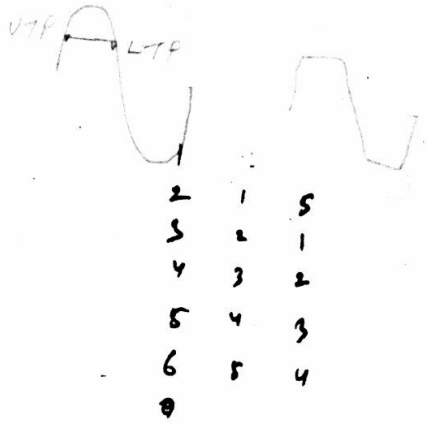
PROCEDURE:

1. Connect 6V dc supply between ground and collector of the transistor.
2. Observe correct polarity of the supply.
3. Feed sine wave form from function generator through C to the base Q1.
4. Connect CRO lead to monitor the waveform.
5. Connect other channel of CRO between collector and ground Q2 to observe output.
6. Adjust dc reference level with the help of positioning control of CRO by pressing 0 switch for both channels and do not disturb this reference setting.
7. Release 0 button to monitor input wave form with offset control of function and adjust the wave exactly at the middle of the trace and also release 0 button of other channel of C.R.O to monitor output square waveform.
8. Raise the amplitude of function generator till at the output of Q2 square waveform appears.
9. With the help of X positioning control, move the trace to the vertical reference line and record the UTP and further move the trace to the trailing edge to note LTP.
10. Observe the output waveform by changing the input waveform function generator.
11. Repeat 1 to 10 with varying input amplitude, frequency and record corresponding UTP and LTP.

OBSERVATIONS AND WAVEFORMS:

Output waveform on a graph sheet.

Sl. No.	Input Amplitude (V)	Input Frequency (Hz)	UTP	LTP
1				
2.				
3.				
4.				
5.				
6.				
7.				
8.				



EXPERIMENT NO. 6

OBJECTIVE: Operation of Schmitt Trigger and determination of UTP and LTP.

APPARATUS: Function generator, C.R.O, Rheostat, Connecting wires, Schmitt trigger – circuit.

THEORY: The Schmitt Trigger Circuit utilizes two series coupled amplifiers for transforming a non-square wave input into a square wave output using regenerative feedback. The circuit is widely used for wave shaping. The input waveform is made to switch from an upper and a lower voltage level, i.e. UTP and LTP to generate a square wave.

CIRCUIT DIAGRAM: