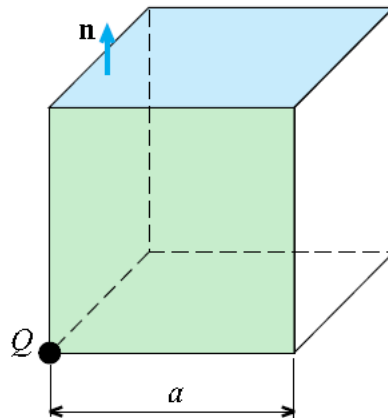


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*Flux through a cube side, charge at a vertex.* A point charge  $Q$  is located at one of the vertices of an imaginary cube in free space, as shown in Fig.Q1.10. The outward flux of the electric field intensity vector due to this charge through a cube side that does not contain the charge (e.g., the upper cube side in the figure) equals

- (A)  $\Psi_E = Q/\epsilon_0$ .
- (B)  $\Psi_E = Q$ .
- (C)  $\Psi_E = Q/(2\epsilon_0)$ .
- (D)  $\Psi_E = Q/(6\epsilon_0)$ .
- (E)  $\Psi_E = Q/(24\epsilon_0)$ .
- (F)  $\Psi_E = 0$ .



**Figure Q1.10** Point charge  $Q$  at a vertex of a cube; for Question 1.13.

*Solution:* (E)

*Answer:* (E)