

Exercise 1

Process Name	Arrival Time	Processing Time
A	0	3
B	1	5
C	3	2
D	9	5
E	12	5

RR Q=1

Queue	A	BA	AB	BCA	CAB	ABC	BC	CB	B	DB	BD	D	ED	DE	ED	DE	ED	DE	E	E	
	A	B	A	B	C	A	B	C	B	D	B	D	E	D	E	D	E	D	E	E	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	3	0	6	6	3
B	5	1	11	10	5
C	2	3	8	5	3
D	5	9	18	9	4
E	5	12	20	8	3
Total			38	18	
Average			7.6	3.6	

# of processes	5
Time units	20
Throughput	0.25

RR Q=4

Queue	A	B	BC	C	CB	B	BD	D	E	ED	E	D	E								
	A			B	C		B	D			E	D	E								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	3	0	3	3	0
B	5	1	10	9	4
C	2	3	9	6	4
D	5	9	19	10	5
E	5	12	20	8	3
Total			36	16	
Average			7.2	3.2	

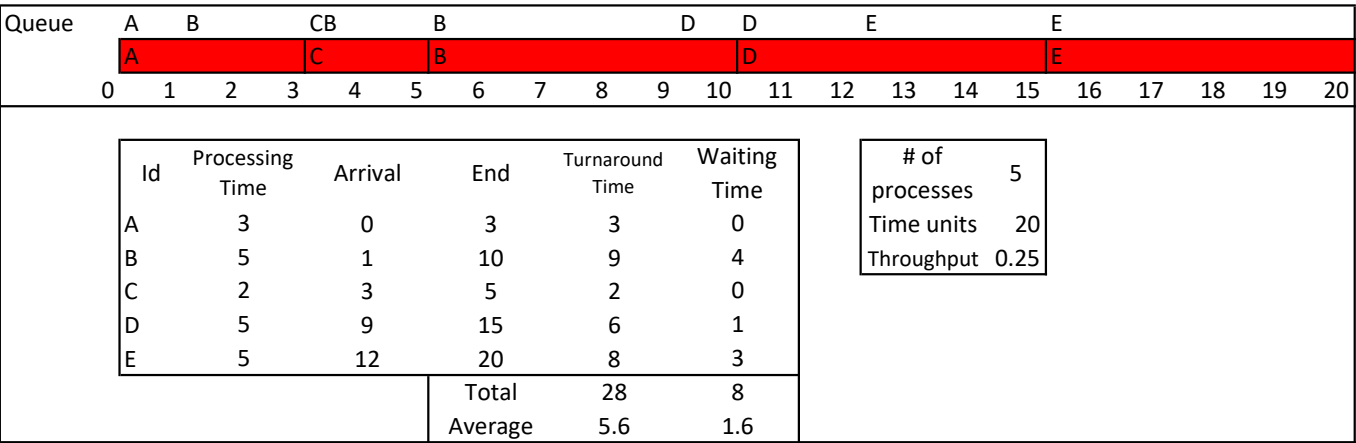
# of processes	5
Time units	20
Throughput	0.25

FCFS

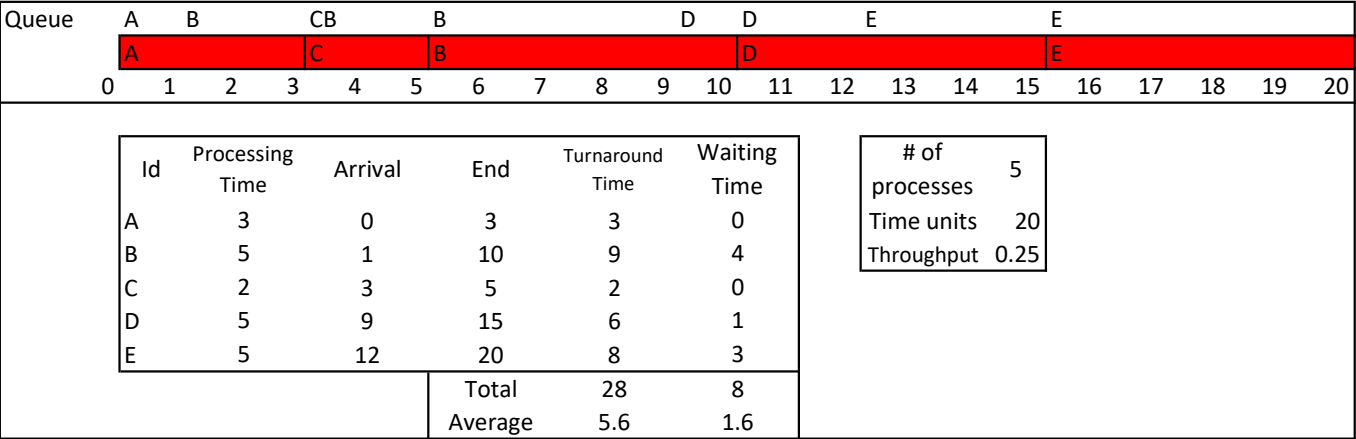
Queue	A	B	BC						D		E										
	A			B					C		D			E							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time	# of processes	5
A	3	0	3	3	0	Time units	20
B	5	1	8	7	2	Throughput	0.25
C	2	3	10	7	5		
D	5	9	15	6	1		
E	5	12	20	8	3		
			Total	31	11		
			Average	6.2	2.2		

SJF



SJtCF



Exercise 2

Process Name	Arrival Time	Processing Time
A	0	1
B	1	9
C	2	1
D	3	9

RR Q=1

Queue

	A	B	CB	BD																
	A	B	C	B	D	B	D	B	D	B	D	B	D	B	D	B	D	B	D	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	1	0	1	1	0
B	9	1	18	17	8
C	1	2	3	1	0
D	9	3	20	17	8
Total				36	16
Average				9	4

# of processes	4
Time units	20
Throughput	0.2

RR Q=4

Queue	A	B	CB	CDB		CDB	DB			BD		DB						BD	D		
	A	B				C		D			B		D					B	D		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	1	0	1	1	0
B	9	1	19	18	9
C	1	2	6	4	3
D	9	3	20	17	8
			Total	40	20
			Average	10	5

# of processes	4
Time units	20
Throughput	0.2

FCFS

Queue	A	B	BC	BCD						CD	D											
	A	B									C	D										
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	1	0	1	1	0
B	9	1	10	9	0
C	1	2	11	9	8
D	9	3	20	17	8
			Total	36	16
			Average	9	4

# of processes	4
Time units	20
Throughput	0.2

SJF

Queue	A	B	BC	BCD							CD	D									
	A	B										C	D								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	1	0	1	1	0
B	9	1	10	9	0
C	1	2	11	9	8
D	9	3	20	17	8
			Total	36	16
			Average	9	4

# of processes	4
Time units	20
Throughput	0.2

SJtCF

Queue	A	B	CB	BD	D																		
	A	B	C	B												D							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		

Id	Processing Time	Arrival	End	Turnaround Time	Waiting Time
A	1	0	1	1	0
B	9	1	11	10	1
C	1	2	3	1	0
D	9	3	20	17	8
Total				29	9
Average				7.25	2.25

# of processes	4
Time units	20
Throughput	0.2