Assignment 2

1. Draw the circuit diagram of a single-phase IGBT bridge inverter feeding an RL load. If the operation is quasi-square wave, sketch to **scale** the following waveforms:

(a) gate drive signals for switches T1, T2, T3 & T4 (T1 & T4 in one

arm and T2 & T3 in the other arm)

(b) output voltage

(c) output current

(d) switch T1 current

(e) diode D1 current

2. Draw the circuit diagram of a single-phase full-wave AC controller using two inverse-parallel SCRs feeding a RL load and sketch to **scale** the following waveforms:

(a) supply voltage

(b) load voltage

(c) load current

(d) SCR T1 voltage

3.Explain single phase Inverter with R L load and draw waveforms.