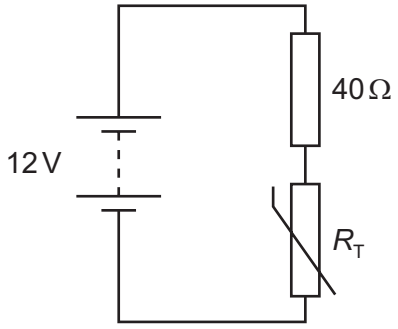
33 A battery of electromotive force (e.m.f.) 12 V and negligible internal resistance is connected to a fixed resistor of resistance 40 Ω and a thermistor of resistance R_T, as shown.



Initially, the temperature of the thermistor is 15 °C and the current in the circuit is 0.10 A.

The temperature of the thermistor then changes, which causes the current to increase to 0.12 A.

How does the temperature of the thermistor change and what is R_T at the new temperature?

	temperature of thermistor	R_T at new temperature / Ω
A	increases	60
B	decreases	60
C	increases	100
D	decreases	100