



14. A long cylindrical shell carries positive surface charge  $\sigma$  in the upper half and negative surface charge  $-\sigma$  in the lower half. The electric field lines around the cylinder will look like figure given in: (figures are schematic and not drawn to scale)

<p>1.</p>	<p>2.</p>
<p>3.</p>	<p>4.</p>

**Answer:** Electric lines of force originate from positive charge and terminate at negative charge. In option (2), though lines are radially emitted but lines are not getting terminated at negative charge. Option 3 is not a correct choice for the same reason. Option (4) lines of force are not smooth.

**Hence correct option is (1).**