



from the Truth Table we can directly write
Boolean funct. output as

$$Y_3 = S_1 S_0 \bar{T}$$

$$Y_2 = S_1 S_0 T$$

$$Y_1 = S_1' S_0 \bar{T}$$

$$Y_0 = S_1' S_0 T$$

The circuit Diagram of 1x4 De-Multiplexer

De-Multiplexor

1×4

$S_1 \quad S_0$

Truth Table

Selection inputs

S_1

S_0

y_3

y_2

y_1

y_0

0

0

0

0

0

0

0

1

0

0

1

0

1

1

0

0

0

1

1

1

0

0

0

1

Digital Electronic.

NAMES : MD AMAAN

ENROLLMENT : AJU/191595

Aim :- What is a Demultiplexer? Draw the logic circuit of 1:4 demultiplexer and discuss its working

Experiment :-

Q. What is Demultiplexer?

→ It is a combination circuit that performs the reverse operation of Multiplexer. It has single input of 2^n output lines and maximum n selection lines. The input will be connected to one of these based on the values of selection lines. DE-Multiplexer is also called as De-MUX.

1x4 DE - Multiplexer has one input I and Selection lines S, & so and four output Y₃, Y₂, Y₁, & Y₀.

The block diagram of 1x4 De-Multiplexer is shown in the following figure.