

Ans. to the question no. (3)

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18-38001-2

a)
$$\begin{array}{r} 512Ch \\ + 4185h \\ \hline 02B1h \end{array}$$

 $\Rightarrow (1001\ 0010\ 1110\ 0001)_2$
 $SF = 1$
 $PF = 0$
 $ZF = 0$
 $CF = 0$
 $OF = 1$

c)
$$\begin{array}{r} E1E4h \\ + DAB3h \\ \hline 1BC92h \end{array}$$

 $\Rightarrow (11011110010010111)_2$

$SF = 1$
 $PF = 0$
 $ZF = 0$
 $CF = 1$
 $OF = 0$
 $AF = 1$

b)
$$\begin{array}{r} FE12h \\ + 1ACBh \\ \hline 118DDh \end{array}$$

 $\Rightarrow (1\ 0001\ 1000\ 1101\ 1101)_2$
 $SF = 1$
 $PF = 1$
 $ZF = 0$
 $CF = 1$
 $OF = 1$
 $AF = 1$

d)
$$\begin{array}{r} 7132h \\ + 7000h \\ \hline E132h \end{array}$$

 $\Rightarrow 1110000100110010$

$SF = 0$
 $PF = 0$
 $ZF = 0$

e)
$$\begin{array}{r} 6389h \\ + 1176h \\ \hline 74FFh \end{array}$$

$\Rightarrow (01101001111111)_2$

$SF = 1$
 $PF = 0$
 $ZF = 0$
 $CF = 0$
 $OF = 1$

Ans: to the question no (4)

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$$\begin{array}{r} a) \quad 2143 h \\ - 1986 h \\ \hline 7BD h \end{array}$$

$$= (0111011101)_2$$

$$SF = 0$$

$$PF = 1$$

$$ZF = 1$$

$$CF = 0$$

$$OF = 1$$

$$AF = 1$$

$$\begin{array}{r} c) \quad 19BC h \\ - 81FE h \\ \hline \end{array}$$

$$- 6842 h$$

$$\Rightarrow (1100101110011101)_2$$

$$SF = 1$$

$$ZF = 1$$

$$OF = 0$$

$$PF = 0$$

$$CF = 1$$

$$AF = 1$$

$$\begin{array}{r} e) \quad 8BCD h \\ - 71AB h \\ \hline \end{array}$$

$$1A22 h$$

$$= (1101000100010)_2$$

$$SF = 0$$

$$PF = 1$$

$$ZF = 1$$

$$CF = 0$$

$$OF = 0$$

$$AF = 1$$

$$\begin{array}{r} b) \quad 51FE h \\ - 1986 h \\ \hline \end{array}$$

$$6828 h$$

$$= (110100001111000)_2$$

$$SF = 0$$

$$CF = 0$$

$$PF = 1$$

$$OF = 0$$

$$ZF = 1$$

$$AF = 1$$

$$\begin{array}{r} d) \quad 0002 h \\ - FE0F h \\ \hline \end{array}$$

$$- FE0D h$$

$$\Rightarrow (10000001111000)_2$$

$$SF = 0$$

$$CF = 1$$

$$PF = 1$$

$$OF = 0$$

$$ZF = 1$$

$$AF = 1$$