Find link vote first =>
$$\frac{link}{5milble}$$
 = $\frac{375 \text{ k bits}}{5 \text{ milble}}$ = 0.075 sec.

Traffic intensity => $\frac{\text{Feq. permin}}{60} \times \text{link vate}$ = $\frac{126}{60} \times 0.075$ = 0.15

Average access delay => $\frac{T}{(1-TB)}$ = $\frac{0.075}{(1-0.15)}$ = 0.0 88235 seconds

Total access time delay > 0.088235+2+4= 6.088235 seconds.

(i) New Access
$$\frac{T}{(1-T_8)} = \frac{0.075}{(0.4)(0.15)} = 0.07979$$
 Seconds

If cache hit => (0.6) (0)+ (0.4) (6.07479) = 2.431916 seconds,

$$T = \frac{375k}{10mil} = 0.0375$$
 Seconds

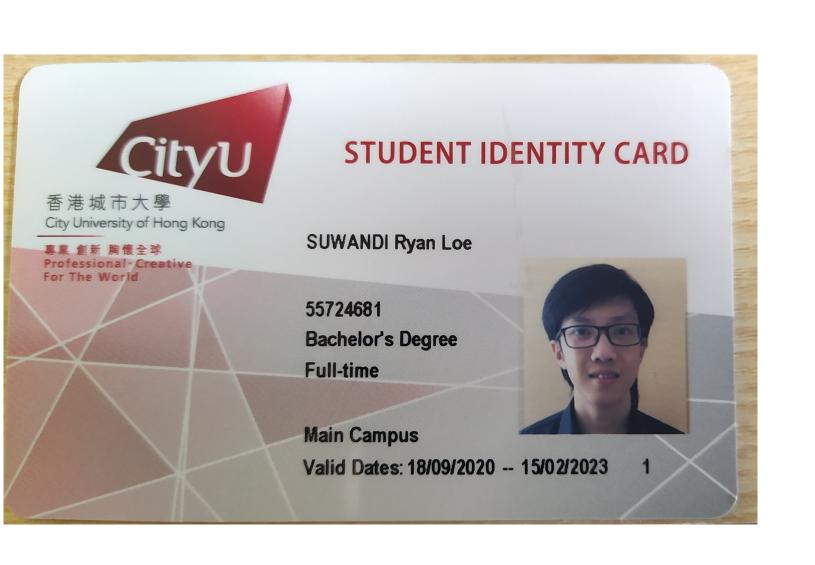
$$T_{B} = \frac{(20 \times 0.7)}{60} (0.0375) = 0.0525$$

$$T_{B} = \frac{(20 \times 0.3)}{60} (0.0375) = 0.0225$$

$$delay = \frac{0.0375}{1-0.0525} = 0.039578 \text{ Seconds}$$

$$delay = \frac{0.0375}{1-0.025} = 0.03836$$

Total time= 0.0395HX0.3 + 6.03836X0.7+th



2 6.0387254 Seconds