MCQ

Mutiple Choice Questions

1.  After reading the question

2.  After reading first 2 options

3.  After reading all 4 options

Operating System Memory Management MCQ Part-1

(MCQs) Group 1: Memory Allocation

1. The main memory accommodates:

a) operating system
b) cpu
c) user processes
d) all of the mentioned

2. In contiguous memory allocation:

a) each process is contained in a single contiguous section of memory
b) all processes are contained in a single contiguous section of memory
c) the memory space is contiguous
d) none of the mentioned

3. The relocation (base) register helps in :

a) providing more address space to processes
b) a different address space to processes
c) to protect the address spaces of processes
d) none of the mentioned

4. With relocation and limit registers, each logical address must be _____ the limit register.

a) less than
b) equal to
c) greater than
d) none of the mentioned

5. The operating system and the other processes are protected from being modified by an already running process because :

a) they are in different memory spaces
b) they are in different logical addresses
c) they have a protection algorithm
d) every address generated by the CPU is being checked against the relocation and limit registers

6. When memory is divided into several fixed sized partitions, each partition may contain _____

a) exactly one process
b) at least one process
c) multiple processes at once
d) none of the mentioned

7. In fixed size partition, the degree of multiprogramming is bounded by _____

a) the number of partitions
b) the CPU utilization
c) the memory size
d) all of the mentioned

8. The first fit, best fit and worst fit are strategies to select a __

a) process from a queue to put in memory
b) processor to run the next process
c) free hole from a set of available holes
d) all of the mentioned

9. In internal fragmentation, memory is internal to a partition and:

a) is being used
b) is not being used
c) is always used
d) none of the mentioned

10. A solution to the problem of external fragmentation is:

a) compaction
b) larger memory space
c) smaller memory space
d) none of the mentioned

11. Another solution to the problem of external fragmentation problem is to:

a) permit the logical address space of a process to be noncontiguous
b) permit smaller processes to be allocated memory at last
c) permit larger processes to be allocated memory at last
d) all of the mentioned

12. If relocation is static and is done at assembly or load time, compaction _____

a) cannot be done
b) must be done
c) must not be done
d) can be done

13. The disadvantage of moving all process to one end of memory and all holes to the other direction, producing one large hole of available memory is:

a) the cost incurred
b) the memory used
c) the CPU used
d) all of the mentioned

14. _____ is generally faster than _____ and _____

a) first fit, best fit, worst fit.
b) best fit , first fit, worst fit
c) worst fit, best fit, first fit
d) none of the mentioned

15. External fragmentation exists when:

a) enough total memory exists to satisfy a request but not contiguous
b) the total memory is insufficient to satisfy a request
c) a request cannot be satisfied even when the total memory is free
d) none of the mentioned

16. External fragmentation will not occur when:

a) first fit is used b) best fit is used
c) worst fit is used d) no matter which algorithm used, it always occur

17. Sometimes the overhead of keeping track of a hole might be:

a) larger than the memory b) larger than the hole itself
c) very small d) all of the mentioned

18. When the memory allocated to a process is slightly larger than the process, then:

a) internal fragmentation occurs
b) external fragmentation occurs
c) both internal and external fragmentation occurs
d) neither internal nor external fragmentation occurs

(MCQs) Group 2: Swapping processes

1. Address Binding is :

a) going to an address in memory
b) locating an address with the help of another address
c) binding two addresses together to form a new address in a different memory space
d) a mapping from one address space to another

2. Binding of instructions and data to memory addresses can be done at :

a) Compile time b) Load time
c) Execution time d) All of the mentioned

3. If the process can be moved during its execution from one memory segment to another, then binding must be :

a) delayed until run time b) preponed to compile time
c) preponed to load time d) none of the mentioned

4. Dynamic loading is :

a) loading multiple routines dynamically

b) loading a routine only when it is called

c) loading multiple routines randomly

d) none of the mentioned

5. The advantage of dynamic loading is that :

a) A used routine is used multiple times

b) An unused routine is never loaded

c) CPU utilization increases

d) All of the mentioned

6. The _____ swaps processes in and out of the memory.

a) Memory manager

b) CPU

c) CPU manager

d) User

7. If a higher priority process arrives and wants service, the memory manager can swap out the lower priority process to execute the higher priority process. This swapping is called :

a) priority swapping

b) pull out, push in

c) roll out, roll in

d) none of the mentioned

8. If binding is done at assembly or load time, then the process _____ be moved to different locations after being swapped out and in again.

a) can

b) must

c) can never

d) may

9. In a system that does not support swapping,

a) the compiler normally binds symbolic addresses to relocatable addresses

b) the compiler normally binds symbolic addresses to physical addresses

c) the loader binds relocatable addresses to physical addresses

d) binding of symbolic addresses to physical addresses normally takes place during execution

10. The address generated by the CPU is referred to as :

a) Physical address
b) Logical address
c) Neither physical nor logical
d) None of the mentioned

11. The address loaded into the memory address register of the memory is referred to as :

a) Physical address
b) Logical address
c) Neither physical nor logical
d) None of the mentioned

12. The run time mapping from virtual to physical addresses is done by a hardware device called the :

a) Virtual to physical mapper
b) Memory management unit
c) Memory mapping unit
d) None of the mentioned

13. The base register is also known as the :

a) basic register
b) regular register
c) relocation register
d) delocation register

14. The size of a process is limited to the size of :

a) physical memory
b) external storage
c) secondary storage
d) none of the mentioned

15. If execution time binding is being used, then a process _____ be swapped to a different memory space.

a) has to be
b) can never
c) must
d) may

16. Swapping requires a _____

a) motherboard
b) keyboard
c) monitor
d) backing store

17. The backing store is generally a :

a) fast disk
b) disk large enough to accommodate copies of all memory images for all users
c) disk to provide direct access to the memory images
d) all of the mentioned

18. The _____ consists of all processes whose memory images are in the backing store or in memory and are ready to run.
a) wait queue
b) ready queue
c) cpu
d) secondary storage

19. The _____ time in a swap out of a running process and swap in of a new process into the memory is very high.
a) context – switch
b) waiting
c) execution
d) all of the mentioned

20. The major part of swap time is _____ time.
a) waiting
b) transfer
c) execution
d) none of the mentioned

21. Swapping _____ be done when a process has pending I/O, or has to execute I/O operations only into operating system buffers.
a) must
b) can
c) must never.
d) may be

22. Swap space is allocated :
a) as a chunk of disk
b) separate from a file system
c) into a file system
d) all of the mentioned