Hands on Electronics IDC102
Mid Semester Examination - 2016

Maximum marks=10. Time=30 minutes.

Name: Roll No.

1. A $10k\Omega$ resistor is connected to a capacitor with $C = 10\mu F$. A signal of frequency $1kHz$ is connected to the resistance and the other end of the capacitor is grounded. Calculate the impedance of this circuit. [3]

2. Calculate the time constant of the circuit given in question 1 and find the output across the capacitor if the input voltage is given by $V(t) = V_0 \sin wt$. [1+2]

3. Find the output voltage V_0 and I_D in the circuit given by: [2+2]