TOPIC:	Integrated optics (angle of minimum deviation)
AIM:	To determine the refractive index of the glass prism using a spectrometer.
APPARATUS REQD.:	- Spectrometer - Spirit level - Magnifying glass - Glass prism - Sodium vapour lamp
FORMULAE USED:	$$\mu = \frac{\sin\left(\frac{A+\delta_m}{2}\right)}{\sin\left(\frac{A}{2}\right)},$$ where, μ = refractive index of glass prism A = angle of prism δ_m = angle of minimum deviation
RESULT:	The refractive index of the given glass prism is 1·57 645.

Teacher's Signature _____

Tabulation:

Vernier	Reading for minimum deviation position R_1			Reading for direct ray (R_2)			$\delta_m = R_1 - R_2$	μ
	MSR	VSR	TR	MSR	VSR	TR		
A	$44°$	$0'$	$44°$	$0°$	$0'$	$0°$	$44°$	1.5760
B	$224°$	$5'$	$224°5'$	$180°$	$0'$	$180°$	$44°5'$	1.5769

Reply:
12/Sep/69
19BCE2105

For equilateral prism, angle $A = 60°$

And refractive index, $\mu = \dfrac{\sin\left(\dfrac{A + \delta_m}{2}\right)}{\sin\left(\dfrac{A}{2}\right)}$

Avg. $\mu = \left(\dfrac{1.5760 + 1.5769}{2}\right)$

$\langle \mu \rangle = 1.57645$