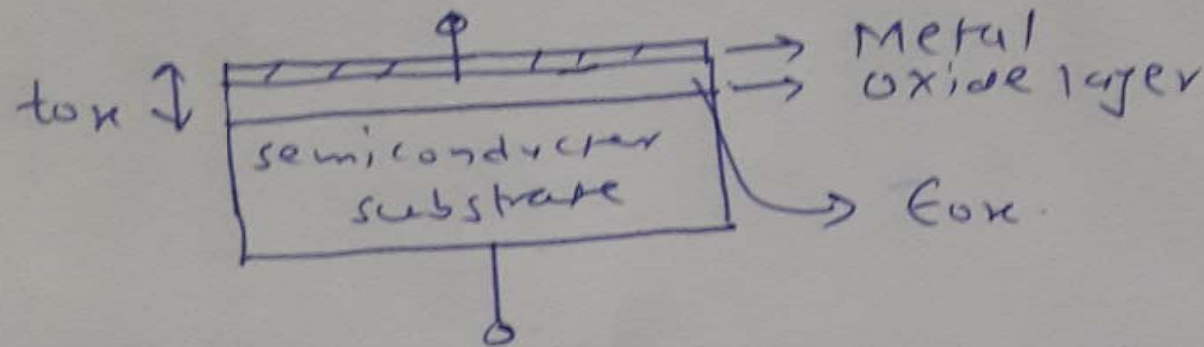


N.B.:

Solution Electronic Devices
WUV - 2017

Two terminal mos structure:



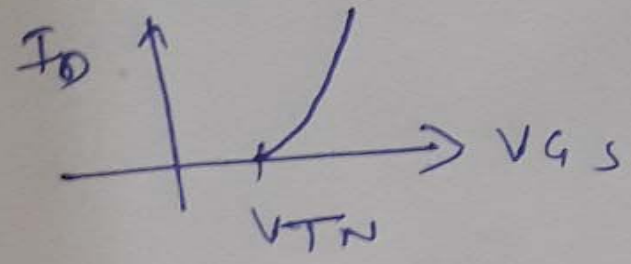
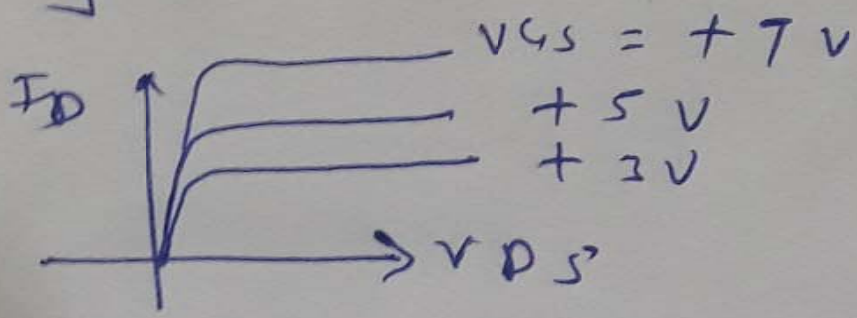
t_{ox} - Thickness of oxide layer
 ϵ_{ox} - Permittivity.

Neat diagram --- (2 m)

Explanation --- (3 m)

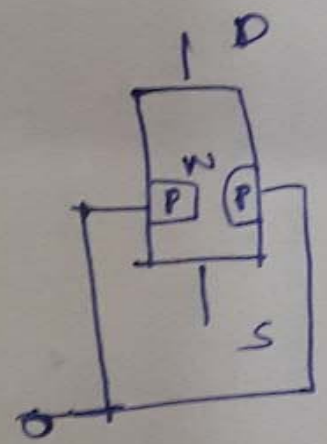
$$\begin{aligned}
 \omega &= \frac{2 \epsilon_s (V_{bi} + V_R)}{e} \left[\frac{N_a + N_d}{N_a N_d} \right]^{1/2} \\
 &= \left[\frac{2 (11.7) (8.85 \times 10^{-14}) (0.635 \pm 5)}{1.6 \times 10^{-19}} \right]^{1/2} \\
 &= \left[\frac{10^{16} + 10^{15}}{10^{16} 10^{15}} \right]^{1/2} \\
 &= \underline{\underline{2.83 \mu m}} \quad \dots \quad (5 m)
 \end{aligned}$$

working — 3 m



Characteristics — — 4 m

Q4 (9)



4 JFET construction, — 2 m

working — 5 m

