

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<sub>H</sub>" : \_\_\_\_\_

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

**Q4.** Find the 1<sup>st</sup> 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 <sub>H</sub>
$00001_H$	6 A <sub>H</sub>
$00002_H$	4 7 <sub>H</sub>
$00003_H$	E A <sub>H</sub>
$00004_H$	C 7 <sub>H</sub>
.	
.	
$FFFFB_H$	0 D <sub>H</sub>
$FFFFC_H$	1 A <sub>H</sub>
$FFFFD_H$	9 C <sub>H</sub>
$FFFFE_H$	8 4 <sub>H</sub>
$FFFFF_H$	B 6 <sub>H</sub>

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

Q7. What is segment base address: \_\_\_\_\_

Q8. Can "456A8<sub>H</sub>" 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

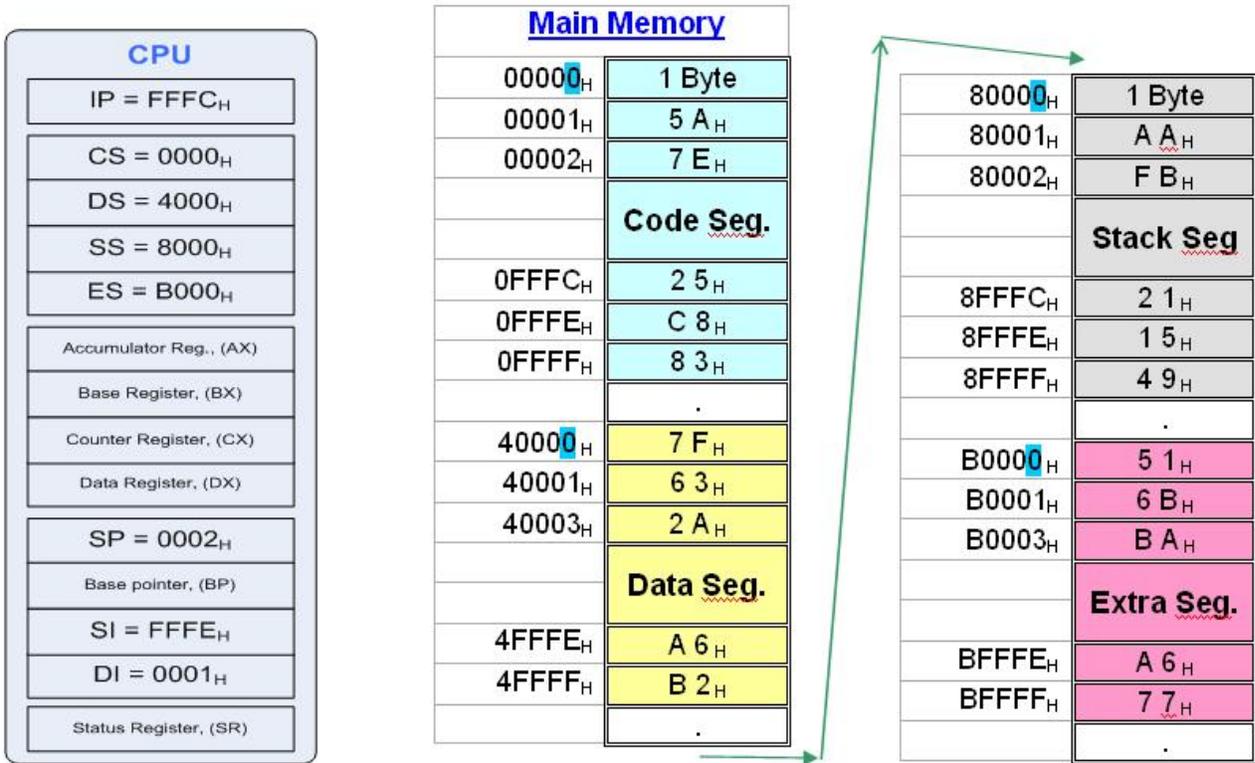
(a) next code to be executed : \_\_\_\_\_

(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<sub>H</sub> to BFFFF<sub>H</sub> is selected to be the new Code-segment, then to point into a location with PA=B1234<sub>H</sub>, what values should be loaded into the **related** CPU registers (given in the left side of the figure below).

\_\_\_\_\_ and \_\_\_\_\_

