

PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Assignment-3

Submission Date: 10/6/22

Subject: Operating System

Subject Code: PC-CS-206A

Semester: 4TH

Section: A

Q1: On a disk with 1000 cylinders, numbered 0 to 999. disk head is initially at track 345. the disk queue is in FIFO order contained pending request for I/O to the following tracks:

123,874,692,475,105,376 starting from the current head position what is the total distance that disk arm moves to satisfy all pending request for each of the following scheduling algo:

(i) FIFO (iv) LOOK

(ii) SSTF (v) C-SCAN

(iii) SCAN (vi) C-LOOK

Q2: Given memory partitions of 100K, 500K, 200K, 300K and 600 K (in order), apply first fit and best fit algorithms to place processes with the space requirement of place processes with the space requirement of 212K, 417K, 112 K and 426 K (in order)? Which algorithm makes the effective use of memory?

Q3: Consider a main memory with capacity of 4 page frames. The reference string is 1,3,4,4,3,2,1,7,5,6,4,2,1,2 which of FIFO or LRU would be better justify your answer.

Q4: Consider a paging hardware with a TLB assume that entire page table and all the pages are in physical memory it takes 10ms to search the TLB and 80ms to access the physical memory, if the TLB hit ratio is 0.6 the effective memory access time in ms is _____.