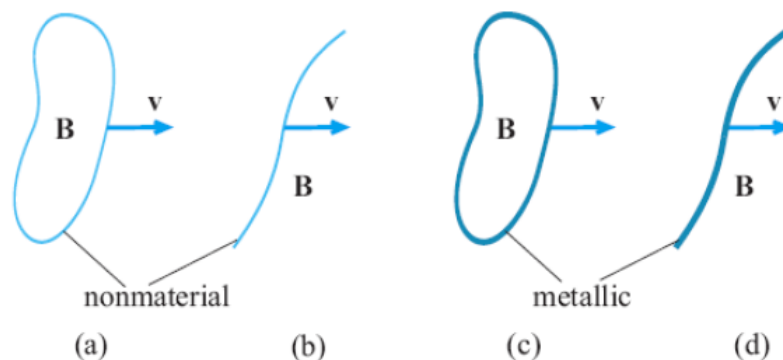


*Moving line - closed/open, imaginary/conducting.* Fig. Q6.5 portrays four cases of either a (closed) contour or open line (with two ends) that are either imaginary (nonmaterial) or made of a metallic wire - moving uniformly with a velocity  $\mathbf{v}$  in a time-invariant (static) magnetic field of flux density  $\mathbf{B}$ , in a vacuum. For a specific orientation in space of the vector  $\mathbf{B}$ , it is possible for an emf to be induced ( $e_{\text{ind}} \neq 0$ ) along the contour/line in



**Figure Q6.5** Imaginary or conducting contour or open line moving in a time-invariant magnetic field; for Question 6.17.

- (A) cases (a) and (c) only.
- (B) case (c) only.
- (C) cases (c) and (d) only.
- (D) cases (a), (c), and (d) only.
- (E) all four cases.
- (F) none of the cases.

*Solution:* (E)

*Answer:* (E)