

II B.Tech II Semester Supplementary Examinations, April/May 2006
APPLIED ELECTRONICS
(Civil Engineering)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Write about the applications of a PN junction diode? [8]
(b) Draw the circuit diagram for CB configuration and explain its characteristics? [8]
2. (a) Draw the frequency response of two stage amplifier and derive equations for input and output impedance? (10)
(b) Explain about the working of bridge rectifier? (6)
3. (a) An amplifier with $2.5\ k\Omega$ input resistance and $50\ k\Omega$ output resistance has a voltage gain of 100. The amplifier is now modified to provide 5% negative feedback in series with the input. Calculate
 - i. voltage gain
 - ii. input resistance
 - iii. output resistance with feedback? [9]
(b) Compare positive and negative feedback? [7]
4. (a) Explain about horizontal and vertical deflection system in CRO? [8]
(b) Draw and explain about the design of decade counter? [8]
5. (a) Describe the action of PN junction diode and explain how it acts as a switch? [8]
(b) Derive the expression for the frequency of oscillation of Colpitts oscillator? [8]
6. (a) Derive the ripple factor for halfwave rectifier with capacitor filter? [8]
(b) Explain about accuracy, resolution & linearity in measuring instruments? [8]
7. (a) Explain about the principle of operation of multimeter? [8]
(b) Explain about piezo electric transducer? [8]
8. Write short notes on:
 - (a) LVDT
 - (b) Gain and bandwidth of single stage amplifier?
 - (c) Barkhausen criterion? [6+5+5]
