GREENLAWNS HIGH SCHOOL

PHYSICS PRACTICAL EXAMINATION- TERM 1 2024-25

STD. 10 **TIME: 1 HR.**

DATE:18/09/2024 **MARKS: 20**

NOTE:

1] Answer to this paper must be written on the paper provided separately.

2] You will not be allowed to write during the first 10 minutes. This time is to be spent in reading the paper and checking the apparatus.

3] The time given at the head of this paper is the time allowed for writing and performing the experiment.

4] Experiment has to be performed on the white sheets provided to you. The writing work has to be done on the ruled sheet. The graph has to be done on the graph paper provided to you.

5] The writing work has to be done in the following format:
Aim, Observation table and Conclusion.

6] Attach the papers in the following order: Ruled sheet with written work, White sheets on which you have performed the experiment and the graph paper.

EXPERIMENT [15]

Aim – To determine the minimum angle of deviation (δm) of the given equilateral prism.

Apparatus – A wooden board, white sheets, board pins, pins, prism, scale, pencil and the protractor.

Procedure –

1] Take a white sheet of paper and fix it on the wooden drawing board with the help of board pins.

2] Place an equilateral triangular prism on the paper and draw the border of its principal section ABC.

3] Take a point O on side AB and draw a normal MN to AB passing through point O.

4] Draw an incident ray XO making an angle of 30° with the normal MN.

5] Fix the pins P_1 and P_2 which are 1-2 cm apart from each other on the incident ray XO.

6] Observe the images of the pins P_1 and P_2 from side AC.

7] Fix the pins P_3 and P_4 in a straight line of the images P_1 and P_2.

8] Mark the positions of all four pins. Then remove all the pins and the prism.

P.T.O.

9] Join P_3 and P_4 till it intersects side AC at point O'. This is an emergent ray Label it as O'Y. Ray OO' represents the refracted ray.

10] Extend the incident ray XO in forward direction and the emergent ray O'Y backward direction. Measure the angle between the extended rays. This is an angle of deviation δ.

11] Repeat the procedure for angles of incidence 35^0, 40^0. 45^0 ...and so on till you get the minimum angle of deviation δm. After getting δm take two more readings.

12] Fill the values of angle of incidence and its corresponding angle of deviation in the observation table and then plot a graph of i- δ using this table. Write your conclusion.

Observation table:

Angle of incidence (i)	Angle of deviation (δ)
30^0	
35^0	
40^0 and so on	

Conclusion

Journal [5]