

26/03

DIGITAL SYSTEMS

(1)

TUESDAYProgrammable Logic Arrays (PLA)

$$F_1(A, B, C) = A\bar{B} + BC$$

$$F_2(A, B, C) = B + A\bar{B}$$

$$F_3(A, B, C) = BC + \bar{A}\bar{C}$$

$$F_4(A, B, C) = \bar{A}C + B\bar{C}$$

→ Terms required

$$A\bar{B}$$

$$BC$$

$$\bar{A}\bar{C}$$

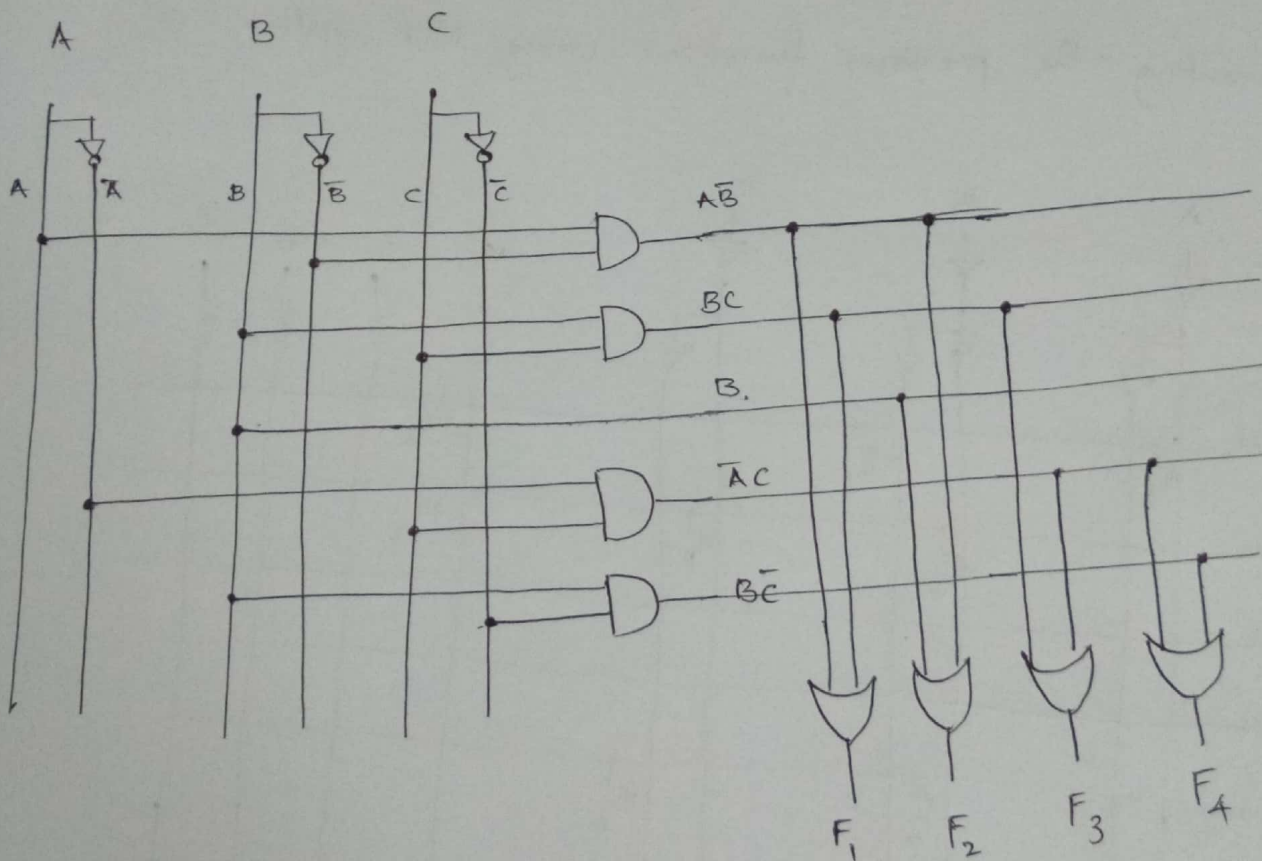
$$B\bar{C}$$

Quiz-1 → 12

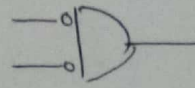
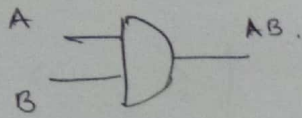
Quiz-2 → 12

Tutorials → 11

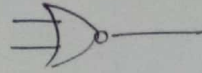
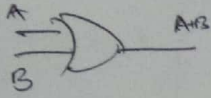
End Sem → 35

 Lab → 30
 100.


NOR & NAND → UNIVERSAL GATES



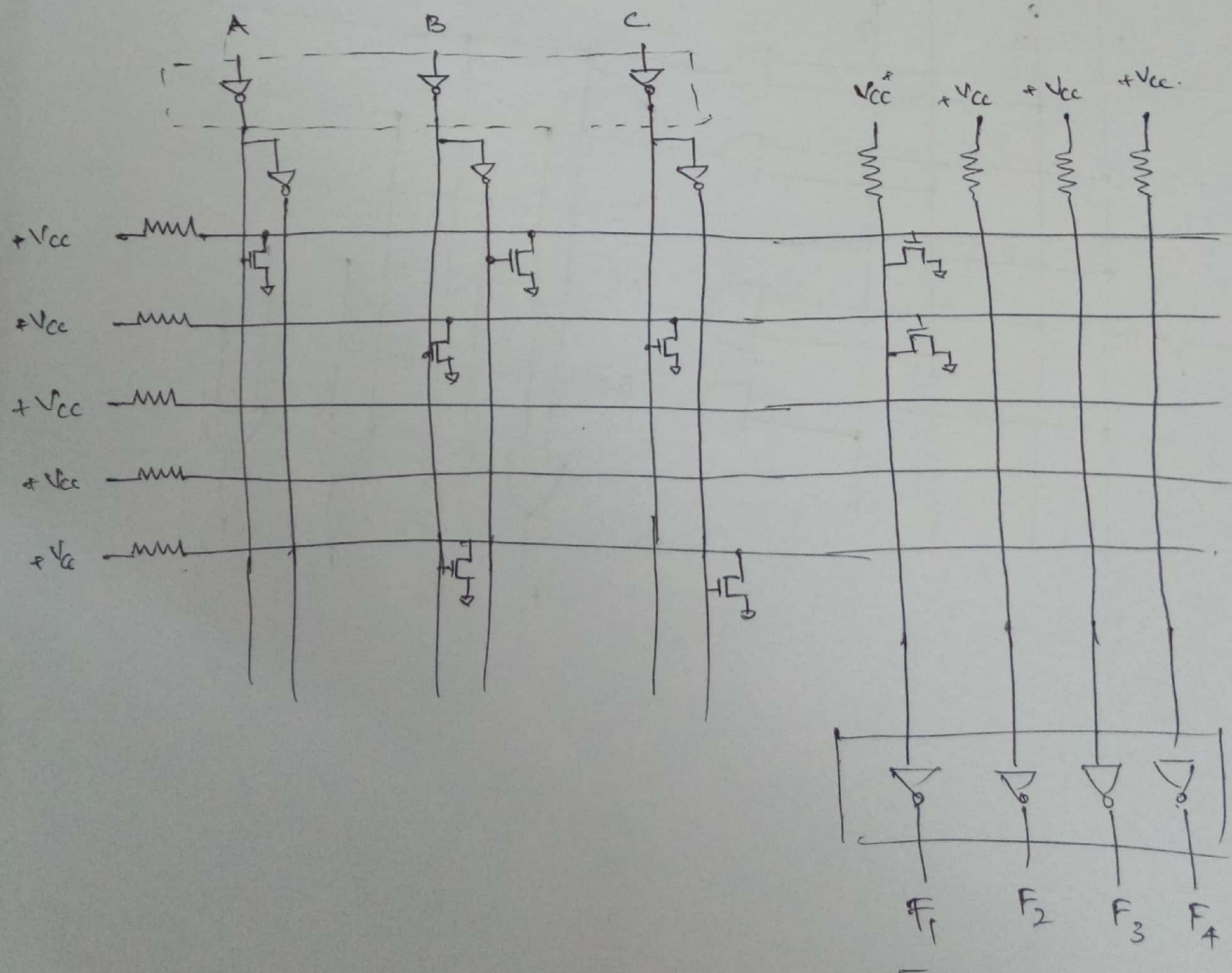
INVERT - AND (NOR)



OR - INVERT (NOR)

All AND & OR GATES can be replaced by NOR,

Implementing the previous functions using NOR-gates.



Terms	A	B	C	F_1	F_2	F_3	F_4
$A \bar{B}$	1	0	—	1	1	—	—
BC	—	1	1	1	—	1	—
B	—	1	—	—	1	—	—
$\bar{A}C$	—	1	0	—	—	1	1
$B\bar{C}$	—	1	0	—	—	—	1