

[This question paper contains 2 printed pages.]

Sr. No. of Question Paper : 8734

C

Roll No.....

Unique Paper Code : 251103

Name of the Paper : ELHP-105 : Electronics Practical – I

Name of the Course : B.Sc. (H), Electronics

Semester : First

Duration : One Hour

Maximum Marks : 25

*(Write your Roll No. on the top immediately on receipt of this question paper.)*

### SECTION A

**Attempt any five questions from Section A. Each question is of 1 mark.**

**Attempt any ten questions from Section B. Each question is of 2 marks.**

- Q1. What is reciprocal of compressibility of a body called. What is its value for incompressible liquid?
- Q2. Which factors control the time period in Searl's method for calculating elastic constants.
- Q3. Why is the position of hollow and solid cylinders exchanged in Maxwell's needle experiment?
- Q4. What is the difference between optical lens and magnetic lens with reference to focal length?
- Q5. What are the operating voltages for LED'S?
- Q6. How a semiconductor, which is non-conducting at room temperature can be made conducting.
- Q7. Write down diode current equation.

### SECTION B

- Q8. What is elasticity? What do you understand by elastic limit? State Hook's law.
- Q9. What are the factors on which power of magnetic lens depends?
- Q10. Define the terms (i) Work function (ii) Threshold frequency and (iii) Stopping potential.
- Q11. Explain I-V characteristics of a p-n junction diode in forward bias and reverse bias.
- Q12. In Hall measurement, why does the resistance of the sample increases with increasing magnetic field.

P.T.O.

- Q13. What is optical lever? What happens to the mirror of optical lever when the wire whose elastic constants are to be determined gets loaded.
- Q14. What are emission spectra? What information it gives about the substance.
- Q15. What is the use of determining the value of  $e/m$ ?
- Q16. Why is a constant current source necessary for four probe method to calculate resistivity?
- Q17. What is photoelectric effect? How the number of electrons emitted can be increased.
- Q18. What are requirements for a semiconductor material to be used as a visible LED?
- Q19. Define Young's modulus and Bulk modulus
- Q20. Explain the terms electrostatic deflection and magnetic deflection.