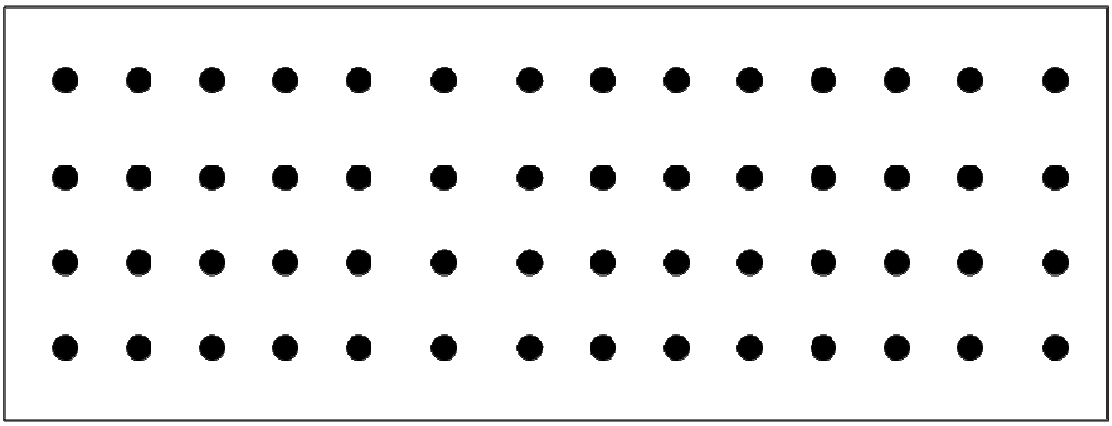
Answer Form

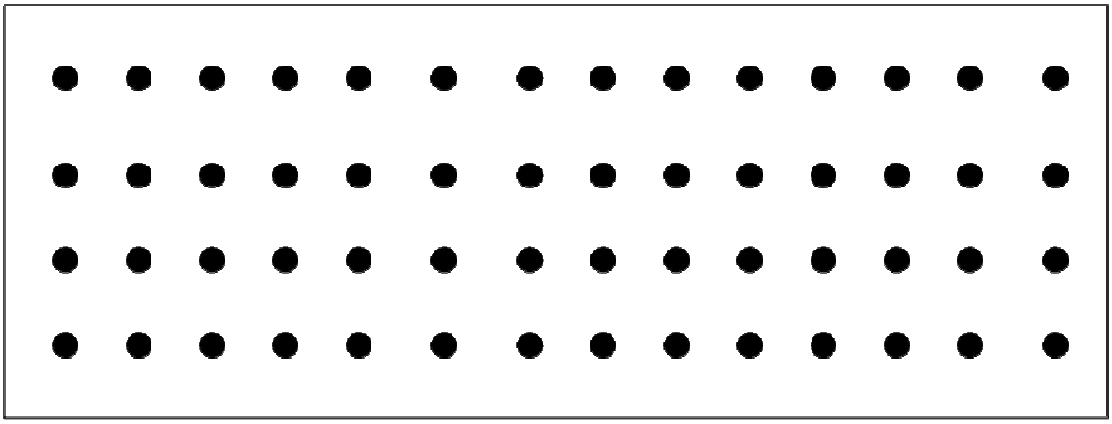
Experimental Problem No. 2

Birefringence of mica

Task 2.1 a) Experimental setup for I_P. (0.5 points)



Task 2.1 b) Experimental setup for I_O. (0.5 points)



2.1		1.0

Task 2.2 The scale for angles.

2.2	The angle between two consecutive black lines is $\theta_{\mathrm{int}} =$	0.25

Tasks 2.3 Measuring I_P and I_O .Use additional sheets if necessary.

TABLE I

$\bar{\theta}$ (degrees)	I_P	I_O

2.3		3.0

Task 2.4 Finding an appropriate zero for θ.

2.4		1.0

Task 2.5 Choosing the appropriate variables.

2.5		0.5

Task 2.6 Statistical analysis and the phase difference.

2.6		3.25

2.6		

2.6		0.5

TABLE II
(Use additional sheets if necessary)

θ (degrees)		

Task 2.7 Calculating the birefringence $|n_1 - n_2|$.

2.7	Write down the width of the plate of mica you used, $L =$ Write down the wavelength you use, $\lambda =$ Calculate the birefringence $\|n_1 - n_2\| =$ Write down the formulas you used for the calculation of the uncertainty of the birefringence.	1.0