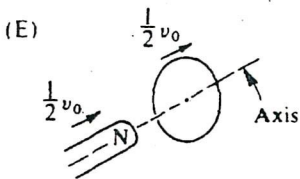
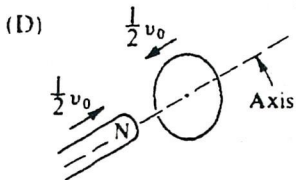
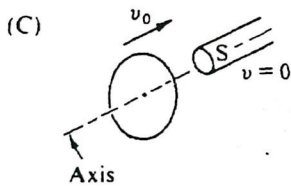
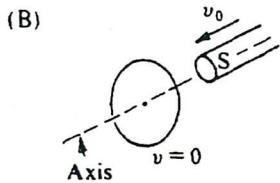
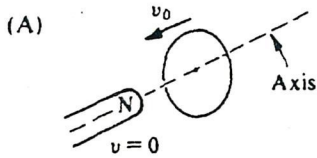
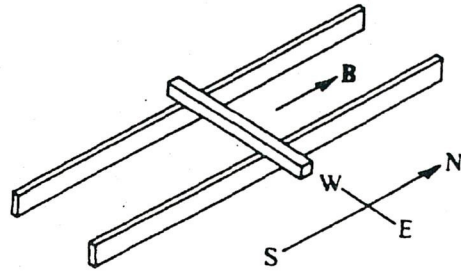


48. In each of the following situations, a bar magnet is aligned along the axis of a conducting loop. The magnet and the loop move with the indicated velocities. In which situation will the bar magnet NOT induce a current in the conducting loop?



Questions 49-50



The ends of a metal bar rest on two horizontal north-south rails as shown above. The bar may slide without friction freely with its length horizontal and lying east and west as shown above. There is a magnetic field parallel to the rails and directed north.

49. If the bar is pushed northward on the rails, the electromotive force induced in the bar as a result of the magnetic field will

- (A) be directed upward
- (B) be zero
- (C) produce a westward current
- (D) produce an eastward current
- (E) stop the motion of the bar

50. A battery is connected between the rails and causes the electrons in the bar to drift to the east. The resulting magnetic force on the bar is directed

- (A) north
- (B) south
- (C) east
- (D) west
- (E) vertically