

Real Time OS:-

Sec-5

Ans-2

Real Time Operating System (RTOS) has well defined fixed time limit, i.e. processing must be done within definite time limit otherwise system will fail.

⇒ Areas where RTOS is useful:-

⇒ Medical - Imaging System

⇒ Display screen of airplane

⇒ Robotics

⇒ Air-traffic control

⇒ Control System

Example of Real Time OS:-

- Harmony (Canada)
- Maruti (Uni of Maryland)
- OS9 (Microwave system cooperation)
- RTEMS.
- A good example is a robot.

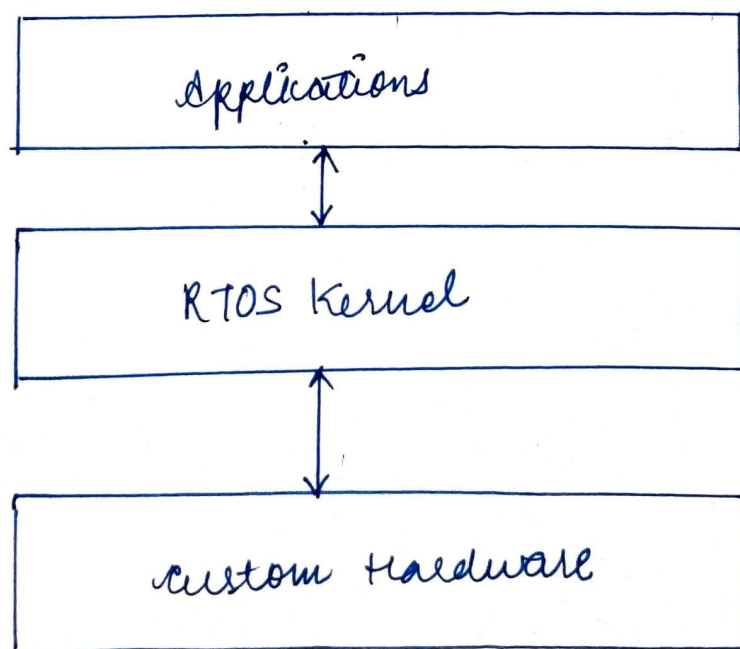


Fig: structure of RTOS

Process Scheduling with diagram:-

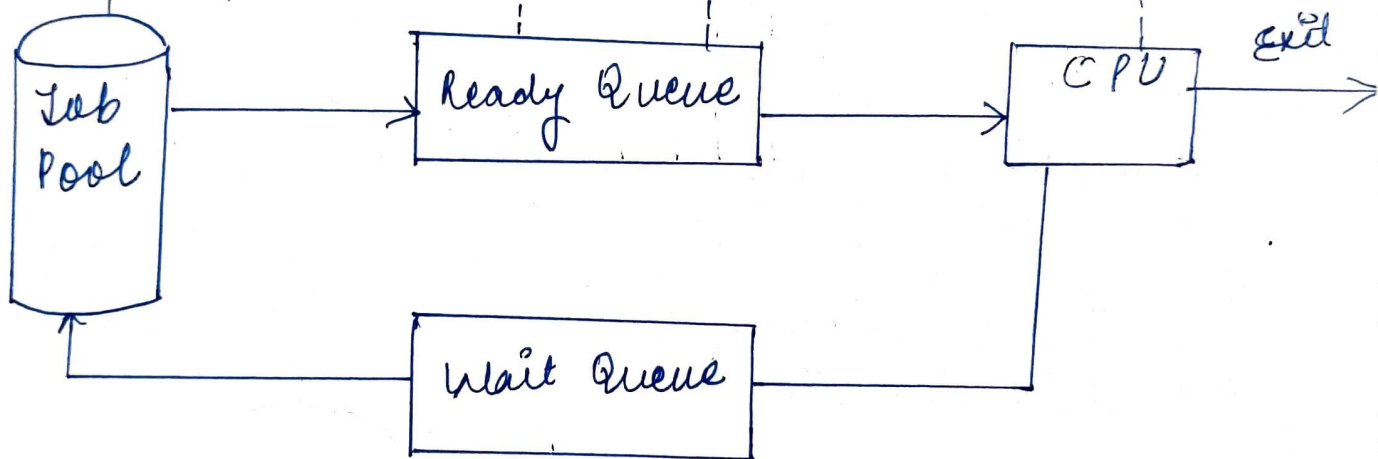
Process Scheduling is a task that schedules process of different states like ready, waiting, running. Various performance criteria that help in designing a good scheduling are:-

- C.P.U. utilization
- Throughput
- Response Time
- Waiting Time
- Fairness

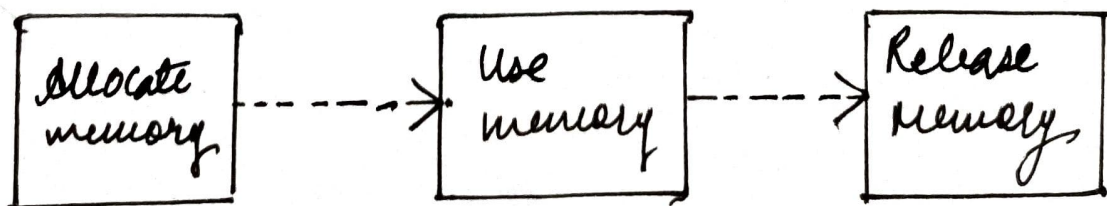
Long term scheduler

vs.

Short Term Scheduler



Memory Management:-



Memory Management is a form of resource management applied to computer memory.

The essential requirement of memory management is to provide ways to dynamically allocate portions of memory to programs at their request, and free it for reuse when no longer needed.

The various memory management techniques (schemes) are:

- contiguous allocation
- Paging
- segmentation
- combination (Paging + segmentation).