

# Class Test 3

Total points 15/20

✓ Which of the following is used to provide memory protection? 1/1

- ☐ Relocation Register
- ☒ Limit Register
- ☐ Program Counter
- ☐ Accumulator



✓ In dynamic loading entire program is loaded 1/1

- ☒ False
- ☐ True



✓ Physical Address is generated by \_\_\_\_\_ 1/1

- ☐ CPU
- ☒ MMU
- ☐ All above
- ☐ Compiler



✓ Stub binds the function call to the libraries that primarily reside in the 1/1

☒ Hard disk



☐ PCB

☐ Cache

☐ RAM

✗ In which scenario page fault occurs? 0/1

☐ If a page is referenced which has protection bit set to 1

☐ If a page is being modified which has protection bit set to 0

☐ If a page is referenced which has protection bit set to 0

☐ If a page is being modified which has protection bit set to 1

☐ If a page is referenced which has present bit set to 1

☒ If a page is referenced which has present bit set to 0



Correct answer

☒ If a page is being modified which has protection bit set to 1

☒ If a page is referenced which has present bit set to 0



✓ Which bits are used to determine not recently used pages?

1/1

☐ Caching disabled bit

☐ Present/absent bit

☒ Modified bit

✓

☒ Referenced bit

✓

☐ Protection bit

✓ During load time address binding the base address is known to

1/1

☒ memory management unit

✓

☐ compiler

☐ linker

☐ assembler

✓ Select all that is true about dynamic linking

1/1

☒ Stub binds the function call to the libraries.

✓

☐ It uses stub to copy object code from library and put them into the executable file

☐ All above

☒ It only keeps track of the object files of the required library files using stub

✓



✗ What happens when a program comes in execution?

0/1

- ☐ CPU loads the program into main memory
- ☐ CPU allocates virtual memory for the desired program
- ☒ CPU leaves the control to MMU
- ☐ MMU loads the program to main memory

✗

Correct answer

- ☒ CPU allocates virtual memory for the desired program

✗ A logical address is 011110001110. If page size is 256 bytes, then what is the page number for this logical address?

0/1

78H

✗

Correct answers

0111

7

Feedback

*Page size is 256 bytes, we need 8 bits to denote the offset. So, the page number will be first 4 bits among the 12 bits address and rest 8 bits denotes the offset.*



✓ Paging solves internal fragmentation problem.

1/1

☒ False



☐ True

✓ The second-chance page replacement algorithm is modified version of FIFO page replacement algorithm. In which scenario it acts as FIFO? 1/1

☐ When all the pages has  $R = 1$  &  $M = 1$  in the last clock cycle

☐ When all the pages has  $R = 0$  in the last clock cycle

☐ When all the pages has  $M = 0$  in the last clock cycle

☐ When all the pages has  $M = 1$  in last clock cycle

☒ When all the pages has  $R = 1$  in the last clock cycle



✓ Compaction is only possible when relocation is \_\_\_\_\_

1/1

☐ None above

☐ Static

☒ Dynamic



✓ A memory has access time of 20ms. If page fault occurs in 4 out of 10 pages and page fault service time is 5ms, then which one is effective access time? 2/2

☐ 13 ms

☐ 11 ms

☐ 17 ms

☒ 14 ms



✓ What is the role of page table in paging? 1/1

☒ mapping virtual address to physical address

☐ managing memory for pages

☐ frame buffering

☐ storing program data



✗ Dynamic linking is not suitable for distributed system because -

0/1

- ☐ None above
- ☒ Hardware organization might be different
- ☐ Operating system may be different
- ☐ Compilers might be different

✗

Correct answer

- ☒ Compilers might be different

✗ Why paging is needed?

0/1

- ☐ To reduce internal fragmentation
- ☐ To reduce external fragmentation
- ☒ Above all
- ☐ To use noncontiguous physical address

✗

Correct answer

- ☒ To use noncontiguous physical address
- ☒ To reduce external fragmentation



✓ In which memory allocation internal fragmentation is the smallest? 1/1

☒ None above ✓

☐ First fit

☐ Worst fit

✓ Where does backing store usually reside? 1/1

☐ Processor

☐ Cache

☐ RAM

☒ Secondary Storage ✓

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