

Q1. Select the most correct answer for the following questions.

1. The role of operating systems is to ____ **B**
 - A provide basic computing resources CPU, memory, I/O devices
 - B control and coordinates the use of hardware among various applications and users.
 - C define the ways in which the system resources are used to solve the computing problems of the users.
 - D perform specific tasks related to managing computer resources

2. Which of the following operating system services is useful for users? **A**
 - A File-system manipulation.
 - B Accounting.
 - C Resource allocation.
 - D Protection

3. In memory, the stack section of a process is to: **A**
 - A Store temporary data.
 - B Store global data.
 - C Store the code.
 - D Dynamic allocated data

4. Thread shares with other threads belonging to the same process its **D**
 - A thread ID
 - B program counter
 - C register set and a stack
 - D files and data

5. CPU throughput refers to **A**
 - A number of processes that complete their execution per time unit.
 - B amount of time to execute a particular process.
 - C amount of time a process has been waiting in CPU.
 - D amount of time it takes from when a request was submitted until the first response is produced.

6. If a process is executing in its critical section, then no other processes can enter their critical section. This condition is called.....
A mutual exclusion.
B critical exclusion.
C synchronous exclusion.
D asynchronous exclusion.

A

7. Which one of the following statements is incorrect?
A The relocation register help to protect user processes from each other
B Logical address space is the set of addresses generated by CPU
C Every address generated by the CPU is divided into frame bit & page number
D Memory protection is implemented by associating protection bit with each frame to indicate if read only or read write access is allowed

C

8. Which of the following is not true about the short-term scheduler?
A Selecting which process should be executed next and allocates CPU.
B Sometimes the only scheduler in a system.
C Is invoked frequently (milliseconds).
D Must be slow.

D

9. _____ states that programs, users and even the systems be given just enough privileges to perform their task.
A principle of operating system
B principle of least privilege
C principle of process scheduling
D principle of disk scheduling

B
D

10. The protection domain of a process contains _____
A object name
B rights-set
C privilege escalation
D both object name and rights-set

11. The internal code of any software that will set of a malicious function under certain circumstances is called _____
A logic bomb
B trap door
C trojan horse
D stack and buffer overflow

A

12. Viruses can be identified by _____
A Stealth
B Virus signature
C Armored
D Macro

13. _____ is the core secondary memory management technique.
A Paging
B Swapping
C demarcation
D Page

14. Which of the following is not a type of virus?
A
B
C
D

15.

...ments is incorrect?
...p to protect user processes from each other.
...the set of addresses generated by CPU.
...the CPU is divided into frame bit & page
...ted by associating protection bit with
...ress is allowed
...scheduler?
...allocates CPU.

12. Viruses can be identified based on a pattern that is known as B
A Stealth
B Virus signature
C Armored
D Macro
13. _____ is the concept in which a process pages are loaded into the main memory from the secondary memory only as they are needed required. C
A Paging
B Swapper
C demand paging
D Page fault
14. Which algorithm chooses the page that has not been used for the longest period of time whenever the page required to be replaced? C
A first in first out algorithm
B additional reference bit algorithm
C least recently used algorithm
D counting based page replacement algorithm
15. In the _____ algorithm, the disk arm starts at one end of the disk and moves toward the other end, servicing requests till the other end of the disk. At the other end, the direction is reversed, and servicing continues. B
A LOOK
B SCAN
C C-SCAN
D C-LOOK
16. In the _____ algorithm, the disk arm goes as far as the final request in each direction, then reverses direction immediately without going to the end of the disk. D
A LOOK
B SCAN
C C-SCAN
D C-LOOK

17. A system uses FIFO policy for page replacement. It has 4 pages frames with no pages loaded to begin with. The system first accesses 50 distinct pages in some order and then accesses the same 50 pages in reverse order. How many page faults will occur?
A 100
B 96
C 97
D 92

B

18. In the optimal page replacement algorithm, when a page is to be replaced, which of the following pages is chosen?
A Oldest page
B Not frequently used page in the future
C frequently used page in the future
D Newest page

B

19. There are 200 tracks on a disk platter and the pending requests have come in the order - 36, 69, 167, 76, 42, 51, 126, 12, and 199. Assume the arm is located at the 100 track and moving towards track 200. If the sequence of disc access is 126, 167, 199, 0, 12, 36, 42, 51, 69, and 76 then which disc access scheduling policy is used?
A Elevator
B Shorter Seek time-First
C C-SCAN
D First Come First Served

C

20. A disk has tracks from 0 to 179. Currently the head is at track 40. The R/W requests for tracks are in the following order- 80, 102, 26, 160, 35, 10, 135. What is the total head movement when SSTF algorithm is used?
A 190
B 258
C 542
D 180

D