

P6 Foundation Science

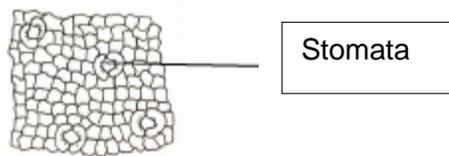
Answer Key

Section A

1.	(3)	5.	(2)	9.	(1)	13.	(2)
2.	(1)	6.	(1)	10.	(3)	14.	(1)
3.	(3)	7.	(3)	11.	(1)	15.	(2)
4.	(3)	8.	(1)	12.	(3)	16.	(1)

Section B

17. a)



b) For gaseous exchange in plants

c) Benefits

1. It reduces the loss of water as it does not have any stomata. / Reduce rate of transpiration
2. It protects the plant from being eaten by other animals/ plant eaters

18. a) It controls all the activities within the cell. **OR**
It contains hereditary / genetic information / DNA of the organism.

b) It has no cell wall [1].
It is able to move freely [1]. **OR**
It is able to move from one place to another. [1]

19. a) 350 cm^3

b) Air does not have a definite volume and can be compressed.

c) Electricity has no mass and does not occupy space.

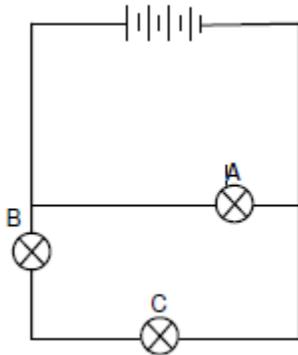
20. a) (i) Lungs : A
(ii) Heart : B

- b) At C, the oxygen in the blood is used up by the cells(1/2m) for respiration/ cell processes.(1/2m) **OR** C had used up the oxygen to carry out life process for the human body. (1m)
21. a) They are grouped according to the way they move.
- b) (i) Bat.
(ii) It gives birth to its young. / It does not lay eggs.
22. a) Organism K at stage R has no feelers but organism L at stage Z has feelers (Presence of feelers).
- OR** Organism K at stage R does not resemble its adult but organism L at stage Z resembles its adult.
- OR** Organism K at stage R has no legs but organism L at stage Z has 3 pairs of legs.
- b) Both have 6 legs/feelers.
23. a) July. The PSI value is the highest, indicating that the quality of the air is the poorest / the air is most polluted in July.
- b) Accept any 1 negative impacts stated below:
 - soil erosion
 - loss of habitat
 - increase greenhouse gases leading to global warming
 - Trees extract groundwater through their roots and release it into the atmosphere. When part of a forest is removed, the trees no longer release this water, resulting in a much drier climate.
(Accept other possible answers)
24. a) The lower the position of the tap, the faster the cup is filled.
Partial Answers
The cup in setup 3 is filled the fastest compared to the other cups. (½ m)
The position of the tap affects the amount of water being let out. (½ m)
- b) As the amount of water in the container decreases, the speed at which the water flows out decreases.
25. a) Ice cubes. It has a wider surface area in contact with the water compared to the ice block so water will lose heat more quickly.
- b) (i) Heat energy

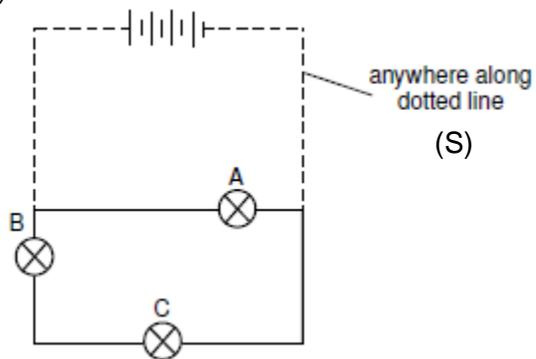
(ii) Black absorbs most heat/absorb heat faster/better so that water can be heated up fastest.

(iii) When bent, the solar heater will have a greater surface area to absorb more heat energy.

26. a)



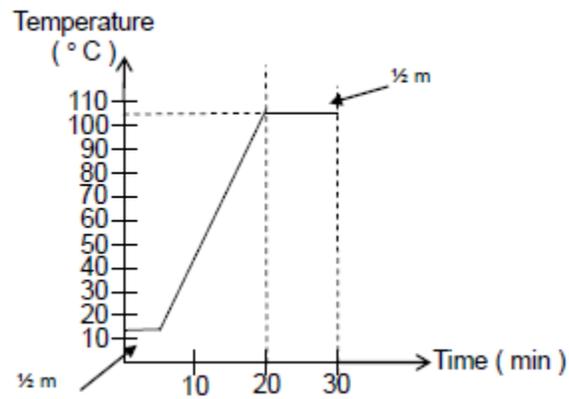
b)



27. a) Liquid

b) P, Q and R (1m) / P and Q ($\frac{1}{2}$ m) / Q and R ($\frac{1}{2}$ m) / P and R ($\frac{1}{2}$ m)

c)



28. a) The distance between the cloth and light sensor/ the distance between the cloth and torch
- b) She should use cloth sample 2 as it allows the least light to pass through it (1/2m) thus it will help to block as much sunlight from entering into the living room. (1/2m)
- c) She should choose a light colour as light colours/light-coloured objects/white-coloured objects absorbed/gained less heat than dark colours/dark-coloured objects/black-coloured objects.