

## Noise in Amplifiers.

The presence of unwanted disturbance in the output of an amplifier which is not related to the input signal is called the noise. The noise has no specific frequency but it is distributed over a wide frequency range.

The Noise is of two kinds

- (i) External Noise
- (ii) Internal Noise

External Noise  $\Rightarrow$  It arises due to atmospheric disturbance or due to electric motor power lines neon signs etc.

Internal noise  $\Rightarrow$  It is generated in the circuit element

Internal is of following eight kinds

- (i) thermal noise
- (ii) shot noise

(iii) Flicker Noise

(iv) partition Noise

(v) Contact Noise

(vi) Microphone noise

(vii) Hum

(viii) white Noise

Thermal Noise  $\Rightarrow$  It is generated due to the random thermal motion of the charge carriers in an electrical conductor such as resistor etc.

Shot Noise  $\Rightarrow$  It arises because of random passage of charge carriers across a potential barrier which gives rise to fluctuations in the average current and hence it constitutes the shot noise