Name of the Subject: APPLIED OPERATING SYS. Subject Code: IT-607

Seat No: IT076 Student ID: 18ITUBN116 Branch/Sem: IT - III

Q2 (b)

Virtual Address Space = Logical add = 64 bits.

Page Size = 16 kB = 2^{14} bits = 14 bits.

Physical add = 256 kB = 2^{18} = 18 bits.

Page Table = 8 B

So, d = 14 bits.

LA (64 bits)	
p	d
50	14

logical address = no of page bit + d

No. of Page Size = 64 - 14

= 50 bits.

PA (18)	
F	d
4	14

Physical add = No. of frame + d

no. of fram = 18 - 14

= 4 bits.

Page Table Size = 2^{50} x 8 B

Inverted Page Table Size = 2^{4} x 8 B

Name of the Subject: APPLIED OPERATING SYS. Subject Code: IT-607

Seat No: IT076 Student ID: 18ITUBN116 Branch/Sem: IT - VI

· Ratio = $\frac{\text{PT Size}}{\text{IPT Size}} = \frac{2^{50} \times 8B}{2^4 \times 8B} = 2^{46}$

Q2 (A)

LA = 126 byte

PA = 216 bytes.

Process divided into 8 equal size segments

Page Table = 2 bytes. = 16 bits

Page Size = 128 bytes

No. of frames in MM = $\frac{126 \text{ byte}}{128 \text{ bytes.}}$

= 2 frames.

Name of the Subject: AOS Subject Code: IT-607

Seat No: IT076 Student ID: 18ITUBN116 Branch/Sem: IT - VI

Q3 (A)

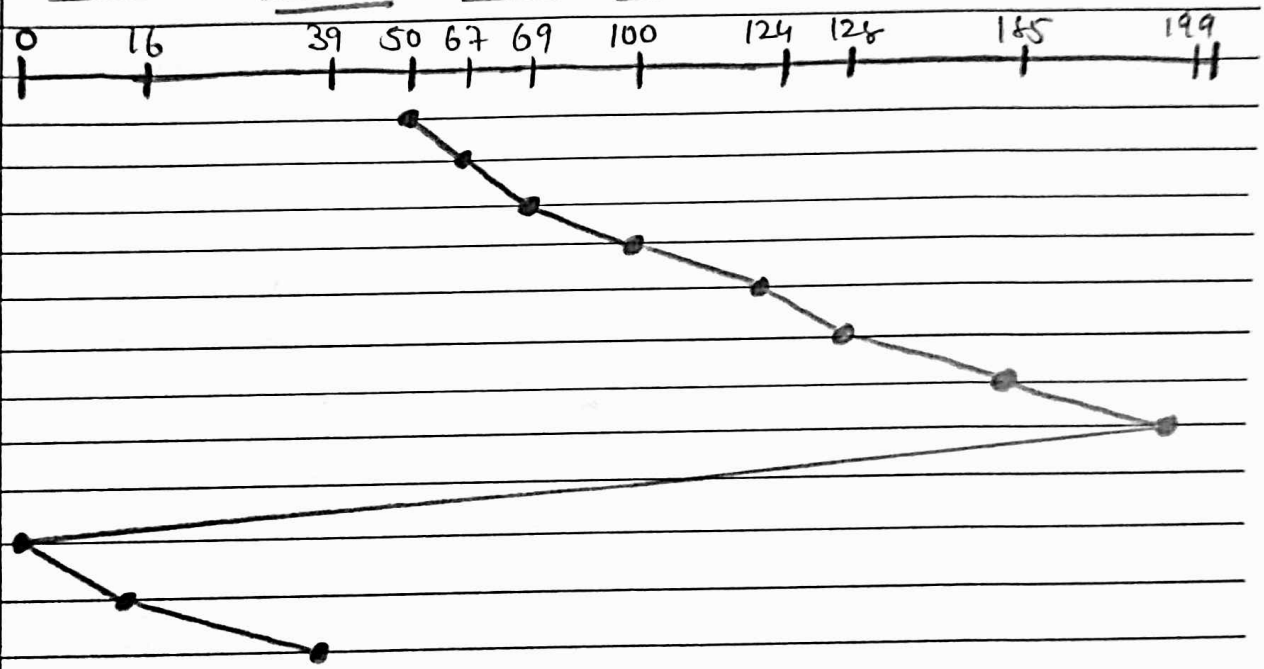
Disk Size = 200

Process = 8.

100, 185, 39, 124, 16, 126, 67, 69

Head = 50.

C-Scan Disk Scheduling.



Starting node = 50

End node = 39

⇒ Total Seek Time = $50 \times 2 + (199 - 67) \times 2 + 10$

$= 100 + (132) \times 2) + 10$

$= 100 + 264 + 10$

$= 374$

Name of the Subject: AOS Subject Code: IT-607

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(i) Total Movement = (199 - 50) + (199 - 0) + (39 - 0)
= 387

Total req = (199 - 50) x 2ms + (199) x 10ms. + (39) x 2ms

= 149 x 2 + 199 x 10 + 39 x 2

= 2366ms.

(ii)

A process that is spending more time paging than executing is said to be thrashing.

- If a process can't maintain min. req. no. of frames & then it swapped out, freeing up frames for other process.

Name of the Subject: AOS Subject Code: IT-607

Seat No: IT076 Student ID: 18ITUBN116 Branch/Sem: IT - III

Q3 (B)

2	3	4	5	3	2	6	7	3	2	3	4
2	2	2	2	2	2	2	2	2	2	2	4
	3	3	3	3	3	3	3	3	3	3	3
		4	5	5	5	6	7	7	7	7	7
M	M	M	M	H	H	M	M	H	H	H	M

Total page fault 7, Total Number of missing the sequence. give the page fault?

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