

Synopsis for OS- Re_Exam 19-20

Class: FYMCA

Course Code: MCA21

Semester: II

Subject: Operating System

Q1)

a) list of services=01 marks

explanation of each type=04 marks(at least 4 services of os)

b) definition-01 mark, diagram—01 mark, explanation=4marks

Q2a)

Gantt chart=02 marks

Avg waiting time=11.42= 03 marks

Avg TAT time= 15=03 marks

OR

a)

	P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇	P ₈	P ₉	P ₁₀	P ₁₁	P ₁₂	P ₁₃	P ₁₄	P ₁₅	P ₁₆	P ₁₇	P ₁₈	P ₁₉	P ₂₀	P ₂₁
0	2	4	6	8	9	11	13	15	17	18	19	21									
Process No	Arrival Time (AT)	Service Time (ST)	Completion Time (CT)	Turn Around Time (TAT)	Waiting Time (WT)																
1	0	4	8	8	4																
2	1	5	18	17	12																
3	2	2	6	4	2																
4	3	1	9	6	5																
5	4	6	21	17	11																
6	6	3	19	13	10																

- **Work Queue:** 23, 89, 132, 42, 187
- there are 200 cylinders numbered from 0 - 199
- the disk head starts at number 100

Q2 b) definition-01 mark, diagram—01 mark, explanation=2marks

Q3 a) 1. Reader Writer Problem :define problem=01 mark, code for reader with explanation=02 code for writer with explanation =02 mark

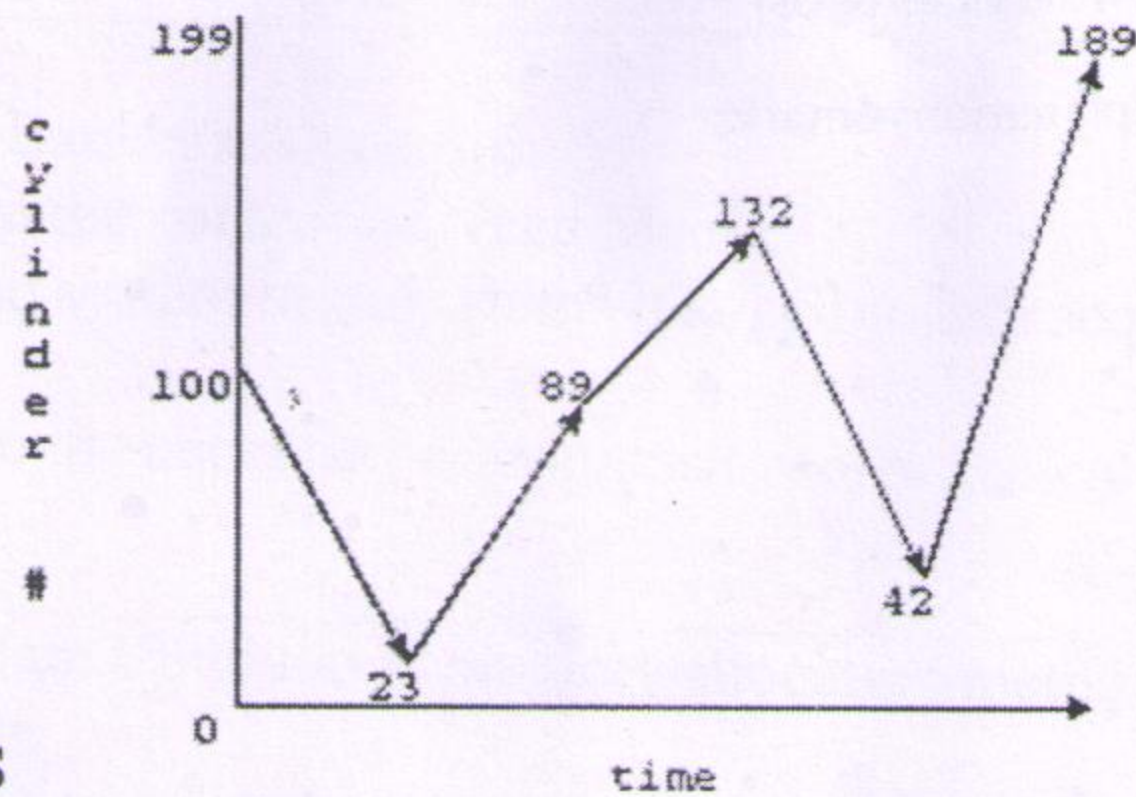
2. Producer Consumer Problem: define problem=01 mark, code for reader with explanation=02, code for writer with explanation =01 mark

b)list down conditions=01 mark, explanation of each=03mark

Q4a)types=01 mark, explanation of each type=03 marks

b) no of page fault FIFO=02 marks, LRU=02 marks optimal=02 marks

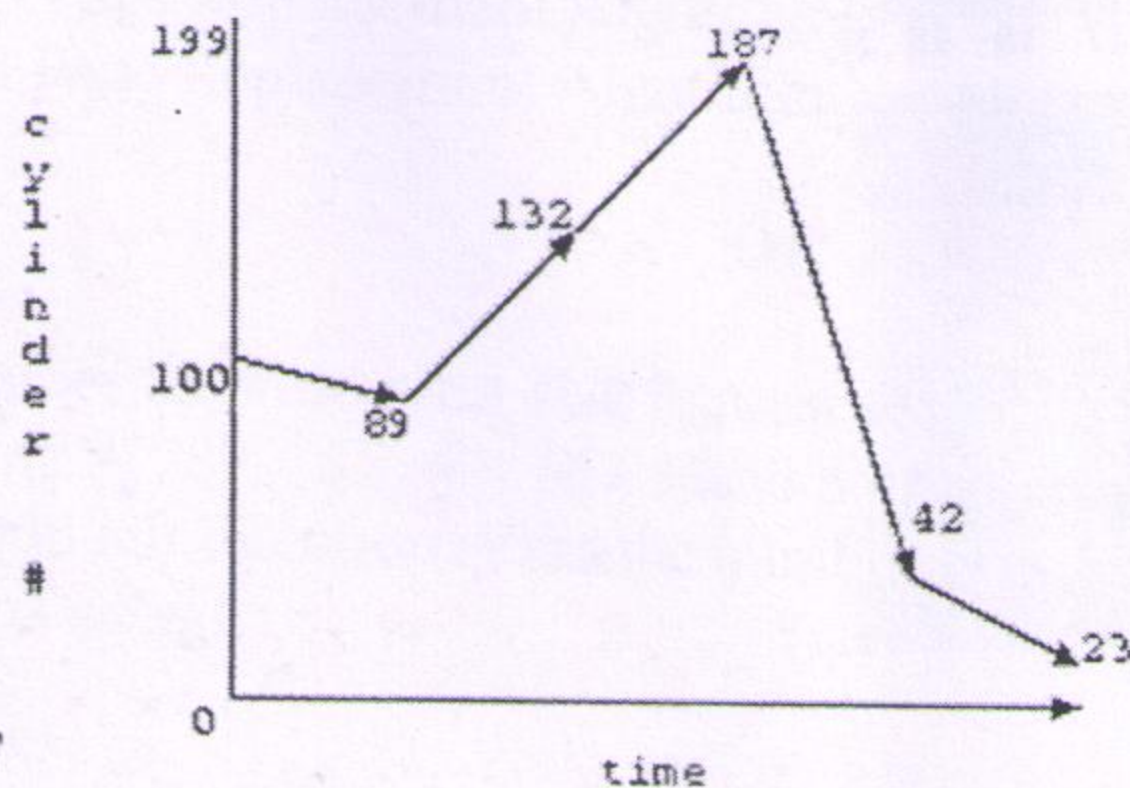
b)FCFS=02,SSTF=02,SCAN=02marks



1. FCFS

● total time is estimated by total arm motion

$$|100 - 23| + |23 - 89| + |89 - 132| + |132 - 42| + |42 - 189| = 77 + 66 + 43 + 90 = 276$$

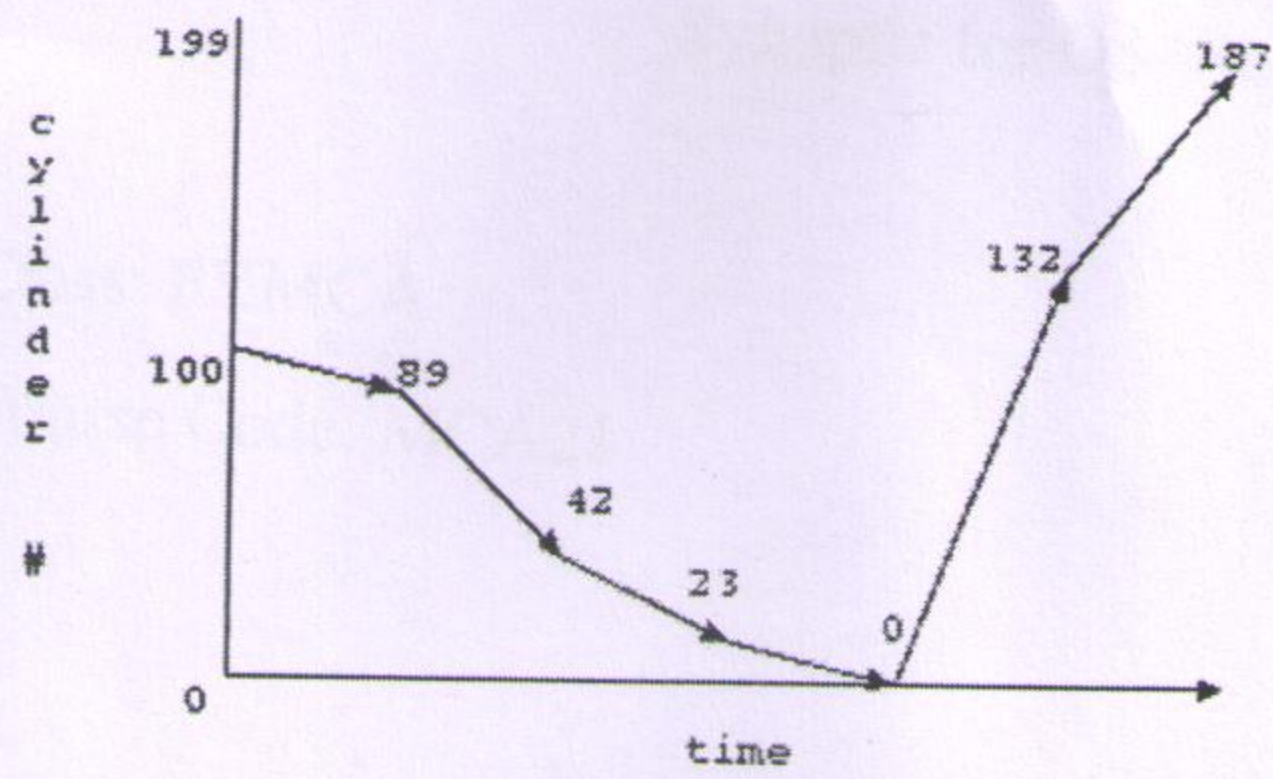


2. SSTF

$$|100 - 89| + |89 - 132| + |132 - 187| + |187 - 42| + |42 - 23| = 11 + 43 + 55 + 145 + 19 = 273$$

3. SCAN

- assume we are going inwards (i.e., towards 0)



$$|100 - 89| + |89 - 42| + |42 - 23| + |23 - 0| + |0 - 132| + |132 - 187| = 11 + 47 + 19 + 23 + 132 + 55 = 387$$

Q5 a)list=01 mark, explanation of each=05 marks

OR a)types=01 mark, explanation of each=05 marks

c)goals=01 mark ,principles=01 mark, domain structure=02 marks

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OR

a)

	P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	P ₇	P ₈	P ₉	P ₁₀	P ₁₁	P ₁₂	P ₁₃	P ₁₄	P ₁₅	P ₁₆	P ₁₇	P ₁₈	P ₁₉	P ₂₀	P ₂₁
0	2	4	6	8	9	11	13	15	17	18	19	21									
Process No.	Arrival Time (AT)	Burst Time (BT)	Completion Time (CT)	Turnaround Time (TAT)	Waiting Time (WT)																
1	0	4	8	8	4																
2	1	5	18	17	12																
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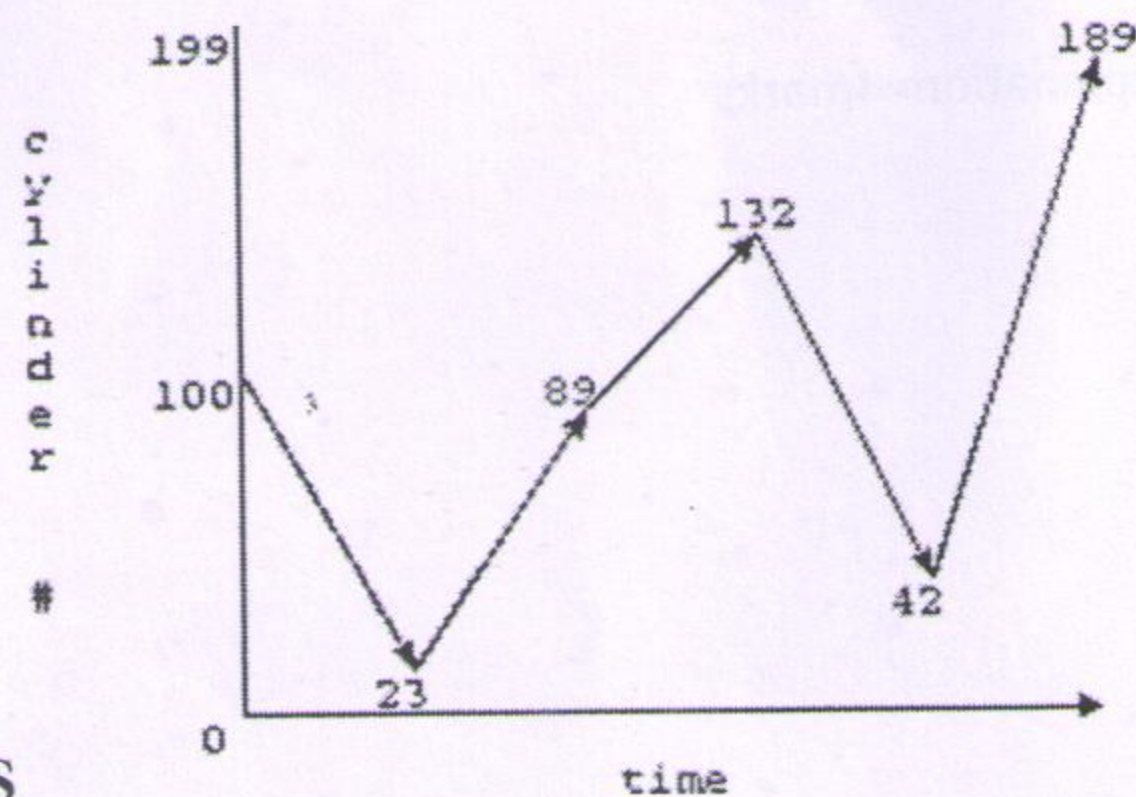
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b) no of page fault FIFO=02 marks, LRU=02 marks optimal=02 marks

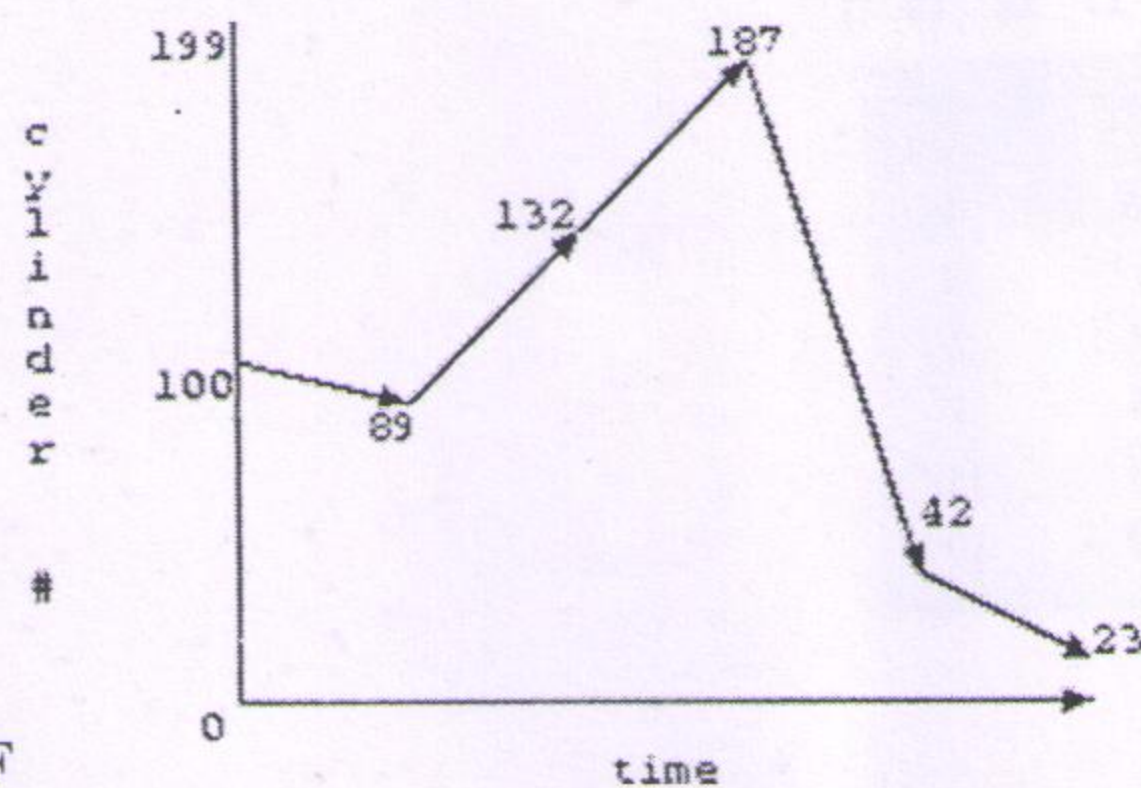
b)FCFS=02,SSTF=02,SCAN=02marks



1. FCFS

● total time is estimated by total arm motion

$$|100 - 23| + |23 - 89| + |89 - 132| + |132 - 42| + |42 - 189| = 77 + 66 + 43 + 90$$

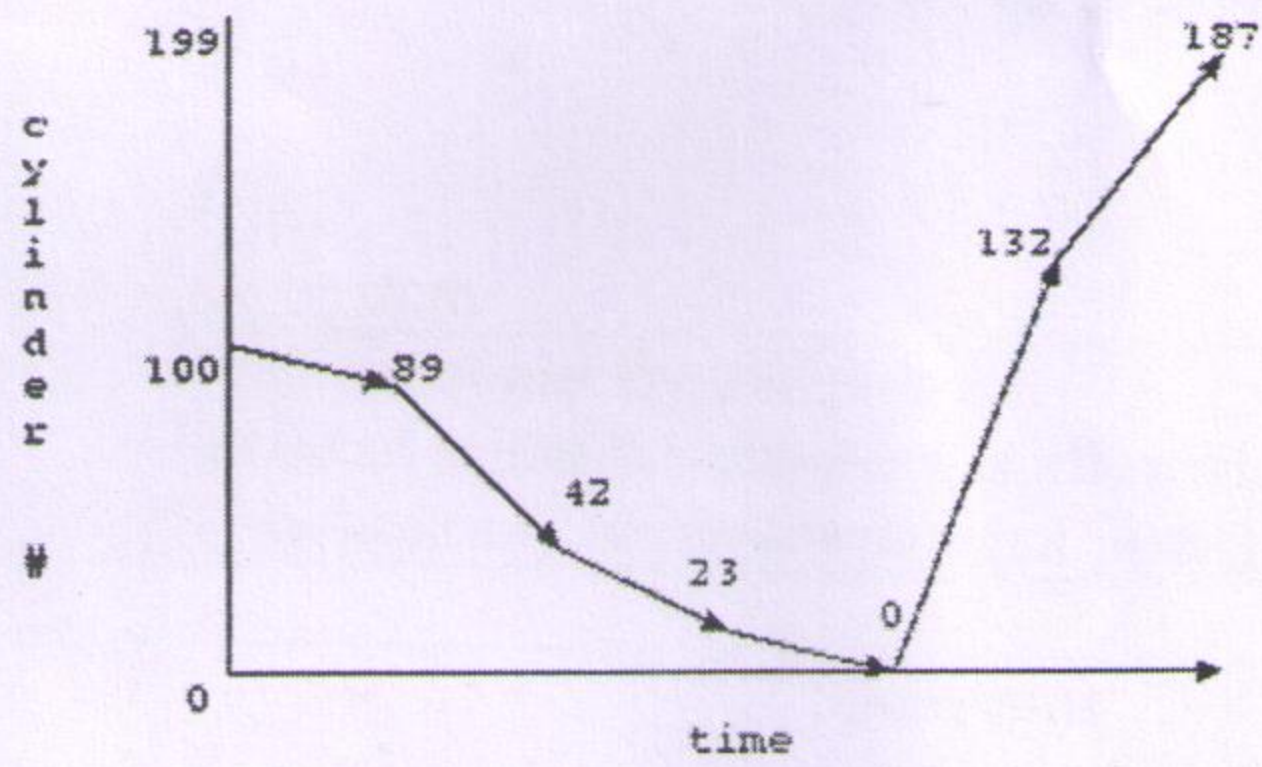


2. SSTF

$$|100 - 89| + |89 - 132| + |132 - 187| + |187 - 42| + |42 - 23| = 11 + 43 + 55 + 145 + 19 = 273$$

3. SCAN

- assume we are going inwards (i.e., towards 0)



$$|100 - 89| + |89 - 42| + |42 - 23| + |23 - 0| + |0 - 132| + |132 - 187| = 11 + 47 + 19 + 23 + 132 + 55 = 287$$

Q5 a)list=01 mark, explanation of each=05 marks

OR a)types=01 mark, explanation of each=05 marks

c)goals=01 mark ,principles=01 mark, domain structure=02 marks