



COLLEGE OF COMPUTING AND INFORMATICS

Assignment 3 includes chapter 9, 10, 11 and 12

Course Title: Operating Systems

Course Code : IT241

Marks: 5

Deadline: 13/4/2016

1. Apply LRU algorithm on this string with 3 frames to determine page fault. (2 Marks)

String is: 6,9,5,2,9,3,9,4,2,3,9,3,9,3,2,5,2,9,5,6,9,5

6	6	6	2	2	4	4	4	9	5	5	5
	9	9	9	9	9	9	3	3	3	9	9
		5	5	3	3	2	2	2	2	2	6

**12 page faults**

2. What is the difference between Sequential access and Direct access to access information in a file? (1 Mark)

**The simplest access method is sequential access. Information in the file is processed in order, one record after the other.**

**Another method is direct access (or relative access). Here, a file is made up of fixed-length logical records that allow programs to read and write records rapidly in no particular order. For direct access, the file is viewed as a numbered sequence of blocks or records. Thus, we may read block 14, then read block 53, and then write block 7. There are no restrictions on the order of reading or writing for a direct-access file.**

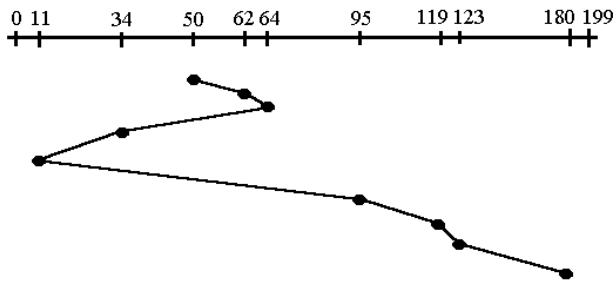
3. Draw and illustrate how Shortest Seek Time First (SSTF), and Circular Scan (C-SCAN) schedules the following request queue (0 – 199):

95, 180, 34, 119, 11, 123, 62, 64

-The head starts at the track 50.

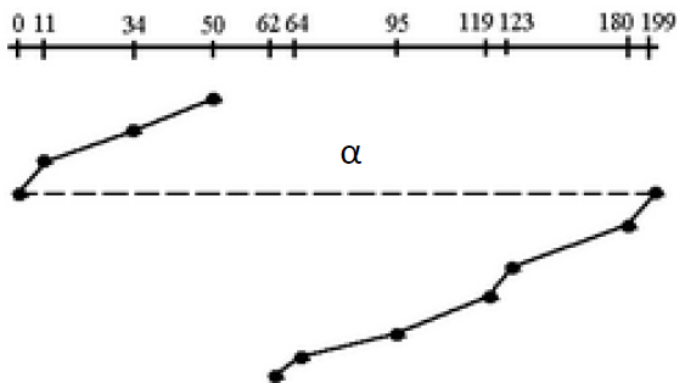
Then calculate how many head movement? (2Mark)

### 1. SSTF



**Total head movement for SSTF = 236 tracks**

### 2. C-SCAN



**Total head movement for C-SCAN = 207 tracks**