

as given low level, $V(o)=0.2V$ and high level, $V(1)=5V$

case 1, when all the inputs are HIGH

$I(1)$ in mA:

0.56

$I(2)$ in mA:

0.16

collector current(in mA):

2.1818182

transistor is in saturation mode

fan out is given by $I(c) \leq h(FE)I(B)$