1. For the given digital circuit, $A = B = 1$. Assume that AND, OR, and NOT gates have propagation delays of 10ns,10ns, and 5ns respectively. All lines have zero propagation delay. Given that $C = 1$ when the circuit is turned on, the frequency of steady-state oscillation of the output Y is _____.
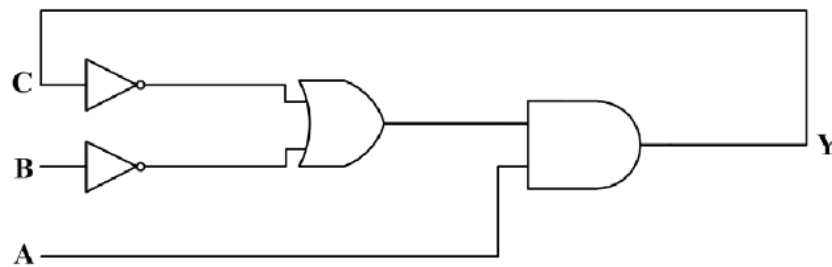
(GATE IN 2023)

Figure 1: Image

(a) 20MHz

(b) 15MHz

(c) 40MHz

(d) 50MHz