

For given table solve questions 1 to 5:

Q1. Find the LSB of byte-content stored in physical address (PA) of 00003_H : _____

Q2. Find the physical address for the word content of "C7EA_H" : _____

Q3. Find the most-significant-byte of the Word stored in PA of $FFFFD_H$: _____

Q4. Find the 1st misaligned-words stored in the memory: _____

Q5. Find the last aligned-double-word stored in the memory contents: _____

| Physical Address(PA) | Memory Contents |
|----------------------|------------------|
| 00000_H | 1 5 _H |
| 00001_H | 6 A _H |
| 00002_H | 4 7 _H |
| 00003_H | E A _H |
| 00004_H | C 7 _H |
| . | |
| . | |
| $FFFFB_H$ | 0 D _H |
| $FFFFC_H$ | 1 A _H |
| $FFFFD_H$ | 9 C _H |
| $FFFFE_H$ | 8 4 _H |
| $FFFFF_H$ | B 6 _H |

Q6. Find the maximum memory spaces supported by 80x86: _____

Q7. What is segment base address: _____

Q8. Can "456A8_H" be a valid segment base address for any 64-KByte segment: (yes/no): _____

Q9. Code segment register stores the leftmost 16bits or 4-hex-digits of the base address of a 64-KByte segment: (yes/no): _____

Q10. The offset address is stored in _____ CPU register for a particular memory location within the 64-KByte Code-segment area.

Q11. The offset address of destination-data is stored in _____ CPU register for a particular memory location within the data-segment area

Q12. If the segment register= 2000_H and the offset part of the physical address= 3456_H , then express the physical address: _____ H

Q13. For the given initial values of the CPU registers of $DS=7FA2_H$,
 $SI= 2351_H$ and $DI=438E_H$

(a) The calculated physical address (PA) of the destination memory location that is pointed or accessed by CPU

(b) The calculate the lowest (starting) physical address of Data segment.

(c) The calculate the highest (ending) physical address of the Data segment.

(d) Write the Logical address of the destination memory location memory

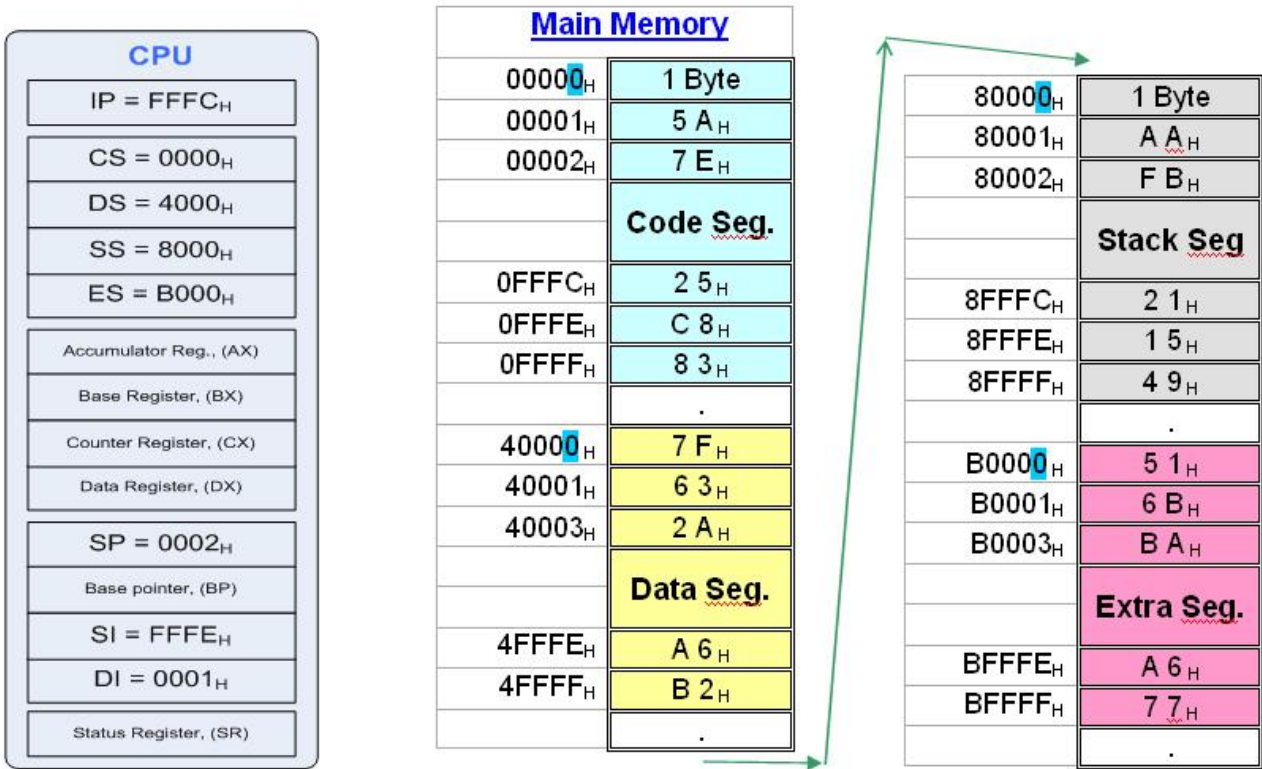
Q14. For the given values of the CPU registers and the main memory contents below, determine the PA's of the

(a) next code to be executed : _____

(b) source data stored in Data-segment : _____

(c) Stack-segment memory location to be accessed: _____,

(d) Extra-segment memory location where destination data can be stored:



Q15. If Memory addresses B0000_H to BFFFF_H is selected to be the new Code-segment, then to point into a location with PA=B1234_H, what values should be loaded into the **related** CPU registers (given in the left side of the figure below).

_____ and _____

