

## Very Short Answer Questions

**Q.1. Why is Chandigarh unlikely to be affected by a cyclone?**

[NCERT Exemplar]

**Ans.** As it is not near to the sea/ocean.

**Q.2. Name the ocean which is mainly responsible to bring rain bearing monsoon winds to Kerala coast in June every year.**

[NCERT Exemplar]

**Ans.** Indian Ocean

**Q.3. To expel hot air out of the kitchen, 'A' has an exhaust fan fitted on the window of her kitchen and 'B' has a similar exhaust fan fitted on the wall near the ceiling of her kitchen. Which of the exhaust fan will expel the hot air more effectively? Explain why.**

[NCERT Exemplar]

**Ans.** B's exhaust fan will expel the hot air more effectively because hot air rises up and her fan is at greater height than A's.

**Q.4. Why is it advisable not to shut all the doors and windows during a storm?**

[NCERT Exemplar]

**Ans.** To avoid the roof getting blown away due to the low pressure created by heavy wind.

**Q.5. A flat in Mumbai with a balcony facing the sea has some clothes hung on a clothes line in the balcony. Towards which direction will the clothes be blown in the afternoon? Explain.**

[NCERT Exemplar]

**Ans.** The clothes will be blown towards the house due to sea breeze blowing towards the land.

**Q.6. The figure given below shows a diagrammatic representation of trees in the afternoon along a sea coast. State on which side is the sea; A or B? Give reasons for your choice.**



[NCERT Exemplar]

**Ans.** B as the wind is blowing from the sea to the land.

**Q.7. A flag mounted on a flag post near the sea coast flutters in the direction of sea. At what time of the day does this happen—at midnight or in the afternoon?**

**[NCERT Exemplar]**

**Ans.** Midnight

**Q.8. What is the 'eye' of a cyclone?**

**Ans.** The low pressure around the warm water vapour spirals, i.e., the centre of a cyclone is calm and is called the eye of the storm.

## Short Answer Questions

**Q.1. Paheli kept an empty bottle made of plastic inside a refrigerator. After few hours, when she opened the refrigerator she found the bottle had collapsed. Explain the possible reason.**

[NCERT Exemplar]

**Ans.** The air inside the bottle contracts due to low temperature hence the bottle collapses due to the outside pressure.

**Q.2. When strong/high speed wind blows, an umbrella held upright at times gets upturned. Explain the reason.**

[NCERT Exemplar]

**Ans.** High speed wind passing over the umbrella creates low pressure. Therefore, the umbrella upturns.

**Q.3. Suggest some precautions to be taken to prevent the roof of a tin sheet from flying away during a fierce wind storm.**

[NCERT Exemplar]

**Ans. (a)** Put heavy stones on it.

**(b)** Screw it tight.

**Q.4. Write three precautions that need to be taken in cyclone prone areas.**

**Ans. (a)** Stay indoors if possible.

**(b)** Listen to the radio or T.V. for weather reports during the cyclone season.

**(c)** Keep emergency medicines, clothes, ration and water ready for instant use.

**Q.5. Write three precautions that need to be taken during a thunderstorm.**

**Ans. (a)** Do not lie on the ground or take shelter under an isolated tree.

**(b)** If you are in water, move out of it.

**(c)** Do not take shelter under an umbrella with a metallic rod.

**Q.6. List the dangers associated with a cyclone.**

**Ans. (a)** Strong water waves are produced by winds.

**(b)** Strong winds push water towards the shore.

**(c)** Low pressure in the eye lifts water surface in the centre and sea water enters coastal areas.

**Q.7. Why does a balloon taken near a candle burst?**

**Ans.** When a balloon is brought near a candle the molecules heat up and the balloon starts expanding. When the balloon no longer can expand it bursts.

**Q.8. List two reasons that can cause floods.**

**Ans. (a)** Heavy rainfall

**(b)** Deforestation

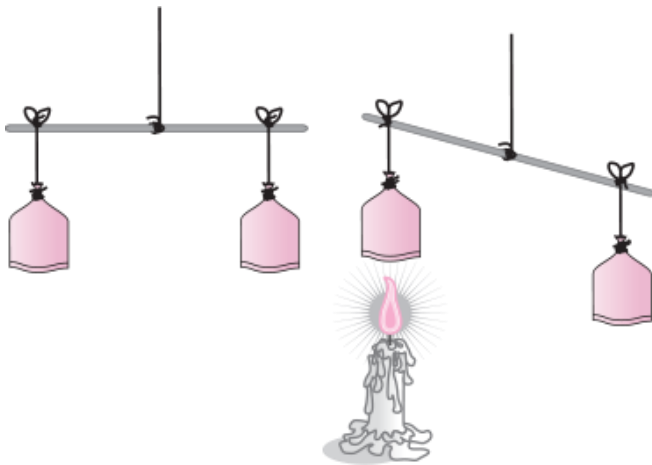
## Long Answer Questions

**Q.1. Describe an activity to demonstrate that warm air is lighter than cool air.**

[NCERT Exemplar]

**Ans. Activity:**

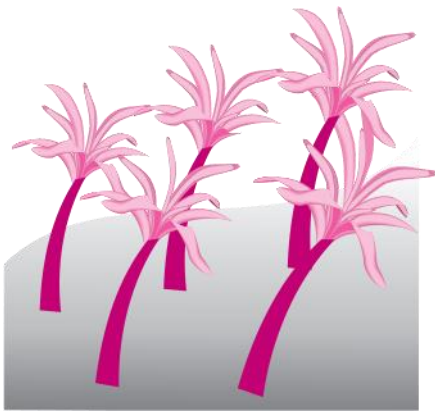
- Take two paper bags of the same size and hang them in inverted position on the two ends of a wooden stick.
- Tie a thread in the centre of the stick and hold the stick by the thread to balance it.
- Place a burning candle below one of the bags.
- The bag above the candle goes up, as the air above the candle becomes warm, it rises, and pushes the bag up.



**Q.2. Explain briefly how the uneven heating between the equator and the poles generate wind currents.**

**Ans.** Places near the equator are always warm as they get the maximum heat from the Sun. The warm air from these regions rises and cool air from the regions in the 0-30° latitude belt on either side of the equator moves in. At the poles, the air is cold. Warm air from latitudes of about 60° rises up and cold air from the poles rush to take its place, thus setting up a wind circulation from the poles to warmer latitudes.

**Q.3. The picture in figure shows tree line along the sea coast on an island near the equator. As shown, the tree tops are permanently bent in one direction. Are the trees bent towards the sea or away from it? Explain.**



**[NCERT Exemplar]**

**Ans.** The tree tops are permanently bent in one direction, i.e., towards the land or away from the sea. This is because in the day time wind blows from sea to land. This sea breeze makes the trees to bend towards the land.

## **HOTS (Higher Order Thinking Skills)**

**Q.1. Why do you think that a steel skyscraper has no need for lightning rods?**

**Ans.** Steel being a good conductor of electricity allows a clear passage of the energy of lightening to the ground without any damage. Therefore, they do not need lightning rods.

**Q.2. Can you tell the direction of the wind by watching the smoke that comes out from the tall chimneys of factories?**

**Ans.** Yes, because the smoke will move in the direction of the wind.