1. difference between process and thread with example

a. in terms of memmory

b. in terms of communication

c.in terms of overheads

d. in terms of creation Time

e.in terms of crash impact

2.**Question:**  
A system has five processes (P1, P2, P3, P4, and P5) with the following arrival times, burst times, and priorities:

| **Process** | **Arrival Time** | **Burst Time** | **Priority** |
| --- | --- | --- | --- |
| P1 | 0 ms | 8 ms | 3 |
| P2 | 1 ms | 4 ms | 1 |
| P3 | 2 ms | 9 ms | 4 |
| P4 | 3 ms | 5 ms | 2 |
| P5 | 4 ms | 2 ms | 5 |

(a) Draw the Gantt chart and calculate the average waiting time (AWT) and average turnaround time (ATAT) for the following scheduling algorithms:

1. First Come First Serve (FCFS)
2. Round Robin (RR) with a time quantum of 3 ms
3. Shortest Job First (SJF) (Non-Preemptive)
4. Shortest Remaining Job First (SRJF) (Preemptive)
5. Priority Scheduling (Non-Preemptive, lower number = higher priority)

(b) Compare the performance of these algorithms in terms of waiting time, turnaround time, and response time.

1. Explain the following terms
2. running state
3. Waiting state
4. Ready state
5. Terminate state
6. Draw the process state
7. What is process
8. What is long term scheduler
9. Short term scheduler
10. What is context switching
11. What is the difference between block and non blocking communication.