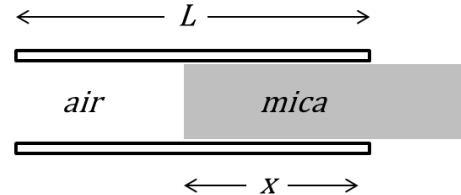


- Q.8. A capacitor is constructed as shown in the figure. The gap between the plates are 5mm. In this gap, another plate of mica can move to fill the gap, with a value 'x'. find out the value of sensitivity of the setup with respect to the variable length 'x'. The width of the plate is 50mm and the dielectric constant of mica is 8. The permittivity of air is 8.85×10^{-12} F/m.



[5 Marks]
