S. B. Roll. No.....

APPLIED PHYSICS-II
2nd Exam/Common/9345/Nov'24
(For 2023 batch)

Duration: 3Hrs. **M.Marks:50**

SECTION-A

Q1. Do as directed any nine of the following. **9x1=9**

a. Time period is reciprocal of_____.
b. _____mirror is used as a driver's mirror.
c. The resistance of a conductor _____with increase in temperature.
d. AC generator works on the principle of_____
e. Reverberation time is larger for an empty hall than a crowded hall. (T/F)
f. Two waves of same frequency moving in opposite direction produce stationary waves. (T/F)
g. Tesla is the S.I. unit of Magnetic flux. (T/F)
h. A capacitor is used to eliminate spark in electronic circuits. (T/F)
i. Define wave velocity.
j. Define refractive index.
k. Write two properties of charge.
l. State ohm's law.

SECTION-B

Q2. Attempt any five questions. **5x4=20**

i. Differentiate between longitudinal and transverse waves.
ii. Define reflection. Explain its laws.
iii. Three resistances each of 3 Ohm are connected in parallel to each other. Find their equivalent resistance.
iv. Differentiate between A.C. and D.C.
v. State and explain Faraday's laws of electromagnetic induction.
vi. Write down properties of electric lines of force.
vii. An electric bulb of 50 Watt remains on for 6 hours every day. Find the amount of electric energy consumed for 30 days.

SECTION-C

Q3. Attempt any three questions. **3x7=21**

a. What are free, forced, and resonant vibrations? Give three examples of each.
b. What is total internal reflection? Explain in detail with diagram and examples.
c. Explain the principle and working of Wheat Stone Bridge with diagram.
d. a) State and explain Coulomb's law in electrostatics. **4**
   b) On which factors the capacitance of a parallel plate capacitor depends? **3**
e. Explain the principle, construction and working of ruby laser in detail with diagram.