Q27_28 Results for Mualla Argin

Score for this attempt: **5** out of 5
Submitted Apr 15 at 11:09pm
This attempt took 1 minute.

Question 1

1 / 1 pts

If the physical memory size is doubled without changing any of its other parameters, the **number of bits in each entry of the page table**

- Doubles
- Halves
- Increases by 1 bit

Correct!

- Reduces by 1
- Remains unchanged

Assuming the frame size remains the same, there are now twice as many physical pages, so the physical page number needs to expand by 1 bit.

Question 2

1 / 1 pts

If the physical memory size is doubled without changing any of its other parameters, the number of entries in the page table

- Doubles

- Halves
- Increases by 1 bit
- Reduces by 1 bit

Correct!

- Remains unchanged

No change. The number of entries in the page table is determined by the size of the virtual address (page number) and the size of a page. It's not affected by the size of physical memory.

Question 3

1 / 1 pts

In a byte addressable virtual memory with 8-bit virtual memory addresses, 8 pages of virtual memory, and 4 frames of physical memory, the frame size is

Correct!

- 32 bytes
- 64 Bytes
- 256 Bytes
- None of the above

In a byte addressable virtual memory with 8-bit virtual memory addresses and 8 pages of virtual memory, the page size is 2^8/2^3 = 2^5 = 32 Bytes. Frame size in memory is the same as page size, hence frame size is 32 Bytes as well.

Question 4

1 / 1 pts

The number of bits representing the Virtual Page Number in a virtual memory system with 8 GB Physical Memory, 256 GB Virtual Memory, and 4 KB Page Size is

- 24 bits
- Correct! 26 bits
- 28 bits
- 38 bits

The number of bits representing the Virtual Page Number in a virtual memory system with 8 GB Physical Memory, 256 GB Virtual Memory, and 4 KB Page Size is calculated as follows:

256GB of Virtual memory translates to $\log_2 256 * 2^{30}$ bits = 38 bits of Virtual Address. Of this, the page (frame) offset is 12 bits since page (frame) size is 4KB. Therefore the Virtual Page Number is 38-12 = 26 bits.

Question 5

1 / 1 pts

In a virtual memory system, each process must have its own page table.

- Correct! True
- False

Quiz Score: **5** out of 5