# CS & IT ENGINEERING

Digital Logic

## Logic Gate

DPP 01

Discussion Notes

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01 Questions

02 Discussion

# Q.1

The input wave form is given


A·1 = A

Draw output wave form

A. 

B. 0 ——————

C. 1 ——————

D. 

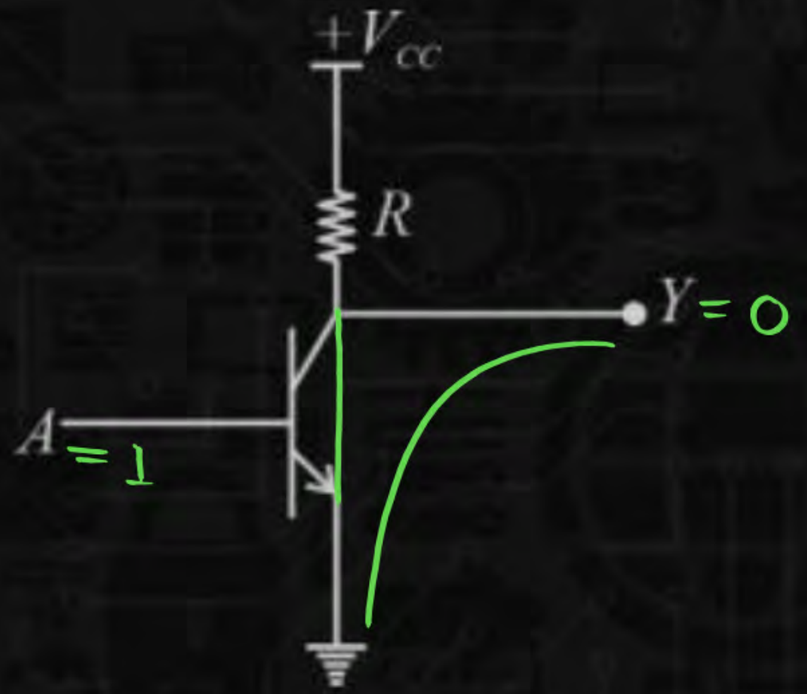
**Q.2** When A = 1 then the value of Y equal

A. 0

B. 1

C. $V_{CC}$

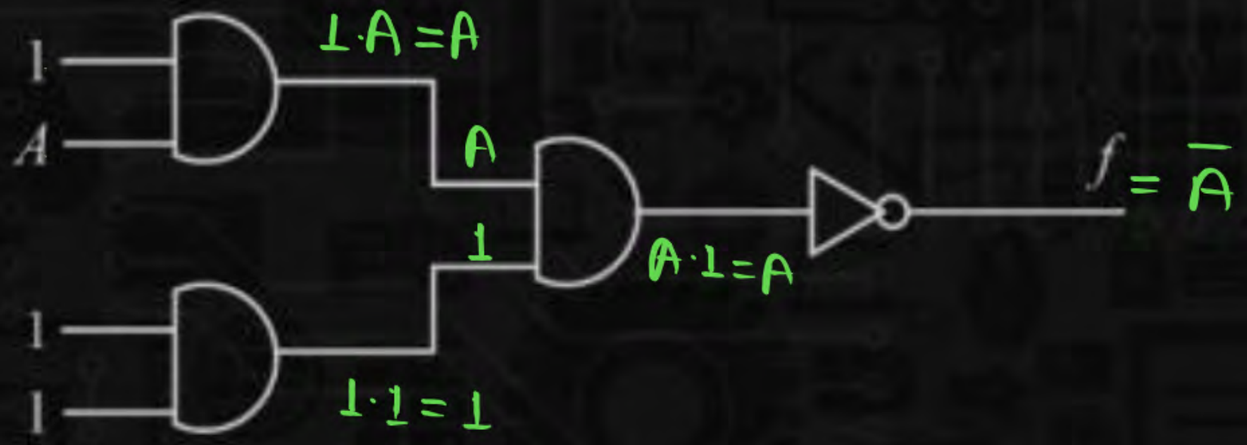
D. none of the above




input = 0 OFF

input = 1 ON

# Q.3




Find value of f ?

A. 1

B. 0

C. A

D. $\overline{A}$

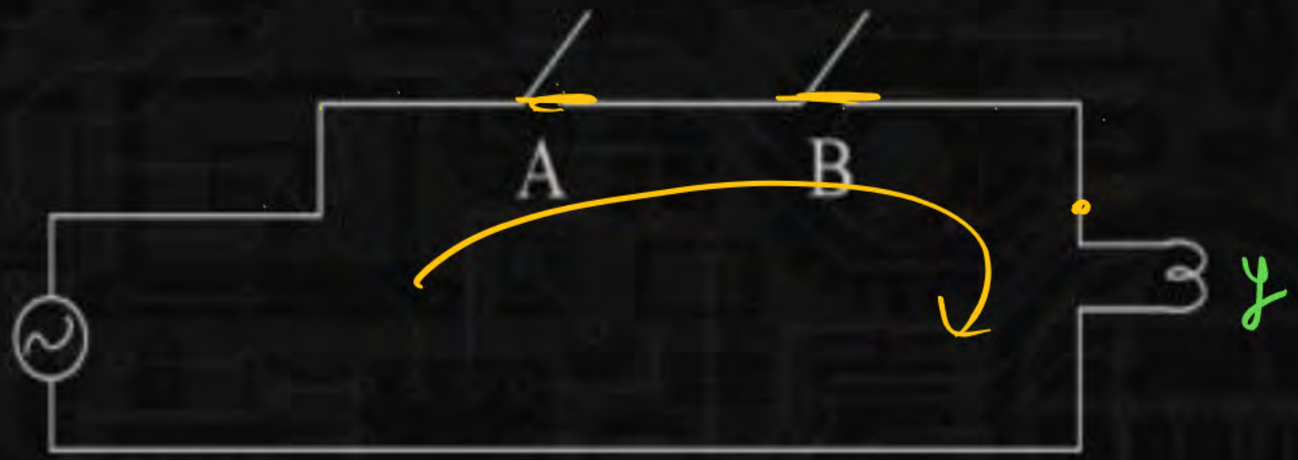
**Q.4** Bulb will glow when A and B are respectively.

A. 00

B. 01

C. 10

D. 11




| A | B | y |
|---|---|---|
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

## Q.5

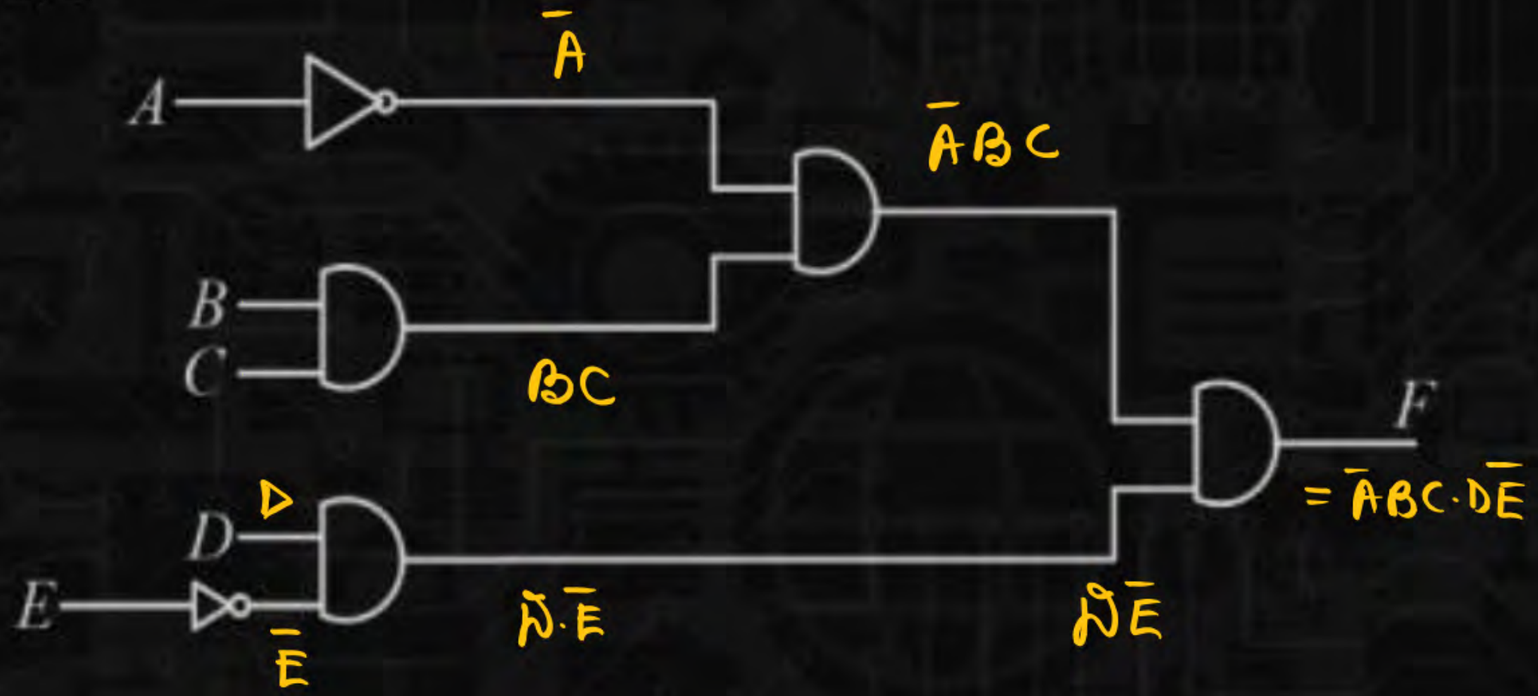
Find expression of F

A. $\bar{A}BC + D\bar{E}$

B. $\bar{A}BCD\bar{E}$

C. $(\bar{A} + BC)D\bar{E}$

D. $\bar{A}BC(D + \bar{E})$



Q.6 The inverter is _____ gate

A. AND

B. OR

C. NOT

D. none of the above

Inverter, Negation, NOT GATE

Complement Logic

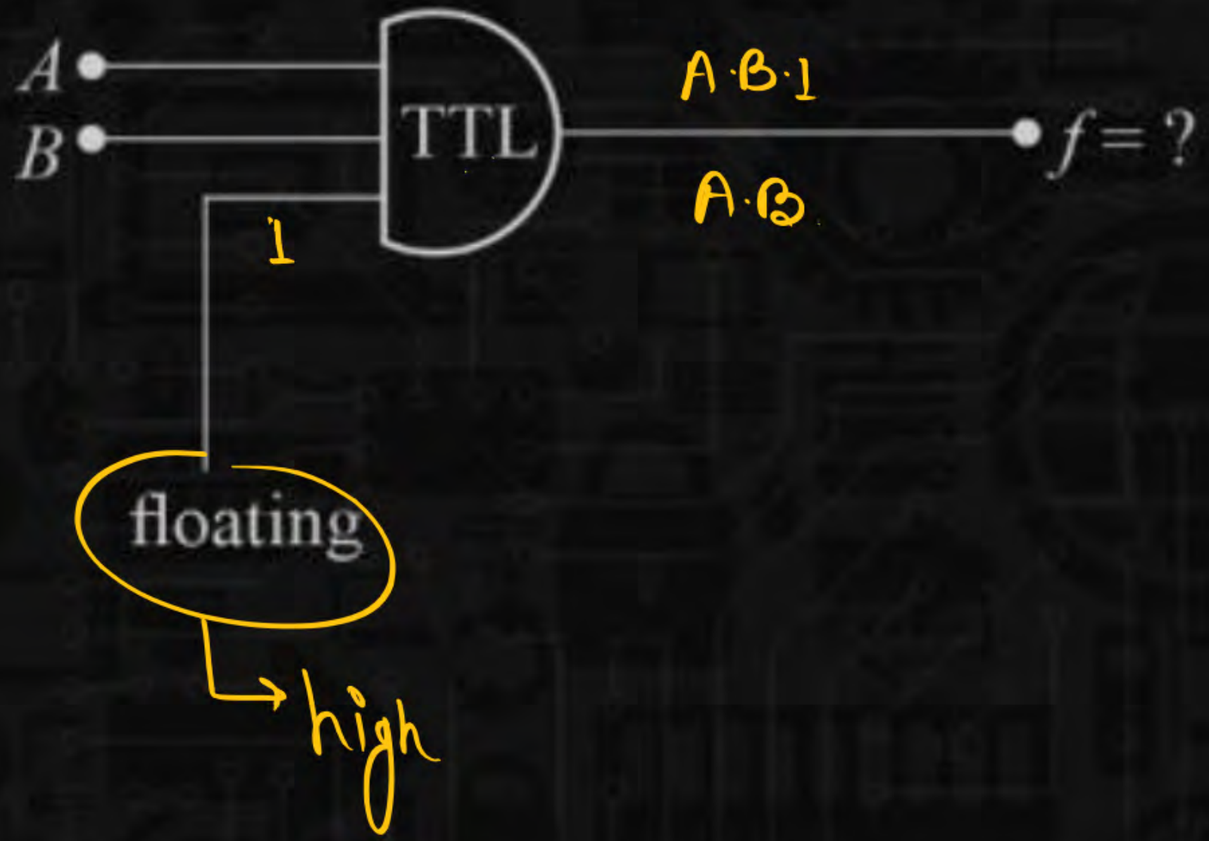
Q.7 Find expression of f ?

A. AB

B. 1

C. A + B

D. $\overline{AB}$



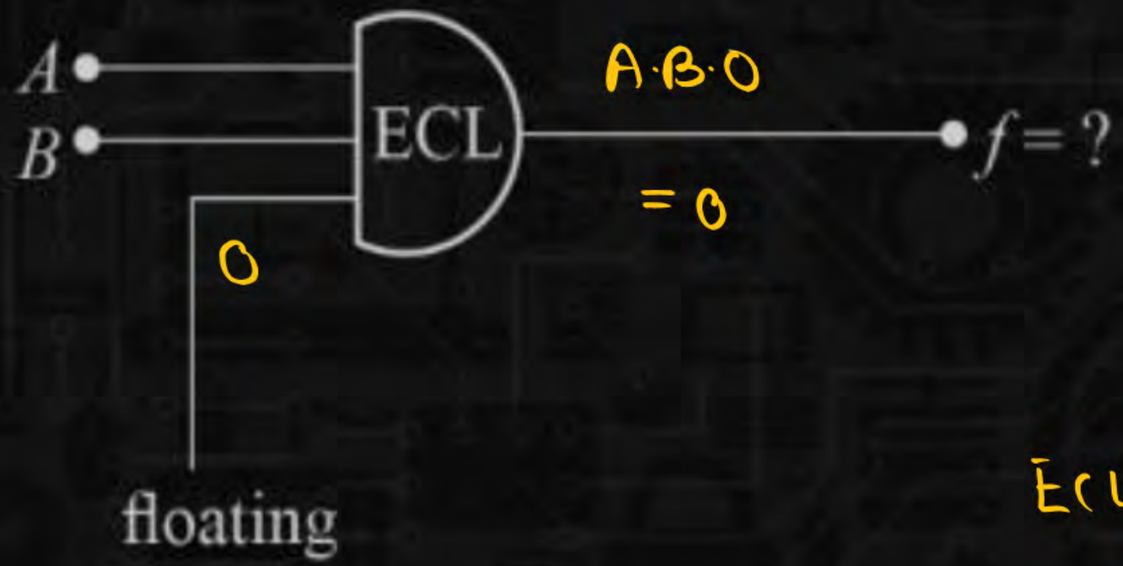
## Q.8 Find expression of f ?

A. 0

B. 1

C. AB

D. $\overline{A}$




ECL → Emitter coupled Logic

**Q.9** Find output frequency, if the propagation delay of NOT gate is 2 n sec.

$2\ n \rightarrow 10^{-9}$

A. 125 MHz

B. 500 MHz

C. 250 MHz

D. none of the above


$$f = \frac{1}{2N\tau_{pd}} = \frac{1}{2\times 1\times 2\times 10^{-9}}\ {}^{1}/_{sec}\ (Hz)$$

$$= \frac{10^9}{4}\ Hz$$

$$= \frac{1000\times 10^6}{4}\ Hz$$

$$= 250\ MHz$$


THANK YOU GW
SOLDIERS !