

SVKM'S NMIMS STME, Navi-Mumbai Campus
FE CSBS Sem II
PEE : Graded Assignment 1 (cumpulsory for all)
Max. Marks : 5

Last date of submission for written assignment: February 10, 2020

Instruction: Assignment will be evaluated on basis of viva on the given questions during lab hours (2m for punctual submission + 3m viva). Zero marks for delayed submission. Viva will be taken during lab sessions or after college hours.

- Q1. Sketch the circuit of a double-ended clipper using ideal p-n diodes which limit the output between $\pm 10V$. Draw input/output wave-forms assuming input to be a sinusoidal signal with $V_{peak} = 15V$.
- Q2. Write two characteristic features to distinguish between n-type and p-type semiconductors.
- Q3. Discuss in detail the V-I characteristics of a PN junction diode.
- Q4. Sketch the circuit of a bridge rectifier and explain its operation.

SVKM'S NMIMS STME, Navi-Mumbai Campus
FE CSBS Sem II
PEE : Research Assignment 1 (Voluntary)
Max. Marks : 5 (bonus)

Only first 5 people to submit the assignment will be awarded marks. The deadline is 24 hours after the first submission. Assignment will be evaluated on basis of written material and viva. Viva will be taken during lab sessions or after college hours.

- Q1. Discuss diode capacitance.
- Q2. How does the diode capacitance vary with the depletion layer width?
- Q3. What is a *varactor* diode?