Operating Systems
Project 10

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Solution

Let T be the time, R be the Running Process, rq be the ready queue and wq the waiting queue. We get the following procession of changes

Time	R	wq	rq	Comment
0	P_1			P_1 arrives and starts.
1		P_1		P_1 does I/O and goes into wq.
2	P_2	P_1		P_2 arrives and starts, as no proc. was running.
3	P_2		P_1	P_1 finishes I/O an goes into rq.
4	P_2		$P_1 P_3$	P_3 arrives and goes into rq.
6	P_1		$P_3 P_2$	Quanta of P_2 runs out
				and P_2 goes into ready queue. P_1 starts again.
8	P_3	P_1	P_2	P_1 does I/O and goes into wq. P_3 starts.
9	P_2	$P_1 P_3$		P_3 does I/O and goes into wq. P_2 starts.
10		$P_1 P_3$		P_2 terminates, but all procs. are blocked.
12	P_1	P_3		P_1 finishes I/O and starts.
13	P_1		P_3	P_3 finishes I/O and goes into rq.
16	P_3		P_1	Quanta of P_1 runs out, P_3 starts.
18	P_1			P_3 terminates and P_1 starts.
19				P_1 terminates.