

Science

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(Chapter – 8) (Winds, Storms and Cyclones)

(Class – VII)

Exercises

Question 1:

Fill 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.

Answer 1:

- (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 *cooler* air comes down.
- (d) Air moves from a region of *high* pressure to a region of *low* pressure.

Question 2:

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

Answer 2:

The following methods can be used to get the direction of wind:

- Take some fine and lighter sand in your hand and slowly slip it off. Movement of dust particles in a particular direction will give the direction of wind flowing.
- Fly a kite. In the direction the kite flies shall be the wind direction.
- Take bit of paper on your palm. The piece will fly in the direction of wind is blowing.
- Use anemometer or wind wane.

Question 3:

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

Answer 3:

We can experience air pressure in our daily activities such as:

- Tree leaves and branches flutter due to pressure exerted by air in the form of wind.
- It is difficult to ride a bicycle against the wind but it is much easier in the direction of wind.

Question 4:

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

Answer 4:

Smoke from kitchen and warm air being lighter rise up. If there is no outlet like ventilators, it will be difficult to escape for warm air and will heat up the room and could cause suffocation and discomfort.

Question 5:

Explain why holes are made in hanging banners and hoardings.

Answer 5:

Air exerts pressure in all directions. If banners and hoardings do not have holes, pressure exerted by wind may tear them off or make them fall. Holes let the air pass through and reduce the air pressure on banners and hoardings.

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Question 6:

How will you help your neighbours in case cyclone approaches your village/town?

Answer 6:

On approaching of the cyclone, we should do the following:

- Help our neighbours and friends in shifting their important household goods, cattle and vehicles to safer places.
- Communicate with government agencies like police, fire brigade, medical centres and other emergency service points as per requirement.
- We should store water for safe drinking.
- We should avoid driving roads nearby flood hit areas.

Question 7:

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

Answer 7:

Self-help is the best help. Therefore it is better to plan in advance and be ready with defense against any approaching cyclone. Planning required in advance to deal with cyclone-hit situation:

- Keep an emergency kit at home.
- Store enough food in water proof bags.
- Store safe drinking water as contaminated water can cause diseases.
- Keep phone numbers of emergency services like police, hospital, friends and relatives ready.
- Make necessary arrangements to shift the essential household goods, domestic animals and vehicles, etc. to safer places.

Question 8:

Which one of the following place is unlikely to be affected by a cyclone?

- (i) Chennai
- (ii) Mangaluru (Mangalore)
- (iii) Amritsar
- (iv) Puri

Answer 8:

(iii) Amritsar

Question 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.

Answer 9:

(i) In winter the winds flow from the land to the ocean.