1. What do you Mean by operating system? Explain different types of operating system.
2. Explain different functions of operating system.
3. Explain in brief about the function of kernel and shell.
4. What is the process? explained Different state of process with diagram.
5. Explain the difference between long term, short term and medium term. Schedulers.
6. Assumed the following workload in a system where the low priority first to executed.

Process.	Arrival time.	Burst time.	Priority.
P1	5	5	5
P2	4	6	4
P3	3	10	3
P4	0	4	2
P5	2	2	1

Find the average waiting time and average turnaround time with SJF and priority Scheduling algorithm.

7. What do you mean by deadlock? Explained the necessary condition of deadlock.
8. Explain banker's algorithm with example.
9. Differentiate local and physical address.
10. What do you mean by memory Fragmentation? Explain types of memory Fragmentation.
11. Explain How Semaphores can be used to solve with the Critical Section problem.
12. but is paging? explained the paging hardware.
13. Consider the following page reference string. 1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6.

Find out number of page faults if there are 4 frames using the following page replacement algorithm. 1st. LRU. 2nd. FIFO 3rd. Optimal.

14. What are the three methods for allocating disk space and example?
15. Write short notes.
    a. Virtual memory.
    b. Segmentation.
    c. First fit? Best fit? Worst fit.
    d. PCB and TCB.
    e. Resource Allocation Graph.