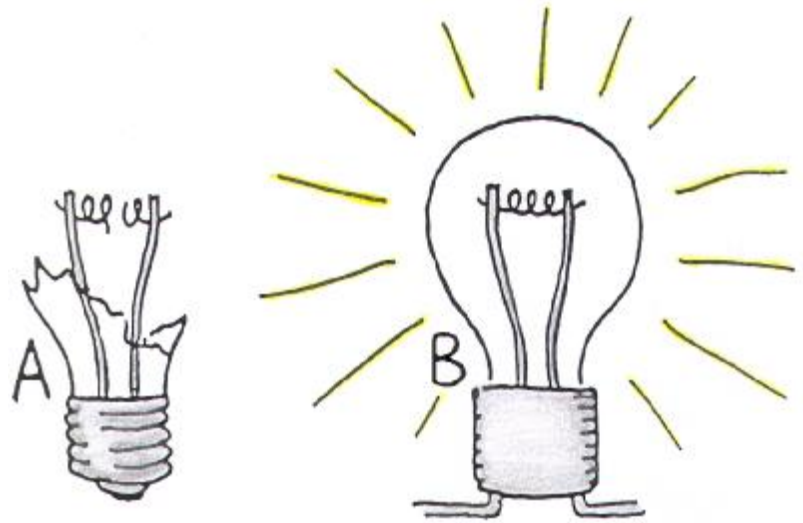
Which of these lamps is emitting electromagnetic radiation?

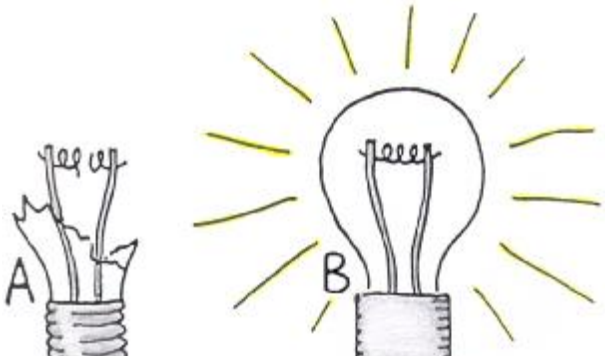
a) Lamp A.
b) Lamp B.
c) Both.
d) Neither.



NEXT-TIME QUESTION

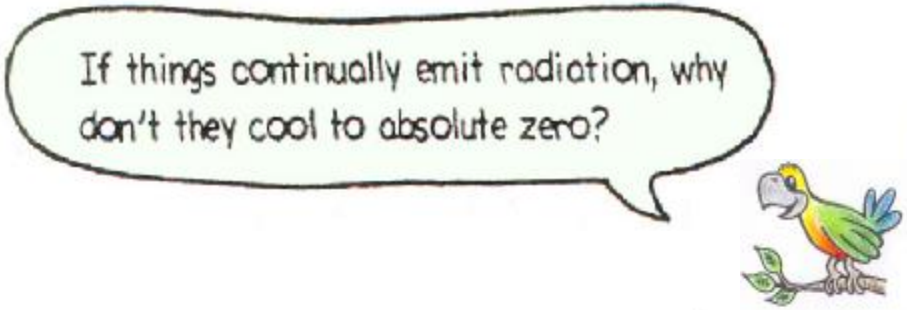
Which of these lamps is emitting electromagnetic radiation?

a) Lamp A.
b) Lamp B.
c) Both.
d) Neither.



Answer: c. both

All bodies with any temperature at all continually emit electromagnetic waves. The frequency of these waves varies with temperature, $f \sim T$. Lamp B is hot enough to emit visible light. Lamp A is cooler, and the radiation it emits is too low in frequency to be visible — it emits infrared waves, which aren't seen with the eye. You emit waves as well. Even in a completely dark room your waves are there. Your friends may not be able to see you, but a rattlesnake can!



CONCEPTUAL Physics

ARBOR SCIENTIFIC
TOOLS THAT TEACH.