

PHYSICS – HSSC

LIST OF PRACTICALS

Section-A

1. Determination of value of 'g' by free fall using an electronic timer / ticker timer.
2. Verification of following relations of the simple pendulum:
 - i. Time period is independent of the amplitude.
 - ii. Time period is independent of its mass or density of the bob.
 - iii. Time period is directly proportional to the square root of its length.
3. To find the moment of inertia of a fly- wheel.
4. Determination of frequency of A.C. by Melde's apparatus/electric sonometer.
5. Investigation of the laws of vibration of stretched strings by sonometer or electromagnetic method.
6. To determine the focal length of a convex lens by displacement method.
7. To determine the focal length of a concave lens using
 - i. Concave mirror
 - ii. Convex lens
8. Setting up a telescope and determination of its magnifying power and length.
9. To find the coefficient of linear expansion of the material of a rod by Pullinger's apparatus.
10. To measure the mechanical equivalent of heat by electrical method.

Section-B

11. To find the resistance of a wire by slide wire bridge
12. To find the resistance of a Galvanometer by half deflection method
13. To find the resistance of a voltmeter by drawing graph between R and I/V
14. Variation of resistance of thermister with temperature
15. To find the internal resistance of a cell using a Potentiometer
16. To determine the e.m.f of a cell using Potentiometer
17. Variation of magnetic field along the axis of a circular coil
18. Charging and discharging of a capacitor and to measure time constant
19. Relation between current and capacitance when different capacitors are used in A.C. circuit
20. Characteristics of a semi-conductor diode and calculation of forward and reverse current resistance
21. Characteristics of a N.P.N. transistor
22. Study of the variation of electric current with intensity of light using a photocell
23. To make burglar alarm using logic gate
24. Determination of high resistance by Neon flash lamp

N.B. Pre-assembled circuits/experimental set up should be discouraged. The students must themselves assemble the electrical/electronic circuits from various components. Use of centimeter graph be made compulsory.