CE/EC/EEE/ME 122 (R-22)

Total No. of Questions : 10] [Total No.of Pages : 02

I/IV B. Tech. DEGREE EXAMINATIONS, AUGUST - 2023

Second Semester

CE / EC / EEE / ME

ENGINEERING PHYSICS

Time : **Three Hours** Maximum : **70** Marks

Answer All Questions

Answer ONE question from each Unit. 5x14=70 M

UNIT - I

1. Write the Newton's rings experiment by reflected light to determine the wavelength of light.

(OR)

2. Write the theory of plane transmission grating and its working.

UNIT - II

3. Write the principle, construction and working of He-Ne laser.

(OR)

4. Discuss the classification of optical fibers based on refractive index profile.

UNIT - III

5. Derive the Claussius - Mossotti relation in case of dielectrics.

(OR)

6. Discuss the classification of magnetic materials basing on susceptibility. Write the applications of magnetic materials.

P.T.O.

UNIT - IV

7. What are extrinsic semiconductors. Discuss the variation of Fermi level with doping concentration in extrinsic semiconductors.

(OR)

8. Discuss direct and indirect band gap semiconductors with examples and E versus K diagram.

UNIT - V

9. Obtain Schrodinger's time independent wave equation.

(OR)

10. Define critical temperature and explain Meissner effect.