

**Instruction:** Answer **all** the questions. Write your answers in the spaces provided. The time suggested for this part is **1 hour**.

I. Diagram I shows two animals.



X



Y

Diagram I

(a) Between the animals in Diagram I, which live in an environment that:

(i) is extremely cold?

\_\_\_\_\_ [1 mark]

(ii) is extremely hot?

\_\_\_\_\_ [1 mark]

(b) State the specific characteristic for each of the animals in Diagram I that helps to protect them from extreme weather.

|      | Animal | Specific characteristic |
|------|--------|-------------------------|
| (i)  | X      |                         |
| (ii) | Y      |                         |

[1 mark]

(c) Name **one** animal with the same characteristic as animal X.

\_\_\_\_\_ [1 mark]

(d) State **one** importance of the survival of animal species.

\_\_\_\_\_ [1 mark]

2. Diagram 2 shows a natural phenomenon.

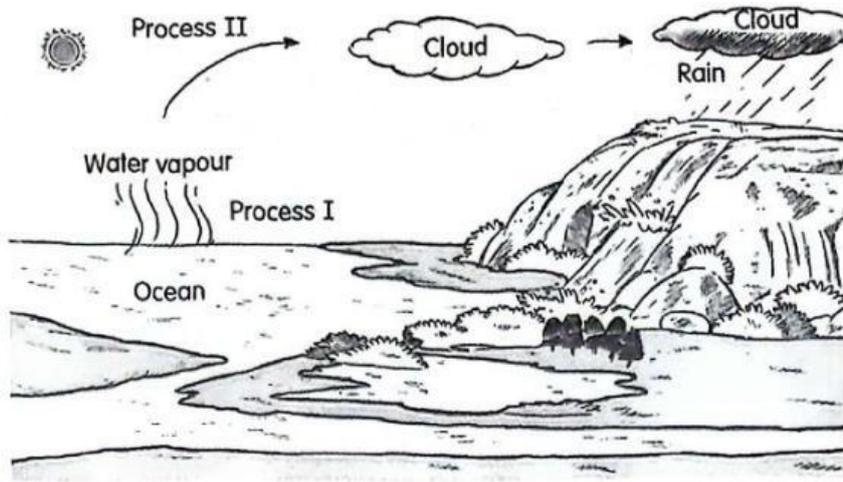


Diagram 2

(a) What is the name of this phenomenon?

\_\_\_\_\_ [1 mark]

(b) Name the **two** processes involving changes in the state of matter of water in this phenomenon.

Process I: \_\_\_\_\_

Process II: \_\_\_\_\_ [1 mark]

(c) What is the change in the state of matter that occurs in process II?

\_\_\_\_\_ [1 mark]

(d) In your opinion, why is this phenomenon important to humans?

\_\_\_\_\_ [1 mark]

3. Diagram 3.1 shows a constellation.

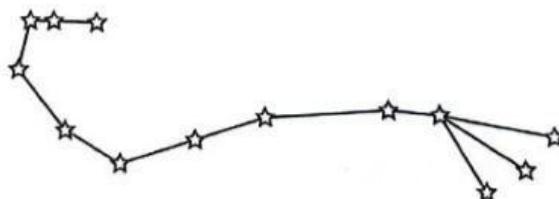


Diagram 3.1

(a) State one use of this constellation to farmers in the olden days.

[1 mark]

(b) In which part of the hemisphere is this constellation visible?

[1 mark]

(c) Diagram 3.2 shows the phases of the Moon.

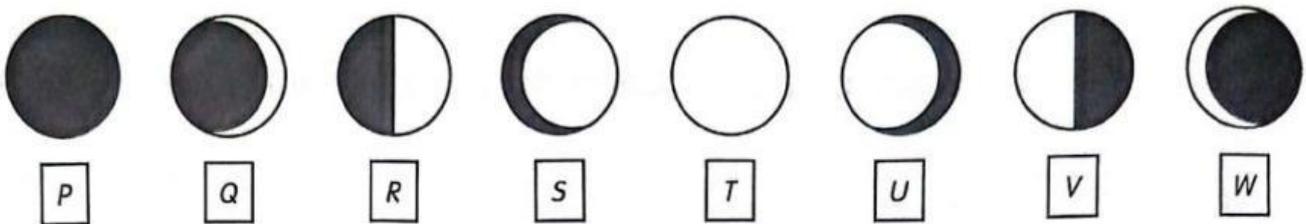


Diagram 3.2

(i) Name phase of the Moon T.

[1 mark]

(ii) State the date of the lunar calendar for the phase of the Moon Q.

[1 mark]

(d) On the 15th day of Zulkaedah in the Hijra calendar, Razak observed a phase of the Moon. What is the name of the phase of the Moon at the time?

[1 mark]

4. Aiman carries out an investigation about electric circuits and the brightness of bulbs. Diagram 4 shows the arrangement of the electric circuits he built.

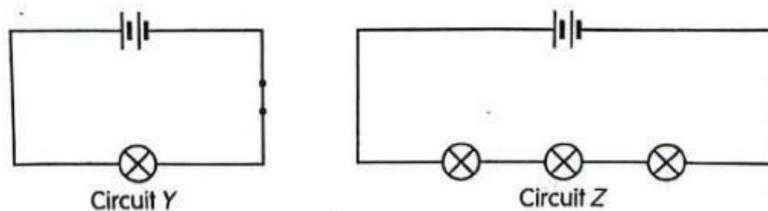


Diagram 4

(a) State the observations when the switch in circuits Y and Z are closed.

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[1 mark]

(b) State the variables involved in this investigation.

- (i) Responding variable: \_\_\_\_\_
- (ii) Constant variable: \_\_\_\_\_
- [2 marks]

(c) Predict what will happen, if the number of dry cells in circuit Y is increased to 4.

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[1 mark]

(d) State one way to save on electricity that you can do at home.

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[1 mark]

5. Diagram 5.1 shows a habitat.

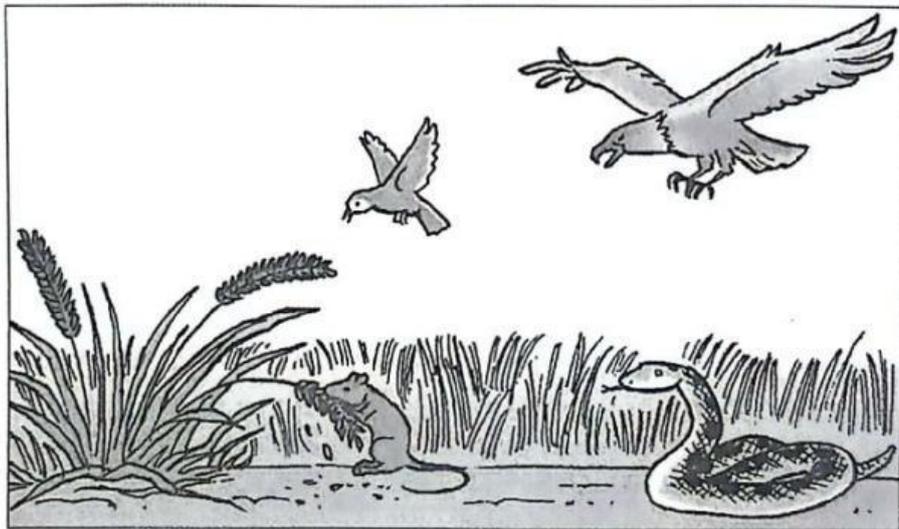


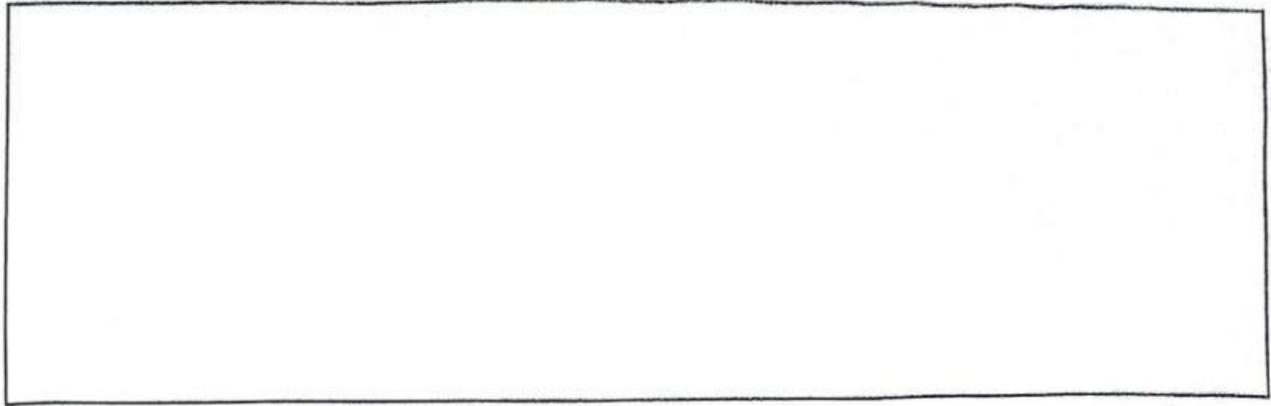
Diagram 5.1

(a) Name the producer in this habitat.

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[1 mark]

(b) Build a food web for this habitat.



[1 mark]

(c) Diagram 5.2 shows a food chain in a habitat.

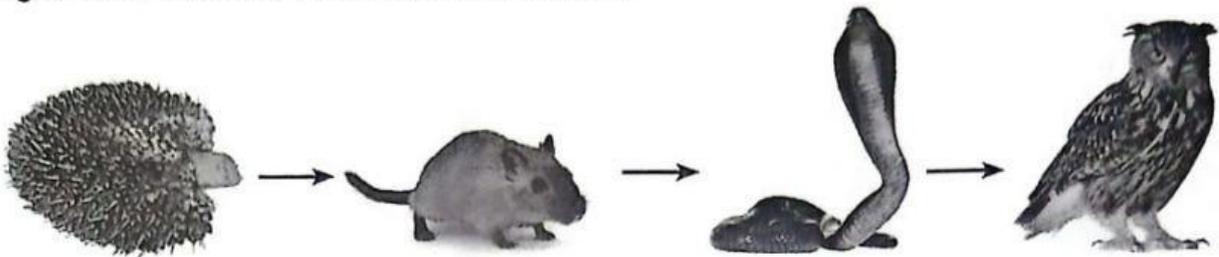


Diagram 5.2

A farmer has killed all the rats using poison. What will happen to the number of snakes? Give a reason.

Number of snakes: \_\_\_\_\_

Reason: \_\_\_\_\_

[2 marks]

(d) State the habitat in which this food chain exists.

\_\_\_\_\_

[1 mark]

A group of 5 Titania pupils are tasked to carry out an investigation on changes in the temperature of water when a beaker of water is heated up. Diagram 6 shows the arrangement of apparatus for the investigation.

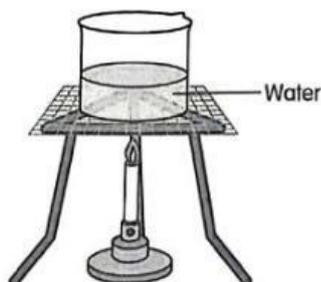


Diagram 6

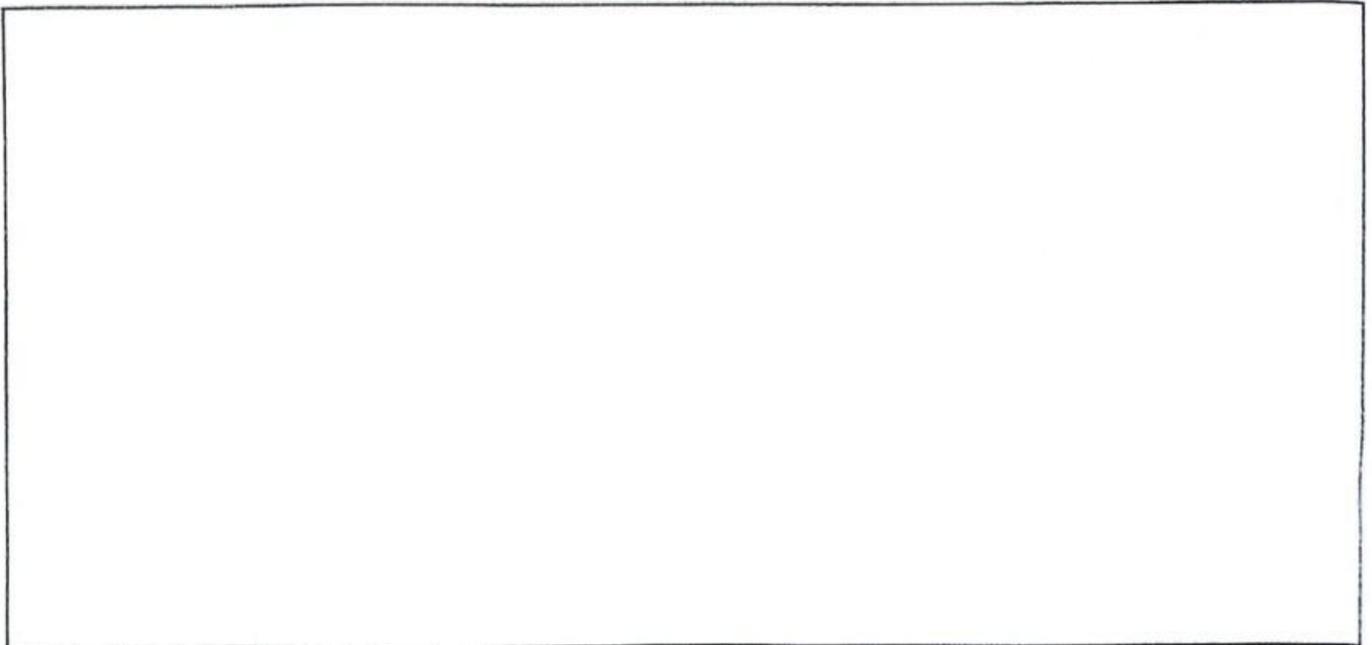
(a) Name a tool used to measure the temperature of the water inside the beaker.

[1 mark]

(b) The information below shows the results for the investigation.

- Heating period: 1 minute, water temperature: 30°C
- Heating period: 2 minutes, water temperature: 40°C
- Heating period: 3 minutes, water temperature: 50°C
- Heating period: 4 minutes, water temperature: 60°C

Based on the information given, build a bar chart to show the results of the investigation.



[1 mark]

(c) What is the pattern for the temperature of the water if the heating period is longer?

[1 mark]

(d) Give an inference to explain your answer in 6(c).

[1 mark]

(e) What is the boiling point of water?

[1 mark]

7. A group of Year 5 pupils conducted an investigation about the human blood circulatory system as shown in Diagram 7. The pupils made an observation of the blood circulatory pathway in the human body.

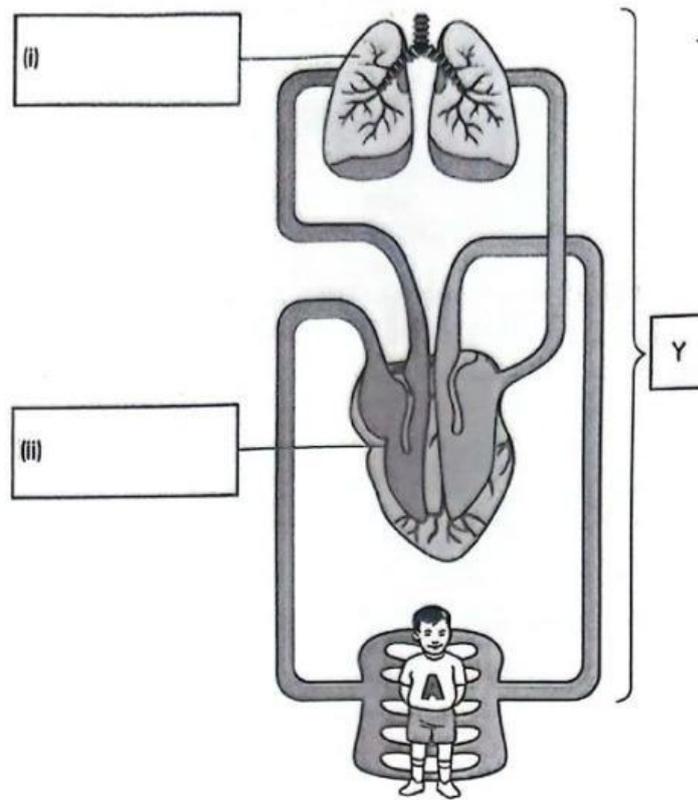


Diagram 7

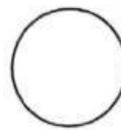
- (a) Label the organs in Diagram 7.

[2 marks]

- (b) The pupils are required to differentiate the blood circulatory pathway found in the human body. What is the type of blood flowing through pathway Y? Tick the correct answer.



Blood rich in carbon dioxide



Blood rich in oxygen

[1 mark]

- (c) State **two** importance of the blood circulatory system to the human body.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

[2 marks]

- (d) State **one** way to take care of all systems in the human body. Describe.

\_\_\_\_\_

[1 mark]

Abu and his friends carried out an investigation on three types of plants, *P*, *Q* and *R*, as shown in Diagram 8.1. They observe the specific characteristics of the plants to protect themselves from enemies.

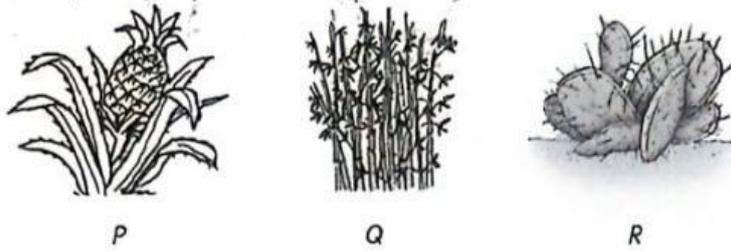


Diagram 8.1

(a) How do the plants protect themselves from enemies?

*P*: \_\_\_\_\_

*Q*: \_\_\_\_\_

*R*: \_\_\_\_\_

[1 mark]

(b) Which plants have the same way of protecting themselves against enemies?

\_\_\_\_\_

[1 mark]

(c) Plant *R* can adapt to extreme hot weather. Name one specific characteristic of plant *R*.

\_\_\_\_\_

[1 mark]

(d) State one side effect experienced by humans from skin contact with plant *Q*.

\_\_\_\_\_

[1 mark]

(e) Why do plants need specific characteristics to protect themselves against enemies?

\_\_\_\_\_

[1 mark]

(f) Diagram 8.2 shows a plant that has stems and leaves with fine hairs.

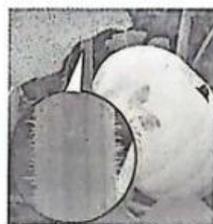


Diagram 8.2

What is the purpose of this characteristic?

\_\_\_\_\_

[1 mark]