

# SIMULATION DATE

$m$  is the total number of jobs,

$n$  is the total number of machines

$l$  is reentrancy times

$T(i,j)$  is the operation time of  $j$ th operation of job  $i$

$Q(i,j)$  is the processing machine of  $j$ th operation of job  $i$

$m=4 \& n=5 \& l=5$

$T=[20,10,39,24,33,17,26,22,19,24,30,36,33,37,34;$   
37,34,35,21,22,28,16,28,34,16,43,39,24,30,36;  
24,23,26,35,20,36,18,37,36,45,30,18,31,24,33;  
24,23,26,35,20,36,18,37,36,45,30,18,31,24,33;];

$Q=[3,2,5,1,4,3,2,5,4,2,3,1,3,2,3;$   
1,3,5,2,1,4,3,1,2,3,1,4,5,2,1;  
3,4,5,2,1,4,2,5,2,1,3,2,1,4,2;  
3,4,5,2,1,4,2,5,2,1,3,2,1,4,2;];

$m=5 \& n=7 \& l=3$

$T=[22,24,29,39,25,21,34,26,36,40,21,26,26,25,33,30;$   
22,24,29,39,25,21,34,26,36,40,21,26,26,25,33,30;  
38,35,29,36,30,20,20,38,37,21,29,33,31,32,26,28;  
39,20,34,36,36,39,23,24,20,36,21,40,34,25,25,31;  
31,26,22,29,28,38,33,23,32,27,37,24,40,26,31,25;];

$Q=[1,2,3,4,5,6,7,2,3,4,1,5,6,7,2,4;$   
1,2,3,4,5,6,7,2,3,4,1,5,6,7,2,4;  
1,2,4,7,1,3,5,1,6,7,5,4,2,5,3,2;  
3,4,5,6,1,4,3,2,6,1,2,6,7,5,2,4;  
4,3,2,7,6,5,7,1,2,3,7,4,5,6,3,2;];

$m=5 \& n=7 \& l=5$

$T=[22,24,29,39,25,21,34,26,36,40,21,26,26,25,33,24,23,26,35,20,36,25;$   
22,24,29,39,25,21,34,26,36,40,21,26,26,25,33,24,23,26,35,20,36,25;  
38,35,29,36,30,20,20,38,37,21,29,33,31,32,26,28,27,23,25,36,40,30;  
39,20,34,36,36,39,23,24,20,36,21,40,34,25,25,35,23,29,36,29,30,34;  
31,26,22,29,28,38,33,23,32,27,37,24,40,26,31,33,20,36,32,37,26,40;] ;

$Q=[1,2,3,4,5,6,7,2,3,4,1,5,6,7,2,4,1,2,4,3,5,2;$   
1,2,3,4,5,6,7,2,3,4,1,5,6,7,2,4,1,2,4,3,5,2;

1,2,4,7,1,3,5,1,6,7,5,4,2,5,3,2,1,3,4,1,5,6;  
3,4,5,6,1,4,3,2,6,1,2,6,7,5,2,4,6,1,2,3,6,7;  
4,3,2,7,6,5,7,1,2,3,7,4,5,6,3,7,2,1,5,6,7,2;];