

I B. Tech II Semester Regular/Supplementary Examinations, July/August-2023
ENGINEERING PHYSICS

(Common to AME, Mining, Pet E, Food E)

Time: 3 hours

Max. Marks: 70

Answer any five Questions one Question from Each Unit
All Questions Carry Equal Marks

UNIT-I

1. a) Write a note on principle of superposition. [7M]
 b) Explain the how to determine the wave length and refractive index through Newton's Rings. [7M]

(OR)

2. a) Explain the Fresnel and Fraunhofer diffraction. [7M]
 b) Write a note on types of polarization. [7M]

UNIT – II

3. a) What is LASER? Write the characteristics of laser. [7M]
 b) Write a short note on population inversion. [7M]

(OR)

4. a) What is optical fiber. Write the working principle of optical fiber. [7M]
 b) Write the importance of optical fiber and optical fiber applications. [7M]

UNIT – III

5. a) What are dielectrics? How to achieve polarization in dielectric materials. [7M]
 b) Explain about Lorentz internal field and its importance. [7M]

(OR)

6. a) Write the classification of magnetic materials, its examples. [7M]
 b) Write a short note on soft and hard magnetic materials. [7M]

UNIT – IV

7. a) What are the basic requirements of a acoustically good hall? [7M]
 b) Deduce Sabine's formula for Reverberation time. [7M]

(OR)

8. a) Explain the production of Ultrasonic by Magnetostriction. [7M]
 b) Write the applications of Ultrasonics. [7M]

UNIT –V

9. a) Write about Unit cell and Bravaislattice. [7M]
 b) What is packing fraction? Explain the packing fraction for SC, BCC and FCC. [7M]

(OR)

10. a) Explain about Bragg's law. [7M]
 b) How to determine the crystal structure by Laue's and powder methods. [7M]

