S.B. Roll No..

APPLIED PHYSICS-II
2nd Exam/common/2753/Feb'2021
(For 2018 batch onwards)

Duration: 1.15Hrs.   **M.Marks:25**

SECTION-A

Q1. Attempt any three questions.   **3x5=15**
    i. Define free, forced and resonant vibrations.
    ii. An astronomical telescope has magnifying power 5 in normal adjustment. Focal length of objective lens is 100 cm. What is focal length of eye piece?
    iii. What is Columb's Law in electrostatics?
    iv. Capacitance of capacity 4 μF and 12 μF are connected in (i) series (ii) parallel. What will be equivalent capacitance in both cases?
    v. Define resistance. What are the factors on which resistance of a conductor depends?
    vi. State Faraday's Laws of Electromagnetic Induction.
    vii. Differentiate between intrinsic and extrinsic semiconductors.

SECTION-B

Attempt any one question.   **1x10=10**

Q2. Give construction and working of He-Ne Laser. What are its advantages over ruby laser?
    (7, 3)

Q3. a) How will you convert galvanometer into ammeter of given range. Explain   **(6)**

    b) Two resistances 4 ohm and 8 ohm are connected in Parallel. What will be equivalent resistance?
    (4)

Q4. State and explain principle, construction and working of an A.C. generator.   **(10)**

Q5. What is Simple Harmonic Motion? Derive expression for acceleration in simple harmonic motion
    (10)