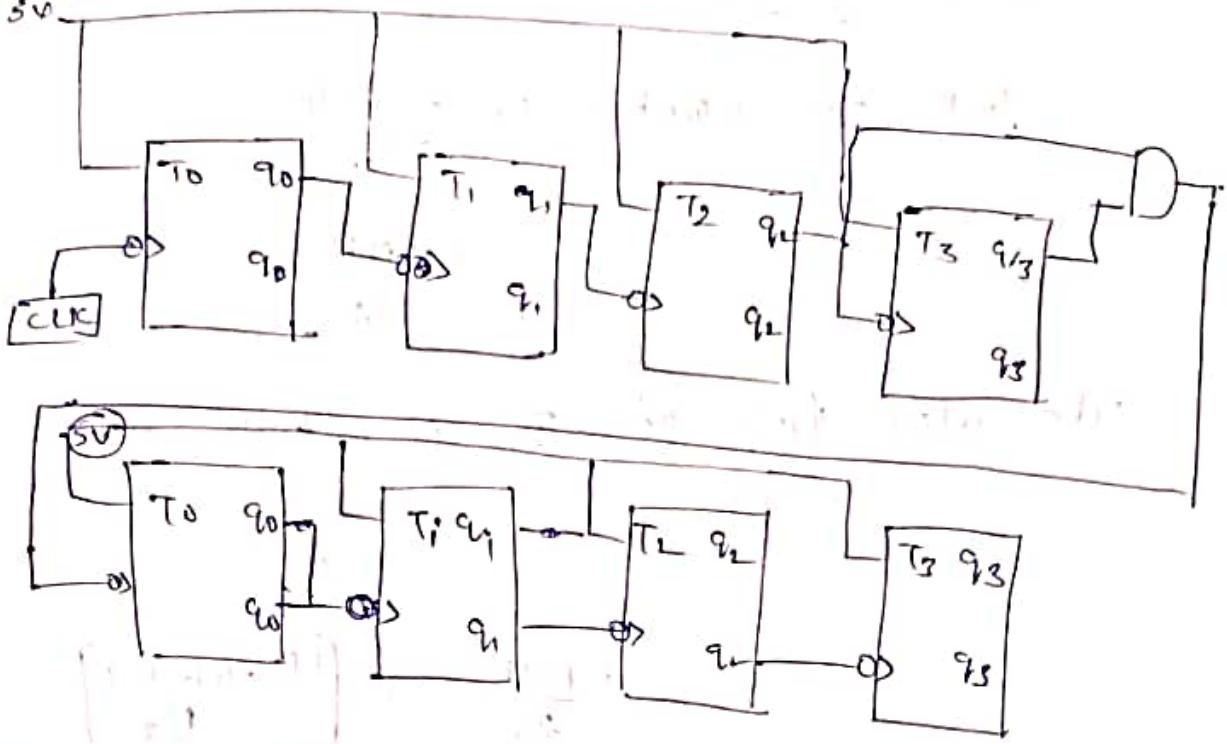
Assignment

(1) (4)



(2)

$T = 1\,MHz$

$T = 1$ micro second

no: of pulses $\Rightarrow \frac{0.2 \times 10^{-3}}{1 \times 10^{-6}}$

$\Rightarrow$ 200 pulses

Counter A

16) 200 (12
26
'40
32
8 → 8th clock pulse
→ decimal value = 7

Counter B

⇒ 1st state changes for 12 pules;

⇒ 200 − 12 = 188; next change for 16 pules

16) 188 (11
16
28 → Total = 11 + 1
16 = 12th clock pulse
12
→ decimal value = 3

(3) Frequency B0

Clock for counter is = $\frac{\text{fclk}}{12}$

$\rightarrow \frac{1\text{MHz}}{12}$

The o/p freq of B0 is = $\frac{\frac{\text{fclk}}{12}}{2}$

$= \frac{\text{fclk}}{24} \Rightarrow$ 41666.67 hz