智慧型汽車導論　Homework 1

姓名：張庭維　學號：R0992217O

1. Part I

(1) What is the worst-case response time of M_0?

Iteration	LHS(Q_0)	B_0	RHS	Stop
1	30	30	30	yes

worst-case = 30+10 = 40

Ans: 40 ms

(2)

Iteration	LHS(Q_1)	B_1	j	Q_1+z	T_j	$\lceil \frac{Q_1+z}{T_j} \rceil$	C_j	RHS	Stop
1	30	30	0	30.1	50	1	10	40	No
2	40	30	0	40.1	50	1	10	40	yes

∴ worst-case = 30+40 = 70

(3)

Iteration	LHS(Q_2)	B_2	j	Q_2+z	T_j	$\lceil \frac{Q_2+z}{T_j} \rceil$	C_j	RHS	Stop
1	30	20	0 / 1	20.1	50 / 200	1 / 1	10 / 30	60	No
2	60	20	0 / 1	60.1	50 / 200	2 / 1	10 / 30	70	No
3	70	20	0 / 1	70.1	50 / 200	2 / 1	10 / 30	70	yes

worst-case = 70+20 = 90

Ans: 90 ms.