

Quiz 5 (5 Minutes)

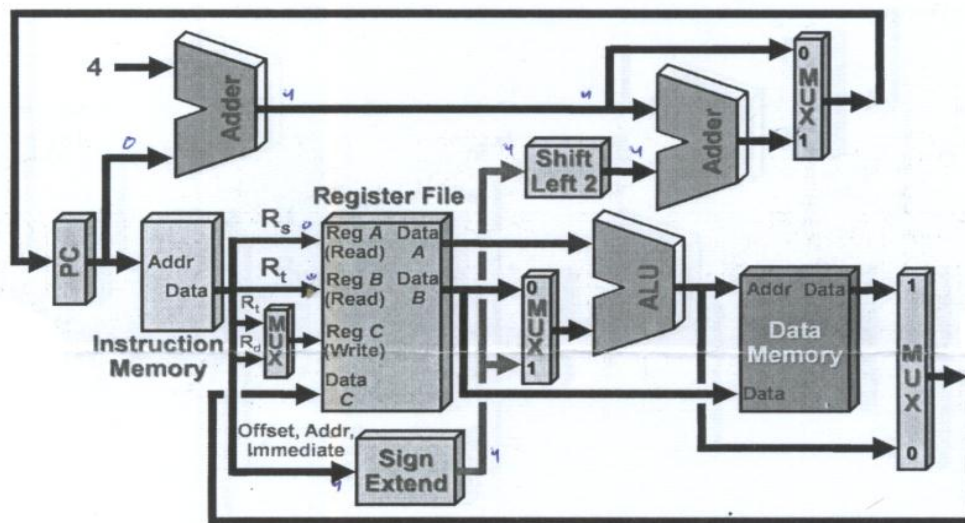
Student Name:

ID:

Student Serial Number (1 – 34):

Question: In the shown datapath, assuming $\tau_{\text{Reg}} = \tau_{\text{ALU}} = \tau_{\text{Adder}} = \tau_{\text{Mem}} = 20$ ns and all other delays are negligible, determine the delay time it takes to fetch and execute the instruction: "JUMP +4"
(2 Points)

Opcode	R_s	R_t	Offset
JUMP	0	0	+4



Solution:

$$20 + 20 = 40 \checkmark$$

$$\tau_{\text{Adder}} + \tau_{\text{Mem}}$$