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Answers to NCERT/CBSE PHYSICS Class 12(Class XII)textbook Exercise and Additional exercise

CHAPTER Eight

ELECTROMAGNETIC WAVES

EXERCISES

(For simplicity in numerical calculations, take $g = 10 \text{ m s}^{-2}$)

8.12 (a) The energy incident on a sphere of area is 5W. Energy per unit area of the sphere of radius 1m is power/area = $5W/4\pi r^2 = 0.4W/m^2$.

Intensity falls off as $1/r^2$. At a distance of 10 m intensity will be $0.4/100 = 0.004W/m^2$.

b) at a distance of 10m intensity will be $5/100 = 0.05W/m^2$.