

# CMOS INVERTER

cmos  $\rightarrow$  nmos & pmos

$V_{gs}$	PMOS	NMOS
0 or Negative voltage	ON	OFF
5V	OFF	ON

$\rightarrow V_{gs} = 0$  &  $-ve$

$\rightarrow V_{gs} = +ve$

$V_{gs}$	pmos
$-ve$ (or) $0V$	ON
$5V$	off

## 7.9.1 CMOS Inverter

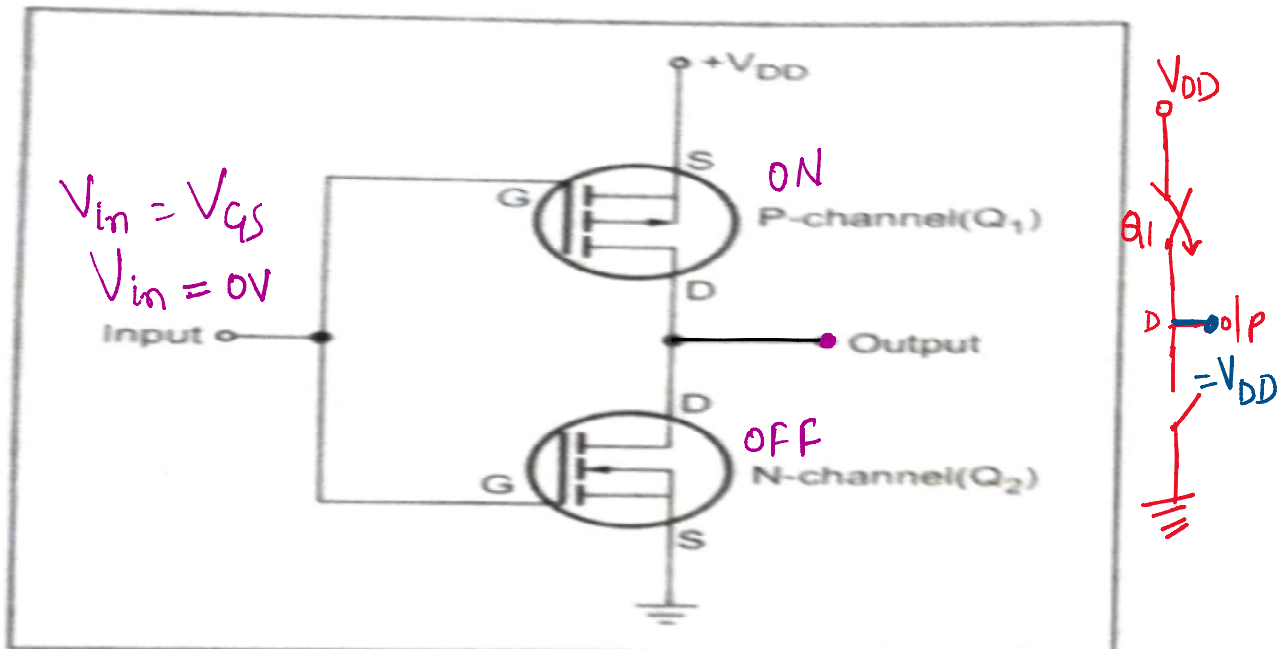


Fig. 7.32 CMOS inverter circuit

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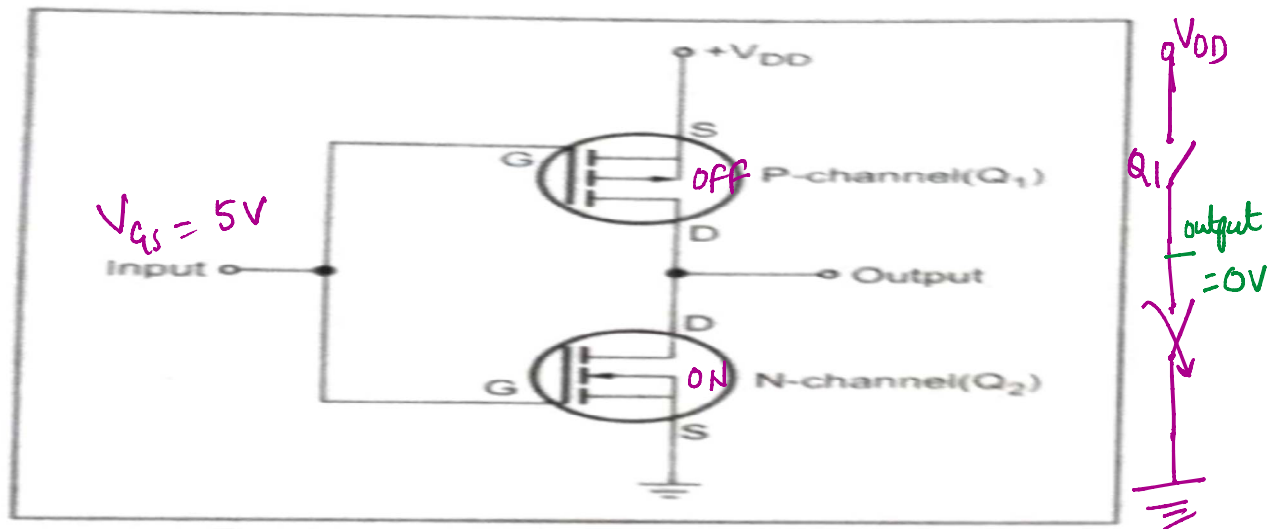
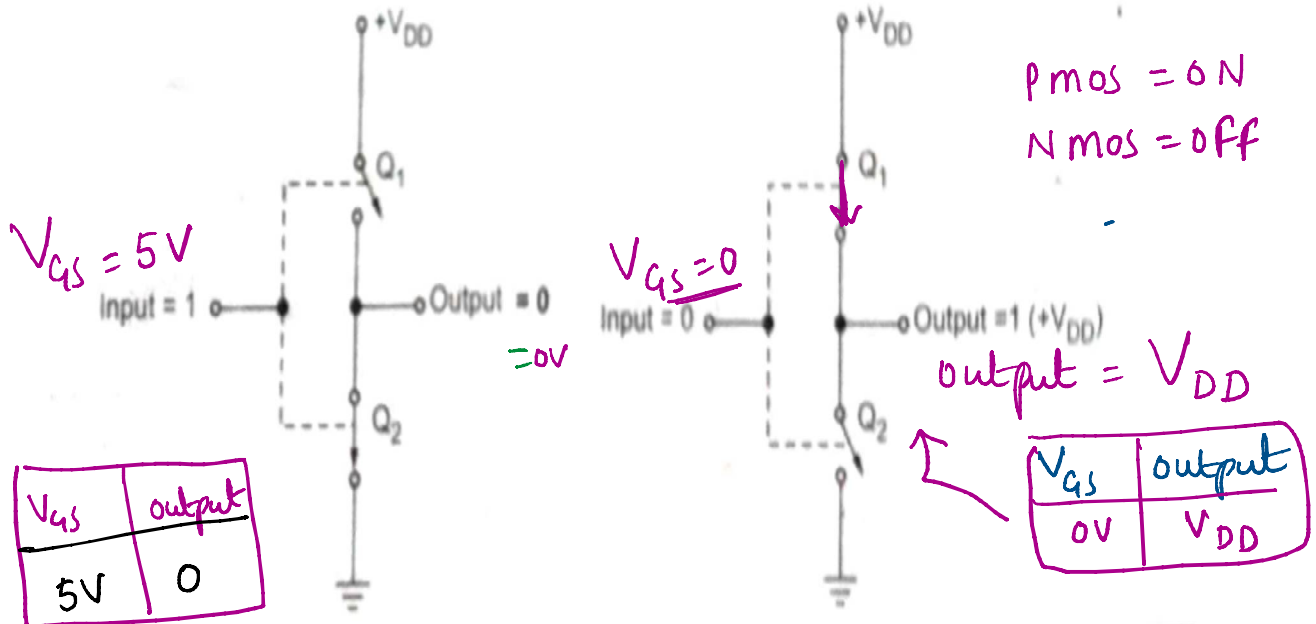


Fig. 7.32 CMOS inverter circuit



$V_{GS}$	output
0V	$V_{DD} = 5V$
5V	0


NOT  
  
 $\approx$  Inverter

Table 7.13 summarizes the operation of CMOS inverter circuit

A	$Q_1$	$Q_2$	Output
0	ON	OFF	1
1	OFF	ON	0

Table 7.13 Truth table of inverter