

Back-to-School savings now on! Purchase before September 30th, and get 25% off Socrative Pro. 

Remind me later

Enter coupon code "BTS20" at checkout. [Learn More](#)

KH1STSEM2021

Save and Exit

ENC333_SEC1_QZ2



Align Quiz to Standard

Enable Sharing
SOC-51204796

1. Define Threshold voltage in CMOS ? SELECT ALL RIGHT ANSWER

A The Threshold voltage, V_T for a MOS transistor can be defined as the voltage applied between the gate and the drain of the MOS transistor below which the gate to source current, I_{GS} effectively drops to zero



B The Threshold voltage, V_T for a MOS transistor can be defined as the voltage applied between the gate and the bulk of the MOS transistor below which the drain to source current, I_{DS} effectively reach maximum value



C The Threshold voltage, V_T for a MOS transistor can be defined as the voltage applied between the gate and the source of the MOS transistor below which the drain to source current, I_{DS} effectively drops to zero

D All are true

2. a MOS transistor can be considered as ----- (select all that apply)

A resistive load in leaner region



B current source in saturation region

C short circuit in cutt off

D open circuit all the time



3. If a large ----- is applied this voltage with deplete the Inversion layer .This Voltage effectively pinches off the channel near the source

A VGS

B VDS

C VSB

D VGB



4. There are four main different layers in MOS transistors which are

A Drain , Source, Gate , bulk

B capacitance , resistance, inductance , voltage

C waver , package, diod , voltage



5. The transistor **current changes** with the operating temperature but is not affected by mobility

False



6. As the channel length decreases, the depletion region below the gate can no longer be approximated as a rectangular region. So, as L -----

A does not change

B increases

C decreases



7. As V_d is higher, the drain depletion region increases, causing a -- ----- in V_t .

A decrease

B increase



8. For MOS devices, leakage current occurs in what region

A Linear

B Saturation

C cutt off



9. For the same V_{DS} , as V_{GS} increases, The I_{DS} will -----

A increase

B decrease



C does not change



D has no effect



10. Hot-e degradation will occur when : When,

A a MOS transistor is in Linear region, , the electric field across the pinch-off region may be high enough that carriers gain there enough energy to excite electron-hole pairs.



B a MOS transistor is in cutt off region, the electric field across the pinch-off region may be high enough that carriers gain there enough energy to excite electron-hole pairs.



C a MOS transistor is in saturation , the electric field across the pinch-off region may be high enough that carriers gain there enough energy to excite electron-hole pairs.

D In all regions

Add a Question

Multiple Choice

True / False

Short Answer

Socrative  Get **PRO!** [Learn More](#)