第七周

1. (1) $T_{pipe} = 2ns$ ($\because \frac{T_0}{5} = 1.4ns < T_{MEM} = 2ns$)

(2) $m = 5$

$$S = \frac{n \cdot T_0}{m \cdot T_{pipe} + (n-1) T_{pipe}} = \frac{n \cdot 7ns \frac{7}{2}}{5 \cdot 2ns + (n-1) 2ns} = \frac{7}{2} \cdot \frac{n}{n+4} = 3.5$$

(3) $T_{pipe} = 0.1ns$

$m = 70$

$$S = \frac{n T_0}{m T_{pipe} + (n-1) T_{pipe}} = \frac{n \cdot 7ns}{7ns + (n-1) \cdot \frac{0.1ns}{7}} = 70$$