

Mgtop 340, Fall 2019
Problem Set 6
Solutions

1. a. (i) C-B-E-D-A
(ii) A-D-E-B-C
(iii) B-C-E-A-D

b. Let Today = Day 14

Job	Proc Time	Flow Time	Due Date	Lateness
B	5	5	19	$\max\{0, 13+5-19\} = 0$
C	4	9	20	$\max\{0, 13+9-20\} = 2$
E	8	17	29	$\max\{0, 13+17-29\} = 1$
A	22	39	41	$\max\{0, 13+39-41\} = 11$
D	18	57	44	$\max\{0, 13+57-44\} = 26$
	57	127		40

(i) Average Completion Time = $\frac{127}{5} = 25.4$ days
(ii) Average Lateness = $\frac{40}{5} = 8$ days

Job	Mach 1	Mach 2	Mach 3	A'	B'
A	20	19	5	39	~~24~~ ⁴
B	7	10	8	~~17~~ ¹	18
C	24	16	1	40	~~17~~ ²
D	31	20	8	51	~~28~~ ⁵
E	25	31	22	56	53
F	12	7	16	~~19~~ ³	23
G	2	46	5	~~48~~ ⁶	51

B - F - G - E - D - A - C

p. 2

$$3, \frac{27}{36} = 75\%$$

$$\begin{aligned} \text{Cumu}_{650-75} &= \text{Cumu}_{650} - \text{Cumu}_{75} \\ &= 74.4226(36) - 20.2722(36) \\ &= 2679 - 730 \\ &= \boxed{1949 \text{ hours}} \end{aligned}$$