1. Given memory partitions of 100k, 500K, 200K, 300K and 600K, how would first fit algorithm processes of 212K, 417K, 112K and 426K in order?

2. In a computer system where the best fit algorithm is used for allocating jobs to the memory partitions, the following situation has encountered:

Partition size (KB)	4K	8K	20K	2K				
Job Size (KB)	2K	14K	3K	6K	6K	10K	20K	2K
Time for execution	4	10	2	1	4	1	8	6

   When will the 20K job complete?

3. Consider the following segment table:

Segment	**Limit**	**Base**
0	1000	1400
1	400	6300
2	400	4300
3	1100	3200
4	1000	4700

   What are the physical addresses of the following logical address?

   i) 2,53 ii) 3,852 iii) 0,1222

4. Consider a system with byte-addressable memory, 32 bit logical addresses, 4 KB page size and page table entries of 4 bytes each. What is size of the page table in the system in megabytes?

5. If a process of 100kb is transferred from backing store to memory and 200kb of process to a backing store and average disk latency is 8 ms then what would be the total swap time, if transfer rate is 1 mbps?

6. If a page size is 4kb and logical address is 22 bit then find out the number of entries in the page table.

7. If the size of the reentrant code is 50kb and each user program holds 100kb of data to support 40 users, how much memory is required?

8. Consider the memory system with the following parameters:

Cache access time (Tc)= 100ns, Memory access time (Tm) = 500ns. If the effective access time is 10% greater than the cache access time, what is the hit ratio?

9. Consider a system with four physical memory frames (initially empty) and the following reference string over seven pages: 1,2,3,4,2,1,5,6,2,1,2,3,7,6. Assume the memory starts empty. What will be the final content of the memory if i) FIFO and ii) LRU page replacement policy is used?