Signal Impairment: The damages caused to a travelling signal are called impairments. Following three are the main varieties of impairments in a signal:

1. Attenuation
2. Distortion
3. Noise

Attenuation: the damage caused in the power of a signal is called attenuation. Usually it is caused due to obstacles in the media like- resistance in wires or storms and tornados in waves. The amplitude of waves in this impairment gets decreased gradually.

Distortion: In this impairment, the shape of wave gets damaged. The harmony contained in the signal gets affected and serious changes to the phase of wave occur.

Noise: Noise is nothing but an unwanted signal that gets attached with our original signal. Usually the neighbouring frequencies make this kind of damages.

Normal Signal:

Attenuated Signal:
Distorted Signal:

Noisy Signal:

Assignments:

1. What do you understand by Signal impairment?
2. How is a noisy signal different from a distorted signal?