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SUBJECT **OPERATING SYSTEM**

QUESTION NO 1

- **The hardware mechanism that enables a device to notify CPU is called an ----------**
  - **Interrupt**
- **The section of the process control block comprises of page and segment tables**
  - **Memory related information**
- **The ---------- system call suspends the calling process.**
  - Wait
- **In ---------addressing, the recipient is not required to name the sender.**
  - **Asymmetric**

- **-------- command gives a snapshot of the current processes.**
  - **Ps**
- **----------command to resume the execution of a suspended job in the foreground**
  - **fg**
- **You can use the ---------- command to display the status of suspended and background processes**
  - **jobs**
- **You can terminate a foreground process by pressing ----------**
  - **<Ctrl-C>**
- **A time sharing system is**
  - **All of these**
- **The main characteristic of a Real time system is**
  - **Usability**
- **Shared libraries and kernel modules are stored in _____ directory**
  - **/lib**

- **_____ scheduler selects the process from the job pool and put them in main memory.**
  - **Long term**
- **In indirect inter process communication, a sender ___ mention the name of the recipient.**
  - **do not**
- **A _____ is an integer variable that, apart from initialization is accessible only through two standard atomic operations: wait and signal.**
  - **Semaphore**
- **A semaphore that cause Busy-Waiting is termed as _____.**
  - **Spinlock**
- **The execution of critical sections must NOT be mutually exclusive**
  - **False**
- **The following requirement for solving critical section problem is known as _____.**
  "There exists a bound on the number of times that other processes are allowed to enter their critical sections after a process has made a request to enter its critical section and before that request is granted."

- ❖ **Bounded Waiting**
- ❖

- ➢ **The performance of Round Robin algorithm does NOT depends heavily on the size of the time quantum.**

  - ❖ **True**

- ➢ **The critical section problem can be solved by the following except.**

  - ❖ **Firmware based solution**

- ➢ **_____ is also called Swapper.**

  - ❖ **Medium term scheduler**

SECTION B

QUESTION NO 2:

ANSWER :

if the thread in the process is running and receives a signal(say Ctrl-C) and the default action of the signal is to terminate a process, does the running thread terminates or the parent process will also terminate. That happens to the threads if the running process terminates because of some signal.

QUESTION NO 1:

ANSWER:

Preemptive SJF scheduling is sometimes called shortest-remaining-time-first scheduling. We illustrate the working of the SJF algorithm by using the following system state.

Process	Arrival Time	Burst Time
P1	0.0	7
P2	2.0	4
P3	4.0	1
P4	5.0	4

QUESTION NO 3

ANSWER:

CPU idle time can be

- **Reliability problem**
- **One must have to take care of security and integrity of user programs and data**
- **Data communication problem**

Advantages of Time-Sharing OS

- **Each task gets an equal opportunity**
- **Less chances of duplication of software**
- reduced

Advantages of threads are:

- **Responsiveness:**

Multithreading an interactive application may allow a program
to continue running even if part of it is blocked or is performing a lengthy operation, thereby increasing responsiveness to the user.

- **Economy:**

Allocating memory and resources for process creation is costly. Alternatively, because threads share resources of the process to which they belong, it is more economical to create and context switch threads.

- **Utilization of multiprocessor architectures:**

Disadvantages of threads are:

Advantages

- With resource sharing facility user at one site may be able to use the resources available at another.
- Speedup the exchange of data with one another via electronic mail.