
Parallel-plate capacitor with an inserted metallic slab. The charges of the plates of an air-filled parallel-plate capacitor are Q and $-Q$. The capacitor terminals are open and the fringing effects can be neglected. An uncharged metallic slab, the thickness of which is smaller than the plate separation, is next inserted between the plates, as shown in Fig. Q2.6. The voltage between the capacitor is now

- (A) large than
- (B) the same as
- (C) smaller than

before the slab was inserted.

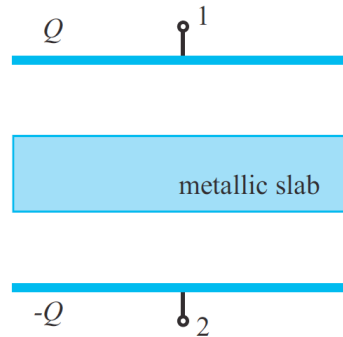


Figure Q2.6 Parallel-plate capacitor with a metallic slab inserted between the plates; for Question 2.16.

Solution: (C)

Answer: (C)