1. Because of virtual memory, the memory can be shared among
a) processes
b) threads
c) instructions
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
2 is the concept in which a process is copied into the main memory from the secondary memory according to the requirement.
a) Paging
b) Demand paging
c) Segmentation
d) Swapping
View Answer
Answer: b
Explanation: None.
3. The pager concerns with the
a) individual page of a process
b) entire process
c) entire thread
d) first page of a process
View Answer
Answer: a
Explanation: None.
4. Swap space exists in

a) primary memory
b) secondary memory
c) cpu
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
5. When a program tries to access a page that is mapped in address space but not loaded in physica memory, then
a) segmentation fault occurs
b) fatal error occurs
c) page fault occurs
d) no error occurs
View Answer
Answer: c
Explanation: None.
6. Effective access time is directly proportional to
a) page-fault rate
b) hit ratio
c) memory access time
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
7. In FIFO page replacement algorithm, when a page must be replaced
a) oldest page is chosen

b) newest page is chosen
c) random page is chosen
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
8. Which algorithm chooses the page that has not been used for the longest period of time whenever the page required to be replaced?
a) first in first out algorithm
b) additional reference bit algorithm
c) least recently used algorithm
d) counting based page replacement algorithm
View Answer
Answer: c
Explanation: None.
9. Virtual memory allows
a) execution of a process that may not be completely in memory
b) a program to be smaller than the physical memory
c) a program to be larger than the secondary storage
d) execution of a process without being in physical memory
View Answer
Answer: a
Explanation: None.
10. The instruction being executed, must be in
a) physical memory
b) logical memory

c) physical & logical memory
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
11. Error handler codes, to handle unusual errors are
a) almost never executed
b) executed very often
c) executed periodically
d) none of the mentioned
View Answer
12. The ability to execute a program that is only partially in memory has benefits like
a) The amount of physical memory cannot put a constraint on the program
b) Programs for an extremely large virtual space can be created
b) Programs for an extremely large virtual space can be createdc) Throughput increases
c) Throughput increases
c) Throughput increases d) All of the mentioned
c) Throughput increases d) All of the mentioned
c) Throughput increases d) All of the mentioned View Answer
c) Throughput increases d) All of the mentioned View Answer Answer: d
c) Throughput increases d) All of the mentioned View Answer Answer: d Explanation: None.
c) Throughput increases d) All of the mentioned View Answer Answer: d Explanation: None. 13. In virtual memory. the programmer of overlays.
c) Throughput increases d) All of the mentioned View Answer Answer: d Explanation: None. 13. In virtual memory. the programmer of overlays. a) has to take care
c) Throughput increases d) All of the mentioned View Answer Answer: d Explanation: None. 13. In virtual memory. the programmer of overlays. a) has to take care b) does not have to take care

14. Virtual memory is normally implemented by
a) demand paging
b) buses
c) virtualization
d) all of the mentioned
View Answer
Answer: a
Explanation: None.
15. Segment replacement algorithms are more complex than page replacement algorithms because
a) Segments are better than pages
b) Pages are better than segments
c) Segments have variable sizes
d) Segments have fixed sizes
View Answer
Answer: c
Explanation: None.
16. A swapper manipulates whereas the pager is concerned with individual of a process.
a) the entire process, parts
b) all the pages of a process, segments
c) the entire process, pages
d) none of the mentioned
View Answer
Answer: c
Explanation: None.

17. Using a pager
a) increases the swap time
b) decreases the swap time
c) decreases the swap time & amount of physical memory needed
d) increases the amount of physical memory needed
View Answer
Answer: c
Explanation: None.
18. The valid – invalid bit, in this case, when valid indicates?
a) the page is not legal
b) the page is illegal
c) the page is in memory
d) the page is not in memory
View Answer
Answer: c
Explanation: None.
19. A page fault occurs when?
a) a page gives inconsistent data
b) a page cannot be accessed due to its absence from memory
c) a page is invisible
d) all of the mentioned
View Answer
Answer: b
Explanation: None.
20. When a page fault occurs, the state of the interrupted process is
a) disrupted

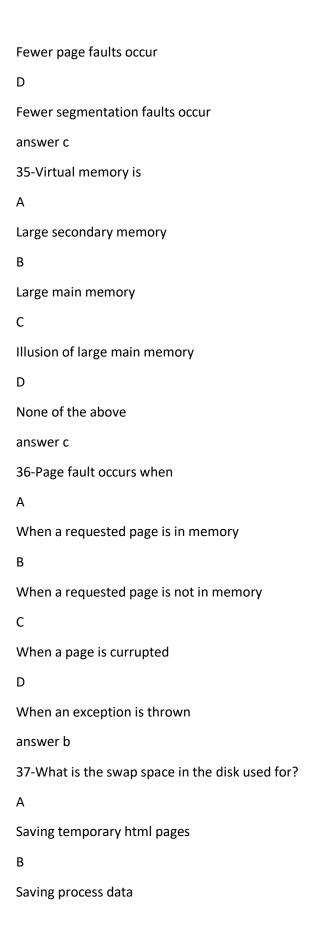
b) invalid
c) saved
d) none of the mentioned
View Answer
Answer: c
Explanation: None.
advertisement
21. When a process begins execution with no pages in memory?
a) process execution becomes impossible
b) a page fault occurs for every page brought into memory
c) process causes system crash
d) none of the mentioned
View Answer
View Answer
View Answer Answer: b
Answer: b
Answer: b
Answer: b
Answer: b
Answer: b Explanation: None. 22. A memory page containing a heavily used variable that was initialized very early and is in constant
Answer: b Explanation: None. 22. A memory page containing a heavily used variable that was initialized very early and is in constant use is removed, then the page replacement algorithm used is
Answer: b Explanation: None. 22. A memory page containing a heavily used variable that was initialized very early and is in constant use is removed, then the page replacement algorithm used is a) LRU
Answer: b Explanation: None. 22. A memory page containing a heavily used variable that was initialized very early and is in constant use is removed, then the page replacement algorithm used is a) LRU b) LFU

Answer: c
Explanation: None.
23. A virtual memory system uses First In First Out (FIFO) page replacement policy and allocates a fixed number of frames to a process. Consider the following statements.
P : Increasing the number of page frames allocated to a process sometimes increases the page fault rate
Q : Some programs do not exhibit locality of reference
Which of the following is TRUE?
a) Both P and Q are true, and Q is the reason for P
b) Both P and Q are true, but Q is not the reason for P
c) P is false but Q is true
d) Both P and Q are false
View Answer
Answer: c
Explanation: None.
24. Users that their processes are running on a paged system.
a) are aware
b) are unaware
c) may unaware
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
25. If no frames are free, page transfer(s) is/are required.
a) one
b) two
c) three
d) four

Answer: b
Explanation: None.
26. When a page is selected for replacement, and its modify bit is set
a) the page is clean
b) the page has been modified since it was read in from the disk
c) the page is dirty
d) the page has been modified since it was read in from the disk & page is dirty
View Answer
Answer: d
Explanation: None.
27. The aim of creating page replacement algorithms is to
a) replace pages faster
b) increase the page fault rate
c) decrease the page fault rate
d) to allocate multiple pages to processes
View Answer
Answer: c
Explanation: None.
28. A FIFO replacement algorithm associates with each page the
a) time it was brought into memory
b) size of the page in memory
c) page after and before it
d) all of the mentioned
View Answer

Answer: a
Explanation: None.
29. What is the Optimal page – replacement algorithm?
a) Replace the page that has not been used for a long time
b) Replace the page that has been used for a long time
c) Replace the page that will not be used for a long time
d) None of the mentioned
View Answer
Answer: c
Explanation: None.
30. Optimal page – replacement algorithm is difficult to implement, because
a) it requires a lot of information
b) it requires future knowledge of the reference string
c) it is too complex
d) it is extremely expensive
View Answer
Answer: b
Explanation: None.
advertisement
31. LRU page – replacement algorithm associates with each page the
a) time it was brought into memory
b) the time of that page's last use
c) page after and before it
d) all of the mentioned

Answer: b
Explanation: None.
32. For 3 page frames, the following is the reference string:
70120304230321201701
How many page faults does the LRU page replacement algorithm produce?
a) 10
b) 15
c) 11
d) 12
View Answer
Answer: d
Explanation: None.
33. What are the two methods of the LRU page replacement policy that can be implemented in hardware?
a) Counters
b) RAM & Registers
c) Stack & Counters
d) Registers
View Answer
Answer: c
Explanation: None.
34-Increasing the RAM of a computer typically improves performance because:
A
Virtual memory increases
В
Larger RAMs are faster
C



C
Storing the super-block
D
Storing device drivers
answer b
38-
A computer system supports 32-bit virtual addresses as well as 32-bit physical addresses. Since the virtual address space is of the same size as the physical address space, the operating system designers decide to get rid of the virtual memory entirely. Which one of the following is true?
A
Efficient implementation of multi-user support is no longer possible
В
The processor cache organization can be made more efficient now
С
Hardware support for memory management is no longer needed
D
CPU scheduling can be made more efficient now
answer c
39-Consider the virtual page reference string 1, 2, 3, 2, 4, 1, 3, 2, 4, 1 On a demand paged virtual memory system running on a computer system that main memory size of 3 pages frames which are initially empty. Let LRU, FIFO and OPTIMAL denote the number of page faults under the corresponding page replacements policy. Then
A
OPTIMAL < LRU < FIFO
В
OPTIMAL < FIFO < LRU
С
OPTIMAL = LRU
D

OPTIMAL = FIFO

40-A system uses FIFO policy for page replacement. It has 4 page frames with no pages loaded to begin
with. The system first accesses 100 distinct pages in some order and then accesses the same 100 pages
but now in the reverse order. How many page faults will occur? (GATE CS 2010)

(A) 196
(B) 192
(C) 197
(D) 195
answer a
41-Assume that there are 3 page frames which are initially empty. If the page reference string is 1, 2, 3 4, 2, 1, 5, 3, 2, 4, 6, the number of page faults using the optimal replacement policy is
A-5
B-6
C-7
D-8
answer c
42-A system uses 3 page frames for storing process pages in main memory. It uses the Least Recently Used (LRU) page replacement policy. Assume that all the page frames are initially empty. What is the total number of page faults that will occur while processing the page reference string given below? 4, 7, 6, 1, 2, 7, 2
A-4
B-5
C-6
D-7
answer c
43. When using counters to implement LRU, we replace the page with the
a) smallest time value
b) largest time value
c) greatest size

d) none of the mentioned View Answer
Answer: a
Explanation: Whenever a reference to a page is made, the contents of the clock register are copied into the time-of-use field in the page-table entry for that page. In this way, we always have the time of the last reference to each page.
44. In the stack implementation of the LRU algorithm, a stack can be maintained in a manner
a) whenever a page is used, it is removed from the stack and put on bottom
b) the bottom of the stack is the LRU page
c) the top of the stack contains the LRU page and all new pages are added to the top
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
45. There is a set of page replacement algorithms that can never exhibit Belady's Anomaly, called
a) queue algorithms
b) stack algorithms
c) string algorithms
d) none of the mentioned
View Answer
46. Applying the LRU page replacement to the following reference string.

12452124

The main memory can accommodate 3 pages and it already has pages 1 and 2. Page 1 came in before page 2.

How many page faults will occur?

a) 2
b) 3
c) 4
d) 5
View Answer
Answer: c
Explanation: None.
47. Increasing the RAM of a computer typically improves performance because
a) Virtual memory increases
b) Larger RAMs are faster
c) Fewer page faults occur
d) None of the mentioned
View Answer
Answer: c
Explanation: None.
48. The essential content(s) in each entry of a page table is/are
a) Virtual page number
b) Page frame number
c) Both virtual page number and page frame number
d) Access right information
View Answer
Answer: b
Explanation: None.
49. The minimum number of page frames that must be allocated to a running process in a virtual memory environment is determined by
a) the instruction set architecture

b) page size
c) physical memory size
d) number of processes in memory
View Answer
Answer: a
Explanation: None.
50. What is the reason for using the LFU page replacement algorithm?
a) an actively used page should have a large reference count
b) a less used page has more chances to be used again
c) it is extremely efficient and optimal
d) all of the mentioned
View Answer
Answer: a
Explanation: None.
51. What is the reason for using the MFU page replacement algorithm?
a) an actively used page should have a large reference count
b) a less used page has more chances to be used again
c) it is extremely efficient and optimal
d) all of the mentioned
View Answer
Answer: b
Explanation: None.
52. The implementation of the LFU and the MFU algorithm is very uncommon because
a) they are too complicated
b) they are optimal
c) they are expensive

d) all of the mentioned
View Answer
Answer: c
Explanation: None.
53. The program initializes all aspects of the system, from CPU registers to device controllers and the contents of main memory, and then starts the operating system.
a) main
b) bootloader
c) bootstrap
d) rom
View Answer
Answer: c
Explanation: None.
54. For most computers, the bootstrap is stored in
a) RAM
b) ROM
c) Cache
d) Tertiary storage
View Answer
Answer: b
Explanation: None.

55. A disk that has a boot partition is called a
a) start disk
b) end disk
c) boot disk
d) all of the mentioned
View Answer
Answer: c
Explanation: None.
56. Whenever a process needs I/O to or from a disk it issues a
a) system call to the CPU
b) system call to the operating system
c) a special procedure
d) all of the mentioned
View Answer
Answer: b
Explanation: None.
57. If a process needs I/O to or from a disk, and if the drive or controller is busy then
a) the request will be placed in the queue of pending requests for that drive
b) the request will not be processed and will be ignored completely
c) the request will be not be placed
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
58. Consider a disk queue with requests for I/O to blocks on cylinders.

98 183 37 122 14 124 65 67

Considering FCFS (first cum first served) scheduling, the total number of head movements is, if the disk head is initially at 53 is?
a) 600
b) 620
c) 630
d) 640
View Answer
Answer: d
Explanation: None.
59. Consider a disk queue with requests for I/O to blocks on cylinders.
98 183 37 122 14 124 65 67
Considering SSTF (shortest seek time first) scheduling, the total number of head movements is, if the disk head is initially at 53 is?
a) 224
b) 236
c) 245
d) 240
View Answer
Answer: b
Explanation: None.
60. Random access in magnetic tapes is compared to magnetic disks.
a) fast
b) very fast
c) slow
d) very slow
View Answer

Answer: d
Explanation: None.
61. Magnetic tape drives can write data at a speed disk drives.
a) much lesser than
b) comparable to
c) much faster than
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
62. On media that use constant linear velocity (CLV), the is uniform.
a) density of bits on the disk
b) density of bits per sector
c) the density of bits per track
d) none of the mentioned
View Answer
63. SSTF algorithm, like SJF of some requests.
a) may cause starvation
b) will cause starvation
c) does not cause starvation
d) causes aging
View Answer
Answer: a
Explanation: None.

64. 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.
a) LOOK
b) SCAN
c) C-SCAN
d) C-LOOK
View Answer
Answer: b
Explanation: None.
65. In the algorithm, the disk head moves from one end to the other, servicing requests along the way. When the head reaches the other end, it immediately returns to the beginning of the disk without servicing any requests on the return trip.
a) LOOK
b) SCAN
c) C-SCAN
d) C-LOOK
View Answer
Answer: c
Explanation: None.
advertisement
66. 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.
a) LOOK
b) SCAN
c) C-SCAN
d) C-LOOK

Answer: a
Explanation: None.
67. In information is recorded magnetically on platters.
a) magnetic disks
b) electrical disks
c) assemblies
d) cylinders
View Answer
Answer: a
Explanation: None.
68. The heads of the magnetic disk are attached to a that moves all the heads as a unit.
a) spindle
b) disk arm
c) track
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
69. The set of tracks that are at one arm position make up a
a) magnetic disks
b) electrical disks
c) assemblies
d) cylinders

Answer: d
Explanation: None.
70. The time taken to move the disk arm to the desired cylinder is called the
a) positioning time
b) random access time
c) seek time
d) rotational latency
View Answer
Answer: c
Explanation: None.
71. The time taken for the desired sector to rotate to the disk head is called
a) positioning time
b) random access time
c) seek time
d) rotational latency
View Answer
Answer: d
Explanation: None.
72. When the head damages the magnetic surface, it is known as
a) disk crash
b) head crash
c) magnetic damage
d) all of the mentioned
View Answer
Answer: b

Explanation: None.

73. The three major methods of allocating disk space that are in wide use are
a) contiguous
b) linked
c) indexed
d) all of the mentioned
View Answer
Answer: d
Explanation: None.
74. In contiguous allocation
a) each file must occupy a set of contiguous blocks on the disk
b) each file is a linked list of disk blocks
c) all the pointers to scattered blocks are placed together in one location
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
75. In linked allocation
a) each file must occupy a set of contiguous blocks on the disk
b) each file is a linked list of disk blocks
c) all the pointers to scattered blocks are placed together in one location
d) none of the mentioned
View Answer

Answer: b

Explanation: None.
76. In indexed allocation
a) each file must occupy a set of contiguous blocks on the disk
b) each file is a linked list of disk blocks
c) all the pointers to scattered blocks are placed together in one location
d) none of the mentioned
View Answer
Answer: c
Explanation: None.
77. Contiguous allocation of a file is defined by
a) disk address of the first block & length
b) length & size of the block
c) size of the block
d) total size of the file
View Answer
Answer: a
Explanation: None.
78. One difficulty of contiguous allocation is
a) finding space for a new file
b) inefficient
c) costly

Answer: a
Explanation: None.
79. What if a pointer is lost or damaged in a linked allocation?
a) the entire file could get damaged
b) only a part of the file would be affected
c) there would not be any problems
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
80. FAT stands for
a) File Attribute Transport
b) File Allocation Table
c) Fork At Time
d) None of the mentioned
View Answer
Answer: b
Explanation: None.
81. By using FAT, random access time is
a) the same
b) increased
c) decreased
d) not affected
View Answer

Answer: c

Explanation: None.
82. A better way of contiguous allocation to extend the file size is
a) adding an extent (another chunk of contiguous space)
b) adding an index table to the first contiguous block
c) adding pointers into the first contiguous block
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
83. If the extents are too large, then what is the problem that comes in?
a) internal fragmentation
b) external fragmentation
c) starvation
d) all of the mentioned
View Answer
Answer: a
Explanation: None.
84. The FAT is used much as a
a) stack
b) linked list
c) data
d) pointer
View Answer
Answer: b
Explanation: None.
85. A section of disk at the beginning of each partition is set aside to contain the table in

a) fat
b) linked allocation
c) hashed allocation
d) indexed allocation
View Answer
Answer: a
Explanation: None.
86. Contiguous allocation has two problems and that linked allocation solves
a) external – fragmentation & size – declaration
b) internal – fragmentation & external – fragmentation
c) size – declaration & internal – fragmentation
d) memory – allocation & size – declaration
View Answer
Answer: a
Explanation: None.
87. Each has its own index block.
a) partition
b) address
c) file
d) all of the mentioned
View Answer
Answer: c
Explanation: None.
88. Indexed allocation direct access.
a) supports
b) does not support

c) is not related to
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
89. The pointer overhead of indexed allocation is generally the pointer overhead of linked allocation.
a) less than
b) equal to
c) greater than
d) keeps varying with
View Answer
Answer: c
Explanation: None.
90. For any type of access, contiguous allocation requires access to get a disk block.
a) only one
b) at least two
c) exactly two
d) none of the mentioned
View Answer
Answer: a
Explanation: We can easily keep the initial address of the file in memory and calculate immediately the disk address of the ith block and read it directly.
91. Consider a disk where blocks 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 17, 18, 25, 26 and 27 are free and the rest of the blocks are allocated. Then the free space bitmap would be
a) 1000011000000111001111111000111111
b) 1100001100000011100111111100011111

c) 01111001111110001100000011100000
d) 0011110011111110001100000011100000
View Answer
Answer: d
Explanation: None.
92. Data cannot be written to secondary storage unless written within a
a) file
b) swap space
c) directory
d) text format
View Answer
93. File attributes consist of
a) name
b) type
c) identifier
d) all of the mentioned
View Answer
Answer: d
Explanation: None.
94. The information about all files is kept in
a) swap space
b) operating system
c) seperate directory structure
d) none of the mentioned
View Answer

Answer: c	
Explanation: None.	
95. A file is a/an data type.	
a) abstract	
b) primitive	
c) public	
d) private	
View Answer	
•	
Answer: a	
Explanation: None.	
96. The UNIX sytem uses a/antype of file.	_ stored at the beginning of a some files to indicate roughly the
a) identifier	
b) extension	
c) virtual number	
d) magic number	
View Answer	
Answer: d	
Explanation: None.	
97. The larger the block size, the	_ the internal fragmentation.
a) greater	
b) lesser	
c) same	
d) none of the mentioned	
View Answer	

Answer: a

Explanation: None.
98. In the sequential access method, information in the file is processed
a) one disk after the other, record access doesnt matter
b) one record after the other
c) one text document after the other
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
99. Sequential access method on random access devices.
a) works well
b) doesnt work well
c) maybe works well and doesnt work well
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
100. The direct access method is based on a model of a file, as allow random access to any file block.
a) magnetic tape, magnetic tapes
b) tape, tapes
c) disk, disks
d) all of the mentioned
View Answer
Answer: c
Explanation: None.

101. For a direct access file
a) there are restrictions on the order of reading and writing
b) there are no restrictions on the order of reading and writing
c) access is restricted permission wise
d) access is not restricted permission wise
View Answer
Answer: b
Explanation: None.
102. A relative block number is an index relative to
a) the beginning of the file
b) the end of the file
c) the last written position in file
d) none of the mentioned
View Answer
Answer: a
Explanation: None.
103. The index contains
a) names of all contents of file
b) pointers to each page
c) pointers to the various blocks
d) all of the mentioned
View Answer
Answer: c
Explanation: None.

104. For large files, when the index itself becomes too large to be kept in memory?
a) index is called
b) an index is created for the index file
c) secondary index files are created
d) all of the mentioned
View Answer
Answer: b
Explanation: None.
105. What will happen in the single level directory?
a) All files are contained in different directories all at the same level
b) All files are contained in the same directory
c) Depends on the operating system
d) None of the mentioned
View Answer
Answer: b
Explanation: None.
106. What will happen in the single level directory?
a) all directories must have unique names
b) all files must have unique names
c) all files must have unique owners
d) all of the mentioned
View Answer
Answer: b
Explanation: None.
107. If the block of free-space list is free then bit will

a) 1

b) 0
c) any of 0 or 1
d) none of the mentioned
View Answer
Answer: a
108 is a unique tag, usually a number identifies the file within the file system.
a) File identifier
b) File name
c) File type
d) None of the mentioned
View Answer
Answer: a
Explanation: None.
109. To create a file
a) allocate the space in file system
b) make an entry for new file in directory
c) allocate the space in file system & make an entry for new file in directory
d) none of the mentioned
View Answer
Answer: c
Explanation: None.
110. By using the specific system call, we can
a) open the file
b) read the file
c) write into the file
d) all of the mentioned

Answer: d
Explanation: None.
111. File type can be represented by
a) file name
b) file extension
c) file identifier
d) none of the mentioned
View Answer
Answer: b
Explanation: None.
112-T
113-F
114-F
115-T
116-F
117-T
118-T
119-T
120-T
121-F
122-T
123-T
124-F
125-T

126-T

127-T

128-T

129-T

130-T