# **Assignment 5**

# U21546216

# **Scott Bebington**

### Task 1

- 1.1) C
- 1.2) A
- 1.3) D
- 1.4) C
- 1.5) B

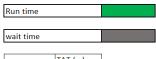
### Task 2

#### 2.1)

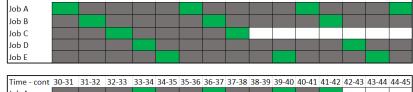
Round Robin Scheduling process							
Job	Arrival time	Run time					
A	0	11					
В	0	7					
С	0	5					
D	0	9					
E	0	13					

Time (m)	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15
Job A															
Job B															
Job C															
Job D															
Job A Job B Job C Job D Job E															

Time - cont 15-16 16-17 17-18 18-19 19-20 20-21 21-22 22-23 23-24 24-25 25-26 26-27 27-28 28-29 29-30



	TAT (m)
Job A	42
Job B	31
Job C	23
Job D	38
Job E	45
Total	179
Average TAT	35,8



Job A
Job B
Job C
Job D
Job E

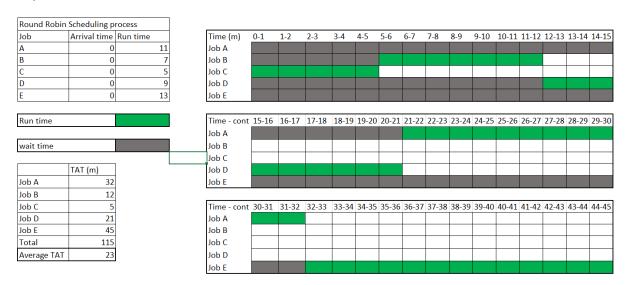
Average TAT = (42 + 31 + 23 + 38 + 45)/5 = 35.8 mins

## 2.2)

Round Robin	Scheduling p	rocess																		
Job	Arrival time	Run time	Priority		Time (m)	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-
Α	0	11		6	Job A															
В	0	7		3	Job B															
C	0	5		7	Job C															
D	0	9		4	Job D															
E	0	13		9	Job E															
			i															,		
Run time					Time - cont	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-3
				_	Job A															
wait time					Job B															
				_	Job C															
	TAT (m)				Job D															
Job A	27				Job E															
Job B	7																			
Job C	32				Time - cont	30-31	31-32	32-33	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41	41-42	42-43	43-44	44-4
Job D	16				Job A															
Job E	45	1			Job B															
Total	127				Job C															
Average TAT	25,4				Job D															
		-			Job E															

Average TAT = (27 + 7 + 32 + 16 + 45) / 5 = 25.4 min

### 2.3)



Average TAT = (32 + 12 + 5 + 21 + 45) / 5 = 23mins

### Task 3

3.1) 4.8 milliseconds

3.2) 2.4 milliseconds

#### Task 4

4.1)

FIFO – First In First Out

Tracks in order: 1000, 740, 1150, 940, 1200, 1850, 1145, 555, 1775, 1695

Track Number	Tracks Traversed	Current Position
1000	1197 - 1000  = 197	1000
740	1000 - 740  = 260	740
1150	740 - 1150  = 410	1150
940	1150 - 940  = 210	940
1200	940 - 1200  = 260	1200
1850	1200 - 1850  = 650	1850
1145	1850 - 1145  = 705	1145
555	1145 - 555  = 590	555
1775	555 - 1775  = 1220	1775
1695	1775 - 1695  = 80	1695
Total tracks Trave		

4.2)

SSTF – Shortest Service Time First

Tracks in order: 1200, 1150, 1145, 1000, 940, 740, 555, 1695, 1775, 1850

Track Number	Tracks Traversed	Current Position
1200	1197 - 1200  = 3	1200
1150	1200 - 1150  = 50	1150
1145	1150 - 1145  = 5	1145
1000	1145 - 1000  = 145	1000
940	1000 - 940  = 60	940
740	940 - 740  = 200	740
555	740 - 555  = 185	555
1695	555 - 1695  = 1140	1695
1775	1695 - 1775  = 80	1775
1850	1775 - 1850  = 75	1850
Total tracks Trav	ersed: 1937	

## 4.3)

### SCAN

Tracks in order: 1200, 1695, 1775, 1850, 1150, 1145, 1000, 940, 740, 555

Track Number	Tracks Traversed	Current Position
1200	1197 - 1200  = 3	1200
1695	1200 - 1695  = 495	1695
1775	1695 - 1775  = 80	1775
1850	1775 - 1850  = 75	1850
1150	1850 - 1150  = 700	1150
1145	1150 - 1145  = 5	1145
1000	1145 - 1000  = 145	1000
940	1000 - 940  = 60	940
740	940 - 740  = 200	740
555	740 - 555  = 185	555
Total tracks Trav	ersed: 1942	

### 4.4)

## C – SCAN

Tracks in order: 1200, 1695, 1775, 1850, 555, 740, 940, 1000, 1145, 1150

Track Number	Tracks Traversed	Current Position
1200	1197 - 1200  = 3	1200
1695	1200 - 1695  = 495	1695
1775	1695 - 1775  = 80	1775
1850	1775 - 1850  = 75	1850
555	1850 - 555  = 1295	555
740	555 - 740  = 185	740
940	740 - 940  = 200	940
1000	940 - 1000  = 60	1000
1145	1000 - 1145  = 145	1145
1150	1145 - 1150  = 5	1150
Total tracks Trav	ersed: 2537	