

Department of Physics

R.L.S.Y. College Aurangabad

MID - SEMESTER TEST

SEM-1 (2023-2024)

Assignment

Full Marks - 10

Note

- (i) Prepare Assignment on ^{any} two Topics given below
- (ii) Submit the Assignment in Physics Department on 9th and 10th of October
- (iii) Assignment must be made on white Paper with all the diagrams drawn by Pencil or Sharp black sketch Pen
- (iv) It should be submitted in thin file or Plastic cover with Roll No. written on the front Page with name of Student and Session

1. A Cube of side L is subjected to Tangential force F so that lower end is fixed but every layer displaced by δ . Draw figure and find Modulus of rigidity.
2. Explain the equilibrium of concurrent forces and give statement of Lami's Theorem
3. Draw L-C-R Circuit containing Alternating current Find (i) Impedance (ii) resonance frequency (iii) Draw graph between voltage and frequency
4. Discuss the following simple harmonic motion and derive expression for time period of
(a) Spring mass system in vertical oscillation fashion under gravity
(b) Simple Pendulum
5. Derive the Galilean transformation equation between Position Co-ordinates.