

A long, hollow conducting cylinder is kept coaxially inside another long, hollow conducting cylinder of larger radius. Both the cylinders are initially electrically neutral. [2007]

- (a) A potential difference appears between the two cylinders when a charge density is given to the inner cylinder.
- (b) A potential difference appears between the two cylinders when a charge density is given to the outer cylinder.
- (c) No potential difference appears between the two cylinders when a uniform line charge is kept along the axis of the cylinders
- (d) No potential difference appears between the two cylinders when same charge density is given to both the cylinders.

Correct option is A)

Refer to image

A potential difference appears between the two cylinders when a charge density is given to the inner cylinder.

