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, $\beta$ = 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), $Av_T$ (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]**