Q1. A silicon n-channel MOSFET has a length of 100 nm and a width of 250 nm. It has an oxide thickness of 10 nm. Calculate the MOS oxide capacitance and the drain current at a gate-source voltage of 3 volts with a drain-source voltage of 6 volts if the threshold voltage is +2 volts. Take electron mobility in silicon to be 1100 cm2 /v.sec and the permittivity of silicon dioxide to be 3.5x10-11 Farad/meter.

**Find**

**Given Values**

**Governing Equations**

when

**Code and Solution**

= 3.5mF