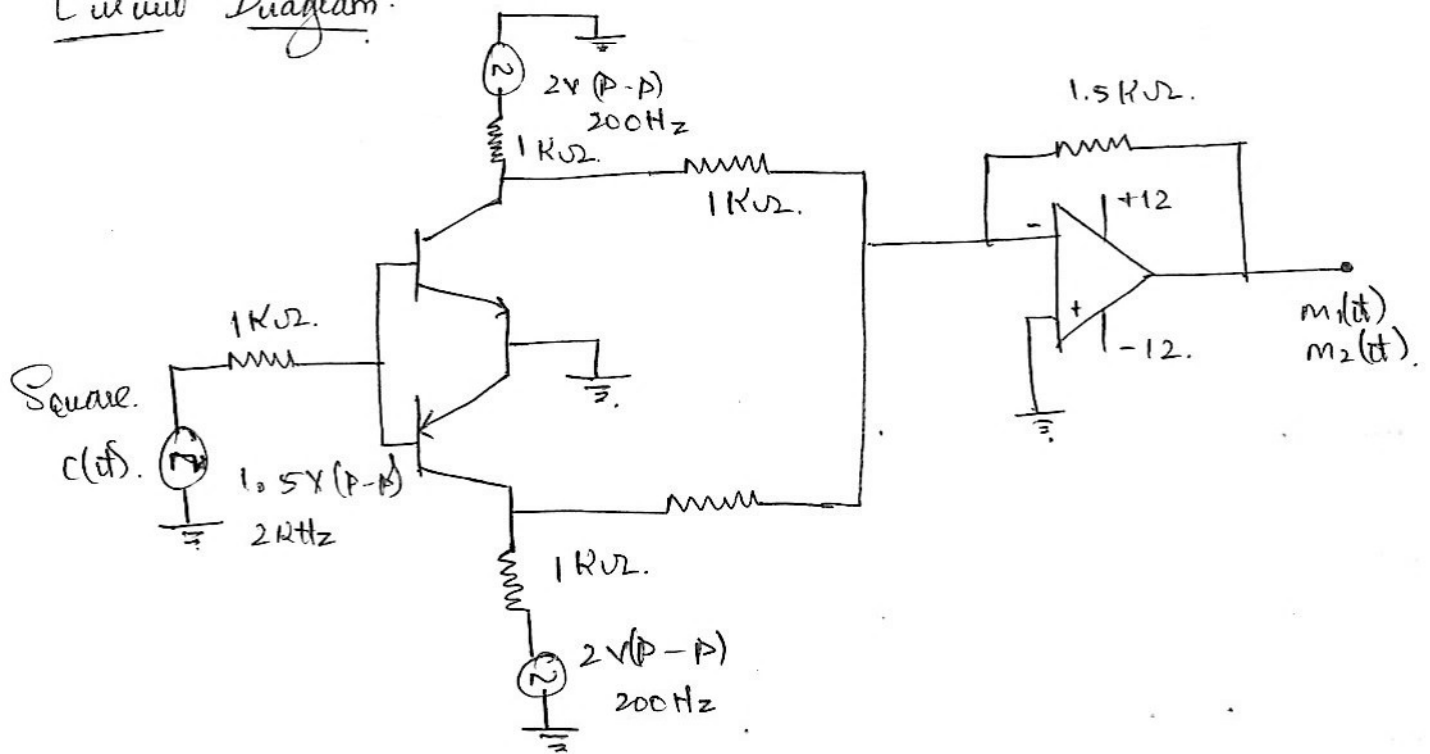① TDM and TDM demux.

② Delta modulation

Hardware Simulation:

Aim: To design & demonstrate the working of TDM and recovery of two band limited signals of 2 signals.
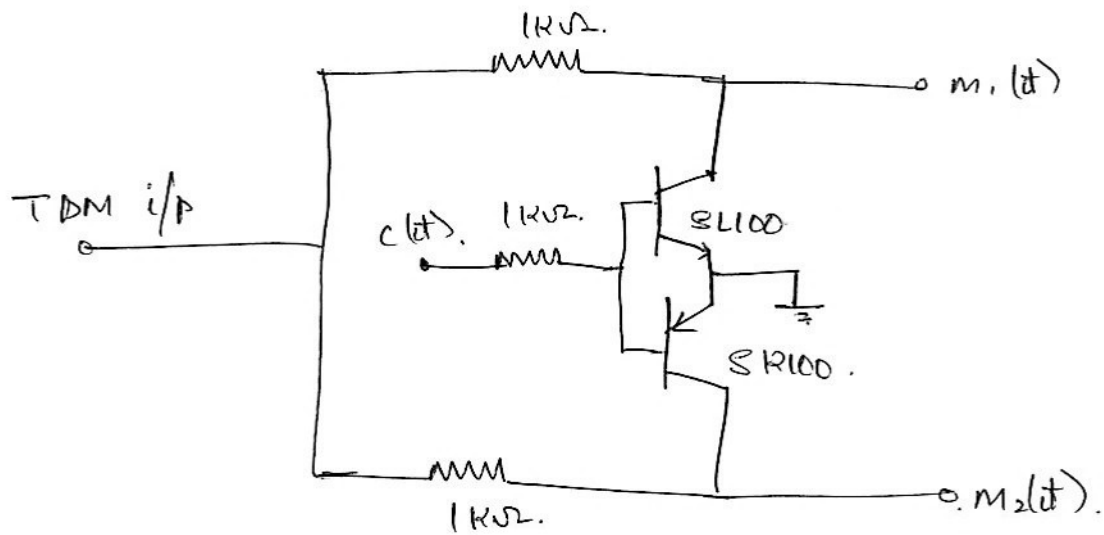
Components Required:

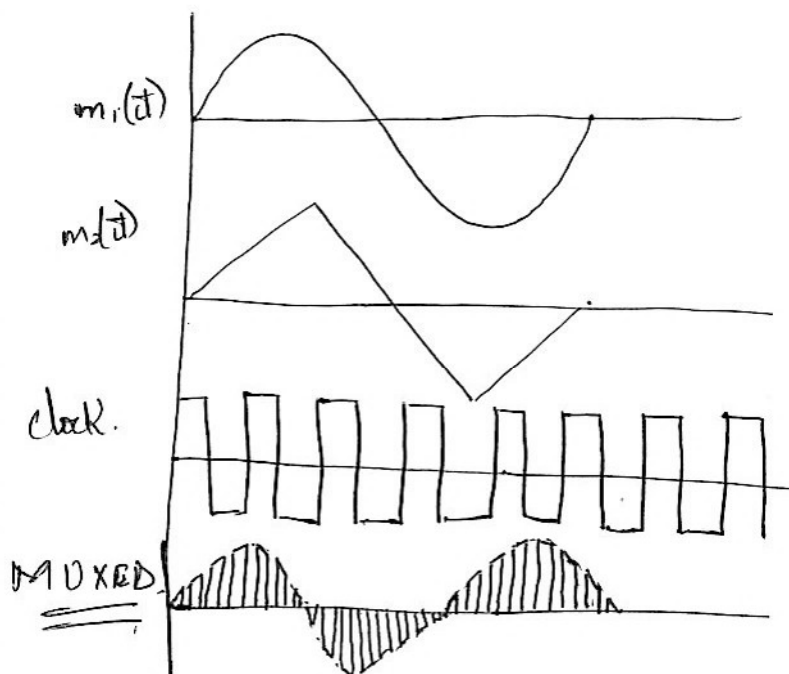Transistors SL100, SK100, Resistors 1KΩ, 1.5KΩ, Opamp μA 741.

Circuit Diagram:

TDM - Multiplexer.

$1 K\Omega$

TDM i/p

$c(t)$. $1 K\Omega$

$SL100$

$SR100$.

$m_1(t)$

$m_2(t)$.

Demultiplexer.

Theory:

→ TDM is used for transmitting several signals over a single channel.

→ Each signal is transmitted in this given time slot.

→ Very reliable and highly efficient in transmission.

→ There is no cross talk in TDM. But disadvantages include timing synchronisation requirement.

$m_1(t)$

$m_2(t)$

clock.

MUXED.

Results: The hardware simulation of the TDM circuit was built and demonstrated. One of the major disadvantage of TDM ie Jitter was also shown.

The simulation of DM in simulink was demonstrated with applications & advantages specifically discussed.