

Problem 3) An electric dipole has a fixed dipole moment \vec{P} , which makes angle θ with respect to x-axis. When subjected to an electric field $\vec{E} = E\hat{i}$, it experiences a torque $\vec{T} = \tau\hat{k}$. When subjected to another electric field $\vec{E}_2 = \sqrt{3}E_1\hat{j}$ it experiences a torque $\vec{T}_2 = -\vec{T}$. The angle θ is :

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- (1) 90°
- (2) 30°
- (3) 45°
- (4) 60°

Ans) 4