Problem 7-1

Job	Process A Time	Process B Time	Order of Selection	Position in Sequence
1	9	6	6th	5th
2	8	5	5th	6th
3	7	7	7th	4th
4	6	3	3rd	7th
5	1	8	1st	1st
6	2	6	2nd	2nd
7	4	7	4th	3rd
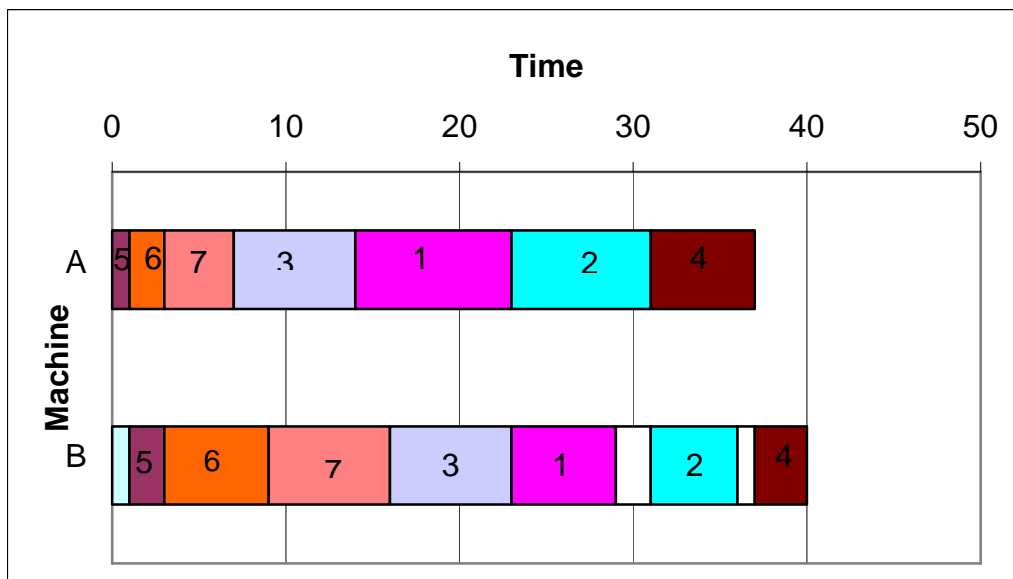
Problem 7-2

a.

#	Name	Proc. Time	Due date	Index	Begin	End	Time units late
1	F	1	2		1	1	0
2	D	1	11		2	2	0
3	B	2	3		3	4	1
4	G	2	9		5	6	0
5	E	3	10		7	9	0
6	A	3	16		10	12	0
7	C	4	14		13	16	2
8	H	5	13		17	21	8

Mean flow time is = 8.9 days

Maximum number of days that a job is late = 8

Number of late jobs = 3

b.

#	Name	Proc. Time	Due date	Index	Begin	End	Time units late
1	F	1	2		1	1	0
2	B	2	3		2	3	0
3	G	2	9		4	5	0
4	E	3	10		6	8	0
5	D	1	11		9	9	0
6	H	5	13		10	14	1
7	C	4	14		15	18	4
8	A	3	16		19	21	5

Mean flow time = 9.9 days

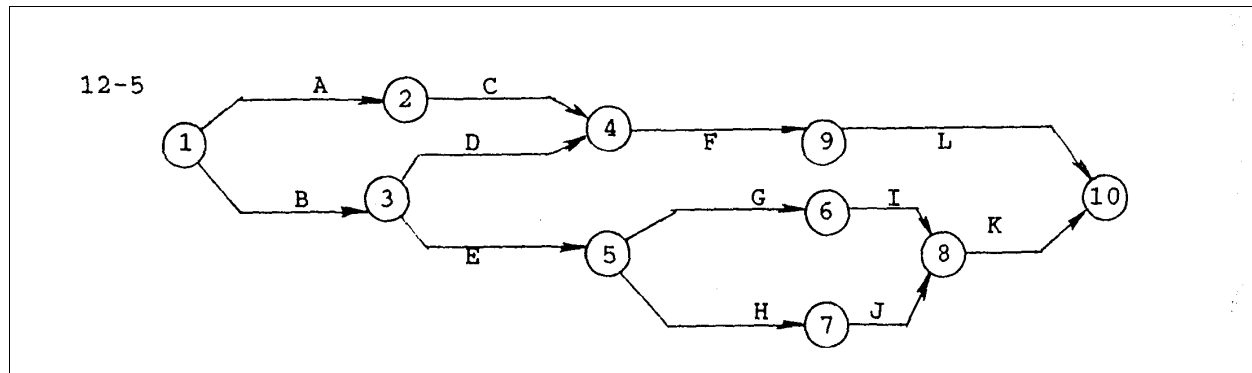Maximum number of days that a job is late = 5

Number of late jobs = 3

c.

#	Name	Proc. Time	Due date	Index	Begin	End	Time units late
1	F	1	2	0	1	1	0
2	B	2	3	0	2	3	0
3	G	2	9	0	4	5	0
4	E	3	10	0	6	8	0
5	D	1	11	0	9	9	0
6	C	4	14	0	10	13	0
7	A	3	16	0	14	16	0
8	H	5	13	5	17	21	8

Mean flow time = 9.5 days

Maximum number of days any job is late = 8

Number of late jobs = 1

Problem 7-3

12-5

Activity	ES	EF	LS	LF	Slack
A	0	8	2	10	2
B	0	2	0	2	0
C	8	9	10	11	2
D	2	11	2	11	0
E	2	6	4	8	2
F	11	16	11	16	0
G	6	12	8	14	2
H	6	9	9	12	3
I	12	15	14	17	2
J	9	14	12	17	3
K	15	17	17	19	2
L	16	19	16	19	0

The critical path is B, D, F, and L.