



5 The energy bands in a solid are illustrated in Fig. 5.1.

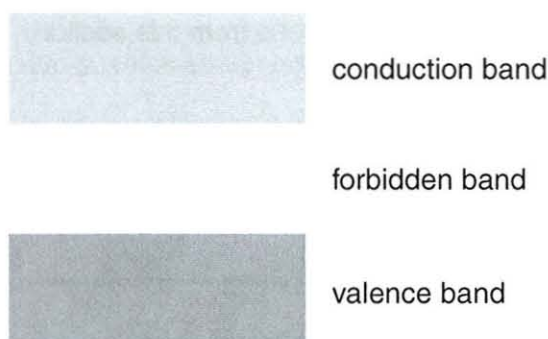


Fig. 5.1

(a) The resistance of an intrinsic semiconductor decreases with increase of temperature.

Use band theory to account for this change.

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..... [4]

(b) The resistance of a metal increases with increase of temperature.

Making reference to band theory, account for this change.

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..... [3]

