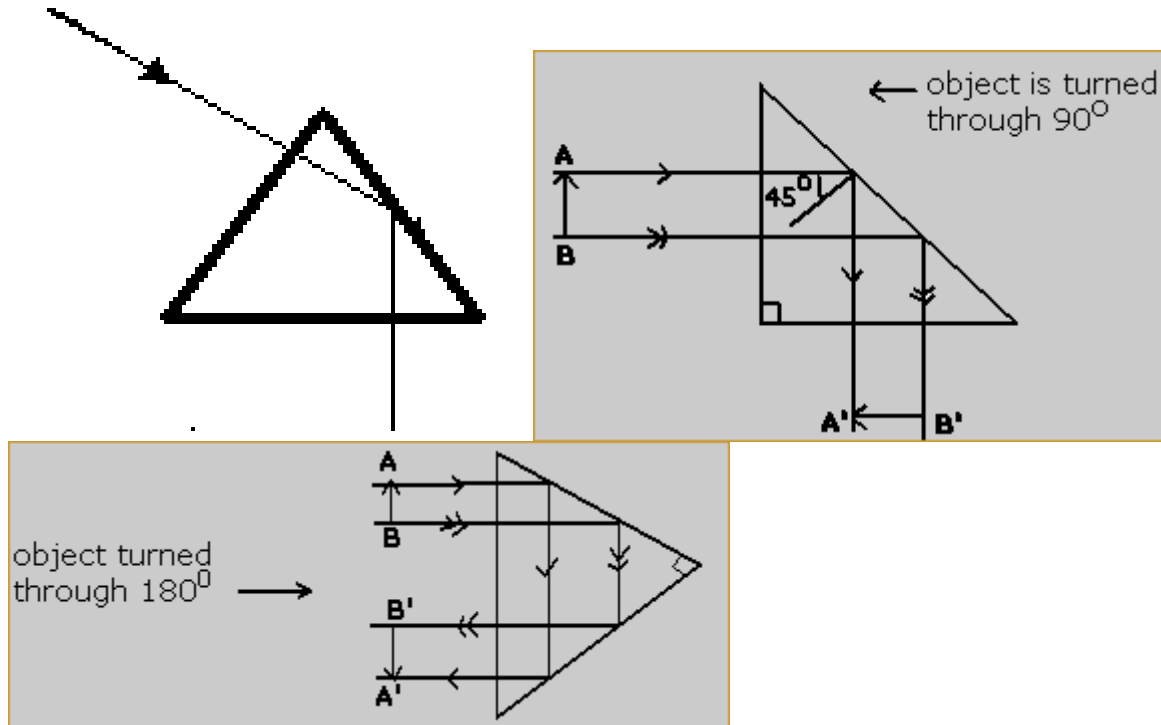


PRACTICAL: 4

TO MEASURE THE ANGLE OF DEVIATION (δ) IN DIFFERENT ANGLES OF PRISM.

AIM:

To measure the angle of deviation δ for a ray of light incident normally ($i = 0^\circ$) on one face of a prism with angle 60° , 45° and 90° .



Procedure:

1. Fix a sheet of paper on the drawing board.
2. Place the 60° angled prism with its triangular face nearly in the middle of the sheet of paper.
3. Draw the boundary of prism and name them as ABC. Select any point on AB (closer to pt. A) on the face of AB and draw a normal at that point.
4. Replace the prism on the sheet at its boundary ABC. Fix two pins vertically about 5 cm away from each other on the normal.
5. Try and see if you can see the refraction of the pins from face BC.
6. Now look from the face BC at the images of the pins and fix another two pins such that all four pins are in the straight line.
7. Encircle the pricks of the pins and join the pts. Through line segment.
8. Measure the angle of deviation and note it down.
9. Repeat above procedure for 45° and 90° angled prism.

Observation:

No.	A	δ
1	60°	
2	45°	
3	90°	

Precautions:

- 1) The gap between two pins should not be less than 3cm.
- 2) All the pins must be perpendicular to the page.
- 3) While fixing the pins the position of prism should not be disturbed.
- 4) The outline of prism should be proper.

Result: The angle of deviation δ for: i) $45^\circ = \text{-----}$
ii) $60^\circ = \text{-----}$
iii) $90^\circ = \text{-----}$

Date: _____

Teacher`s Sign _____

Viva Voce:

- 1) What is meant by total internal reflection of light?
- 2) Which prism is basically used for 180° reflector?
- 3) Which prism is called as 90° reflector?
- 4) State any two conditions for total internal reflection.
- 5) What is the critical angle?