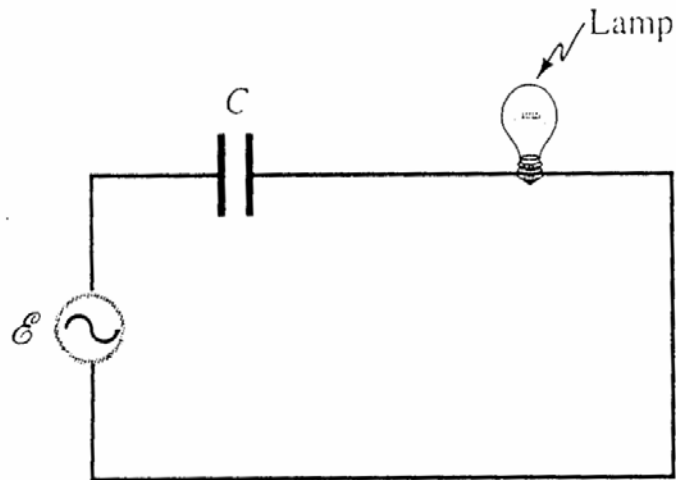


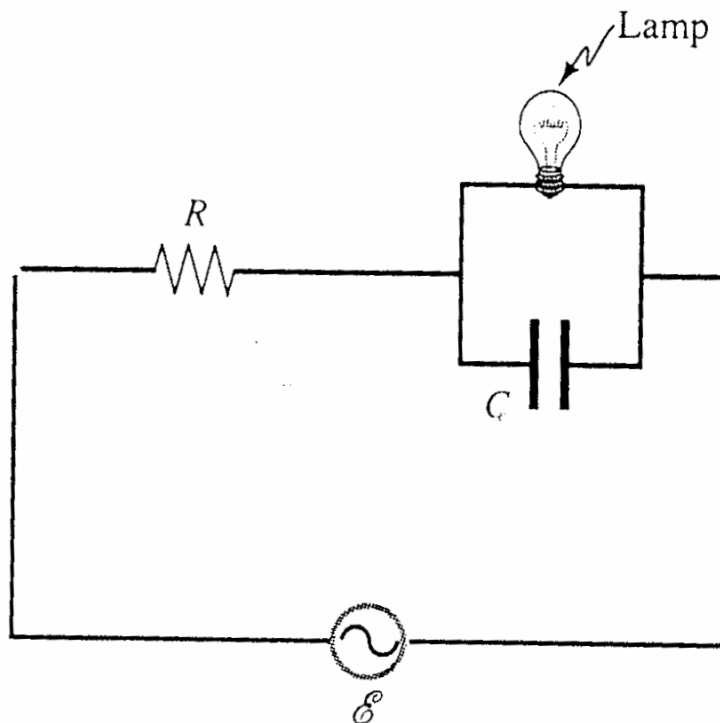
1. A capacitor and a lamp are connected in series with an AC generator of constant voltage but variable frequency



Which of the following three statements is true?

The lamp will 1. not light, because the capacitor is connected in series with the lamp; 2. burn brightest when the frequency is high; 3. burn with the same brightness for all frequencies.

2. A capacitor, lamp, and resistor are connected to an AC generator of constant voltage but variable frequency



Which of the following statements is true? The lamp will 1. not burn, because the capacitor shorts out the lamp; 2. burn brightest when the frequency is low; 3. burn brightest when the frequency is high ; 4. burn with the same brightness for all frequencies.