

Exercises

CPU Scheduling

E-1: Compute average wait time by using Shortest Job First (SJF) scheduling policy for following processes.

Process:	P1	P2	P3	P4
Arrival Time:	1	3	8	10
CPU Time:	8	7	5	4

E-2: Compute average wait time by using Round Robin (time slice 3 units) scheduling policy for following processes.

Process:	P1	P2	P3	P4	P5
Arrival Time:	1	3	6	10	12
CPU Time:	8	7	5	6	4

E-3: Compute average wait time by using Virtual Round Robin (VRR) processor scheduling policy (time slice 4 units). Process P2 generates IO operation after every 3 units of processing and IO operation takes 6 units to complete.

Draw a process model for virtual round robin processor scheduling and list the processes in different states of the model at time “15”

Process:	P1	P2	P3	P4
Arrival Time:	1	2	3	6
CPU Time:	11	8	9	5

E-4: Compute average wait time by using Shortest Remaining Time First (SRTF) processor scheduling policy. Process P3 generates IO operation after every 3 units of processing and IO operation takes 6 units to complete.

Process:	P1	P2	P3	P4
Arrival Time:	1	2	3	5
CPU Time:	9	8	5	6

E-5: Compute average wait time by using non-preemptive priority (higher priority number, means higher priority) scheduling policy.

Process:	P1	P2	P3	P4
Arrival Time:	1	3	6	7
Priority:	1	2	3	2
CPU Time:	6	3	5	2

E-6: Compute average wait time by using preemptive priority (higher priority number, means higher priority) scheduling policy.

Process:	P1	P2	P3	P4
Arrival Time:	1	3	6	7
Priority:	1	2	3	4
CPU Time:	6	3	5	2