

Roll No

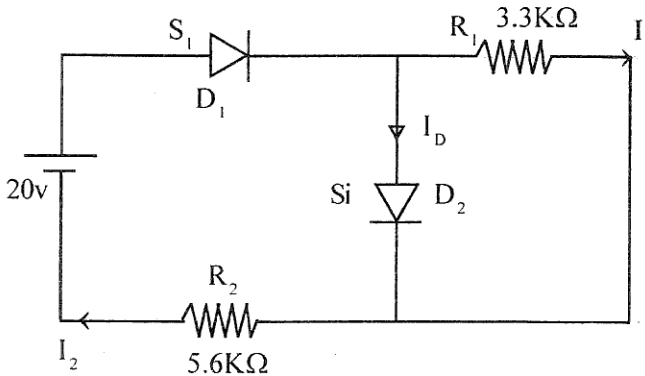
EX - 304**B.E. III Semester**

Examination, December 2012

Electronic Devices and Circuits - I**Time : Three Hours****Maximum Marks : 70/100**

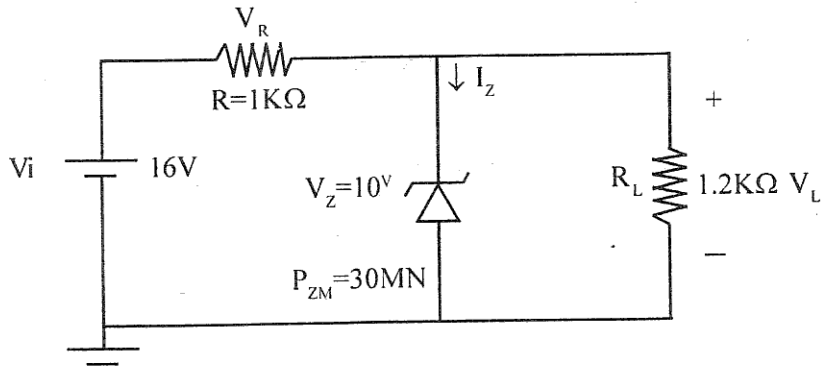
Note: Attempt any Five questions. All questions carry equal marks.

1. a) Explain the difference between Zener diode and diode.
b) Determine the currents I_1 , I_2 and I_D for the network shown below.

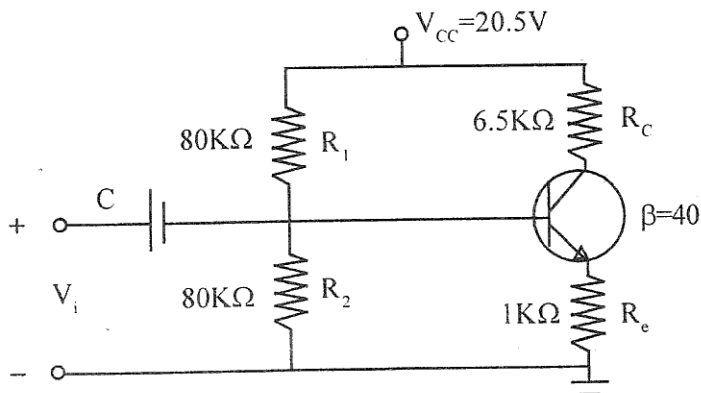


2. a) Explain in brief:
i) Varactor diode
ii) Tunnel diode
iii) PIN diode
iv) LED

- b) For the zener diode network shown below determine V_L , V_R , I_Z and P_Z .



3. a) Write the difference between an enhancement and depletion type MOSFET.
 b) Explain the working of a JFET and give its characteristics curves.
4. a) What is the need of biasing circuit in BJT. Explain biasing techniques for BJT in brief.
 b) Find the value of I_C , I_B and V_{CE} from the circuit given below.



5.
 - a) Discuss the effect of Negative feedback on gain, input impedance, output impedance, distortion, stability.
 - b) Draw and explain the circuit of a Wien bridge oscillator.
6.
 - a) What do you mean by class A, class B and class C amplifiers?
 - b) Show that the maximum conversion efficiency of a Class B amplifier system is 78.5%.
7.
 - a) Draw Bootstrapped Darlington circuit and explain how this increases the input resistance.
 - b) Draw and explain the circuit diagram of Darlington amplifier.
8. Short notes on (any two)
 - a) Effect of temperature on semi conductor diode.
 - b) RC coupled amplifier
 - c) V.I characteristics of VJT
 - d) Zener regulator
 - e) Clippers and clamping circuits.
