Q2- State whether each of the following is TRUE or FALSE

1- An operating system manages system resources. T
2- A programmer counter stores the address of the next instruction to be processed. F
3- A PCB determines which process is to be executed next. F
4- Time-sharing OS is a logical extension of the multi-programmed OS where user can interact with the program. The CPU executes multiple jobs by switching among them so frequent, to make the user feels as if the operating system is running only his program . T
5- In Asymmetric multi processing each processor run an identical copy of the OS, and these copies communicate with each other as and when needed. F
6- User programs cannot directly interact with the system resources, instead they request the operating system which checks the request and does the required task for the user programs. T
7- System calls provide the interface between a process and the operating system. T
8- Information associated with each process is stored in the schedular. F
9- Operating systems act as resources allocators and control the execution of programs. T
10- Dynamic Loading is useful when large amounts of code are needed to handle infrequently occurring cases as unused routines are never loaded. T
11- Fragmentation occurs in a dynamic memory allocation system when all the free blocks are big enough to satisfy the required memory request. F
12- Preemption generally does not increase the complexity of a scheduling problem. F
13- Paging eliminates internal fragmentation. F
14- Compaction can be used to solve the problem of internal fragmentation. F
15- An operating system is interrupt driven T
16- Device controller informs CPU that it has finished its operation by causing an interrupt. T
17- Upon an I/O request by a user program, the I/O operation starts and control does not return to the user program until the I/O operation is finished. F
18- In direct memory access, device controller transfers blocks of data from buffer storage directly to main memory without CPU intervention. T
19- Disk surface is logically divided into sectors, which are subdivided into tracks. F
20- In direct memory access, only one interrupt is generated per block, rather than the one interrupt per byte. T
21- A process can be swapped temporarily out of memory to a backing store, and then brought back into memory for continued execution. T
22- Roll out, roll in is a swapping variant used for priority-based scheduling algorithms; where higher-priority process is swapped out so lower-priority process can be loaded and executed. F
23- Relocation registers used to protect user processes from each other, and from changing operating-system code and data. T
24- Worst-fit and best-fit are usually better than First-fit in terms of speed and storage utilization F