**AIM: To study Pulse Amplitude Modulation.**

**APPARATUS:** Dual traces CRO, PAM kit, connecting leads.

**THEORY:**

In PAM, amplitude of pulses of carrier pulse train is varied in accordance with the modulating signal. Fig. explains the principle of PAM. A signal i.e. baseband is shown in fig. and carrier pulse train f(t) is also shown. The frequency of carrier train is decided by sampling theorem. A pulse amplitude modulated signal fc(t) is shown. It can be seen that the amplitude of pulse depends upon the value of f(t) during the time of pulse.

**BLOCK DIAGRAM:**



Fig.1: PAM Modulator

**PROCEDURE**:

1. Using connecting leads connect the output of sampling pulse generator to input-1 of PAM modulator and output of modulating signal generator to input-2of the PAM modulator.
2. Now after switching on the mains power supply adjust the frequency of the sampling pulse generator and level of modulating signal to obtain the PAM waveform on CRO.
3. Trace these waveforms on tracing paper.

**RESULT:** Pulse Amplitude Modulation & Demodulation is studied.

**PRECAUTIONS:**

1. Switch off the experimental kit during making connections.

2. Adjust the frequency of pulse trains carefully to get reasonable PAM waveforms.

3. Use the CRO carefully.

