

Physics (New Book) - 9th Class Physics English Medium Chapter 9 Preparation

Q1. What is thermal conductivity

Ans 1: Thermal conductivity: The rate of flow of heat across the opposite face of a meter cube of a substance is called thermal Conductivity of the substance

Ans 2: Unit: $\text{Wm}^{-1}\text{K}^{-1}$

Q2. Why transfer of heat in fluids takes place by convection?

Ans 1: In fluids, molecules are not tightly packed. they can easily move from one place to another and convection is done by actual movement of molecules from hotter to colder part.

Q3. Define the rate of flow of heat and write its mathematical form.

Ans 1: Rate of flow of heat: The amount of heat that flows in unit time is called the rate of flow of heat

Ans 2: Formula: Rate of flow of heat
Unit: Js^{-1}

Q4. Explain the greenhouse effect in global warming

Ans 1: Earth's atmosphere contains CO_2 and water vapors. It causes the greenhouse effect and thus retains the temperature of Earth by trapping more heat due to the greenhouse effect. This phenomenon is called global warming.

Q5. What is meant by global warming

Ans 1: Global warming: An increase in the average temperature of Earth by trapping more heat due to the greenhouse effect is called global warming

Ans 2: Cause of Global warming: The main cause of global warming is the percentage increment in the carbon dioxide gas in the atmosphere

Q6. Define rate of flow of heat?

Ans 1: The amount of heat that flows in unit time is called rate of flow of heat. Rate of flow of heat = Q/t Unit: Its unit is Js^{-1}

Q7. Which surface is a good absorber and which is a poor absorber of heat

Ans 1: A dull black surface is a good absorber and a polished surface is poor absorber of heat

Q8. Why bottoms of cooking pots are made black

Ans 1: The bottoms of cooking pots are made black because the capacity to absorb heat is enhanced through it. A black or rough surface absorbs more heat as compared to a white or polished surface.

Q9. Why bottom of cooking pots are made black?

Ans 1: Bottoms of cooking pots are made black because the black surface is a good absorber of heat so food cooks quickly.

Q10. Describe an experiment of convection.

Ans 1: Take a beaker and fill two-thirds of it with water. Heat the beaker by keeping a burner below it. Drop two or three crystals of potassium permanganate in the water. It will be seen that coloured streaks of water formed by crystals move upward above the flame and then move downward from the sides. These coloured streaks show the path of currents of liquid.
