

Hots (Higher Order Thinking Skills)

Q.1. How does insolation affect temperature?

Ans. (i) The amount of insolation decreases from the equator towards the poles.

(ii) Therefore, the temperature decreases in the same manner.

(iii) If the earth's temperature rises too high, it would become too warm for some crops to grow.

(iv) Temperature in cities is much higher than that of villages.

(v) The concrete and metals in buildings and the asphalt of roads get heated up during the day.

(vi) This heat is released during the night.

(vii) Further, the crowded high-rise buildings of the cities trap the warm air and thus raise the temperature of the cities.

Q.2. Examine the structure of the atmosphere.

Ans. The structure of atmosphere is divided into five layers. These include:

(i) Troposphere: Its average height is 13 km and all weather phenomena like rainfall, fog and hailstorm occur here. The air we breathe is found here.

(ii) Stratosphere: It extends up to a height of 50 km. It is free from weather conditions and clouds making it ideal for flying aeroplanes. It even contains ozone layer, which protects us from the harmful sun rays.

(iii) Mesosphere: It extends up to a height of 80 km. Meteorites burn up in this layer on entering from the space.

(iv) Thermosphere: In this, the temperature rises with increasing height. Ionosphere is a part of this layer. It extends 80–400 km. It even helps in radio transmission. Radio waves transmitted from the earth are reflected back to the earth by this layer.

(v) Exosphere: It is the upper most layer and has very thin air. Light gases like helium and hydrogen float into the space from here.