Operating System 1/ Sheet 3(Part 2)

Chapter3&4 Cont'

Question1: *write the scientific term.*:

1. is a flow of execution through the process code, with its own program counter that keeps track of which instruction to execute next. **(Thread)**
2. specializes in coastal, rural, and small, challenging sites **(MP Architecture)**
3. *time it takes for the dispatcher to stop one process and start another running* ***(Dispatch latency)***

Question2*: Choose the right answer:*

1. ……usually referred to as **……**, is an execution model that exists independently from a language, as well as a parallel execution model. (POSIX Threads/pthreads, Win32 threads/java threads, MP/MMU)
2. …….user-level threads mapped to single kernel thread (Each, many, one, two)
3. …….. user level thread maps to kernel thread (Each, many, one, two)
4. Two-level Model Similar to M:M, except that it allows a user thread to be **……** to kernel thread. (mailbox, bound, thread, Kernel thread)

Question3: **Choose the right answer for each the following spaces:**

(nonprimitive, Preemptive, Many-to-Many Model, SJF is optimal, Time slice)

1. **Many-to-Many Model** Allows many user levels threads to be mapped to many kernel threads.
2. **nonprimitive** once CPU given to the process it cannot be preempted until completes its CPU burst.
3. **Preemptive** if a new process arrives with CPU burst length less than remaining time of current executing process, preempt.
4. **SJF is optimal** gives minimum average waiting time for a given set of processes.
5. **Time slice** each queue gets a certain amount of CPU time which it can schedule amongst its processes.

True or false:

1. A priority number (integer) is associated with each process (True)
2. The **I/O Devices** is allocated to the process with the highest priority (smallest integer ≡ highest priority) (**False**) CPU.
3. **SRTF** is a priority scheduling where priority is the predicted next CPU burst time (**False**) SJF.
4. Each process gets a small unit of CPU time (*time quantum*), usually 10-100 milliseconds (True)
5. Each queue has its own scheduling algorithm (True)
6. Multilevel-feedback-queue scheduler defined by only **one queue** (False) number of queues.