

Operating System

Process Management

DPP 03

[MCQ]

1. The information about a process is maintained in _____.
- Process Context block which is implemented using an Array.
 - Process Control block which is implemented using a Stack
 - Process Context block which is implemented using a Linked list
 - Process Control block which is implemented using a Doubly Linked list

[MSQ]

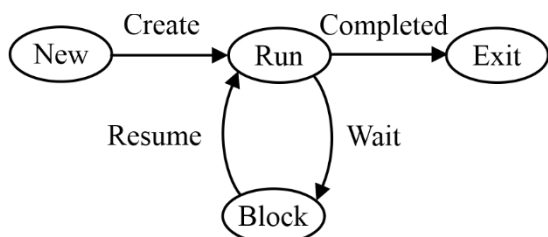
2. Consider a computer with a CPU and N processes, which of the following is correct regarding the processes:
- There can be maximum of N processes in the block state.
 - There can be maximum of N processes in the ready state.
 - There can be atmost 1 process in the running state.
 - There can be atmost N processes in the running state.

[MCQ]

3. If "Dispatch" operation is performed on the process, which transition is possible from the following?
- Running to Ready
 - Ready to Running
 - Blocked to Ready
 - Running to Blocked.

[MCQ]

4. The given process state transition diagram represents:



- UNIX operating system.
- Multiprogramming operating system.
- Uni-programming operating system.
- None of these.

[MSQ]

5. If the process is in Main memory, then, it can be in
- Ready state
 - Running state
 - Block state
 - Suspend state

[MCQ]

6. If a process is suspended from Running state, it is moved to _____.
- Ready state in main memory.
 - Block state in secondary memory.
 - Suspend ready state in main memory.
 - Suspend ready state in secondary memory.

[MSQ]

7. Which of the following scheduling queues are present on the disk?
- Ready queue
 - Block queue
 - Suspend queue
 - Input queue

[MSQ]

8. Which of the following process state transition/ transitions is/are present in multi-programming OS but not in uni-programming OS?
- Running to Exit
 - Ready to Running
 - Block to Ready
 - Running to Ready

Answer Key

- | | |
|--------------|--------------|
| 1. (d) | 5. (a, b, c) |
| 2. (a, b, c) | 6. (d) |
| 3. (b) | 7. (c, d) |
| 4. (c) | 8. (b, c, d) |



Hint & Solutions

1. (d)

The information about a process is maintained in a Process Control Block. Process Control Block is generally implemented using Doubly-linked list. So, option D is correct answer.

2. (a, b, c)

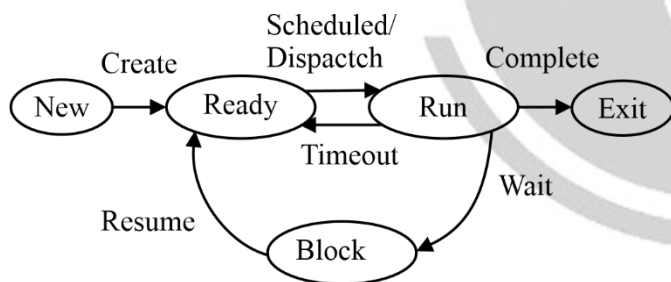
There can be N number of process present in block state. So, A is correct.

Ready state comprises a queue to store and schedule the processes on the CPU, therefore, there can be a maximum of N processes in the ready state. Hence, option B is correct.

When process is actually executing on the CPU that time the process is in running state. A single CPU can run at most 1 process at a time. Therefore, C is the correct option and D is incorrect.

3. (b)

In the process transition diagram, if the process is moving from ready to running state, means the process is dispatched or scheduled on the CPU.



Therefore. Option B is correct.

4. (c)

The given operating system do not have “READY state” in it, so a single process is created and loaded

into CPU for execution. The above process state transition diagram represents Uni-programming operating system.

Unix operating system is also a multi-programming operating system, and the multi-programming operating system, has a “READY state” to schedule multiple processes to the CPU.

Therefore, option “C” is the correct answer.

5. (a, b, c)

If the process is in Ready state, Running state, Block state, then it is in main memory. Whereas if the process is in suspend state, it means it is in the disk until the main memory gets free.

Therefore, option a, b, c are correct.

6. (d)

When a process is suspended it is moved to suspend ready state in secondary memory on disk.

7. (c, d)

Suspend queue and Input/Job queue are present on disk. Ready queue and Block queue are present on main memory.

8. (b, c, d)

As, Ready state is not present in the uni-programming operating system, so

- Ready to Running
- Block to Ready
- Running to Ready

All these transitions are present in Multi-programming operating system but not in Uni-programming OS.



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