Daniyal Alam
I.D: 15385

Mid Semester Assignment

Operating System:

Q-1,
Ans:
Interrupt

Q-2,
Ans:
Memory related information.

Q-3
Ans:
Wait.

Q-4
Ans:
Asymmetric.

Q-5
Ans:
PS.

Q-6.
Ans:
fg.

Q-7.
Ans:
jobs.

Q-8.
Ans:
<Ctol-C>

Q-9.
Ans:
All of these.

Q-10.
Ans:
Usability.

Q-11:

Ans.

/lib

Q-12:

Ans:

long term:

Q-13:

Ans:

do not.

Q-14:

Ans:

Semaphore.

Q-15:

Ans:

Spinlock.

Q-16
Ans:
False.

Q-17
Ans:
True.

Q-18
Ans:
Bounded
Waiting.

Q19.
Ans:
Firmware based
solution.

Q20.
Ans:
Medium term
scheduler.

Section - "B"

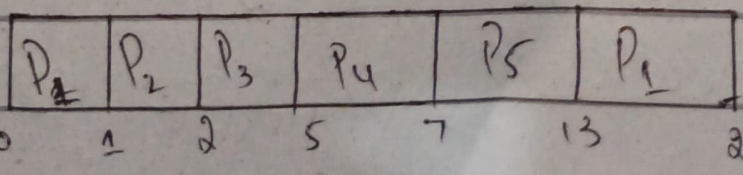
Q-21. Write the formula/ procedure for ——— ——— scheduling.

Ans:

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

Process	Arrival time	Burst time	Completion time	T-A-T	Waiting time: (Burst time) - TAT
P_1	0	8	20	20	8-20=-12
P_2	1	1	2	1	1-1=0
P_3	2	3	5	3	0
P_4	3	2	7	4	2
P_5	4	6	13	9	3

GANT



Average T-A-T = $\frac{20+1+3+4+9}{5}$

$= \frac{37}{5}$

Average waiting time = $\frac{12+0+0+2+3}{5}$

$= \frac{17}{5}$

Q-22 If a process exits and there are ---- run?

Ans:

No, threads of the process will no longer run once the process in terminated. Because all threads in a process share the same address space, all threads are

suspended at the same time. Similarly a termination of a process terminates all threads within that process.

Q-23. Considering the resource sharing feature _____ briefly.

Ans:

Resource sharing have both advantages of threads and disadvantages of threads.

Advantages:

Responsiveness:

Multithreading an interactive application may allow a program to continue running even if part of its

blocked or is performing a lengthy operation, thereby increasing responsiveness to the user.

Resource sharing:

By default threads share the memory and the resources of the process to which they belong. Code sharing allows an application to have several different threads of activity all within the same address space.

Disadvantages:

Some of the main disadvantages of threads are:

Resource sharing:

Inthese as resource sharing is one of the major advantage of threads, it is also a disadvantage because proper synchronization is needed between threads for accessing the shared resources eg: data and file.

Difficult programming model:

It is difficult to write, debug and maintain multi-threaded programs

for an average user. This is particularly true when it comes to writing code for synchronized access to shared resources.