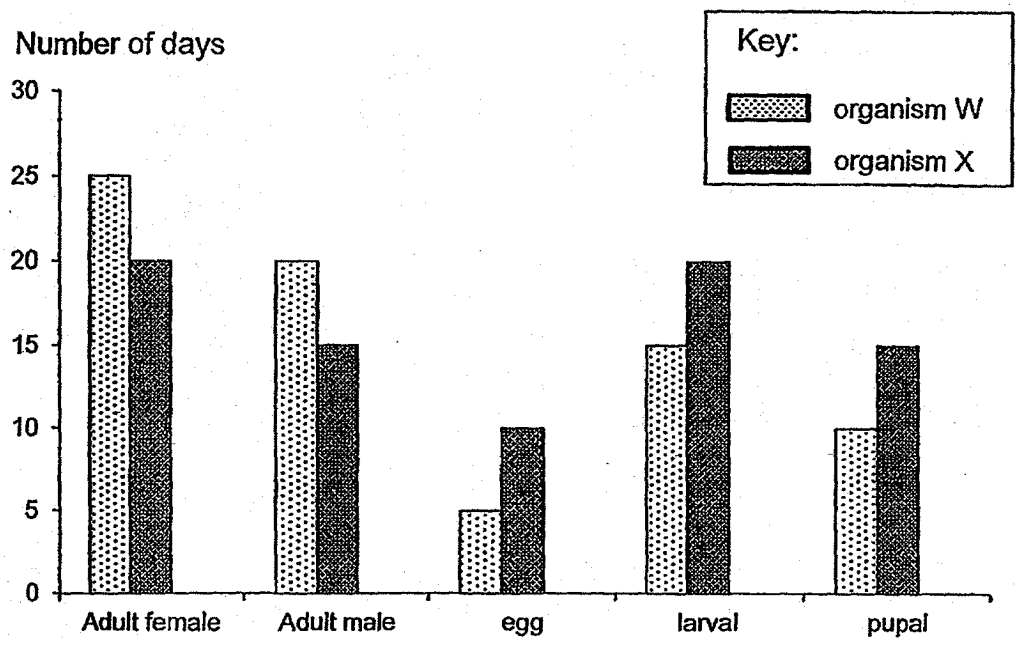
6. Study the set-ups below. David wants to find out how the number of leaves affects the absorption of water by the plant.



After a week, he recorded the volume of water in each pot. However, David's father pointed out that he had made a mistake with one of the volumes of water recorded. Which of his observations is incorrect?

	Set-up	Volume of water on Day 1 (ml)	Volume of water after week 1 (ml)
(1)	A	500	250
(2)	B	500	350
(3)	C	500	500
(4)	D	500	300

7. The graph below shows the number of days for each stage of the life cycle of organisms W and X.



Which of the following shows the stages that organisms W and X would be on the 20th day after the eggs have been hatched?

	Organism W	Organism X
(1)	adult	larval
(2)	larval	pupal
(3)	pupal	larval
(4)	adult	adult

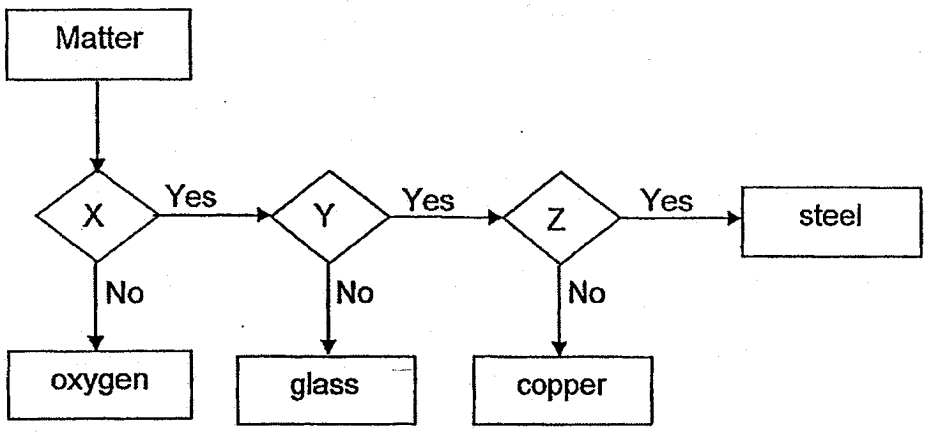
8. Study the table below.

Organism F	Organism G
3-stage life cycle	4-stage life cycle
Its young resembles the parent	Its young does not resemble the parent

What could organisms F and G be?

	Organism F	Organism G
(1)	cockroach	dragonfly
(2)	goldfish	grasshopper
(3)	rabbit	beetle
(4)	housefly	frog

9. Study the flow chart below.

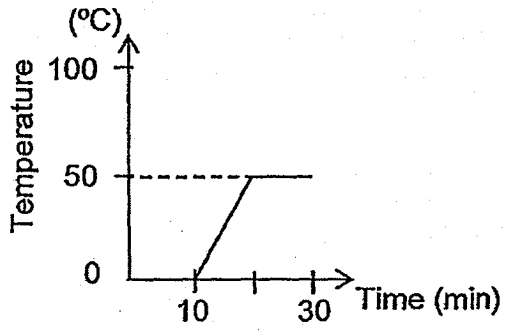


Which one of the following sets of questions can X, Y and Z represent?

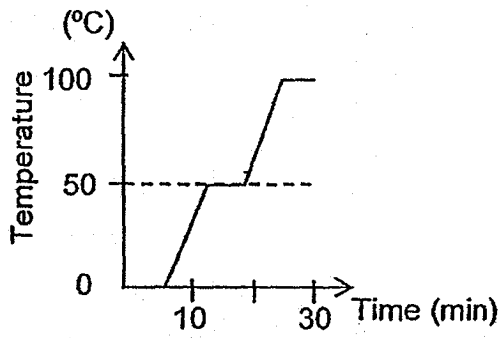
	X	Y	Z
(1)	Does it conduct electricity?	Is it magnetic?	Is it a solid?
(2)	Is it a solid?	Does it conduct electricity?	Is it magnetic?
(3)	Does it occupy space?	Does it conduct electricity?	Is it a metal?
(4)	Does it have a definite shape?	Is it a solid?	Does it conduct electricity?

10. A beaker of ice cubes was left in a classroom for 30 minutes. Which one of the graphs below correctly shows the change in the temperature of the ice cubes?

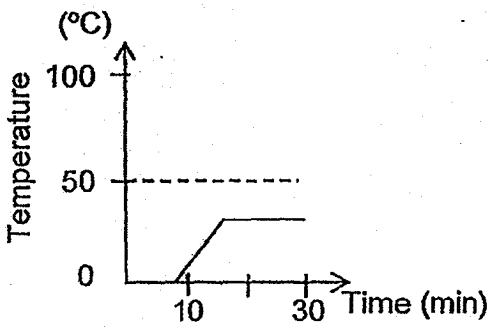
(1)



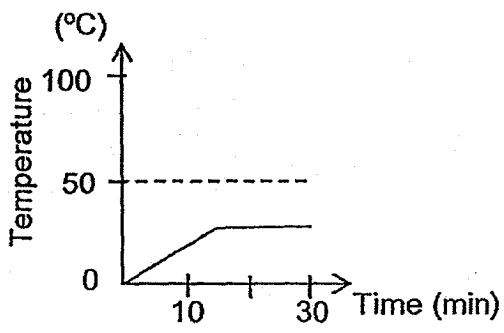
(2)



(3)



(4)

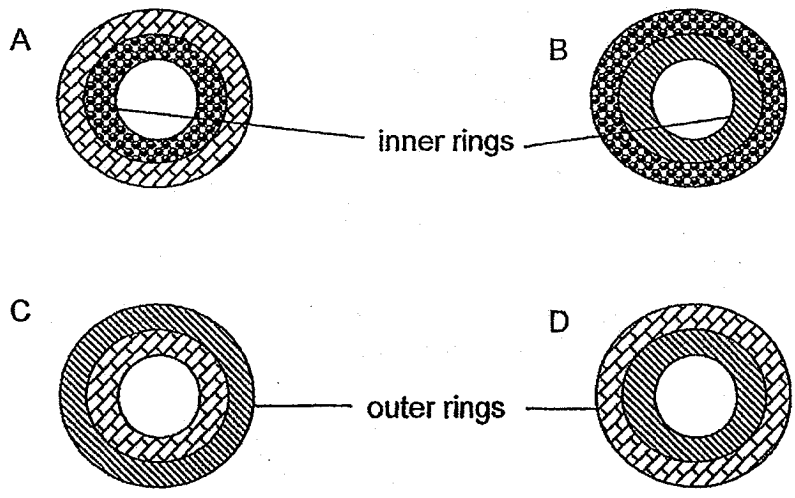


11. The table below shows the lengths of metals P, Q and R when heated to 100 °C.

Key	Metal	Length of metal at room temperature (mm)	Length of metal at 100 °C (mm)
	P	100	111
	Q	100	102
	R	100	106

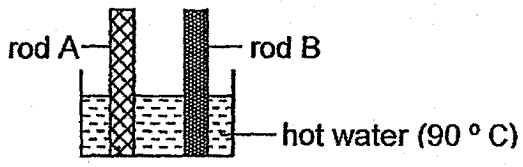
Metals P, Q and R were used to make rings as shown below. The rings were immersed in cold water at 10 °C for 10 minutes.

Which of the inner rings could be easily removed at the end of 10 minutes?



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

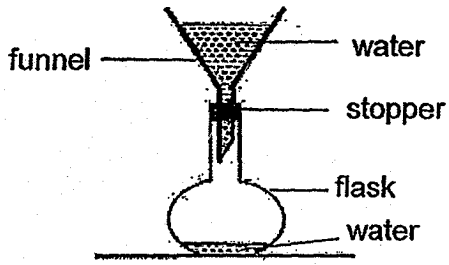
12. Bala conducted an experiment by placing two rods A and B of similar lengths and sizes but made of different materials into a beaker of hot water as shown below.



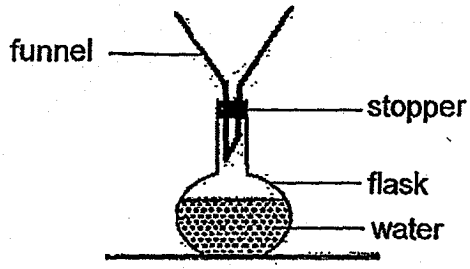
Which one of the following helped Bala to arrive at the conclusion that rod B is a better conductor of heat than rod A after 10 minutes?

(1) Rod A felt cooler than rod B.
(2) Rod A expanded more than rod B.
(3) Rod B had a lower temperature than rod A.
(4) The mass of rod B increased more than the mass of rod A.

13. Mr Tan set up the experiment shown in the diagram below. When he poured some water into the funnel, a few droplets of water flowed into the flask while the rest of the water remained in the funnel.



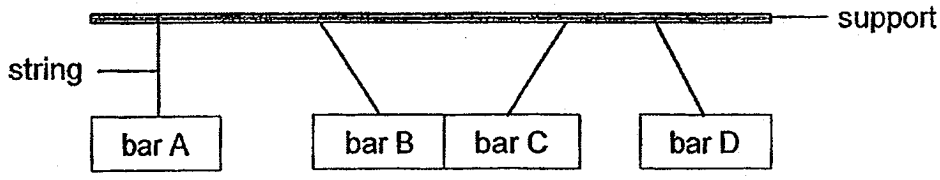
John then set up a similar experiment. When he poured the same amount of water into the funnel, all the water flowed into the flask as shown below.



Which one of the following could have caused the result obtained by John to be different from that by Mr Tan?

(1) John poured the water in too quickly.
(2) John had fixed the stopper loosely.
(3) The water that John used was cold.
(4) John did the experiment on a cooler day.

14. Aminah stroked each of the four metal bars A, B, C and D with a magnet for 30 times. She then hung them next to one another from a support. It was observed that only one of the bars remained stationary while the rest either swung away from or towards one another as shown below.

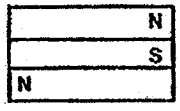


Based on the above observations, which one of the following shows the most likely materials that bars A, B, C and D are made of?

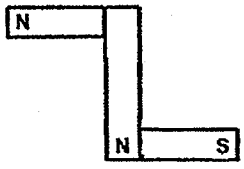
	bar A	bar B	bar C	bar D
(1)	steel	copper	iron	iron
(2)	iron	iron	steel	aluminium
(3)	aluminium	steel	copper	iron
(4)	copper	steel	iron	steel

15. The diagram below shows the arrangements of some magnets.

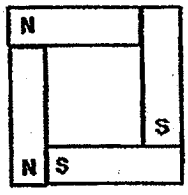
A



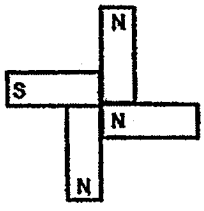
B



C



D



Which of the above arrangements is/are not possible?

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

~~ End of Section A ~~

Name : _____( )

Class : Primary 5 _____

CHIJ ST NICHOLAS GIRLS' SCHOOL

Primary 5
Continual Assessment 2018

SCIENCE

BOOKLET B

1 MARCH 2018

Booklet A	30
Booklet B	20
Total	50

Total Time for Booklets A and B: 1 hour 15 minutes

7 questions
20 marks

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

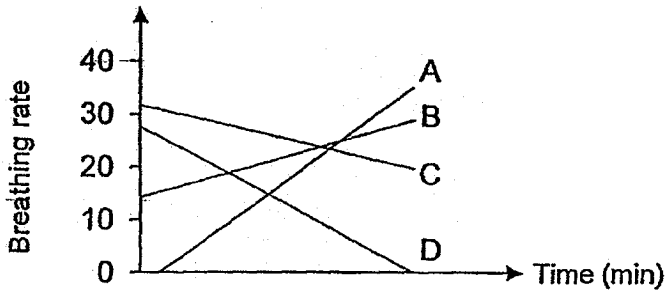
_____
Parent's Signature/Date

This booklet consists of 8 printed pages.

Section B (20 marks)
For questions 16 to 22, 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.

16. The diagram below shows how the breathing rate of an average healthy adult changes during different activities.



(a) Which graph A, B, C or D best describes how the breathing rate changes as a person does the following activities? Explain your answer. [1]

(i) **Runs very fast for 3 minutes**

_____

_____

(ii) **Rests after a brisk walk** [1]

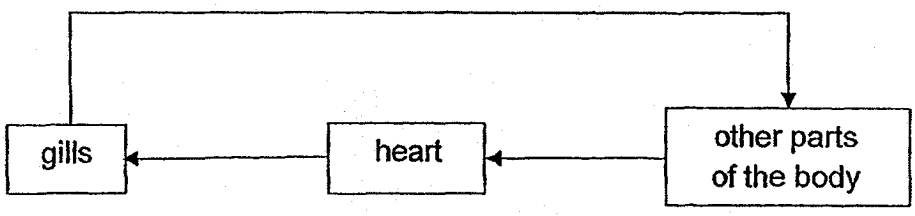
_____

_____

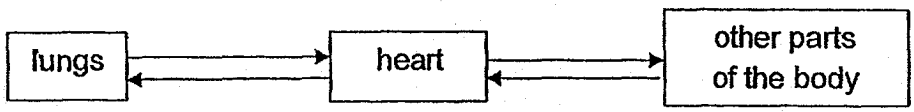
(b) Name an activity during which the breathing rate of a person remains at the normal rate. [1]

_____

17. The diagrams below show the flow of blood in the circulatory systems of a fish and a human.



In a fish



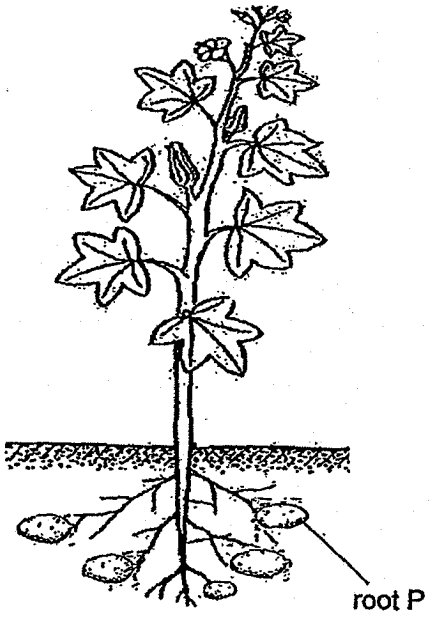
In a human body

(a) State one difference between the blood flow in the circulatory systems of a fish and in a human. [1]

(b) Both the lungs and gills are surrounded by many blood vessels. Explain why. [1]

(c) State the function of the heart in the circulatory system of a human. [1]

18. The diagram below shows plant A with an edible underground root P.



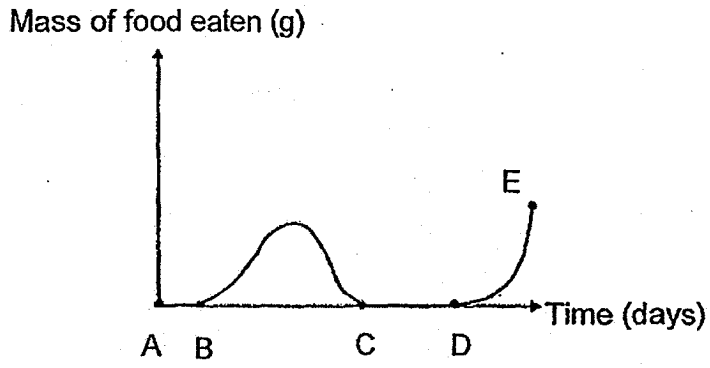
plant A

(a) P stores food made by the leaves of plant A. Describe how the food made by the leaves gets stored in P. [2]

(b) Four parts of a plant are shown below. Draw arrows (⟶) in the diagram below to show how water is transported in a plant. [1]

stem	leaves
roots	flowers

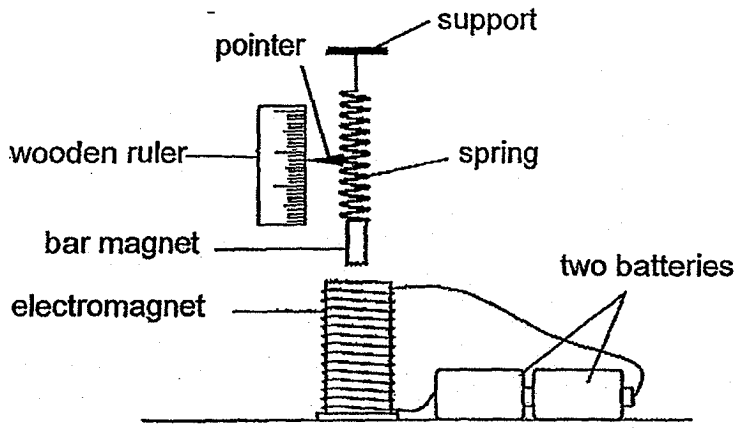
19. The graph below shows the amount of food eaten by an organism T at different stages of its life cycle.



(a) Name stage C to D of the life cycle of the organism T. Suggest a reason why there is no change in the mass of the food eaten. [1]

(b) Explain why it is beneficial for organism T to lay many eggs at one time as shown below. [1]

20. In the set-up below, the bar magnet is repelled by the electromagnet. A pointer attached to the spring moves when the circuit is closed.



(a) How will the pointer move when only one battery is used? [1]

	Tick the correct box
upwards	
downwards	
towards the ruler	
away from the ruler	

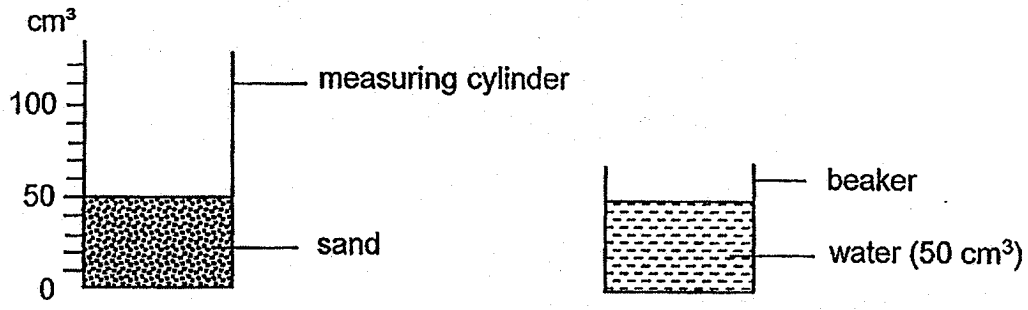
(b) Explain your answer in (a) above. [2]

_____

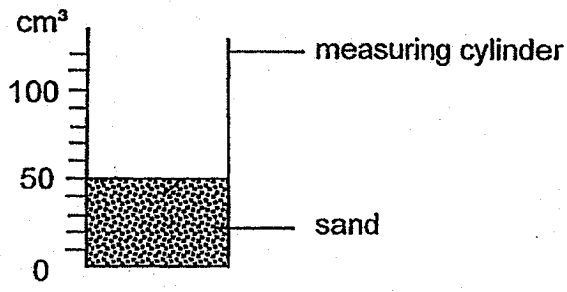
_____

_____

21. James filled a measuring cylinder with 50 cm^3 of sand. He poured 50 cm^3 of water into the same cylinder.

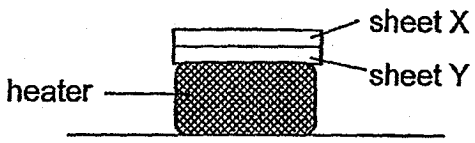


(a) **Draw a line** in the diagram below to show the water level when the beaker of water is poured into the measuring cylinder with sand. [1]



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

22. Lily had two similar sheets X and Y made of the same material. She placed the sheets on a heater as shown below.



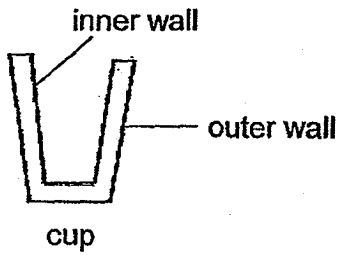
At the start, sheets X and Y were of the same length. After a while, sheet Y became longer than sheet X.

(a) Give a reason why sheet Y became longer than sheet X. [1]

_____

_____

(b) Lily had a glass cup with thick walls as shown.



(i) When she poured some hot tea into the cup, the outer wall felt cooler than the inner wall. Give a reason for this. [1]

_____

_____

(ii) When Lily filled the cup with boiling water, the cup cracked. Explain why. [1]

_____

_____

~~ End of paper ~~

CHIJ ST NICHOLAS GIRLS' SCHOOL (PRIMARY SECTION)

2018 P5 CA1 SCIENCE | CORRECTIONS SHEET

BOOKLET B (OPEN-ENDED QUESTIONS)

NAME: _____( ) CLASS: P5 ___ DATE: _____

INSTRUCTIONS: Please fill in this sheet using GREEN INK only.

QN. NO.		CORRECTION(S)
16	(a)	(i)
		(ii)
	(b)	
17	(a)	
	(b)	
	(c)	
18	(a)	
	(b)	
19	(a)	
	(b)	

QN. NO.		CORRECTION(S)
20	(a)	
	(b)	
21	(a)	
	(b)	
22	(a)	
	(b)	(i)
		(ii)

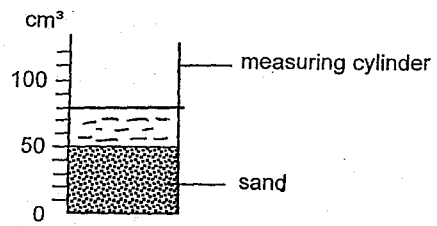
SCHOOL : CHIJ PRIMARY SCHOOL
LEVEL : PRIMARY 5
SUBJECT : SCIENCE
TERM : 2018 CA1

SECTION A

Q 1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
4	4	4	3	1	3	3	3	2	3
Q 11	Q12	Q13	Q14	Q15					
2	1	2	4	2					

SECTION B

Q16)	a)i)B. When we run , we need more oxygen so our breathing rate increases therefore it is not C and D. When we are not running we still need oxygen so we still breath therefore A is incorrect. ii)C. The breathing rate is decreasing as resting after a brisk walk requires lesser energy/oxygen. D is not possible as the breathing rate ends at zero. b)Sitting down playing a board game.
Q17)	a)The circulatory system of a fish transports blood (rich in oxygen)from the gills to the other body parts, but the circulatory system of a human transports blood (rich in oxygen) from the heart to the other body parts. b)The blood vessels are to increase the surface area for more oxygen to be taken into the blood stream more carbon dioxide to be removed from the bloodstream. c)The heart pumps blood containing oxygen, digested food and water to all parts of the body.

Q18)	a)The food from leaves travel through the phloem tubes to other parts of the plant. Excess food then travels back into the phloem tubes and enters root P to be stored. b)stem → leaves ↑ → flowers roots
Q19)	a)The pupal stage. When it is in the stage before C to D, the larval stage, it eats a lot of food and water so that it will be stored in its body. During C to D, it cannot move about freely so it feeds on the food stored in its body therefore there in no change in the muss of food eaten form C to D. b)To increase the chances of the eggs hatching and growing into adults and to ensure the continuity of its kind.
Q20)	a)downwards b)When one battery is used, the magnetism in the electromagnet decreases, causing the bar magnet to be repelled lesser and drop a little, making the pointer move downwards.
Q21)	a)  b)There are air spaces between the sand grains, some of the water poured in will push air out of the holes and occupy the space hence the water level is below 100cm3.
Q22)	a)Y was closer to the heater so it will gain more heat and expand more than X. b)i)The outer wall was further away from the hot tea than the inner wall therefore it gained lesser heat than the inner wall and felt cooler.

	ii)The inner wall gained heat a lot faster than the outer wall and expanded a lot more. As the expansion was unequal, it caused the cup to crack.