Tutorial Sheet-8 IEC103

Q1) Draw the circuit of a 555 Timer to implement monostable multivibration. Draw the waveforms and derive the expression for pulse width duration at output of 555 Timer.

(Q2) Using a 10nF capacitor C, find the value of R that yields an output pulse of duration 100μs in the 555 Timer monostable circuit.

Q3 Draw the circuit diagram of a 555 Timer to implement astable multivibrator. Draw the appropriate waveforms and derive expression time period of oscillations and duty ratio

(Q4.) For the 555 Timer astable multivibrator, with a 1nF capacitor, find the values of R_A and R_B that results in an oscillation frequency of 100KHz and a duty cycle (or ratio) of 75%