1. a.) **FIFO**

p0 → p1 → p2 → p3 → p4

0 80 105 120 145 155

W p0

- =0

W p1

- =65

W p2

- =90

W p3

- =35

W p4

- 55

AVG Wait Time= (0+65+90+35+55)/5 = 49

1. b.) **SJF**

p0 → p2 → p4 → p1 → p3

0 80 95 105 130 155

W p0

- =0

W p1

- =90

W p2

- =65

W p3

- =45

W p4

- 5

AVG Wait Time= (0+90+65+45+5)/5 = 41

1. c.) **SRT**

p0	p2	p1	p0	p3	p4	p3	p0	
0	15	30	55	85	90	100	120	155

W p0
- =75

W p1
- =15

W p2
- =0

W p3
- =10

W p4
- 0

AVG Wait Time= (75+15+0+10+0)/5 = 20

1. d.) **RR**

p0 → p0 → p1 → p2 → p0 → p1 → p2 → p0 → p1 → p0 → p3 → p4 → p0 → p3 → p0 → p3 → p0

0 10 20 30 40 50 60 65 75 80 90 100 110 120 130 140 145 155

W p0

- =75

W p1

- =40

W p2

- =35

W p3

- =35

W p4

- 10

AVG Wait Time= (75+40+35+35+10)/5 = 39

1. e.) **LRT**

p0 → p1 → p0 → p1 → p0 → p1 → p0 → p1 → p0 → p1 → p0

0 56 58 60 62 64 66 68 70 72 74 76

W p0

- =74

W p1

- =114

W p2

- =120

W p3

- =43

W p4

- 64

p2 → p1 → p0

(3 times)

p2 p3

84 85 86 98

(13 times)

p0 → p1 → p2 → p3

(3 times)

p0 → p1 → p2 → p3 → p4

(4 times) 155

AVG Wait Time= (74+114+120+43+64)/5 = 83

1. f.) **MLF**

e =	9	10	9	10	11	10	9	9
	p0	p1	p0	p3	p4	p3	p0	p2

0 15 40 85 90 100 120 140 155

W p0
- =60

W p1
- =0

W p2
- =125

W p3
- =10

W p4
- 0

AVG Wait Time= (60+0+125+10+0)/5 = 39

2.

SJF is optimal because of how much a specific job or set of jobs is weighted. If many processes wait on a very long job to finish then all of their wait times will be large and this is taken into account when calculating the average wait time for each process. Although they may be relatively short jobs they are all equal in terms of the fact that they all add together in computing the average wait time. But if we put the largest job(s) at the end then only that job/jobs will have a long wait (and little, or no weight if it is the last job) compared to many smaller jobs having a long wait each.

awt = 1/n Σi=1 (n-i) x tsi