

Quiz: Lesson 2

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Electronic Circuits 1
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Name: _____ Student ID: _____

Prob. 1

Among Si, Ge, Diamond, which has the highest intrinsic electronic concentration at room temperature? Which has the lowest? Very briefly explain why.

Prob. 2

Estimate the percentage of Si atoms that produce free electronics in intrinsic Si at room temperature.

Prob. 3

List two elements that can be added to intrinsic Si and make it N-type.

Prob. 4

10^{15} cm^{-3} B atoms are added to intrinsic Si having 10^{10} cm^{-3} electrons. How many electrons are there in this Si at room temperature? Explain how the electron concentration changes as temperature increases.