Question1 answer:

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| **S.N.** | **Long-Term Scheduler** | **Short-Term Scheduler** | **Medium-Term Scheduler** |
| 1 | It is a job scheduler | It is a CPU scheduler | It is a process swapping scheduler. |
| 2 | Speed is lesser than short term scheduler | Speed is fastest among other two | Speed is in between both short and long term scheduler. |
| 3 | It controls the degree of multiprogramming | It provides lesser control over degree of multiprogramming | It reduces the degree of multiprogramming. |
| 4 | It is almost absent or minimal in time sharing system | It is also minimal in time sharing system | It is a part of Time sharing systems. |
| 5 | It selects processes from pool and loads them into memory for execution | It selects those processes which are ready to execute | It can re-introduce the process into memory and execution can be continued. |

Question2 answer:

A context switch is the mechanism to store and restore the state or context of a CPU in Process Control block so that a process execution can be resumed from the same point at a later time. Using this technique, a context switcher enables multiple processes to share a single CPU. Context switching is an essential part of a multitasking operating system features.

When the scheduler switches the CPU from executing one process to execute another, 1. the state from the current running process is stored into the process control block.

2. the state for the process to run next is loaded from its own PCB and used to set the PC, registers.

3. At that point, the second process can start executing.