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1) Define preemptive and non-preemptive scheduling in OS.

Ans) Preemptive Scheduling :- is a CPU scheduling technique that works by dividing time slots of CPU to a given process. The time slot given might be able to ~~complete the whole process or~~ complete the whole process or might not be able to it. When the burst time of the process is greater than CPU cycle, it is placed back into the ready queue and will execute in the next chance. This scheduling is used when the process switch to ready state.

Non Preemptive Scheduling :- is a CPU scheduling technique the process takes the resource and holds it till the process gets terminated or is pushed to the waiting state. No process is interrupted until it is completed, and after that processor switches to another process.

2) Define illustrate different analysis techniques of algorithms.



2) Mention the different CPU scheduling criteria.

Ans) Different CPU scheduling algorithms have different properties and the choice of a particular algorithm depends on the various factors. Many criteria have been suggested for comparing CPU scheduling algorithms.

The criteria include the following:—

- (i) CPU utilisation:— The main objective of any CPU scheduling algorithm is to keep the CPU as busy as possible.
- (ii) Throughput:— A measure of the work done by CPU is the number of processes being executed and complete per unit time.
- (iii) Turnaround time:— For a particular process, an important criteria is how long it takes to execute that process.
- (iv) Waiting time:— A scheduling algorithm does not affect the time required to complete the process once it starts execution.
- (v) Response time:— In an interactive system, turn-around time is not the best criteria. A process may produce some output fairly early and continue computing new result while previous result are being output to the user.