WEIGHTED ASSESSMENT 1

SCIENCE
(BOOKLET A)

Total Time (for Booklets A and B): **50 minutes**

INSTRUCTIONS TO CANDIDATES

- Follow ALL instructions carefully.
- Answer ALL questions.

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).

[28 marks]

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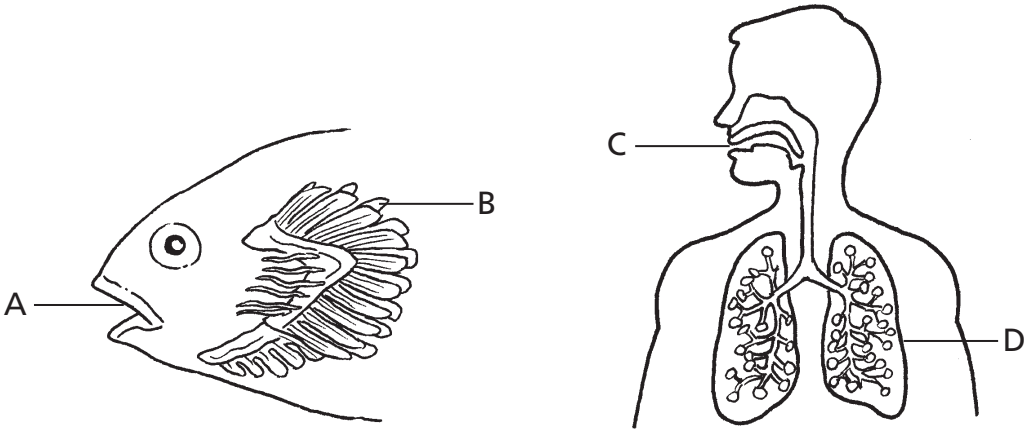
1. The diagrams below show the respiratory systems of fish and human.



In which parts is oxygen taken into the bloodstream?

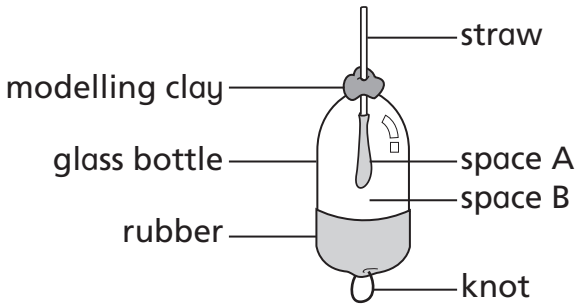
(1) A only (2) D only

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

2. A girl hid inside a cupboard during a game of hide and seek.
How did the amounts of gases in the air inside the cupboard change?

	Oxygen	Nitrogen	Water vapour	Carbon dioxide
(1)	Decreased	Increased	Stayed the same	Increased
(2)	Decreased	Stayed the same	Increased	Increased
(3)	Increased	Stayed the same	Decreased	Decreased
(4)	Increased	Decreased	Stayed the same	Decreased

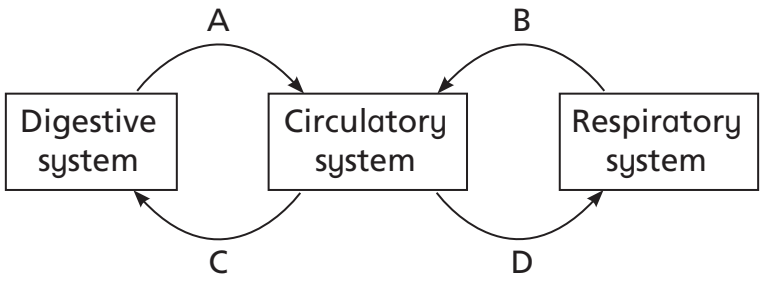
3. Betty builds a lung model as shown. Space A is the space inside the balloon while space B is the space in the glass bottle.



Which does **not** happen when Betty pulls down the knot?

(1) Space A increases.
(2) Space B increases.
(3) Space A is filled with more air.
(4) Space B is filled with more air.

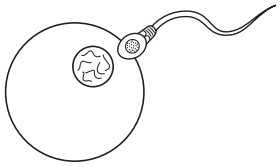
4. In the diagram, A, B, C and D represent blood flow between human systems.



Which statement is **not** correct?

(1) The blood in A is rich in digested food and oxygen.
(2) The blood in C is poor in carbon dioxide.
(3) The blood in D is poor in oxygen.
(4) The blood in B is rich in oxygen and poor in digested food.

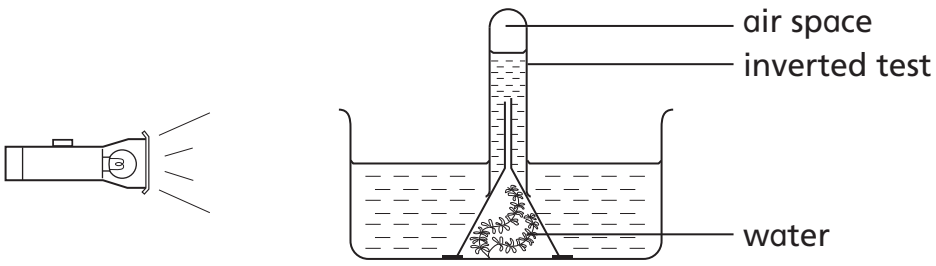
5. The diagram shows a process in the human reproduction.



Which statement about the process is true?
(1) It takes place in the womb.
(2) It happens after pollination.
(3) It happens after cell division has taken place.
(4) Genes from the male and female adults are passed to their young.

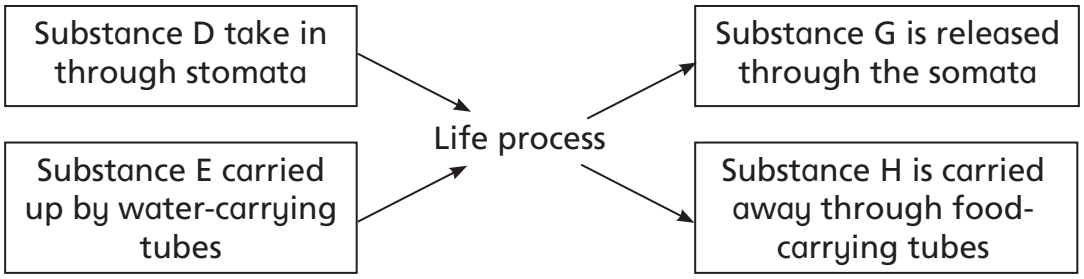
6. A fern produces many tiny spores. Each spore can grow into a new plant.
Why does the fern need to produce a large number of spores?
(1) To ensure the fern will grow more fruits
(2) To ensure successful pollination by wind
(3) To ensure conditions for germination are met
(4) To ensure some of the spores will grow into new plants

7. Yong Kun left the following set-up in a dark room. The torch was turned on for three hours.



After three hours, he observed that there was an increase in the air space inside the inverted test tube. Which best explains his observation?
(1) The water plant produced oxygen during respiration.
(2) The water plant produced oxygen during photosynthesis.
(3) The water plant produced carbon dioxide during respiration.
(4) The water plant produced carbon dioxide during photosynthesis.

8. The diagram shows a life process that takes place in plants.

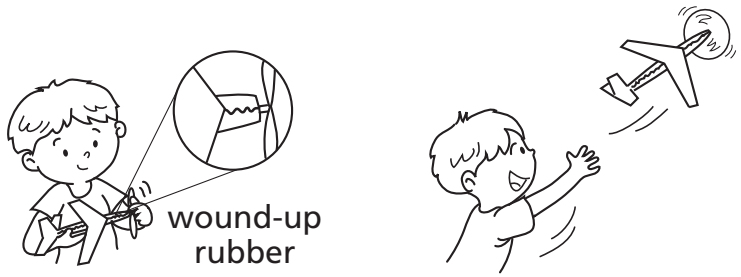


Which substance is carbon dioxide?

(1) D (2) E

(3) G (4) H

9. Ben wound up the rubber band inside a toy plane before releasing it. The toy flew over a certain distance.



He repeated the experiment from the same height above the ground. This time, the toy flew over a longer distance.
Which could be the reason for the observation in the second experiment?

(1) No air resistance acted on the plane.
(2) A smaller gravitational force acted on the plane.
(3) The plane possessed more gravitational potential energy.
(4) The wound-up rubber band possessed more elastic potential energy.

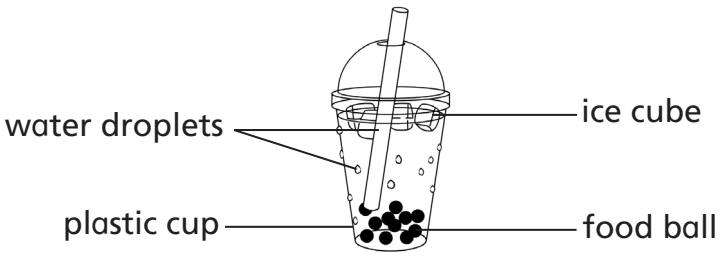
10. A fog is formed in a way similar to how a cloud is formed. How is the fog formed?
    (1) Water vapour loses heat and undergoes condensation to form water droplets.
    (2) Water vapour gains heat and undergoes evaporation to form water droplets.
    (3) Water droplets lose heat and undergo condensation to form water vapour.
    (4) Water droplets gain heat and undergo evaporation to form water vapour.

11. The table shows the melting points of three substances, X, Y and Z.

Substance	Melting point (°C)
X	10
Y	32
Z	125

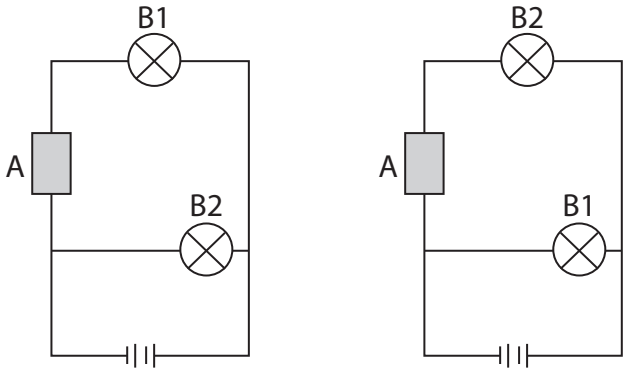
Which statement is correct?
(1) X is a solid at 5°C.
(2) X and Y are liquids at 30°C.
(3) Y and Z are solids at 140°C.
(4) Z exists in either liquid or gas at 125°C.

12. Gisha bought a cup of bubble tea as shown. She is able to observe the ice cubes melting in the plastic cup.



Which statement based on the above diagram is **not** correct?
(1) The ice loses heat and melts at 0°C.
(2) The plastic cup allows light to pass through.
(3) The ice floats on water while the food balls sink in water.
(4) Water vapour in the air loses heat to the cold cup surface and condenses.

13. The circuits contain object A and bulbs B1 and B2. In circuit 1, B1 lighted up while B2 did not. In circuit 2, again, B1 lighted up while B2 did not.

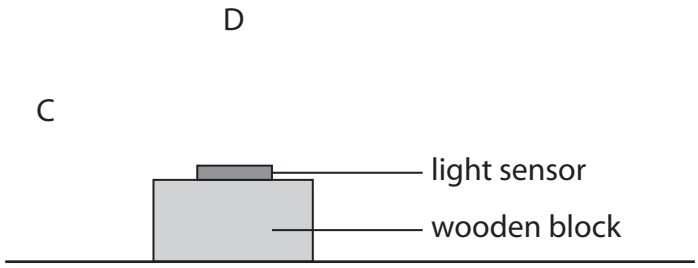


Circuit 1 Circuit 2

Which could be a possible reason why B2 did not light up?

(1) B2 has fused.
(2) B1 has fused.
(3) Object A does not conduct electricity.
(4) There is insufficient energy in the batteries.

14. Kenji places a light sensor on top of a wooden block. He shines a light source at the wooden block at different positions C and D which are at the same distance from the light sensor.



At which position would Kenji obtain a longer shadow of the block and at which position would the light sensor measure a greater amount of light?

	Longer shadow of block	Greater amount of light measured by light sensor
(1)	C	C
(2)	C	D
(3)	D	C
(4)	D	D

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