

4)

Task	Length	Arrival Time
0	85	0
1	30	10
2	35	15
3	20	80
4	50	85

FIFO

Task	Start Time	Completion Time
0	0	$0 + 85 = 85$
1	85	$85 + 115 = 200$
2	200	$200 + 35 = 235$
3	235	$235 + 20 = 255$
4	255	$255 + 50 = 310$

Response Time:

$$\frac{(85+115+150+170+220)}{5} = 148$$

SJF

Task							
0	10			5			70 (Finish)
1		30 (Finish)					
2			35 (Finish)				
3					20 (Finish)		
4						50 (Finish)	
Time	10	40	75	80	100	150	220

Response Time:

$$\frac{(10+40+75+80+100+150+220)}{7} \approx 96.42$$

Round Robin (Time Slice of 10)

Task									
0	10			10			10		
1		10			10			10 (Fin)	
2			10			10			10
3									
4									
Time	10	20	30	40	50	60	70	80	90

0			10				10		10
1									
2					5 (Fin)				
3	10					10 (Fin)			
4		10					10		10
Time	100	110	120	125	135	145	155	165	175

0		10		15 (Fin)
1				
2				
3				
4	10		10 (Fin)	
Time	185	195	205	220

Response Time:

$$(10 + 20 + 30 + 40 + 50 + 60 + 70 + 80 + 90 + 100 + 110 + 120 + 125 + 135 + 145 + 155 + 165 + 175 + 185 + 195 + 205 + 220) / 22 \text{ approximately} = 112.95$$

13)

FIFO

Task			
A	100 (Fin)		
B		100 (Fin)	
C			100 (Fin)
Time	100	200	300

Round Robin (Time Slice of 1)

Task									
Time	1	2	3	4	5	6	7	8	9
A	1			1			1		
B		1			1			1	
C			1			1			1

Task									
Time	10	11	12	298	299	300
A	1			...			1 (Fin)		
B		1			...			1 (Fin)	
C			1			...			1 (Fin)

Round Robin (Time Slice of 100)

Task				
Time	100	200	300	
A	100 (Fin)			
B		100 (Fin)		
C			100 (Fin)	

Has the same performance as FIFO

MFQ (Time Slice of priority is 1)

Task								
A								
B	1		1		1		1	
C		1		1		1		1
Time	1	2	3	4	5	6	7	8

A								100 (Fin)
B	1		...			1 (Fin)		
C		1		...			1 (Fin)	
Time	9	10	199	200	300

SJF

Task								
A								
B	2		8		2		8	
C		2		8		2		8
Time	2	4	12	20	22	24	32	40

A							100 (Fin)	
B	...		2		8 (Fin)			
C		...		2		8 (Fin)		
Time	182	184	192	200	300	