

28 A diffraction grating has N lines per unit length and is placed at 90° to monochromatic light of wavelength λ .

What is the expression for θ , the angle to the normal to the grating at which the third order diffraction peak is observed?

A $\sin \theta = \frac{1}{3N\lambda}$

B $\sin \theta = \frac{N\lambda}{3}$

C $\sin \theta = 3N\lambda$

D $\sin \theta = \frac{3\lambda}{N}$

29 Two parallel plates P and S are 2 mm apart in a vacuum. An electron with charge $-1.6 \times 10^{-19} \text{ C}$