

IE 516 – Manufacturing Planning and Control

Fall 2014

Home Work # 2

Q1. Show that $L_{\max} \leq T_{\max} \leq \sum T_j$.

Q2. Consider the problem $1 \parallel \sum C_j^2$. Propose an algorithm for this problem, and prove that it is optimal.

Q3 Consider the problem $1 / r_j, pmpt / L_{\max}$. Determine the optimal schedule and prove its optimality.

Q4 Consider $1 \parallel \sum w_j T_j$ Prove or disprove the following statement:

If $w_j/p_j > w_k/p_k$,

$p_j < p_k$,

and $d_j < d_k$,

then there exists an optimal sequence in which job j appears before job k .

Q5. Problem 3.1, 3.2 3.6, 3.7, 3.8, and 3.10 from Pinedo Book.