

1. Consider a swapping system in which memory consists of the following hole sizes in memory order: 10 KB, 4 KB, 20 KB, 18KB, 7 KB, 9KB, 12 KB, and 15 KB. Which hole is take for successive segment requests of 12 KB, 10KB, 9KB for worst fit? c

20 KB, 10KB, 18KB
12KB, 10 KB, 9KB
20KB, 18KB, 15 KB
20KB, 18KB, 9KB

2. Suppose a virtual address space of 2^{28} words and the page size is 2^{12} words. If the virtual address is 1234567 in Hexadecimal, what would be the page number in hexadecimal? b

123
1234
12345
123456

3. The page table for each process maintains: a

The frame location for each page of the process
The page location for each frame of the process
The physical memory location of the process
None of the others

4. A computer has four page frames. The time of loading, time of last access, and the R and M bits for each page are as shown below (the times are in clock ticks): a

Page Loaded Last ref. R M

0 | 226 | 280 | 0 | 0
1 | 160 | 265 | 0 | 1
2 | 110 | 270 | 1 | 0
3 | 120 | 285 | 1 | 1

Which page will NRU replace?

0
1
2
3

5. Which of the following information bits in the entry of page table is used to indicate Page Fault? a

Present/absent bit
Status bit
Referenced bit
Modified bit

6. U03 Q.0015 b

When a virtual memory system manages memory in fixed length units, which of the following terms correctly represents its unit?

Frame
Page
Sector
Segment

7. Consider a swapping system in which memory consists of the following hole sizes in memory order: 10 KB, 4 KB, 20 KB, 18KB, 7 KB, 9KB, 12 KB, and 15 KB. Which hole is take for successive segment requests of 12 KB, 10KB, 9KB for first fit? a
- 20 KB, 10KB, 18KB
12KB, 10 KB, 9KB
20KB, 18KB, 15 KB
20KB, 18KB, 9KB
-
8. Consider a swapping system in which memory consists of the following hole sizes in memory order: 10 KB, 4 KB, 20 KB, 18KB, 7 KB, 9KB, 12 KB, and 15 KB. Which hole is take for successive segment requests of 12 KB, 10KB, 9KB for best fit? b
- 20 KB, 10KB, 18KB
12KB, 10 KB, 9KB
20KB, 18KB, 15 KB
20KB, 18KB, 9KB
-
9. A memory free in 3 frames. How many page fault occur after running as the following page 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 0, 7 using LRU b
- 19
12
7
13
-
10. A memory free in 3 frames. Which values do the last page frame contain after running as the following page 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 0, 7 using FIFO b
- 7, 1, 3
7, 1, 2
2, 1, 0
0, 1, 7
-
11. Consider a swapping system in which memory consists of the following hole sizes in memory order: 10 KB, 4 KB, 20 KB, 18KB, 7 KB, 9KB, 12 KB, and 15 KB. Which hole is take for successive segment requests of 12 KB, 10KB, 9KB for next fit? d
- 20 KB, 10KB, 18KB
12KB, 10 KB, 9KB
20KB, 18KB, 15 KB
20KB, 18KB, 9KB
-
12. A memory free in 3 frames. How many page fault occur after running as the following page 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 0, 7 using FIFO b
- 19
13
6
None of the others

13.	<p>The developer divides the program to many pieces. When a program started, span>>First, the piece manager (piece 0) is loaded into the memory</p> <p>-Then, the piece 0 is informed to load the little piece (piece 1) into memory either above piece 0 in memory (if there was space for it) or on top piece 0 (if there was no space)</p> <p>-When the piece 1 finished, the piece 0 is informed to load the piece 2 into memory either above piece 1 in memory (if there was space for it) or on top piece 0 (if there was no space), and so on</p> <p>What is the mechanism?</p> <p>Overlays</p> <p>Pagings</p> <p>Segmentation</p> <p>All of the others</p>	a
14.	<p>Loading pages before letting processes run or before resuming the process</p> <p>Prepaging</p> <p>Demand paging</p> <p>Locality reference</p> <p>Reprocess</p>	a
15.	<p>A memory free in 4 frames. How many page faults do occur after running as the following page 2 3 2 0 1 5 2 4 5 3 2 5 2 using LRU</p> <p>0</p> <p>4</p> <p>13</p> <p>7</p>	d
16.	<p>(Multi-choice)</p> <p>Should the page replacement algorithms try to find LRU page consider only the page currently allocated to particular process, or should it consider all the pages in memory? Which policy does this question reference?</p> <p>Local allocation</p> <p>Global Allocation</p> <p>Page size</p> <p>Shared page</p>	ab
17.	<p>(Multi-choice)</p> <p>The copyonwrite strategy solution is known as</p> <p>Deep copy</p> <p>Sharing modified page</p> <p>Sharing read only page</p> <p>Sharing data</p>	abd
18.	<p>A memory free in 3 frames. Which values do the last page frame contain after running as the following page 7, 0 , 1, 2 , 0, 3, 0 , 4, 2 , 3 , 0 using LRU</p> <p>0, 2, 3</p> <p>7,0,1</p> <p>4,0,3</p> <p>None of others</p>	a

19.	<p>1. Map a disk block to a page (s) in memory and page used the file on disk as the backing store</p> <p>2. Allowing a part of the virtual address space to be logically associated with the file</p> <p>What's is the strategy?</p> <p>Memorymapped file</p> <p>Memorymapped I/O</p> <p>Memorymapped device</p> <p>All of the others</p>	a
20.	<p>How many way can the developer manually split the program using overlays technique ?</p> <p>1. The program is partition such as assembler into part 1 code (50KB), part 2 code (100KB), and the symbol table (30KB) and common routines (40KB) used by both pass 1 and pass 2</p> <p>2. The memory has 200 KB.</p> <p>3. Assume that the management overlay has its size as 20KB</p> <p>a.The overlay 1 with part 1 code, the symbol table, and the common routines; the overlay 2 with part 2 code, the symbol table, and the common routines</p> <p>b.The overlay 1 with the symbol table, and the common routines; the overlay 2 with part 1 code; and the overlay 3 with part 2 code</p> <p>c.All of the others</p> <p>d.The overlay 1 with the symbol table, the overlay 2 with the common routines, the overlay 3 with part 1 code, and the overlay 4 with part 2 code</p>	c
21.	<p>(Multi-choice)</p> <p>1. The program is partition such as assembler into part 1 code (50KB), part 2 code (100KB), and the symbol table (30KB) and common routines (40KB) used by both pass 1 and pass 2</p> <p>2. The memory has 200 KB.</p> <p>3. Assume that the management overlay has its size as 20KB</p> <p>How many way can the developer manually split the program using overlays technique ?</p> <p>a/The overlay 1 with part 1 code, the symbol table, and the common routines; the overlay 2 with part 2 code, the symbol table, and the common routines</p> <p>b/The overlay 1 with the symbol table, and the common routines; the overlay 2 with part 1 code; and the overlay 3 with part 2 code</p> <p>c/The overlay 1 with part 1 code and the symbol table; the overlay 2 with part 2 code, and the common routines</p> <p>d/The overlay 1 with the symbol table, the overlay 2 with the common routines, the overlay 3 with part 1 code, and the overlay 4 with part 2 code.</p>	abd
22.	<p>What is the table's name ?</p> <p>1. Each one entry in table represents page frame in real memory</p> <p>2. An entry contains the pair (n, p). Let n represents as process, p represents as page</p> <p>3. The hardware search entire the table for the entry (n, p)</p> <p>4. If so, the entry position is the page frame. Otherwise, the page fault occurs</p> <p>Inverted page</p> <p>Translation Lookaside Buffers</p> <p>Multilevel page</p> <p>Process</p>	a

23. The process references only a relatively small fraction of its pages in execution. What does the sentence reference ? c
- Prepaging
Demand paging
Locality reference
Reprocess
-
24. A memory free in 4 frames. Which state of the memory after the page 4 is accessed when the requested page as 2 3 2 0 1 5 2 4 5 3 2 5 2 using LRU a
- 2 5 4 1
2 4 0 1
2 5 4 3
2 5 0 1
-
25. When the page fault occurs, the page replacement algorithm is applied. How many page faults can occur at least if the memory has 5 page frames and the program splitting 4 pages ? b
- 5
4
Nothing
9
-
26. A memory free in 5 frames. How many page hit do occur after running as the following page 2 3 2 0 1 5 2 4 5 3 2 5 2 using FIFO a
- 5
7
13
6
-
27. Each page can be labeled with the number of instructions that will be executed before that page is first reference. Choose the page that will be the latest one accessed in the future between all the pages actually in memory c
- LRU
NRU
Optimal
FIFO
-
28. The set of pages that a process is currently using a
- Working set
Paging table
Prepaging
Process table
-
29. Which address range (byte) is corresponding to 32 bit virtual address 0x00403004 (4.206.596 in decimal)? (Using Multilevel Page Table) a
- 4.206.592 to 4.210.687
4.194.304 to 8.388.608
12.288 : 16383
None of others

30. (Multi-choice)	ac
Which of these statements about No Memory Abstraction are true?	
No swapping OS can run many program at a time in the simplest model No paging All of others	
31. One of the way of memory organization is ___ at the bottom of memory in the simplest model of the No Memory Abstraction	a
Operating System Device drivers user program None of others	
32. (Multi-choice)	ac
Which of these statements about address space definition are true?	
Do not have to be numeric Is the set of physical addresses Is decoupled from the physical memory All of others	
33. Base register holds the _____ where the program begins in a memory abstraction.	b
address space physical address logical address virtual address	
34. Limit register specifies _____ in A memory Abstraction	d
the address space the offset the physical address the length of program	
35. In "No Memory Abstraction", the static relocation technique is _____	a
a/When the program is loaded at address n, the constant n was added to every program address b/When the program is compiled, the address of program is added with the constant value where the program will be loaded c/After the program is loaded at address n, the constant n is stored at a particular register. d/None of the others	
36. Which strategy is a simplest design for speeding up Paging?	a
Page table is loaded into registers Page table is loaded into main memory Page table is loaded into disk Page table is loaded into TLB	

37.	Suppose a virtual address space of 2^{24} words and the page size is 2^{10} words. If the virtual address is 91A000 in Hexadecimal, what would be the page number in Hexadecimal?	b
	246 2468 123 1234	
38.	Assume that process AD make up the set of runnable processes on memory as B1 B2 B3 A1 A2 A5 A7 D3 D4 D6 C1 C6 C5. Suppose D gets a page fault. Which page is replaced using the local policy? Assume that the replaced page is always a last page.	a
	D6 B3 C5 None of the others	
39.	If there are 64 pages and the page size is 4096 words, what is the length of logical address?	d
	12 bits 8 bits 16 bits 18 bits	
40.	Which solutions are used to solve the shared libraries?	b
	Relocation on the fly and positionindependent code Copy on write and positionindependent code Static reallocation and positionindependent code None of the others	
41.	A memory free in 3 frames. Which values do the page frame contain after the 4^{th} page is accessed? Assume that the running as the following page 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 0, 7 using LRU	a
	4, 0, 3 3, 0, 4 1, 0, 7 7, 0, 1	
42.	A memory free in 3 frames. How many times do the page fault occur? Assume that the running as the following page 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 0, 7 using LRU	b
	7 times 12 times 6 times 13 times	
43.	To specify an address in this segmented memory, the _____ form is used	a
	< segmentnumber, offset > < virtual address, offset > < process, offset > < physical address, offset >	

44. Consider a swapping system in which the memory consists of the following hole sizes: 10K, 4K, 20K, 15K, 9K. Assume worst fit algorithm is used. Which holes are taken for successive segment requests of 8K, 12K, 10K? a
- 20K, 15K, 10K
10K, 15K, 20K
9K, 15K, 10K
10K, 20K, 15K
-
45. Assume that the Page Table below is in effect. The number of lines per page is 400. The actual memory location for line 1634 is _____. d
- Page Number | Page Frame Number
0 8
1 10
2 5
3 11
- a/ 3
b/ 1634
c/ 4434
d/ None of the others
-
46. Which of these statements about the Inverted Page Table are true? a
- a/ An entry contains the pair (process, virtual page) mapped into the corresponding page frame
b/ An entry contains the pair (process, offset) mapped into the corresponding page frame
c/ An entry contains the pair (segment, virtual page) mapped into the corresponding page frame
d/ An entry contains the pair
-
47. Which keyword is appropriate described in the following statement? "While memory sizes are increasing rapidly, software sizes are increasing much faster" a
- bloatware
overlays
paging
swapping
-
48. Which are file types? d
- Regular files
Character special files
Block special files
All of the others
-
49. Page replacement algorithms determine d
- a/ when the system should update page table entries
b/ how many pages should be added to main memory
c/ which pages should be brought into memory because a process is likely to reference them soon
d/ which page to remove to provide space for an incoming page
-
50. In terms of storage utilization the best method of Dynamic Storage Allocation is: c
- Next fit
First fit
Best fit
Worst fit

51. Which of the following statements is incorrect about Translation Lookaside Buffer (TLB)? C
- a/ A TLB is sometimes known as an associative memory
 - b/ Each entry of a TLB contains the information about one page, including the virtual page number and the corresponding page frame
 - c/ A TLB miss implies a disk operation will follow
 - d/ None of the others.
-
52. When there is an excessive amount of page swapping between main memory and secondary storage, the operation becomes inefficient, which is called _____. C
- excessive demand paging
 - hot swapping
 - thrashing
 - overswapping
-
53. Consider a swapping system in which the memory consists of the following hole sizes: 10 K, 4 K, 20 K, 15 K, 9 K. Assume first fit algorithm is used. Which holes are taken for successive segment requests of 8 K, 12 K, 10 K? b
- 9 K, 15 K, 10 K
 - 10 K, 20 K, 15 K
 - 20 K, 15 K, 4 K
 - None of the others
-
54. Which of the following information bits used by the various page replacement policies indicates if the page has been called lately? C
- Locality bit
 - Status bit
 - Referenced bit
 - Modified bit
-
55. Consider a swapping system in which the memory consists of the following hole sizes: 10 K, 4 K, 20 K, 15 K, 9 K. Assume best fit algorithm is used. Which holes are taken for successive segment requests of 8 K, 12 K, 10 K? a
- 9 K, 15 K, 10 K
 - 10 K, 20 K, 15 K
 - 20 K, 15 K, 4 K
 - None of the others
-
56. Suppose a virtual address space of 2^{28} words and the page size is 2^{12} words. If the virtual address is 1234567 in Hexadecimal, what would be the page number in Hexadecimal? b
- 123
 - 1234
 - 12345
 - 123456

57. A computer has four page frames. The time of loading, time of last access, and the R and M bits for each page are as shown below (the times are in clock ticks):
- | Page | Loaded | Last ref | R | M |
|------|--------|----------|---|---|
| 0 | 226 | 280 | 0 | 0 |
| 1 | 160 | 265 | 0 | 1 |
| 2 | 110 | 270 | 1 | 0 |
| 3 | 120 | 285 | 1 | 1 |
- Which page will LRU replace?
- 0
1
2
3
-
58. Assume that the Page Table below is in effect. The number of lines per page is 400. The actual memory location for line 433 is ____.
- | Page Number | Page Frame Number |
|-------------|-------------------|
| 0 | 8 |
| 1 | 10 |
| 2 | 5 |
| 3 | 11 |
- 1
33
4000
4033
-
59. The ____ policy is based on the theory that the best page to remove is the one that has been in memory the longest
- NRU
LRU
FIFO
LIFO
-
60. Assume that the Page Table below is in effect. The number of lines per page is 400. The actual memory location for line 433 is ____.
- | Page Number | Page Frame Number |
|-------------|-------------------|
| 0 | 8 |
| 1 | 10 |
| 2 | 5 |
| 3 | 11 |
- 1
33
4000
4033
-
61. The page table for each process maintains:
- The page frame location for each page of the process
The page location for each frame of the process
The physical memory location of the process
None of the other choices

62. Which of the following information bits in the entry of page table is used to indicate Page Fault? a
- Present/absent bit
Status bit
Referenced bit
Modified bit
-
63. Suppose a virtual address space of 2^{28} words and the page size is 2^{12} words. If the virtual address is 1234567 in Hexadecimal, what would be the page number in Hexadecimal? b
- 123
1234
12345
123456
-
64. A computer has four page frames. The time of loading, time of last access, and the R and M bits for each page are as shown below (the times are in clock ticks):
Page Loaded Last ref. R M b
- 0 226 280 0 0
1 160 265 0 1
2 110 270 1 0
3 120 285 1 1
- Which page will Second Chance replace?
- 0
1
2
3
-
65. If there are 64 pages and the page size is 2048 words, what is the length of logical address? d
- 14 bits
15 bits
16 bits
17 bits
-
66. A page fault means that we referenced a page d
- that was outside the memory boundaries
with an incorrect I/O request
that was not in secondary storage
that was not in main memory
-
67. Consider a swapping system in which the memory consists of the following hole sizes: 10 K, 4 K, 20 K, 15 K, 9 K. Assume first fit algorithm is used. b
Which holes are taken for successive segment requests of 8 K, 12 K, 10 K?
- 9 K, 15 K, 10 K
10 K, 20 K, 15 K
20 K, 15 K, 4 K
None of the other choices

68. With paging, when is the internal fragmentation possible?	b
a/ Page does not fit the frame b/ The last page of the job is less than the maximum page size c/ The virtual memory assigned to the program is less than the physical memory assigned to it d /Such thing cannot happen	
69. Which of the following statements is incorrect about Translation Lookaside Buffer (TLB)?	a
a/ A TLB is sometimes known as an associative memory b/ Each entry of a TLB contains the information about one page, including the virtual page number and the corresponding page frame c/ A TLB miss implies a disk operation will follow d/ None of the other choices	
70. The modified/dirty bit is used for the purpose of:	C
Implementing FIFO page replacement algorithm Dynamic allocation of memory used by one process to another Reduce the average time required to service page faults None of the other choices	
71. When there is an excessive amount of page swapping between main memory and secondary storage, the operation becomes inefficient, which is called ____.	C
excessive demand paging hot swapping thrashing overs wapping	
72. Which best solution is applied to protect the process against the Operating System in No Memory Abstractions concepts?	b
Using the special register Using a fixed bit protection Using a pair of register that is named basic and limit All of the others	

73.	<p>Consider the following pseudo code fragment</p> <ol style="list-style-type: none"> 1. Assuming that the process linked list and the hole linked list are same data structure that are declared in global scope and contain the progressed data 2. if the specific process is allocated then 3. that process element is removed from process list 4. next, it is attached at the end of the hole list 5. the hole list is sorted 6. end if 7. if finding the memory is large enough to allocate to process 8. while (!holeList) 9. if(holeList.size equals the needed memory size) 10. allocate the memory 11. break 12. end if 13. end while 14. end if <p>Which solution is described in allocation memory for process in "Memory Management with Linked List" concepts?</p> <p>Quickfit Bestfit Worstfit Mergefit</p>	a
74.	<p>How many ways are Threads implemented?</p> <p>Implementing in user space Implementing in kernel space Implementing in hybrid All of the others</p>	d
75.	<p>Which strategy is the best for applying to support a large logical address?</p> <p>Multilevel Page Tables Inverted Page Tables Array of computer registers All of the others</p>	a
76.	<p>In a 32 bit computer, the memory manager manages the virtual memory with 4KB page size, and each page table entry has 4 byte sizes. How many size is the computer memory used to contain the page table of process?</p> <p>1 MB 4 MB 4 byte 4 KB</p>	b
77.	<p>Which solution is applied to solve both two programs reference absolute physical memory problem in No Memory Abstractions concepts?</p> <p>Static relocation Base and Limit Registers Using a special registers None of the others</p>	a

78.	<p>Consider the following pseudo code fragment</p> <ol style="list-style-type: none"> 1. Assuming that the process linked list and the hole linked list are same data structure that are declared in global scope and contain the progressed data 2. if the specific process is allocated then 3. that process element is removed from process list 4. next, it is attached at the end of the hole list 5. the hole list is sorted 6. end if 7. if finding the memory is large enough to allocate to process 8. while (!holeList) 9. if(holeList.size equals the needed memory size) 10. allocate the memory 11. break 12. end if 13. end while 14. end if <p>Which solution is described in allocation memory for process in "Memory Management with Linked List" concepts?</p> <p>None of the others Bestfit Worstfit Mergefit</p>	a
79.	<p>Which strategy is applying to support a large logical address?</p> <p>Multilevel Page Tables Inverted Page Tables Inverted Page Tables with hash table All of the others</p>	d
80.	<p>The program is partition such as assembler into pass 1 code (40KB), pass 2 code (50KB); and the symbol table (10KB), common routines (30KB) and data resources (45KB) used by both pass 1 and pass 2. The memory has only 150 KB. The overlay0 has its size as 10KB.</p> <p>Which way following overlay strategy is applied?</p> <p>A/Overlay1 (pass1), Overlay2 (symbol table, common routines, data resources), Overlay3 (pass2) B/Overlay1 (symbol table, common routines, data resources),Overlay2 (pass1), Overlay3 (pass2) C/Overlay1 (symbol table, common routines), Overlay2 (data resources), Overlay3 (pass1), Overlay4 (pass2) D/All of the others</p>	d
81.	<p>In a computer with 32 bit virtual address, the memory manager manages the virtual memory with 4KB page size, and each page table entry has 8 byte sizes. How many size is the computer memory used to contain the page table of process?</p> <p>8 MB 4 MB 8 byte 4 KB</p>	a
82.	<p>A memory free in 3 frames. How many page hits do? Assume that the running as the following page 7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 0, 7 using LRU</p> <p>7 times 19 times 3 times 12 times</p>	a

83.	Consider a swapping system in which the memory consists of the following hole sizes: 10K, 4K, 20K, 15K, 9K. Assume worse fit, next fit and best fit algorithms are used in sequence. Which holes are taken for successive segment requests of 8K, 12K, 10K in sequence?	a
	20K, 15K, 10K 9K, 15K, 10K 10K, 20K, 15K 15K, 20K, 10K	
84.	Assume that process AD make up the set of runnable processes on memory as B1 B2 B3 A1 A2 A5 A7 D3 D4 D6 C1 C6 C5. Suppose D gets a page fault. Which page is replaced using the global policy? Assume that the replaced page is always a first page.	c
	D6 C5 B1 A7	
85.	Suppose a virtual address space of 2^{24} words and the page size is 2^{10} words. If the virtual address is 91A000 in Hexadecimal, what would be the page number in decimal?	c
	2468 1024 9320 16777216	
86.	Which design issues for paging system is proposed with "Keeping the pagefault rate acceptable" idea?	a
	Load Control Local Allocation Policies Shared pages None of the others	
87.	Which best solution is applied to sharing data?	a
	copyonwrite read only positionindependentcode None of the others	
88.	If there are 64 pages and the page size is 8192 words, what is the length of logical address?	c
	13 bits 6 bits 19 bits None of the others	
89.	Which components are used in MULTICS?	d
	Descriptor segment Page table Pages All of the others	

90. Which the latest version is the segmentation applied in practices?

a

Segmentation with paging

Pure segment

Segmentation without virtual memory

All of the others

91. Given the program is divided to following segment

a

Seg limit base

0 200 3200

1 1100 500

2 400 4700

Assume that the program generates an instruction that access 103 of segment 0. Which statement is true?

The program access the real address of 3303

The program access the real address of 303

The trap to OS is occurs

None of the others