

ERRATA for
FE Electrical and Computer Practice Exam
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Revisions are shown in red.

Question 27, p. 17

A section of copper has resistivity of $10 \Omega \cdot \text{m}$ at 20°C . The temperature coefficient of copper is $0.004041^\circ\text{C}^{-1}$. If the temperature is increased to 30°C , the resistivity ($\Omega \cdot \text{m}$) is most nearly:

- A. 8.96
- B. **10.40**
- C. 11.04
- D. 11.20

Solutions 27, p. 73

From the Resistivity section in the Electrical and Computer Engineering chapter of the *FE Reference Handbook*, there is a linear relationship between resistivity and temperature for metals such as copper according to the following relationship:

$$\rho = \rho_0 [1 + \alpha(T - T_0)]$$

where α is the temperature coefficient of resistivity per degree, ρ_0 is the resistivity at T_0 , T is for temperature in $^\circ\text{C}$, and ρ is the resistivity of the material.

$$\begin{aligned}\rho &= 10[1 + 0.004041(30 - 20)] \\ &= **10.40** \Omega\text{-m}\end{aligned}$$

THE CORRECT ANSWER IS: B