

For Questions, Notes, Syllabus & Results

PH 8151 ENGINEERING PHYSICS

Important 2mark questions

Unit I

1. What is Hook's law?
2. Define tensile strength.
3. What are the effects of hammering and annealing on elasticity of a material?
4. When a wire is bent back and forth, it becomes hot. Why?
5. List any two factors affecting elastic modulus and tensile strength.

Unit II

1. What is meant by cavity loss?
2. Why does inter modal dispersion occur?
3. Define forced and damped oscillations.
4. How will you classify optical fibers based on the material?
5. Show that it is possible for stimulated emission to be predominant over spontaneous emission at microwave frequencies (GHZ) at room temperature 300K.

Given that $h = 6.626 \times 10^{-34}$ Js $k = 1.38 \times 10^{-23}$ J/K

Unit III

1. Comment on the thermal behaviour of Invar.
2. List the important characteristics of a material to be thermal insulator.
3. Distinguish between conduction and convection.
4. What are bimetallic stripes? Give its application.
5. Give any two examples in daily life demonstrating thermal insulation is done through compound media.

Unit IV

1. Mention the physical significance of wave function.
2. Brief about the tunnelling phenomenon.
3. State Wien's displacement law.
4. What is a bimetallic strip? Give its applications.
5. Define Compton effect.

Unit V

1. Show the atomic positions in fcc and crystal structures in a sketch.
2. What is Burger vector?
3. Determine the lattice constant of a FCC crystal having atomic radius of 14.76 nm.
4. How does plastic deformation occur in solids?
5. For a cubic system, sketch the planes with miller Indices (110), (101), (001).