Anglo-Chinese School (Junior)

CONTINUAL ASSESSMENT 1 (2020)
PRIMARY 6

SCIENCE

BOOKLET A

THURSDAY **5 MARCH 2020** **50 Minutes**

Name: _____ ( ) Class : 6.( )

INSTRUCTIONS TO PUPILS

DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO

Follow all instructions carefully.

There are 14 questions in this booklet.

Answer **ALL** questions.

INFORMATION FOR PUPILS

The total marks for this booklet is 28.

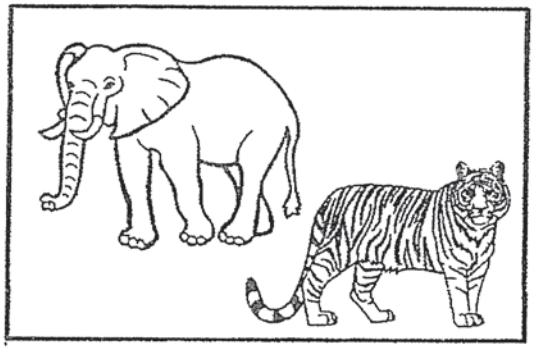
The total time for Booklets A and B is 50 minutes.

This question paper consists of 9 printed pages (inclusive of cover page).

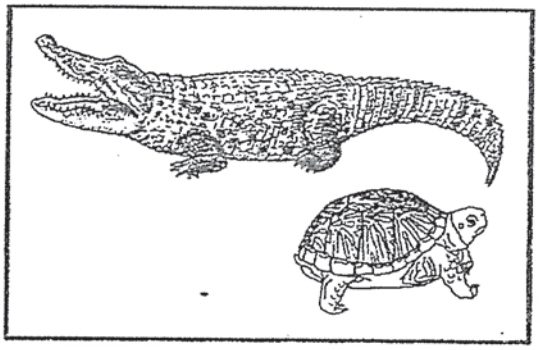
For each question from 1 to 14, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade your answer on the Optical Answer Sheet.

(28 marks)

1. Study the two groups of animals, A and B.



A



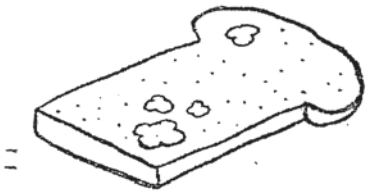
B

Which of the following describes the groups of animals correctly?

	Characteristics	A	B
(1)	The animals lay eggs to reproduce.	No	Yes
(2)	The animals have hair as their outer covering.	No	No
(3)	The animals have scales as their outer covering.	Yes	Yes
(4)	The adults give birth to their young.	Yes	Yes

2. Which one of the following organisms does <u>not</u> reproduce by spores?

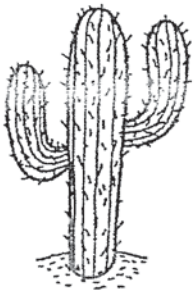
(1) Mould on bread



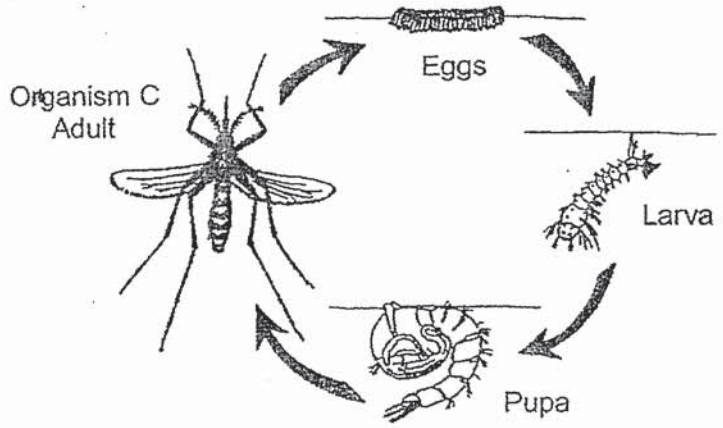
(2) Fern

(3) Mushroom

(4) Cactus



3. David studies the life cycle of organism C.



Which of the following characteristics helped David classify organism C as an insect?

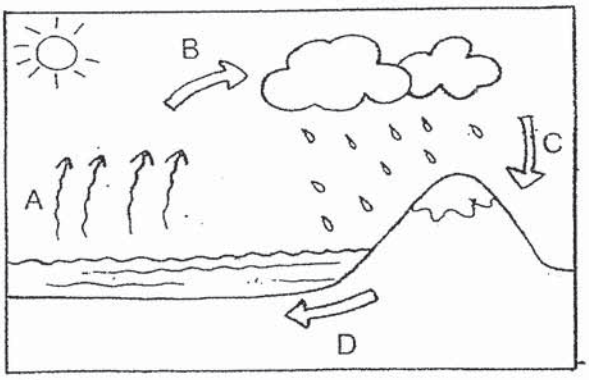
(1) The adult lays eggs.

(2) The adult has three body parts.

(3) The young moults several times.

(4) The young does not resemble the adult.

4. The diagram shows the water cycle.



At which two parts, A, B, C and D of the water cycle, are water present in the liquid state?

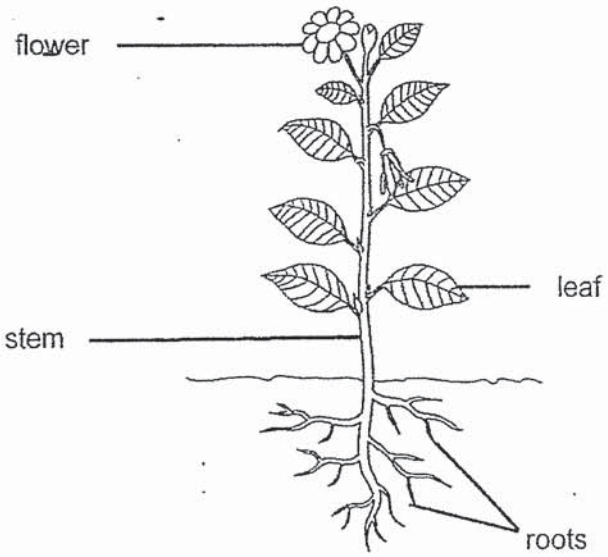
(1) A and B

(2) B and C

(3) A and C

(4) C and D

5. Study the plant shown.

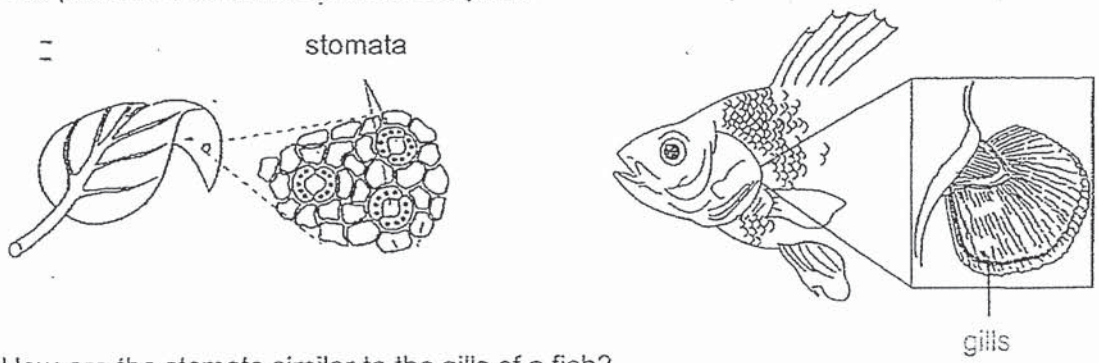


Which of the following two statements are true about the plant?

A It has a weak stem.
B Its roots make food.
C Its flower helps in reproduction.
D Its stem transports food to the roots.

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

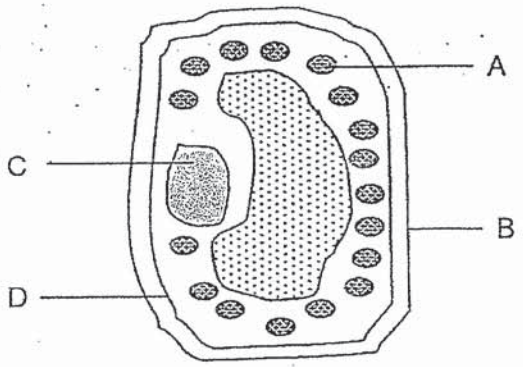
6. The pictures shows the stomata of a plant.



How are the stomata similar to the gills of a fish?

(1) They take in water.
(2) They take in oxygen only.
(3) They allow gaseous exchange.
(4) They have covers to protect them.

7. The diagram shows a plant cell.



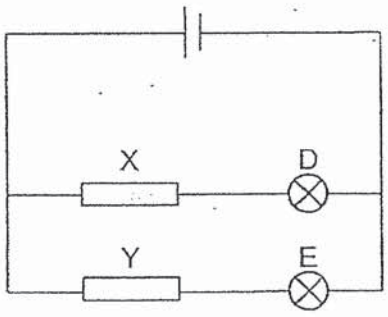
The table states the functions of parts A, B, C and D.

Part	Function
A	Makes food
B	Supports and gives the cell its shape
C	Controls all the activities of the cell
D	Controls the movement of substances in and out of the cell

Which of the parts and functions are correct?

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

8. Elly set up an electrical circuit as shown. She used some wires, two identical bulbs, D and E, and materials X and Y to form the circuit.

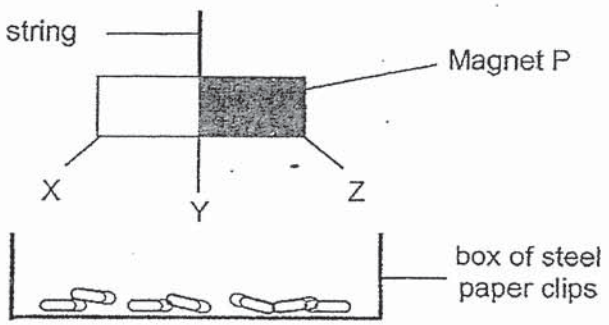


Elly noticed that only bulb D lit up.

What could be the reason for this observation?

(1) Bulb D is not working.
(2) X is an electrical insulator.
(3) Y is an electrical insulator.
(4) The battery has run out of chemical potential energy.

9. Fred labelled each part of Magnet P as X, Y and Z as shown. He conducted an experiment by lowering Magnet P into a box of steel paper clips.



Fred repeated the experiment using two other magnets, Q and R, of the same size. He recorded the number of paper clips attracted to each part of each magnet in the table.

	Number of paper clips attracted at		
	X	Y	Z
Magnet P	17	6	15
Magnet Q	7	1	9
Magnet R	9	3	10

Which of the following conclusions is correct?

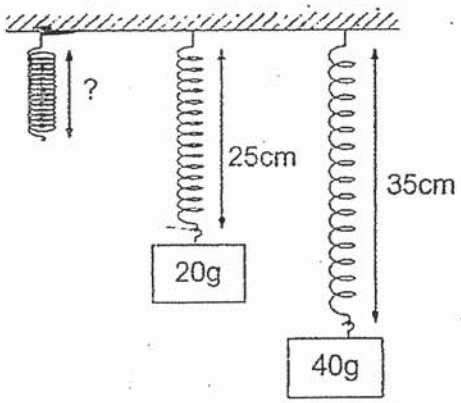
(1) P is the strongest magnet because the most number of paper clips were attracted by the magnet.

(2) Q is the strongest magnet because the least number of paper clips were attracted by the magnet.

(3) P and R are equally strong as the number of paper clips attracted by the two magnets at Z is almost the same.

(4) P and R are weaker than Q because the number of paper clips attracted by the two magnets are higher than Q.

10. Fendi added some weights to a spring, as shown.



What is the original length of the spring?

(1) 10 cm

(2) 12 cm

(3) 15 cm

(4) 20 cm

11. Julian pushed his toy car on four different surfaces, A, B, C and D; with the same amount of force. The distances travelled by the toy car for each of the surfaces are shown in the table.

Surface	Distance Travelled By Toy Car (cm)
A	180
B	360
C	150
D	280

Arrange the surfaces, A, B, C and D starting with the surface that causes the least frictional force with the wheels of the toy car.

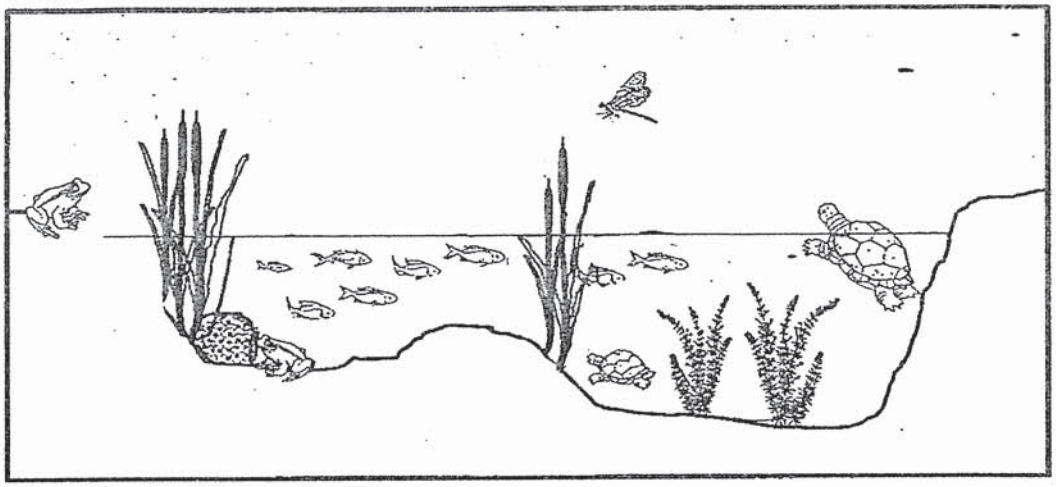
(1) B, A, D, C

(2) B, D, A, C

(3) C, A, D, B

(4) C, B, A, D

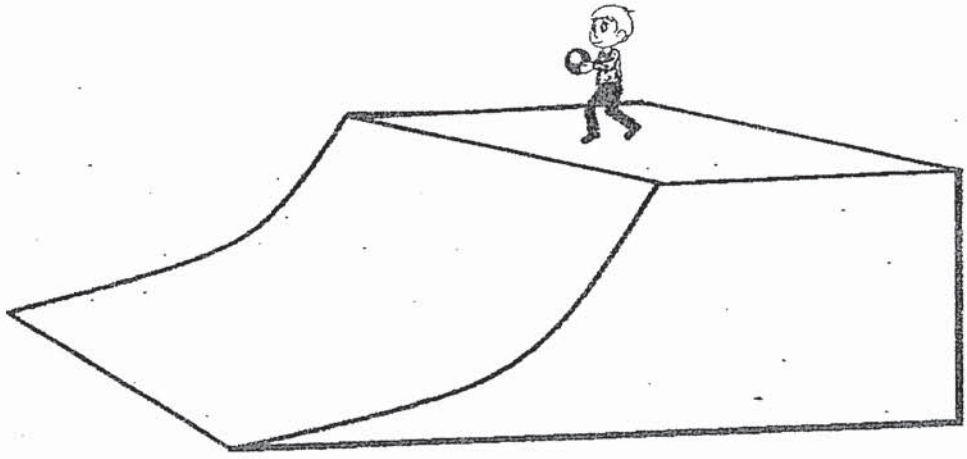
12. The diagram shows a pond habitat.



How many populations are there in this habitat?

(1) 5
(2) 6
(3) 7
(4) 8

13. Harry released a ball down a ramp.



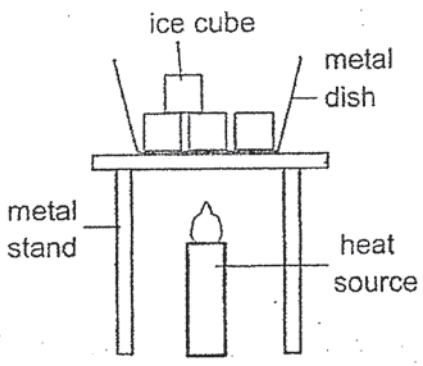
Which of the following correctly shows the energy conversion that occurred in the ball?

(1) Kinetic energy → Sound energy + Heat energy
(2) Kinetic energy → Potential energy + Heat energy
(3) Potential energy → Kinetic energy + Sound energy
(4) Potential energy → Kinetic energy + Sound energy + Heat energy

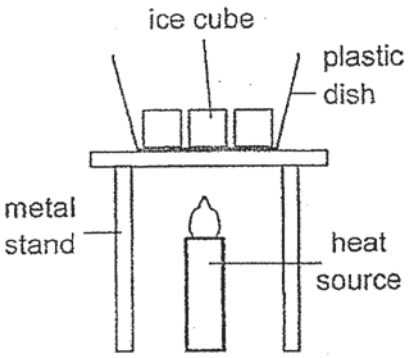
14. Gilbert wants to find out which material is able to conduct heat the fastest.

Which two set-ups must Gilbert use to test his aim?

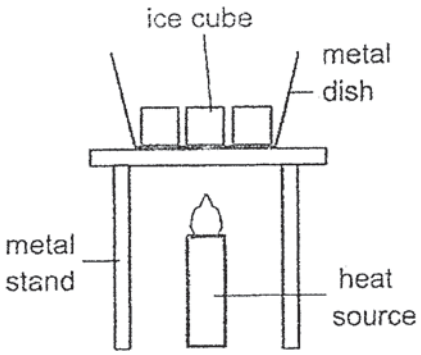
(A)



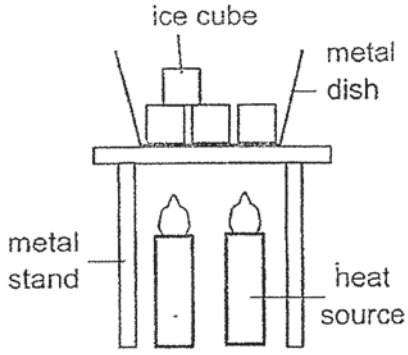
(B)



(C)



(D)



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

End of Booklet A

Anglo-Chinese School (Junior)

CONTINUAL ASSESSMENT 1 (2020)
PRIMARY 6

SCIENCE

BOOKLET B

THURSDAY **5 MARCH 2020** **50 Minutes**

Name: _____ ( ) Class : 6.( ) Parent's Signature: _____

INSTRUCTIONS TO PUPILS

DO NOT TURN OVER THE PAGES UNTIL YOU ARE TOLD TO DO SO

Follow all instructions carefully.

There are 7 questions in this booklet.

Answer ALL questions.

INFORMATION FOR PUPILS

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

The total marks for this booklet is 22.

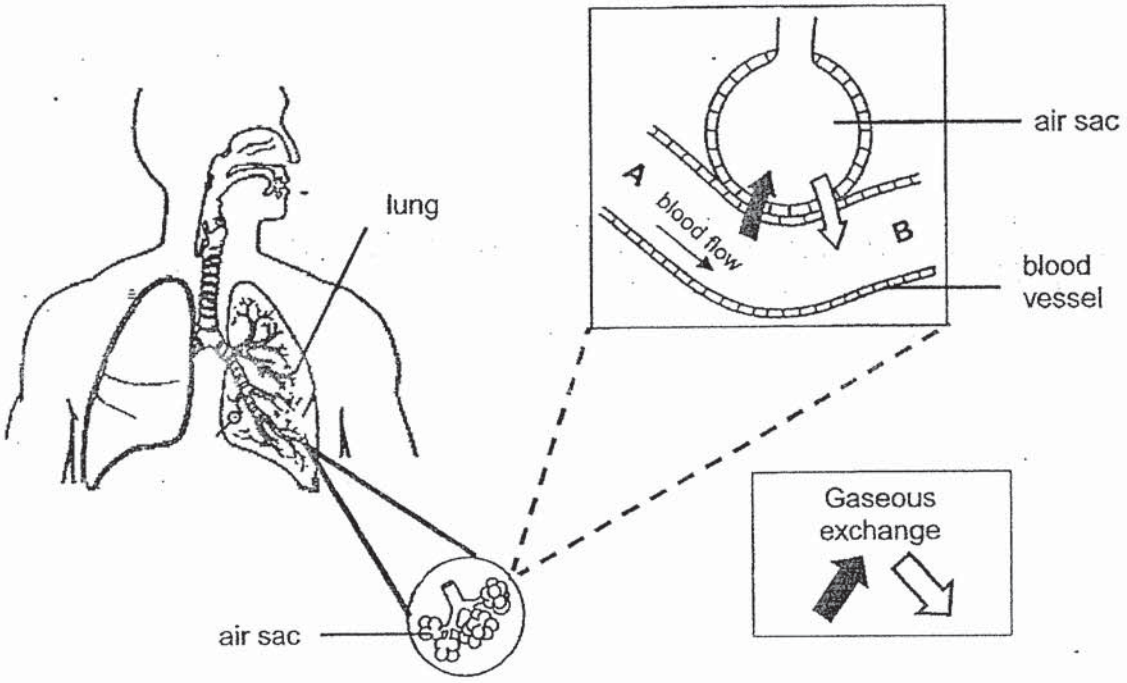
The total time for Booklets A and B is 50 minutes.

This question paper consists of 9 printed pages (inclusive of cover page).

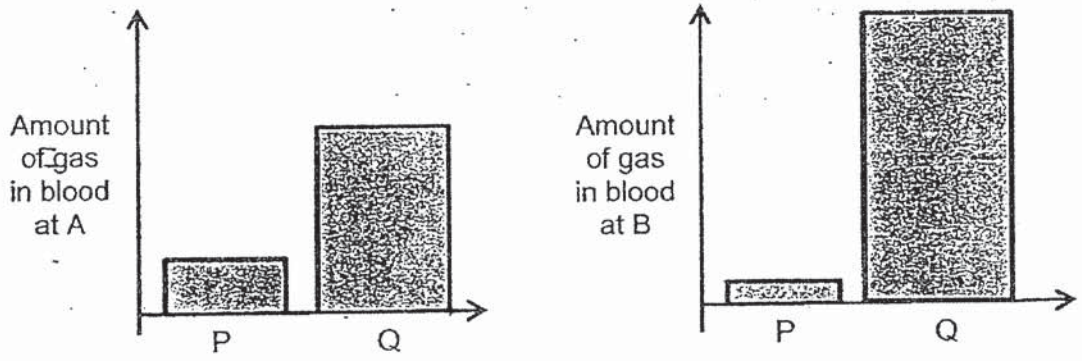
Booklet	Possible Marks	Marks Obtained
A	28	
B	22	
Total	50	

For questions 15 to 21, write your answers in this booklet.
The number of marks available is shown in brackets [ ] at the end of each question or part question. (22 marks)

15. The diagram shows the lungs of a human and how gaseous exchange takes place at the air sacs.



Gases P and Q are found in the blood at parts A and B of the blood vessel. The amount of gases P and Q found in A and B is represented in the bar graphs below.



(a) Identify gases P and Q. [1]

(i) P is _____

(ii) Q is _____

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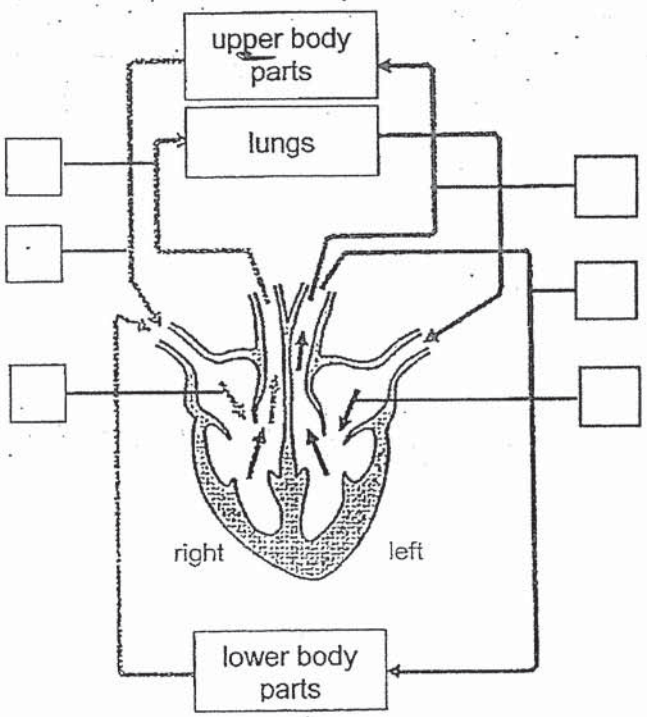
SCORE 1

The diagram shows the flow of the blood from the lungs to the rest of the body via the heart.



(b) Identify the arrows that represent the blood that is rich in oxygen by placing ticks (✓) in the boxes. [1]

(c) Explain how digested food is transported to all parts of the body.

_____

_____

(Go on to the next page)

SCORE	/ 2

16. Harry uses a float when he swims at the swimming pool.

(a) Harry needs to pump air into the float to inflate it before he can use it in the pool. What property of air does this show? [1]

_____

_____

(b) Does the mass of air in the float increase, decrease or remain the same after more air is pumped into it? Give a reason for your answer. [1]

_____

_____

(c) Why does the float feel harder after it has been left in the sun for some time? Explain your answer clearly. [1]

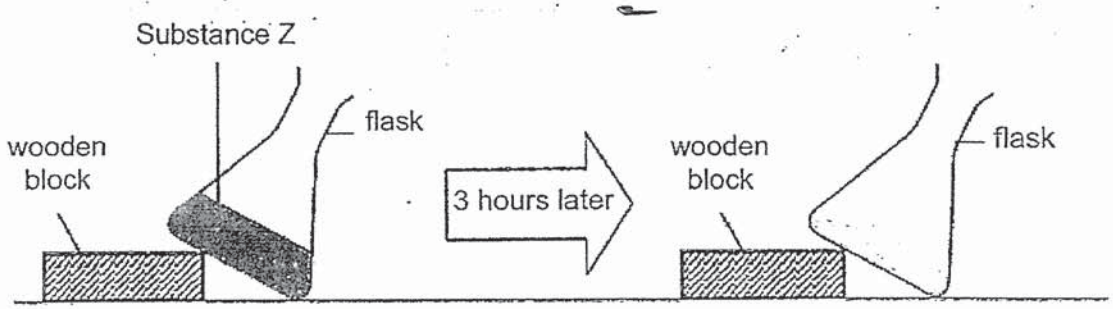
_____

_____

(Go on to the next page)

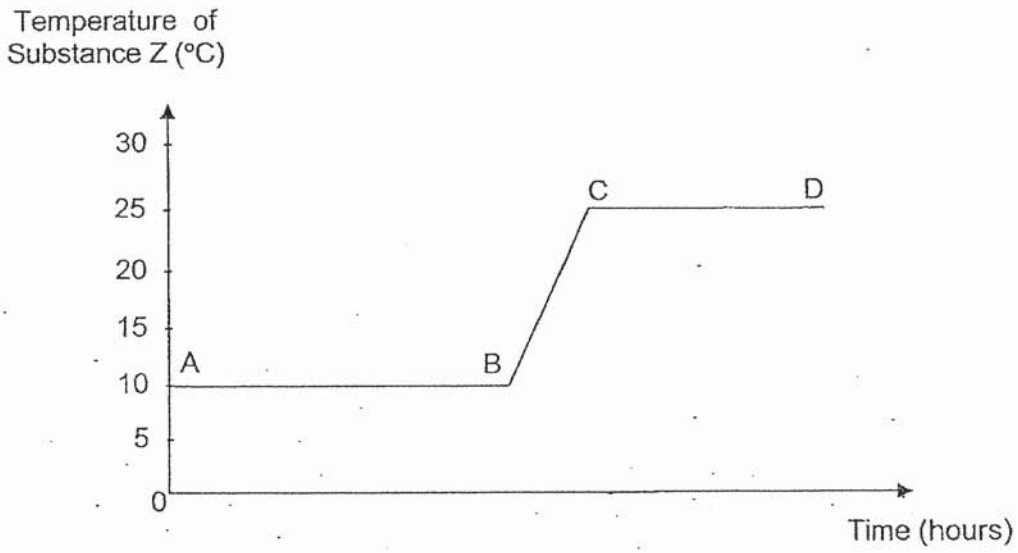
SCORE	/ 3

17. Iris placed a flask containing Substance Z on the table at room temperature of 25°C for three hours. She used a data logger to measure the temperature of Substance Z over that period. After three hours, she noticed that Substance Z was in the liquid state.



(a) **In the diagram above,** use a ruler to draw Substance Z in liquid state. [1]

Using the data recorded by her data logger, Iris plotted a graph as shown.



(b) Based on the graph, what is the melting point of Substance Z? [1]

_____

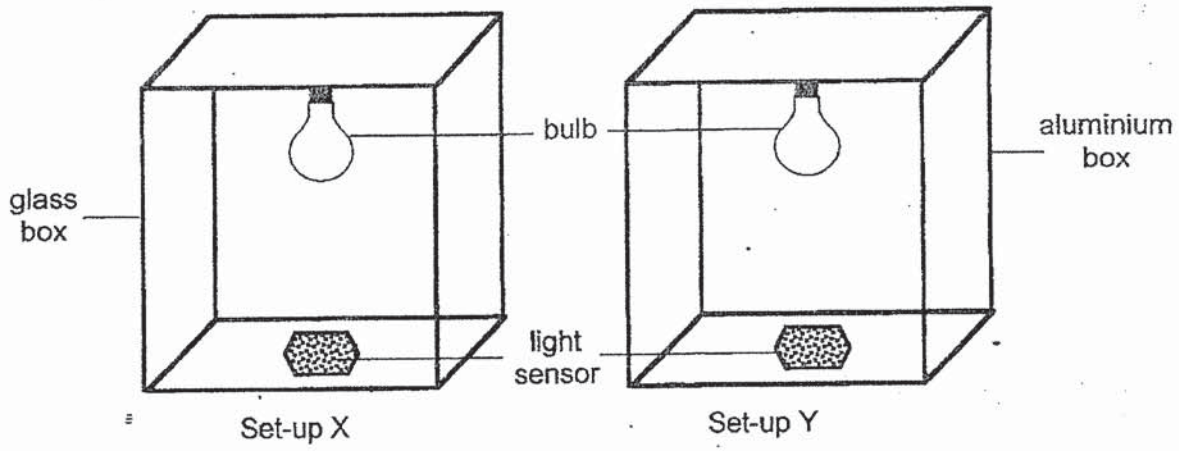
(c) At which point in the graph did Substance Z reach room temperature? [1]

_____

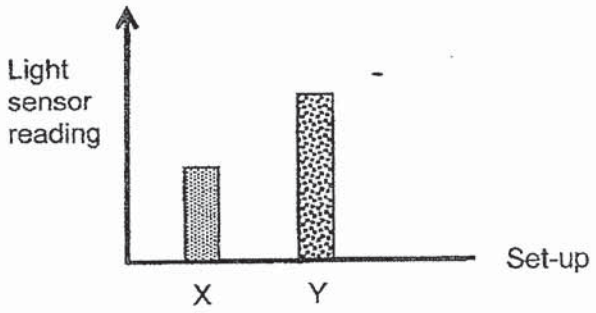
(Go on to the next page)

SCORE	
	3

18. Jimmy used boxes of identical size but made of different materials to conduct an experiment in a dark room. In each box, he used identical bulbs and placed light sensors to record the amount of light detected.



He recorded the results in the graph.



(a) State a property of light. [1]

_____

(b) Explain why there is a difference in the amount of light detected in each set-up. [2]

Set-up X : _____

_____

Set-up Y : _____

_____

(c) Why did Jimmy use identical sized boxes for the experiment? [1]

_____

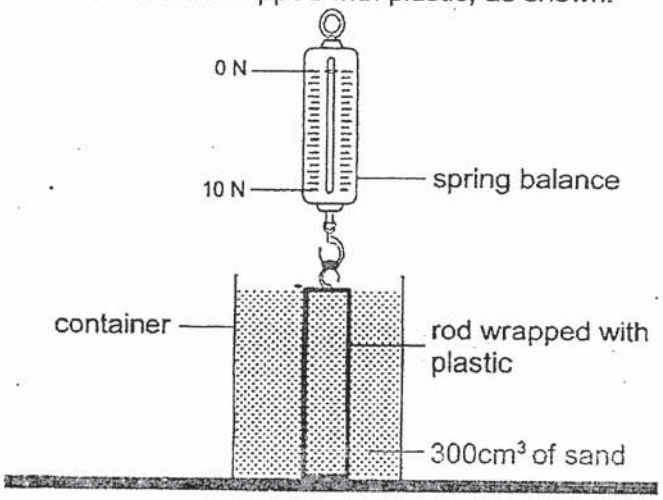
_____

(Go on to the next page)

SCORE	/ 4

19. Kenny set up an experiment to measure the amount of force needed to lift two 100g rods out of an empty container, one at a time. One rod is wrapped with plastic and the other rod with sandpaper.

He then added 300cm^3 of sand into the empty container. He measured the amount of force needed to lift the rod wrapped with plastic, as shown.



(a) State the forces that caused the spring to stretch when he lifted the rod out of the container with sand. [1]

_____

(b) Kenny had recorded his results in the table. Suggest the amount of force needed to lift the rod wrapped with sandpaper out of the container of sand. Write your answer in the table. [1]

Rod	Force needed (N)	
	Without sand	With sand
wrapped with plastic	1	3
wrapped with sandpaper	1	

(c) Explain your answer in (b). [1]

_____

_____

(Go on to the next page)

SCORE	/ 3

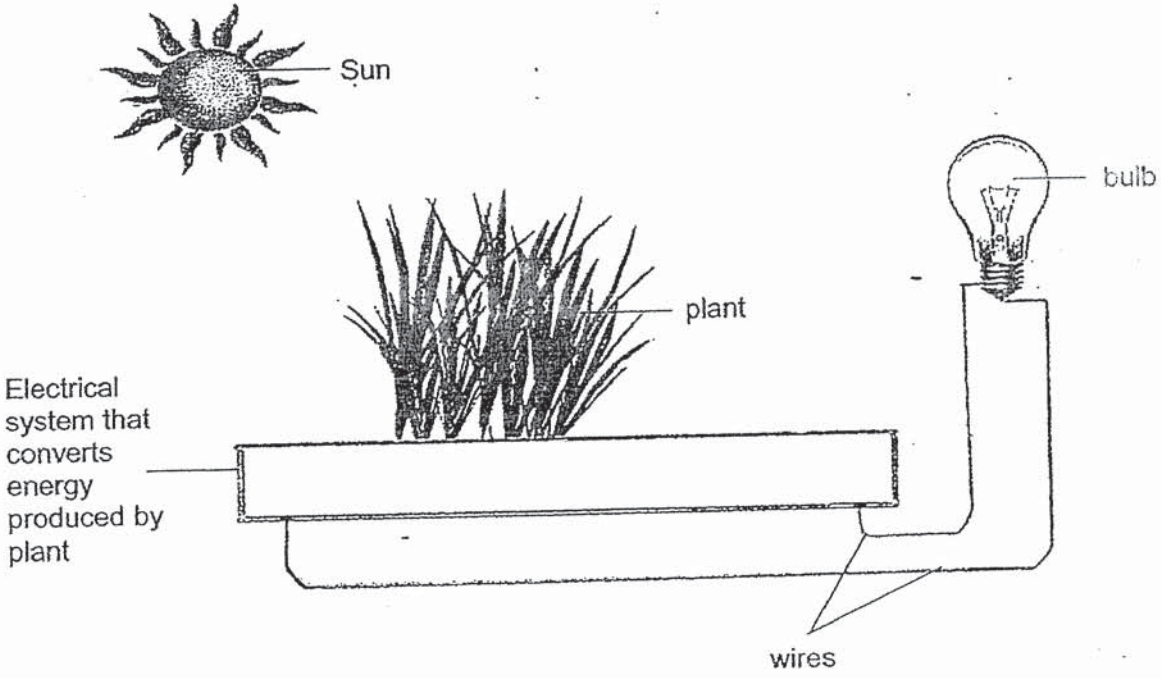
20. Plants get their energy from the Sun to make food through the process of photosynthesis.

(a) List the factors that are required for photosynthesis in green plants. [1]

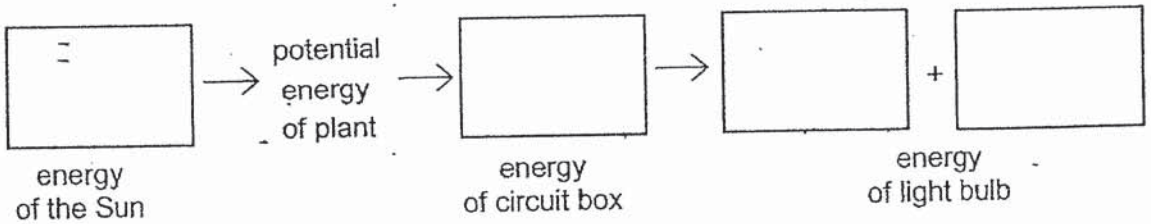
_____

_____

Scientists have found that plants produce electrical energy when they carry out photosynthesis which is used to light up a bulb as shown in the set-up.



(b) Complete the boxes below to show the energy conversion that takes place in the above set-up. [1]



(c) Explain how this form of obtaining energy is an advantage as compared to the burning of fossil fuels for energy. [1]

_____

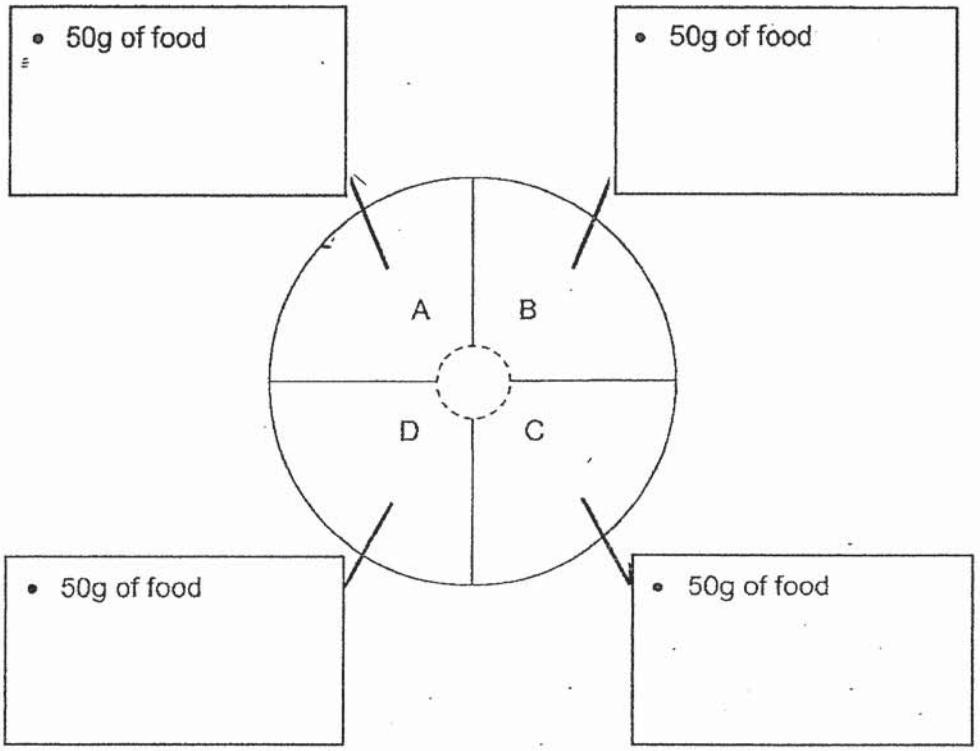
_____

(Go on to the next page)

SCORE	/ 3

21. Everett wanted to investigate the preferred conditions of the habitat of organism H. He has the following resources:
    - a covered tray with
        - air holes
        - four equal parts, A, B, C and D
        - a hole in the middle which is the only way to each part
    - 2 torchlights
    - 600g of dry soil
    - 600g of damp soil
    - 100 organism H

(a) Design an experiment to investigate Everett's aim by filling in the necessary boxes using all the available resources. [2]



(b) Describe what he must observe after a few days before he can conclude the preferred habitat for organism H. [1]

_____

_____

End of Paper

SCORE	3

ANSWER KEY

YEAR : 2020
LEVEL : PRIMARY 6
SCHOOL : ACS
SUBJECT : SCIENCE
TERM : CA1

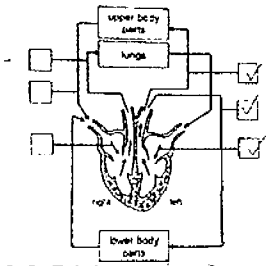
BOOKLET A

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

BOOKLET B

Q15.a) P is carbon dioxide
Q is oxygen

b)



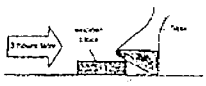
c) Food is completely digested in the small intestine. The blood carries the digested food from the small intestine and transports to all parts of the body.

Q16.a) Air takes up space

b) Increase. Air has a mass.

c) The air in the float gains heat from the sun and expands. The expanded air occupies a bigger space and causes the float to feel harder.

Q17a)



b) 10°c

c) At point c

Q18 a) Light travels in a straight line.

b) Set up X : Glass is transparent, it allows light to pass through, so less amount of light is reflected.

Set up Y : Aluminium is opaque, it does not allow light to pass through. Hence, more light is reflected.

C) This is to ensure the result of the experiment is solely due to different materials used and not the side of the boxes.

Q19 a) Gravitational force and frictional force

b) 5

c) Sand is rougher than plastic. As the spring balance is pulled up, the rod wrapped with sandpaper will rub against the sand and the frictional force between the rod and the sandpaper increase. Hence, more force is needed overcome the greater amount of frictional force.

Q20. a) light , carbon dioxide , water and chlorophyll.

b) light energy – electrical energy – light energy + heat energy

c) Fossil fuels pollute the environment and are not reusable but this form does not pollute.

Q21a) (A) 300g of damp soil , 25 organism H

(B) 1 torchlights , 300g damp soil , 25 organism H

(C) 1 torchlight , 300g dry soil , 25 organism H

(D) 300g dry soil , 25 organism H

b) He must observe which part has the most organism H living there.

2

END