

Worksheet: Thermal Properties of Matter

Maharashtra State Board · Class 11 · Physics · 5 questions · 14 marks

Name: _____

Date: _____

Score: _____ / 14

Q1. A 20 m steel rail at 20 C is heated to 45 C ($\alpha = 1.2 \times 10^{-5} / \text{C}$). Find the expansion. [2 marks]

Q2. At what temperature is the Celsius reading equal to the Fahrenheit reading? [2 marks]

Q3. A 100 g copper block ($c = 390 \text{ J/kg K}$) at 200 C is placed in 200 g water at 20 C. Find the final temperature. [3 marks]

Q4. Why is the bottom of a lake warmer than the top in winter? [2 marks]

Q5. Find the heat to convert 100 g ice at -10 C to steam at 100 C ($c_{\text{ice}} = 2100$, $L_f = 3.36 \times 10^5$, $c_{\text{water}} = 4200$, $L_v = 22.6 \times 10^5 \text{ J/kg}$). [5 marks]
