Purchase		1,80,000/-	
Sales returned		29000/-	
Total		4,00,000/-	4,00,000/-

Networking

(Line Coding

Digital Data to Digital Signal

Model - 1

NRZ — 1- Above the ref.L $\Big\}$ rule
0- On the ref.L

Model - 2
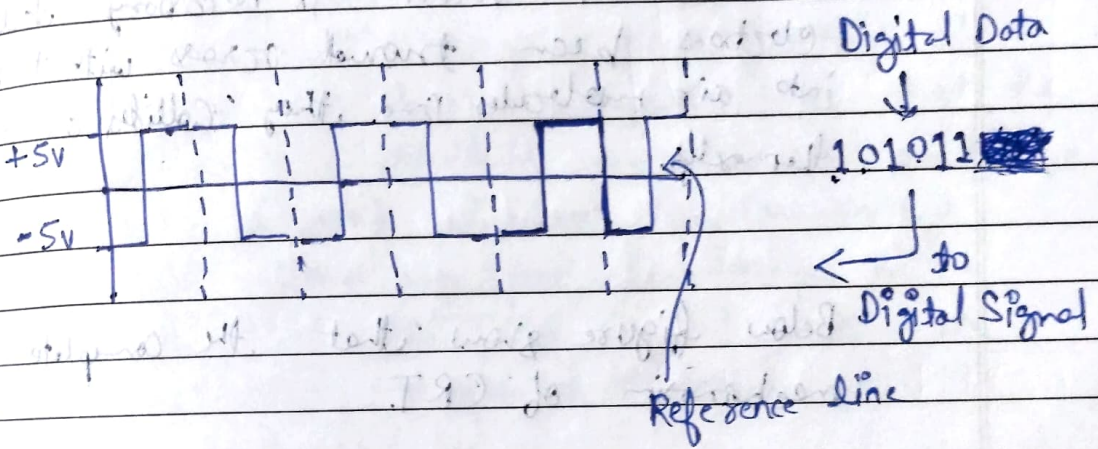
NRZL

1- Below the RL $\Big\}$
0- Above the RL

module

Manchester

→ Each bit will transite in the middle, used in Ethernet

IEEE 802.3 (org.)

1 → -ve to -ve

0 → +ve to -ve

Digital Data
↓

+5v

-5v

1 0 1 0 1 1

to

Digital Signal

Reference line

Different Models types. ←

NRZ

NRZ-L

NRZ-I

RZ

Manchester

Differential Manchester

AMI

Pseudo ternary

MLT - Multilevel transmeet.

Networking

18/03/2024

** Digetal to Analog modulation

ASK $\longrightarrow$ Amplitude (Peck)
FSK $\longrightarrow$ Frequency (No. of cycles per unit)
PSK $\longrightarrow$ Phase (Angle of signal)

ASK ⌐~ ~~Ex~~ FSK X
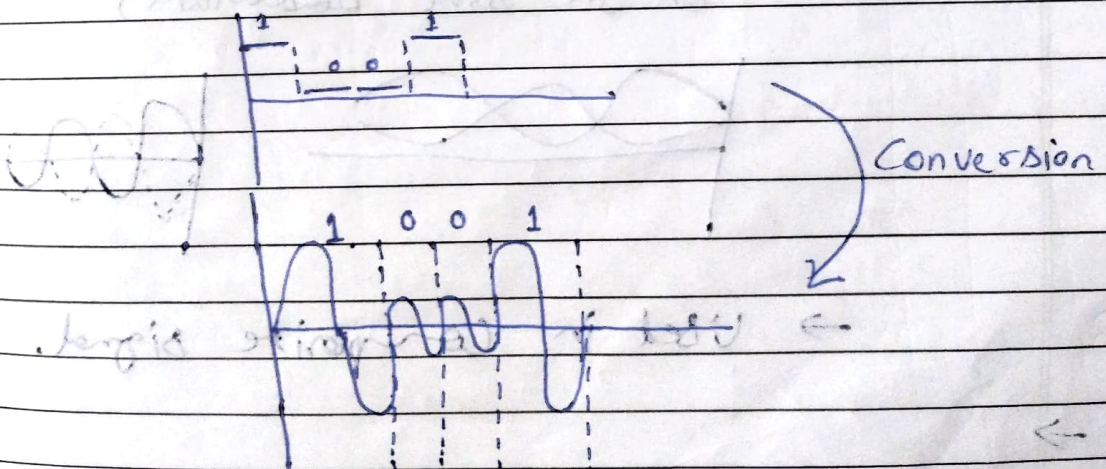PSK └─┤
        $\longrightarrow$ QAM -- Quadrature Amplitude
                                    Modulation

ASK — Amplitude Shift Keying
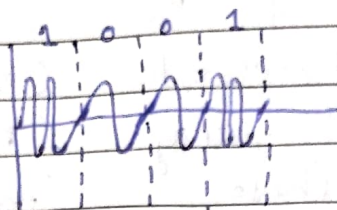FSK — Frequency   "   "
PSK — Phase   "   "
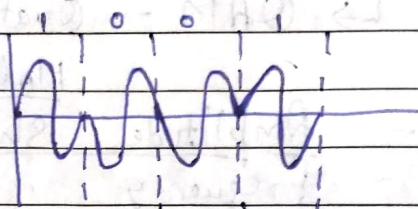

ASK — Amplitude Shift keying

Assumed Value — 1001

Conversion
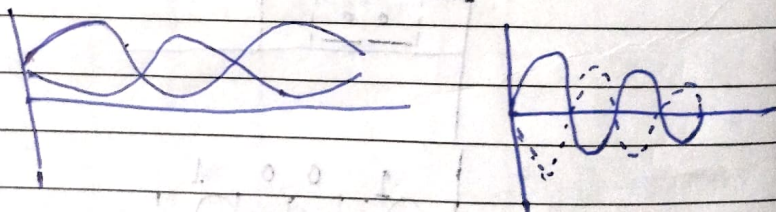
FSK - frequency shift keying.

value - 1001

PSK - Phase shift keying   value - 1001

QAM - Quadrature Amplitude modulation

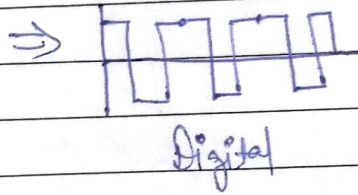(Used to transfering composite signals)
on the same bandwidth)
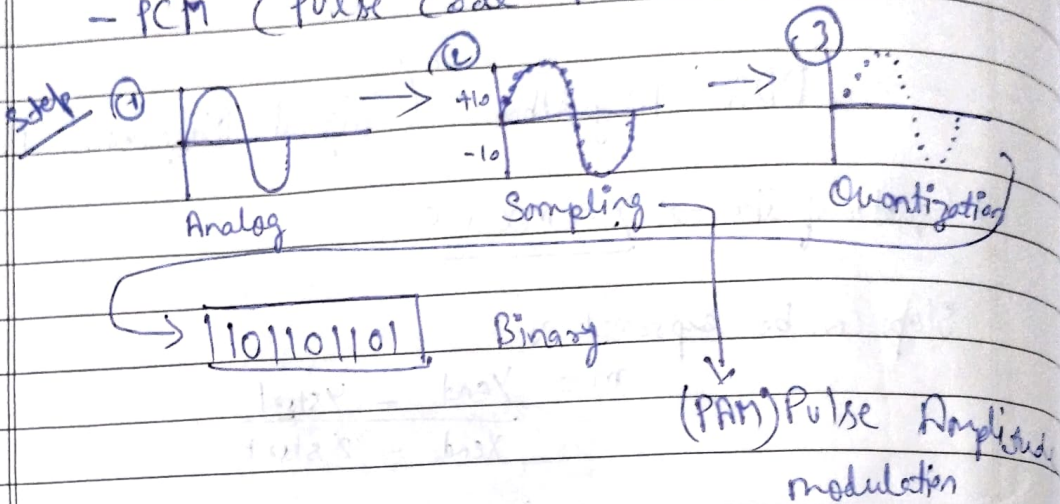

→ Used in composite signal.

→

Networking

* <u>Analog</u> to Digital Signal   [G MODEM]

   - PCM (Pulse Code modulation)

step ①   Analog   © Sampling   ③ Quantization

     +10
     -10

→ |10|101|01| Binary

(PAM) Pulse Amplitude modulation

⇒

Digital

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* <u>Multiplexing & Demultiplexing :-</u>

→ Multiplexing :- It is used in transmission of
data signal by combining multiple signal
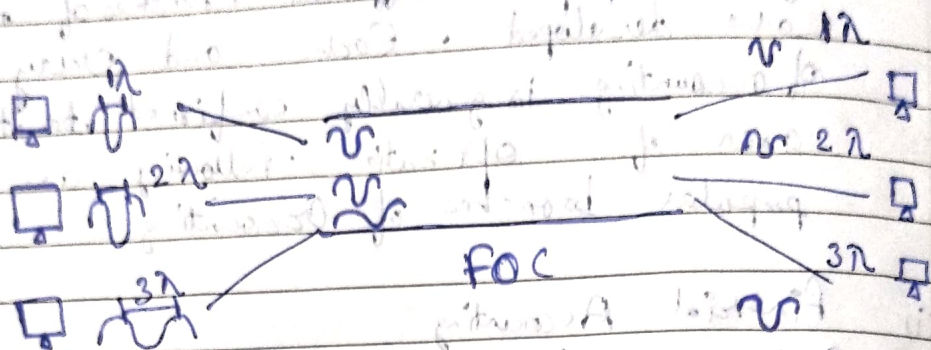at the same link for the maximum
utilization of the bandwidth of the link

    Type of multiplexing.

      ① FDM (Frequency Division multiplexing)
      ② TDM (Time Division multiplexing)
      ③ Wavelength Division multiplexing (WD
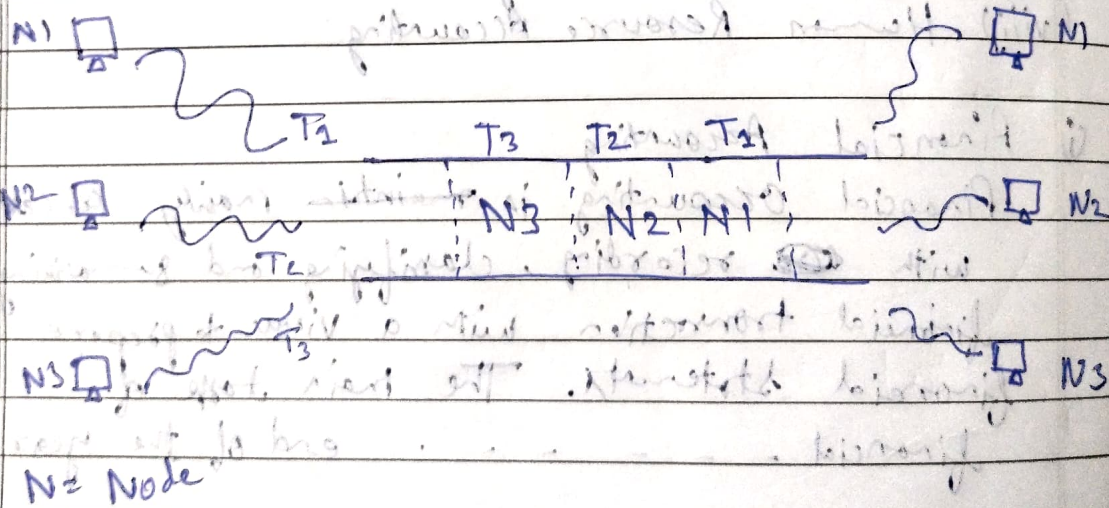
(i) FDM

Multiplexing   Demultiplexing

MUX

1 MHz

2 MHz

3 MHz

4 MHz

Single Multiplexed Line.
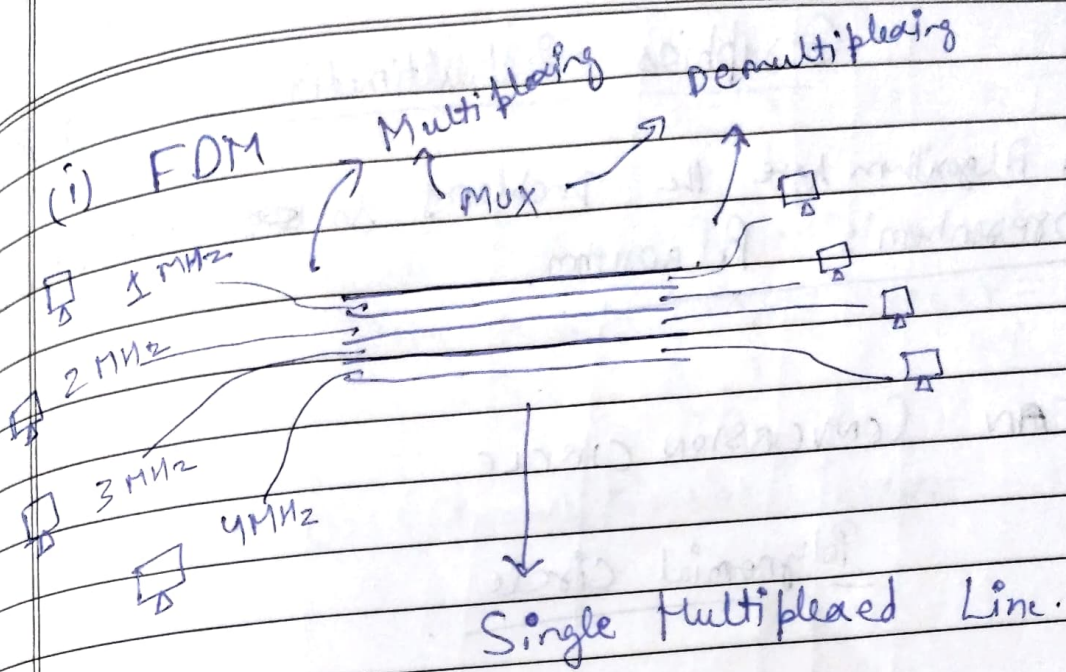
Networking

* WDM (Wavelength Division Multiplexing)

FOC

* Time Division Multiplexing (TDM)

N = Node

T = Time

Switching → This tell us how data will go or travel. one end to another.

GSM - Global System for mobile communication

TDM → It is used in GSM.