LNMIIT
The LNM Institute of Information Technology

Electronics II

Mid Semester Exam II

Date: 13th March 2014 Time: 60 Minutes Max Marks. 30

Notes: If not mentioned, then you can ignore I_B in problem solving.
Marks of each question are mention against it.
Assumptions made should be written clearly.

1: For the circuit given in figure 1, find out R_E, R_C, R_B, V_E, and V_C. **[5]**

2: Design a common emitter voltage divider biased amplifier with V_{CC} = 20V, I_C = 10mA, β = 100 and Q point is at the centre. **[5]**

3: In the Common base amplifier given in figure 2, find out I_E, V_C, V_E, Av, Zi, Zo and Avs. Also plot the input voltage graph at emitter and output voltage at collector. (Both AC and DC voltages are to be considered in the waveform.) **[7 +3]**

4: For cascaded amplifier given in Figure 3, find out Av1, Av2 (Voltage gains of each stage with load), A_{VT} (total gain of the system w.r.t vi) and vo. **[5]**

5: For the circuit given in figure 4, find out the values of I_C, I_B, V_C and V_E. **[5]**