n jobs and ~~m~~ three m/cs.

e have five jobs, each of which must go through m/c's A, B and C in order ABC. Processing times (in hrs.) are given in the following table:

Processing Time \ Job	1	2	3	4	5
M/c A	8	10	6	7	11
B	5	6	2	3	4
C	4	9	8	6	5

Soln:

$\min A_i = 6$

$\min C_i = 4$

$\max B_i = 6$

As $\min A_i \geq \max B_i$.

or $\min C_i \geq \max B_i$

The problem can be converted into 5 jobs & 2 m/s

Job	1	2	3	4	5
G_i	8+5 = 13	16	8	10	14
H_i	5+4 = 9	15	10	9	9

3	2	5	1	4

For total elapsed time.

Job:		3	2	5	1	4
M/c A	In	0	6	16	27	35
	out	6	16	27	35	42
	In	6	16	27	35	42
M/c B	out	8	22	31	40	45
	In	8	22	31	40	45

n jobs – m machines

Find an optimal sequence for the following sequencing problem of four jobs & five m/cs when passing is not allowed of which processing time (in hrs) is given below:

Job :	1	2	3	4
m/c M_1 :	6	5	4	7
m/c M_2 :	4	5	3	2
m/c M_3 :	1	3	4	2
m/c M_4 :	2	4	5	1
m/c M_5 :	8	9	7	5

Now find elapsed time.

Here $\min M_1 = 4$ & $\min M_5 = 5$

$\max M_2 = 5$

& $\max M_3 = 4$

& $\max M_4 = 5$.

We see that $\min M_5 \geq \max M_{ij}$ $j = 2, 3, 4$.

condition is satisfied

∴ the given problem can be converted into four jobs & 2 m/c;

Thus if G & H be the m/c

then $G = M_1 + M_2 + M_3 + M_4$

& $H = M_2 + M_3 + M_4 + M_5$

Job	1	2	3	4
G_i	13	17	16	12
H_i	15	21	19	10

Using optimal seq. of algorithm

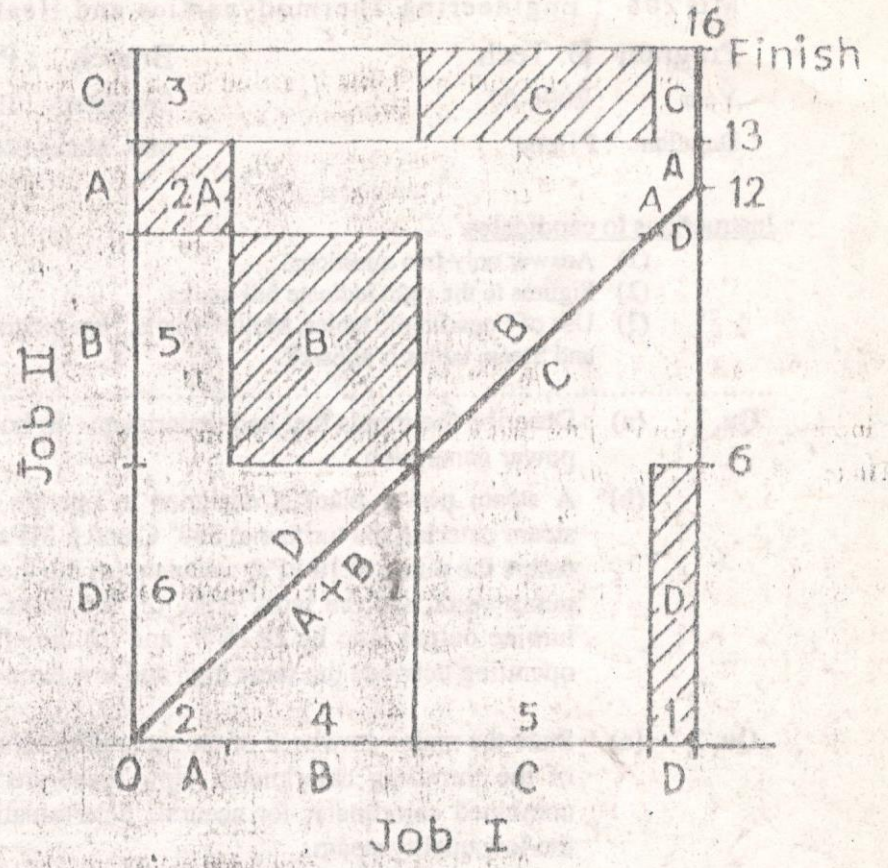
1	3	2	4

3. Two jobs are to be processed through four machines *A*, *B*, *C* and *D* in the sequence *ABCD* for Job I and *DBAC* for Job II. The processing time is given by

Machines→	*A*	*B*	*C*	*D*
Jobs				
I	2	4	5	1
II	2	5	3	6

Find the optional scheduling of jobs.

Hints. Draw graphs for Jobs I and II.



Idle time is 4 for Job I

Idle time is 0 for Job II

Elapsed time = 16.

Scheduling of operations for Jobs on machines are shown by the thick line.