

(3) Processor Y

Clock Rate = 46412 (PU Time = 7×101 × 5

TCA = 7×109

CPI = 5 = 8.756

:. Speed up = CPU Time (Processor X)

CPU Time (Processor Y)

= 15 = 1.714

8.75

: Program A runs 1.714 time factor on Y man X

4 Uork Rate = (R

CRoid = 1×109 Nz IC = 9×109 CPI = 1.5

CR new = 2×109 Nz IC=9×109 (Assuming some)

by cru Time old = $9 \times 10^{4} \times 1.5 = 13.55$ 107 = 13.55

hy CPO Time = 13.5 = 3.375 s

: CPI new = CPU Time new x CRnew

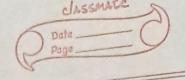
ICnew

= 3.375 x 2xy89

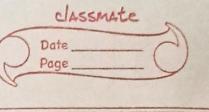
9xy87

= 0.75

.. Average (PI of Program A = 0-75 on new design ==



(5)	Total power - 80 W	⇒ Assuming Dynamic Power = 4 Static Power 1						
	CR - 2×10 " 112	Static Power						
	Voltage = 6V	4x+x= 80 7 X=16						
		PPola = 64 w 6 Pola = 16 w						
(a)								
	Prola - 64 W (4:1 natio)							
	&R new = 5 × 10 1 Mz							
	: Dynamic Power - (5x10) x 64							
	consumed (xxxx)							
	= 160 W							
4								
(4)	Voltage new = 2V							
h	Static Power & Voltage ~ N* V* e-V*							
	in Static Pan xxx = (2) x 16							
	(New) = $\left(\frac{2}{5}\right) \times \frac{16}{5}$							
	= 6.4 W							
	0 . 0 . (.)	. , 2						
"	Dynamic Power & (Voltage)2							
	: Dynamic Power = 4 x 64 (New) 25							
	(New)	25						
	= 10.24 \							
	: Total Power = 10.	24 + 6 . 4						
	=16.84W							
	<i>C</i>	1.4 - 2041 - 7044						
	:. Fraction of static	- 6.4 = 0.3846 = 38.46y.						
	· (auc)	(6.9)						



1	MIPS	Code	: (aithub	Repos
-		The same of the same of			

4 In the code, I have initialized the away for size 10.

413V