Uniformly polarized large dielectric slab, field inside. An infinitely large dielectric slab of thickness $d = 2a$ is uniformly polarized through-out its volume such that the polarization vector, $\mathbf{P}$, is perpendicular to the faces (boundary surfaces) of the slab, as shown in Fig. Q2.2. The surrounding medium is air. The electric field intensity vector (due to bound charges of the slab) at a point inside the slab is

(A) nonzero and has the same direction as $\mathbf{P}$.
(B) nonzero and is directed oppositely to $\mathbf{P}$.
(C) zero.

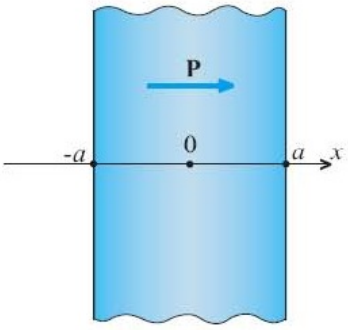

Figure Q2.2 Infinitely large polarized dielectric slab; for Question 2.3.

Solution: (B)
Answer: (B)