

## Electronics & Communication

**B.Tech.**

**Semester-V**

**Integrated Circuit(TEC-352)**

**Class Test-II**

**Total Time: 1Hour**

**M.M : 15**

Note: Answer all the Question.

1. Explain the operation of a 555 timer as a one - shot multivibrator .Also derive the expression for ton time of the output waveform.

OR

Draw the circuit diagram of triangular wave generator and explain its operation . Also derive the Expression for For frequency.

2. Draw a regenerative comparator and explain its operation. What factors determine the hysteresis?

OR

A schmitt trigger with the upper threshold level  $V_{ut} = 0V$  and hysteresis width  $V_H = 0.2V$  converts a 1kHz sine wave of amplitude  $4V_{p-p}$  into a square wave . calculate the time duration of the positive and the negative portion of the output waveform.

3 . Describe CZ process in details with neat diagram .

OR

Derive the Diffusion equation.

\*\*\*\*\* END OF PAPER\*\*\*\*\*