

## Exercise Questions

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1. Fill in the missing word in the blank spaces in the following statements:

- (a) Wind is \_\_\_\_\_ air.
- (b) Winds are generated due to \_\_\_\_\_ heating on the earth.
- (c) Near the earth's surface, \_\_\_\_\_ air rises up, whereas \_\_\_\_\_ air comes down.
- (d) Air moves from a region of \_\_\_\_\_ pressure to a region of \_\_\_\_\_ pressure.

**Solution:**

- (a) Wind is **moving** air.
- (b) Winds are generated due to **uneven** heating on the earth.
- (c) Near the earth's surface, **warm** air rises up, whereas **cold** air comes down.
- (d) Air moves from a region of **high air** pressure to a region of **low air** pressure.

2. Suggest two methods to find out wind direction at a given place.

**Solution:**

The two methods to finding out the wind direction at a given place are as follows:

- i. By seeing the direction of dry leaves released in the air.
- ii By seeing the direction in which it is difficult to ride the bicycle.

3. State two experiences that made you think that air exerts pressure (other than those given in the text).

**Solution:**

- i. When we fill the air in the balloon, it becomes tight, and if we try to fill more air, the balloon will burst which proves air exerts pressure.
- ii. Wind causes curtains, doors and windows to move with the direction of the wind. This demonstrates air exerts pressure.

4. You want to buy a house. Would you like to buy a house having windows but no ventilators? Explain your answer.

**Solution:**

It is not a good idea to buy a house without ventilators because warm air is lighter than cold air hence warm air passes out of your home through ventilators. Accordingly, without ventilators, warm air will not pass out, and the house will remain warm.

**5. Explain why holes are made in hanging banners and hoardings.**

**Solution:**

Holes in the banners and hoardings help air to pass through them. Hence, banners can withstand the pressure of the air and remains intact.

**6. How will you help your neighbours in case a cyclone approaches your village/town?**

**Solution:**

We can help our neighbours in case of a cyclone approaches by any of the following measures:

- By helping them shift to a safer place.
- By helping them to shift their animals, necessary households and vehicles to a safer place.
- By calling emergency services such as fire stations, police, medical centres etc.

**7. What planning is required in advance to deal with the situation created by a cyclone?**

**Solution:**

- We should not ignore the warnings issued by the meteorological department through TV, radio, or newspapers.
- We should make necessary arrangements to shift the essential household goods, domestic animals and vehicles, etc., to safer places.
- Avoid driving on roads through standing water, as floods may have damaged the roads.
- Phone numbers of all emergency services like police, fire brigade, and medical centres should be handy.
- Always store drinking water for emergencies.
- Do not touch wet switches and fallen power lines.
- Do not pressurise the rescue force by making undue demands.
- Cooperate and help your neighbours and friends.

**8. Which one of the following places is unlikely to be affected by a cyclone?**

**(i) Chennai**

**(ii) Mangaluru (Mangalore)**

**(iii) Amritsar**

**(iv) Puri**

**Solution:**

The answer is (iii) Amritsar because Amritsar is far away from the sea, while the remaining three are coastal areas and are more likely to be hit by a cyclone.

**9. Which of the statements given below is correct?**

- (i) In winter, the winds flow from the land to the ocean.**
- (ii) In summer, the winds flow from the land towards the ocean.**
- (iii) A cyclone is formed by a very high-pressure system with very high-speed winds revolving around it.**
- (iv) The coastline of India is not vulnerable to cyclones.**

**Solution:**

The answer is (i) In winter, the winds flow from the land to the ocean.

