

23. A student makes the following statements about metals, insulators, and semiconductors.
- I In some metals, the valence and conduction bands overlap and each band is partially filled.
 - II The band gap between the valence band and the conduction band in an insulator is large compared to the band gap in a semiconductor.
 - III An increase in temperature decreases the conductivity of a semiconductor.

Which of these statements is/are correct?

- A I only
- B II only
- C I and II only
- D I and III only
- E II and III only