Unit 11 - ASSESSMENTS

Assessment - 1

The due date for submitting this assignment has passed.

Submitted assignment (Submitted on 2017-01-29, 15:41)

This Assessment can only be submitted once.

1) Which of the following statements about Softwares is false?  
   - System Softwares can control and coordinate the use of hardware.
   - DBMS, Compilers, Assemblers are examples of System Software.
   - System Softwares provide an API that can be accessed by the Application Softwares.
   - OS Interface is used by the System Softwares to interact with the hardware/OS.
   
2) Which of the following is true about the Bootstrap program?  
   - It is stored on the ROM
   - It loads the OS Kernel and triggers its execution
   - It initializes the hardware system
   - All of the options are correct.

3) Fill in the blanks with the most accurate answer:  
   I) Keyboard generates a ____________ everytime a key is pressed.

   II) Software programs generate a _________ when they want to access data from an external hard disk.

   - Exception, Interrupt
   - Interrupt, Trap
   - Interrupt, Exception
   - Trap, Interrupt

4) Which of the following is true about i/o?  
   - Synchronous i/o is advantageous because it results in faster execution of the user program.

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II) Asynchronous i/o is disadvantageous because it requires more hardware/software changes such as System calls and Device status enable bits.

- True, True
- True, False
- False, False
- False, True

5) State True or False. Privilege escalation attacks allow the attacker to change to a ID

(1 point)

GROUP or USER ID) with more access rights.

- True
- False

6) State True or False.

1 point

I) OS manages Process, Memory, Files as well as Secondary storage.
II) A system without a cache can be built, but it will be slower.

- True, False
- False, False
- False, True
- True, True

7) Fill in the blanks

2 points

I) Supervisor mode is another name for User mode. True or False? ________.
II) ________ exception is used to switch from user mode to kernel mode.

- True, Interrupt
- False, interrupt
- False, Trap
- True, Trap

8) State true or false.

1 point

I) In a Micro-Kernel based OS, different modules communicate with each other using message passing. This is a secure way to enable communication.
II) In a Modular OS, kernel modules can directly call any other module. This, however, suffers from efficiency issues.

- True, True
- False, True
- False, False
- True, False

9) Creating many threads is advisable than creating many processes. Which of the statements below do not support this claim?

1 point

- Threads can share the address space and global data.
- Programmer should ensure that it is ok to share data between two threads.
- Context switching is faster for threads as compared to Processes
- None of the options.

10) Fill in the blanks.

1 point

Creating threads takes some time, and the process will have to wait before assigning a job to the thread. A possible solution for improving performance is using ____________

- Kernel Threads
User Threads
Thread Pools
Processes

11 Fill in the blanks: 1 point
I) The reason why CPU is idle is because of ____________________.
II) Short term scheduler selects the process to be ___________ the ready queue.
   - there are no process to execute, brought into
   - alternating i/o activity, picked from
   - alternating i/o activity, brought into
   - None of the options.

12 Match the following: 1 point
1. Pick the job that arrived first - A. FCFS
2. Pick the job that is smallest - B. SJF
3. Pick the job that can complete first - C. SRTF
   - 1A, 2C, 3B
   - 1C, 2A, 3B
   - 1A, 2B, 3C
   - 1B, 2A, 3C

13 State True or False. Non-Preemptive scheduling algorithm will pull out the currently executing process in order to schedule another process. 1 point
   - True
   - False

14 SJF Scheduler suffers from which of the following issues? 1 point
   - None of the options
   - Bigger processes are starved
   - Process arrival dictates waiting time.