United International University
CSE 4509: Operating Systems
Make-up CT

1.

Consider the following snapshot of a system:

	Allocation A B C D	Max A B C D	Available A B C D
P_0	0 0 1 2	0 0 1 2	1 5 2 0
P_1	1 0 0 0	1 7 5 0	
P_2	1 3 5 4	2 3 5 6	
P_3	0 6 3 2	0 6 5 2	
P_4	0 0 1 4	0 6 5 6	

Answer the following questions:
a) What is the content of the matrix Need? [3]
b) Is the system in a safe state? (If you can find a safe sequence, then the system is in a safe state) [5]

2. Let's assume the disk has 200 tracks, numbered from 0 to 199. **The head starts at track 50.**
Request queue: [15, 180, 90, 135, 45, 110, 70, 10, 175]
Find out which algorithm will perform better among Shortest Seek Time First and Scan? [12]