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Subject : Operating System.

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Q1 Ans  
Interrupt.

Q2 Ans.  
memory related information

Q3 Ans =  
wait

Q4 Ans =  
Asymmetric

Q5 Ans  
PS

Q6 Ans =  
fg

Q7 Ans  
jobs

Q8 Ans  
<ctrl-c>

Q9 Ans  
All of these

Q10 Ans  
usability.

Q11 Ans.  
lib

Q12 Ans. long term

Q13 Ans. do not.

Q14 Ans. Semaphore

Q15 Ans. spinlock

Q16 Ans. False

Q17 Ans. True

Q18 Ans: Bounded waiting.

Q19 Ans. Firmware based solution

Q20 Ans. median term schedulability.

# Section (B)

Q.21) Write the formula procedure for SJF 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-AT	waiting time (Burst time)
P1	0	8	20	20	8-20 = -12
P2	1	1	2	2	1-1 = 0
P3	2	3	5	5	0
P4	3	2	7	7	2
P5	4	6	13	13	3

CANT	P1	P2	P3	P4	P5	P1
	0	1	2	5	7	13

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

$$= \frac{37}{5}$$

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

$$= \frac{17}{5} \text{ Ans}$$

Q22 If a process exists and there are --- Run!

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

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

Q23 considering the resource sharing feature ---

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

### Advantages:

Multi-threading an interactive application may allow a program to continue running even if part of it is blocked or if performing lengthy operation thread increasing responsiveness to the users.

### 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

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Some of the main disadvantages of threads are.

### Resource Sharing.

Where 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 e.g. data and file.

### Difficult Programming Model.

It is difficult to write, debug, and maintain multi-threads program on average users. This is particularly true when it comes to writing code for synchronized access to shared resources.