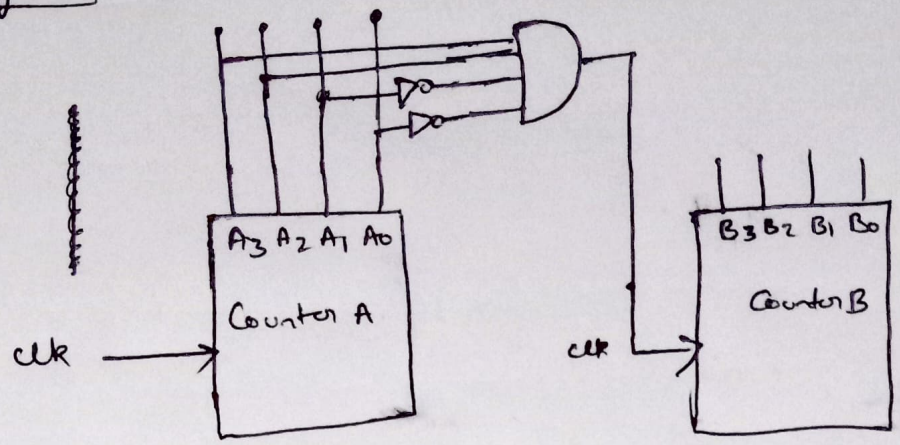
Assignment : [Kishan.G.N | G-15 VLSI]

1)



2) $T = \frac{1}{f} = \frac{1}{1\times10^{6}} = 1\times10^{-6} =$ 1 μsec

no. of clocks $= \frac{0.2\times10^{-3}}{1\times10^{-6}} = 200$ clocks [T = 0.2 millsec = 0.2×10^{-3}]

→ Counter A o/p after 200 clocks is 0111.

∵ total no. of states is 16 ($2^4 = 16$).

0000 ⟶ 1111

$$16\overline{)200}\ (12$$
$$-16\downarrow$$
$$40.$$
$$-32$$
$$8.$$

∴ 8th state which is 7 in decimal.

→ Counter B o/p after 200 clocks is 0100

∵ 12 clocks will be applied to counter B.

∵ 16 − 12 = 4

3) clk freq = 1MHz.

frequency of B0 is = $\frac{1MHz}{2} = 0.5MHz$.