Q1) What is the difference between time limit exceed and time overrun.

Ans) Time limit exceed is the point at which a processor has run longer than the time assigned to it for execution, so the procedure is appropriated by the OS. Though, time over run is the point at which a procedure has held up out the most extreme measure of time for an event to happen for its success.

Q2) What is the difference between invalid instruction and data misuse.

Ans) Invalid instruction is a nonexistent instruction which processor wants to execute. And, data misuse is when a data of different data type is being used incorrectly or if the data isn’t initialized properly.

Q3) Consider a system with priorities. A high priority process named A is currently blocked. A low priority process named B is running. An interrupt signals completion of the event for which A is waiting. What should be the transitions in the system, so that priorities are not violated?

Ans. Once the processor interrupt signals of the event completion, process A is put in ready state and placed at the end of ready queue by the OS. When process B is completed, dispatcher will scan the ready queue and will select process A because it has highest priority in ready queue.

Q4) Consider a background process that executes for x nanoseconds, then sleeps for y nanoseconds. It never terminates. Which transitions will it make according to the 5 state process model.

Ans) The background process will first enter the NEW stage then will enter into READY state when it is ready for execution and in the ready queue. During execution, it will enter the RUNNING stage. It will then enter BLOCKED stage, where it will not been terminated but will be sleeping and awaiting another process execution upon which it’ll again be put into READY stage and these stages keep repeating. This background process will not enter the EXIT stage as its not being terminated.