

Operating Systems (CS 303)
Department of Computer Science and Engineering
Indian Institute of Technology Indore
Class test - I

Name:

Roll No.:

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1. System calls are invoked by using
 - a. Non - Privilege instruction
 - b. An indirect jump
 - c. Polling
 - d. Software interrupt

 2. What is 1 KB is equivalent to?
 - a. 10 bits
 - b. 8192 bits
 - c. 1,024 bits
 - d. 896 bytes

 3. What is not the function of an operating system?
 - a. Managing memory and files of the system
 - b. Providing mechanisms for process synchronization
 - c. Providing a logical view of information storage
 - d. Load and store instructions

 4. The interface between a process and an operating system is provided by_____.
 - a. Main memory
 - b. Application Programming Interface(API)
 - c. System calls
 - d. Cache memory

 5. Which of the following statement is not correct?
 - a. Dual mode provides one space for the user and one for the kernel
 - b. Multitasking systems are the logical extension of a multiprogramming system
 - c. MS-DOS is an example of a multitasking system
 - d. System programs are also known as system utilities

 6. Which of the following statement is not correct?
 - a. A process is a program in execution
 - b. A program is an active entity and a process is a passive entity
 - c. A process is the instance of a computer program that is being executed by one or many threads
 - d. A program is a group of instructions to carry out a specified task

7. Which bit signifies the current mode of execution(user or kernel) in a system?
- a. Mode bit
 - b. Task bit
 - c. Kernel bit
 - d. Current bit
8. There are two modes in CPU -privileged and non-privileged. What is required to change the mode from privileged to non-privileged?
- a. a hardware interrupt is needed
 - b. a software interrupt is needed
 - c. a privileged instruction (which does not generate an interrupt) is needed
 - d. a non-privileged instruction (which does not generate an interrupt) is needed
9. What are the components of the computer system?
- A) Hardware
 - B) Operating System
 - C) Application Program & User
 - D) All of the above
10. What is an operating system?
- A) Collection of programs that manages hardware resources.
 - B) System service provider to the application programs.
 - C) Interface between the hardware and application programs.
 - D) All of the above
11. To access the services of operating system, the interface is provided by the _____
- A) System call
 - B) API
 - C) Library
 - D) Assembly Instructions
12. In UNIX, Which system call creates the new process?
- A) Fork
 - B) Create
 - C) New
 - D) None of the above
13. Which of the following is wrong about the bootstrap program?
- A) Initializes all aspects of the system
 - B) Loads operating system kernel and starts execution
 - C) Intermediate code in the set of instructions
 - D) Bootstrap is the first program when a machine initializes.
14. While the CPU is executing a program, an interrupt exists then it
- A) Follows the next instruction in the program
 - B) Jumps to instruction in other registers
 - C) Breaks the normal sequence of execution of instructions
 - D) Stops executing the program
15. Which of the following is the lowest in the computer memory hierarchy?
- A) Cache memory
 - B) RAM
 - C) Secondary memory
 - D) CPU registers
16. Write system call returns -1 when
- A) If disk fills up while write is in progress
 - B) When file doesn't exist
 - C) If the file size exceeds the system's limit
 - D) If disk fills up while write is in progress and if the file size exceeds

17. The offset pointer is positioned using which system call?
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| a) Read | b) lseek |
| c) Write | d) Open |
18. Indicate one of the best options from the following. SetConsoleMode() call function in windows operating system is a UNIX's function called for
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|------------|-----------|
| a) ioctl() | b) read() |
| c) write() | d) open() |
19. Indicate one of the best options from the following. SetFileSecurity() call function in windows operating system is a UNIX's function called for
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| a) umask() | b) chown() |
| c) chmod() | d) shmget() |
20. Which one of the following is not true?
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| a) kernel is the program that constitutes the central core of the operating system |
| b) kernel is the first part of operating system to load into memory during booting |
| c) kernel is made of various modules which cannot be loaded in running operating system |
| d) kernel remains in the memory during the entire computer session |
21. What is the activity of an operating system with regard to memory management?
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| a) Keep track of which parts of memory are currently being used and by whom |
| b) Decide which processes are to be loaded into memory when memory space becomes available. |
| c) Allocate and deallocate memory space as needed. |
| d) All of the above. |
22. What is the activity of an operating system with regard to secondary-storage management?
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| a) Free-space management. | b) Storage allocation. |
| c) Disk scheduling. | d) All of the above. |
23. Which of the following method structures the operating system by removing all nonessential components from the kernel and implementing them as system and user-level programs.
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| a) Microkernel | b) Virtual machine |
| c) Para-virtualization | d) DTrace |
24. What is a facility that dynamically adds probes to a running system, both in user processes and in the kernel.
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|------------------------|--------------------|
| a) Microkernel | b) Virtual machine |
| c) Para-virtualization | d) DTrace |