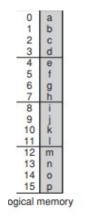
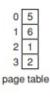
SelfE_Memory Management

1.	Which memory's management is discussed under "memory management"
	topic ?. a. Disk
	b. RAM
	c. ROM
2	
۷.	If a system has 4 GB main memory then how many address bits are
	needed to address all its bytes uniquely. a. 16
	b. 32
	c. 64
	d. None of the above
2	
ა.	If Base register contains 10448 and the limit register contains 2350 for a
	process, then which of the following memory addresses will be treated as illegal requests?
	a. 10500
	b. 12790
	c. 13000
	d. None of the options
4	Which of the following address binding scheme restrict the process to be
٠.	kept in the same memory region till completion where it was loaded initially
	a. Compile time binding
	b. Load time binding
	c. Run time binding
	d. All the above
5.	When the actual memory address is different from the address generated
	by CPU, it is termed as
	a. Physical address
	b. Virtual address
	c. Relative address
	d. Temporary address
6.	The responsibility of converting logical address into physical address is
	under
	a. OS
	b. Kernel
	c. MMU
	d. CPU
7.	Under loading, a routine is loaded only in it is invoked during execution
	of a process.

8.	In dynamic linking, the library function call is made in the form of a which is replaced by the address of the function loaded in memory during execution.							
9.	When there is no sufficient memory to load a process that has to be executed, the dispatcher carries out to create the space needed and this is possible only in address binding\							
10.	 Identify the limitation of contiguous memory allocation a. Process size will be limited by the size of the partition b. Leads to internal fragmentation c. Number of processes that can be loaded simultaneously is less 							
11.	 d. All of the above . Identify the drawback of dynamic partitioning a. Internal fragmentation b. External fragmentation c. Both fragmentation possible d. None of the options 							
12.	Name the ensure that	registers that no user peads	nat can be ι		•	• •	tion to	
13.	3. If the memory currently consist of the following partitions then find out the total size of external fragments(1 KB) that gets created in each of the memory allocation schemes – First fit and best fit							
	Size: 6 KB Process: Nil	Size: 3 KB Process:P 3	Size: 10 KB Process: Nil	Size: 4 KB Process: P1	Size 8 KB Process: Nil	Size: 7 KB Process: P2	Size 6KB Process: Nil	
L	Processes	s: P5- 5 KB	, P6: 7 KB,	P7: 3 KB				J
14.	is a sol	ution to get	rid of exter	nal fragme	ntation by i	ntegrating a	all the	
	free memo	ory together	r into one si	ingle free b	lock.			
	is called_		-	esses is cal	led and	partitions o	f memory	
16.	a. Log b. Mor size c. No i	te benefit of ical memor ce number of the allower to the above of the above	y space car of processes ocate contig	s can be loa	aded excee	ding actual	=	
17.	and offse	ldress comp t le no , Fran		and offset,	physical ad	dress consi	st of	

b. Frame no, Page noc. Base, Limit
d. Process no, Segment no
18. A is used to map the page number with its frame number.
19 is the fastest memory that is used to store the page table so that its entries can be accessed quickly?
20. Consider a physical memory of 1 MB which is divided into frames of 4 KB. Size of logical memory is 4 MB. Compute the size of logical address,
number of bits for page no and number of bits for offset.
21. Paging has no fragmentation but can have small amount of fragmentation
a. Internal, External
b. External, Internal
22. Consider that the page size is 4 KB. Then compute the amount of
fragmentation while loading the following processes: $P1 - 16 \text{ KB}$, $P2 - 11$
KB, P3- 14 KB, P4 – 1 KB
23. In order to find out which frames are free and which are occupied, OS
maintains a table.
24. Expand TLB.
a. Traditional Lookaside Buffer
b. Transaction Lookaside Buffer
c. Translation Lookaside Buffer
25. In order to differentiate the pages of different processes, the value is
stored in TLB with each entry.
26. For a TLB hit ratio of 80 %, calculate the effective access time assuming
that the memory access time is 150 milliseconds and TLB access time is
15 milliseconds
a. 185
b. 195
c. 205
d. 175
27. Calculate the physical address where 'p' can be found from the following:





28. Identify the characteristic of TLB?

- a. TLB is an associative memory and sothe searched item is compared with all keys simultaneously
- b. It is made of SRAM which is faster than DRAM
- c. It is used to hold the frequently accessed pages
- d. Initially there will be more TLB miss, but over a long period there will be more TLB hits
- e. All of the above
- 29. Which value is used to prevent access to addresses within the internal fragmentation of a process?
- 30. Code that can be shared by multiple processes and can be executed simultaneously without any chance of processing getting the impact of execution by other processes is said to be _____
- 31. Under ___ paging, the page table is split into multiple levels and only the first level table needs to be kept in the memory.
- 32. Consider again the system with a 32-bit logical address space and a page size of 4 KB. A logical address is divided into a page number consisting of 20 bits and a page offset consisting of 12 bits. If the page number is divided into 10 bits for first level page table and 10 bits for second level table then how many second level table can exist and how many entries each table can have ?.
- 33. To overcome the problem of collisions in hashed page table scheme, a ___ is used to store
- 34. In an inverted page table, the total size of page table will be equal to the ___
 - a. Number pages in logical memory
 - b. Number of frames in main memory
 - c. Number pages in a process
 - d. Number of processes currently running
- 35. Each inverted page-table entry is a pair of __ and __
- 36. Identify the incorrect difference between paging and segmentation
 - a. Pages are of equal size but segments are of different sizes

- b. Paging has internal fragmentation but segmentation don't have
- c. Creating pages requires programmer's support but segmentation can be created by OS itself.
- d. Logical address in paging is made of page no and offset, but logical address in segmentation is made of segment no and offset
- 37. __ bit helps in identifying pages that can be replaced simply by erasing from memory without the overhead of writing back into the disk.
- 38. Consider the following segment table and identify the illegal address that will be trapped by the OS

Segment	Base	Length	
0	219	600	
1	2300	14	
2	90	100	
3	1327	580	
4	1952	96	

- a. 0, 430 (segment no, offset)
- b. 1, 10
- c. 2,500
- d. 3, 400
- 39. What is NOT the benefit of virtual memory?
 - a. Size of logical memory can be much larger than physical memory
 - b. Programmers can write programs without bothering about actual size of available memory
 - c. Execution time of programs drastically reduced
 - d. Secondary memory is utilized to create virtual memory
 - e. All are correct
- 40. The virtual address space of process will include blank spaces or holes to allow the expansion or stack or heap at run time. These holes are also called
 - a. External fragmentation
 - b. Internal fragmentation
 - c. Sparse
 - d. Blank spots
- 41. Loading pages into memory only when they are requested by CPU is called ____
- 42. When a page is not yet loaded in memory, it is indicated by ___ bit in the page table and it causes a ___
- 43. In the following code, the array manipulation is an example of __ locality and execution of loop is an example of __ locality

a[i] = a[i]*j;	
44. When increasing the	number of frames cause increase in number of page
faults, such an unus	ual phenomenon is termed as
45. Choose the algorithm	n that suffers from the above phenomenon
a. LRU	
b. FIFO	
c. Optimal	
d. All of them	
46. Compute the number	r of page faults under the LFU (least frequently used)
page replacement a	gorithms on a memory with three frames for the
following reference s	string
1 1 2 3 2 4 5 1	
47. Second chance algo	rithm for page replacement is a variation of
	eme cause more thrashing ?
 a. Local allocation 	n
b. Global allocat	on
	on scheme, the number of frames allocated to a
process will remain	_
a. Local allocation	
b. Global allocat	
	el finds out the number of unique pages in a locality,
	many frames for the process. Hence all the required
. •	main memory for a certain locality. This prevents
_	es page faults. As the locality changes, the number of
frames allocated is	also made to change.