

Question 4) Two sources of light emit X-rays of wavelength 1 nm and visible light of wavelength 500 nm, respectively. Both the sources emit light of the same power 200 W. The ratio of the number density of photons of X-rays to the number density of photons of the visible light of the given wavelength is:

(A) $1/500$

(B) 250

(C) $1/250$

(D) 500

Answer: (A) $1/500$