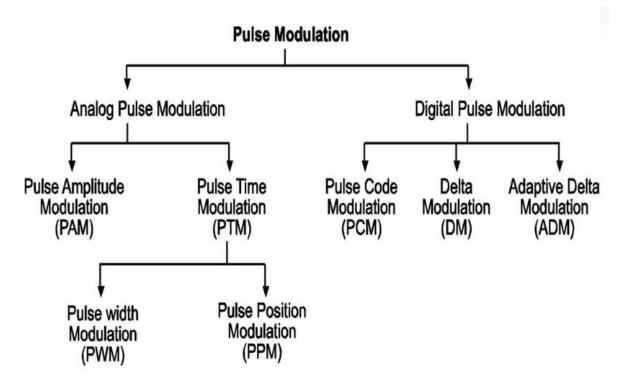


1

## **Pulse Modulation**

Pulse Modulation is a technique in which the signal is transmitted with the information by pulses. This is divided into Analog Pulse Modulation and Digital Pulse Modulation. (Pulse modulation is a type of modulation in which the signal is transmitted in the form of pulses. It can be used to transmit Analog information).



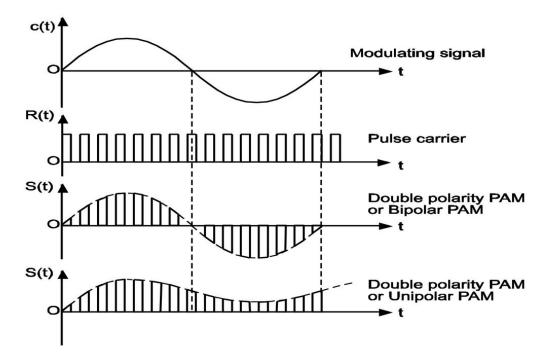
## 1- Pulse Amplitude Modulation(PAM)

Pulse amplitude modulation is a technique in which the amplitude of each pulse is controlled by the instantaneous amplitude of the modulation signal. It is a modulation system in which the signal is sampled at regular intervals and each sample is made proportional to the amplitude of the signal at the instant of sampling. The PAM is divided into two types , they are:



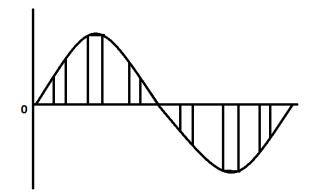
2

- ✤ Depends on the message polarity :
- 1- Single polarity PAM
- 2- Double polarity PAM



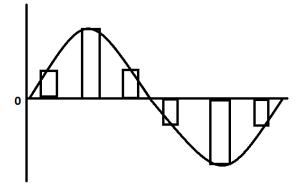
✤ Depends on the shape of the top of PAM pulses :

1- Natural PAM

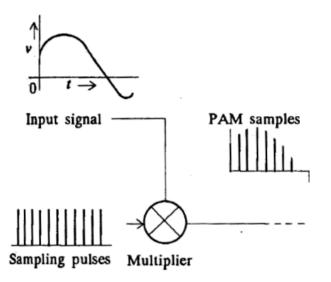




2- Flat top PAM

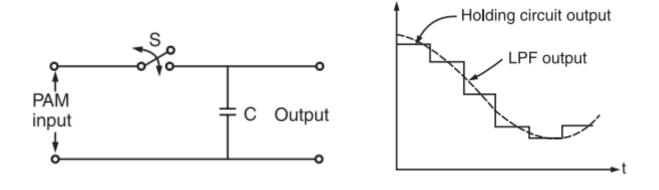


## PAM modulation circiut:





## PAM demodulating circuit:



4