

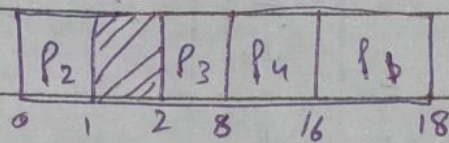
DATE: ___/___/2021

M T W T F S

FCFS (First comes first serve)

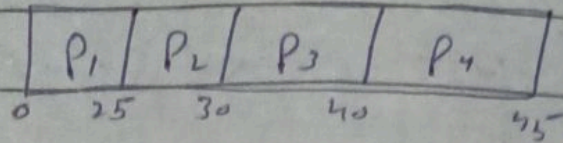
1:

Process	A-T	B-T	W-T	TAT	CT
P ₁	4	2	14	16	18
P ₂	0	1	0	1	1
P ₃	2	6	0	6	8
P ₄	3	8	5	13	16



2:

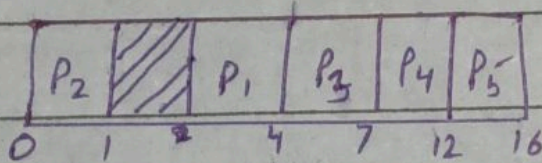
P	B-T	W-T	TAT	C-T	R-T
P ₁	25	0	25	25	0
P ₂	5	25	30	30	25
P ₃	10	30	40	40	30
P ₄	5	40	45	45	40



$$\text{Throughput} = \frac{4}{45}$$

3:

P	A ₁ -T	B-T	TAT	CT	W-T
P ₁	2	2	2	4	0
P ₂	0	1	1	1	0
P ₃	2	3	5	7	2
P ₄	3	5	9	12	4
P ₅	4	4	12	16	8



4:

DATE: ___/___/2021

ID	A-T	B-T	W-T	TAT	C-T
P ₁	0	2	0	2	2
P ₂	1	4	1	5	6
P ₃	2	3	4	7	9
P ₄	3	1	6	7	10

P_1	P_2	P_3	P_4	
0	2	6	9	10

5:

ID	A-T	B-T	W-T	TAT	CT
P ₁	3	4	0	4	7
P ₂	5	3	5	8	13
P ₃	0	2	0	2	2
P ₄	5	1	8	9	14
P ₅	4	3	3	6	10

P_3			P_1	P_5	P_2	P_4
0	2	3	7	10	13	14

6:

ID	A-T	B-T	W-T	TAT	C-T
P ₁	0	2	0	2	2
P ₂	3	1	0	1	4
P ₃	5	6	0	6	11

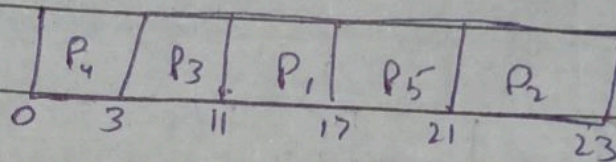
P_1		P_2		P_3	
0	2	3	4	5	11

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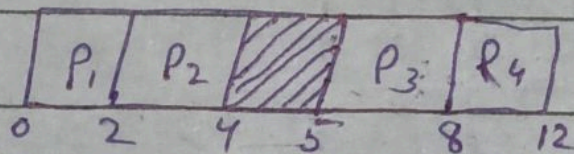
7:

ID	A-T	B-T	W-T	TAT	C-T
P ₁	2	6	9	15	17
P ₂	5	2	16	18	23
P ₃	1	8	2	10	11
P ₄	0	3	0	3	3
P ₅	4	4	13	17	21



8:

ID	A-T	B-T	W-T	TAT	C-T
P ₁	0	2	0	2	2
P ₂	1	2	1	3	4
P ₃	5	3	0	3	8
P ₄	6	4	2	6	12

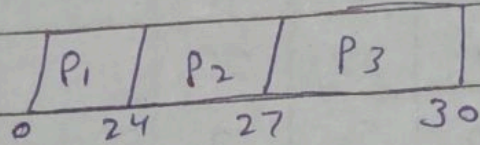


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M T W T F S

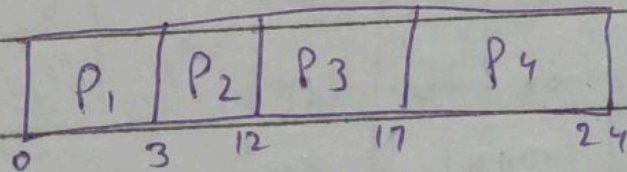
9:

ID	B-T	W-T	TAT	C-T
P ₁	24	0	24	24
P ₂	3	24	27	27
P ₃	3	27	30	30



10:

ID	B-T	W-T	TAT	C-T
P ₁	3	0	3	3
P ₂	9	3	12	12
P ₃	5	12	17	17
P ₄	7	17	24	24



SJF (shortest job first)

11:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	2	6	1	7	9
P ₂	5	2	4	6	11
P ₃	1	8	14	22	23
P ₄	0	3	0	3	3
P ₅	4	4	7	11	15

P_4	P_1	P_2	P_5	P_3	
0	3	9	11	15	23

12:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	2	1	4	5	7
P ₂	1	5	10	15	16
P ₃	4	1	3	4	8
P ₄	0	6	0	6	6
P ₅	2	3	6	9	11

P_4	P_1	P_3	P_5	P_2	
0	6	7	8	11	16

13:

ID	B-T	W-T	TAT	C-T
P ₁	21	11	32	32
P ₂	3	2	5	5
P ₃	6	5	11	11
P ₄	2	0	2	2

P ₄	P ₂	P ₃	P ₁
0	2	5	11
			32

14:

ID	A-T	B-T	W-T	TAT	C-T
P ₁	0	7	0	7	7
P ₂	2	4	6	10	12
P ₃	4	1	3	4	8
P ₄	5	4	9	13	18

P ₁	P ₃	P ₂	P ₄
0	7	8	12
			18

15:

ID	A-T	B-T	W-T	TAT	C-T
P ₁	0	20	0	20	20
P ₂	1	1	19	20	21
P ₃	2	1	19	20	22

P ₁	P ₂	P ₃
0	20	21
		22

16:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	2	6	1	7	9
P ₂	5	2	4	6	14
P ₃	1	8	14	15 ²²	23
P ₄	0	3	0	3	3
P ₅	4	4	7	14	18

P_4	P_1	P_2	P_5	P_3	
0	9	9	14	15	23

Average W-T is:

$$1+4+14+0+7=26$$

$$= 26/5 = 5.2$$

17:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	2	6	7	13	15
P ₂	5	2	0	2	7
P ₃	1	8	14	22	23
P ₄	0	3	0	3	3
P ₅	4	4	2	6	10

average W-T

$$= 7+0+14+0+2$$

$$= 23/5$$

$$= \underline{4.6}$$

P_4	P_1	P_5	P_2	P_3	P_1	P_3	
0	3	4	5	7	10	15	23

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M T W T F S

18:

ID	A-T	B-T	TA-T	W-T	C-T
P ₁	5	8	16	8	21
P ₂	0	5	5	0	5
P ₃	4	9	12	3	16
P ₄	1	2	6	4	7

P_2	P_4	P_3	P_1	
0	5	7	16	21

19:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	18	13	31	31
P ₂	1	4	0	4	5
P ₃	2	7	5	12	14
P ₄	3	2	2	4	7

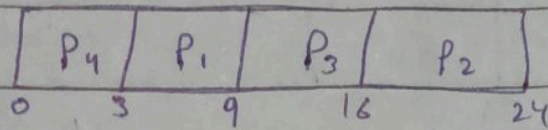
P	P_2	P_4	P_3	P_1	
0	1	5	7	14	31

$$\text{Average TA-T} = \frac{31+4+12+4}{4}$$

$$= 12.75$$

20:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	6	3	9	9
P ₂	0	8	16	24	24
P ₃	0	7	9	16	16
P ₄	0	3	0	3	3



SRTF (shortest Remaining Time first)
(Preemptive SJF)

21:

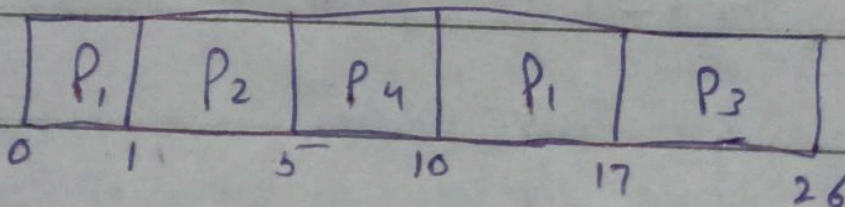
ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	8	9	17	17
P ₂	1	4	0	4	5
P ₃	2	9	15	24	26
P ₄	3	5	2	7	10

Avg TA-T =

$$= \frac{17+4+24+7}{4}$$

$$= 13/4$$

$$= 6.5$$



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22:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	9	4	13	13
P ₂	1	4	0	4	22 ⁵
P ₃	2	9	11	20	22

P_1	P_2	P_3	P_3	
0	1	5	13	22

$$\text{AVG TA-T} = \frac{4+0+11}{3} = \frac{15}{3} = 5$$

23:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	20	0	20	15 ²⁰
P ₂	15	25	15	35 ⁴⁰	55
P ₃	30	10	0	10	40
P ₄	45	15	10	25	70 ⁶⁵

P_1	P_2	P_3	P_2	P_4	
0	20	30	40	55	70

24:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	8	5	13	13
P ₂	1	2	0	2	3
P ₃	4	3	0	3	7

P ₁	P ₂	P ₁	P ₃	P ₁
0	1	3	4	13

$$\text{AVG } W-T = 5/3 = 1.66$$

25:

ID	A-T	B-T	W-T	TA-T	C-T
P ₁	0	8	7	15	15
P ₂	3	2	0	2	5
P ₃	3	3	2	5	8

P ₁	P ₂	P ₃	P ₁
0	3	5	8