

### Practical 3

(01)  $(3A)_{16} \rightarrow (?)_{10}$

$$\begin{array}{cc} 3 & A \\ \downarrow & \downarrow \\ 3 & 10 \end{array}$$

$$= 10 \times 16^0 + 3 \times 16^1 = (58)_{10}$$

(02)  $(56)_{10} - (31)_{10}$

$$= (25)_{10} = (0011001)_{2}$$

(03)  $(9)_{10} \times (-4)_{10}$

$$(9)_{10} + (-4)_{10} = (3)_{10}$$

$$= (00000011)_{2}$$

(04)  $(5+3) = (8)_{10}$

$$= (?)_{2}$$

$$= (1000)_{2}$$

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$$(Q5) \quad (125)_{005} \rightarrow (?)_{10}$$

$$= (40)_{10}$$

$$(40)_{16} = (28)_y$$

$$(?)_{16} = (28)_{16} \quad \text{--- (1)}$$

$$= (?)_{32} = (18)_{32} \quad \text{--- (1)}$$

Ans = 2 sol<sup>n</sup>.

(Q6) Convert

$$\begin{array}{r} 1111 \\ \hline 1 \\ F \end{array}$$

$$\begin{array}{r} 1111 \\ \hline 1 \\ F \end{array}$$

$$\begin{array}{r} 0010 \\ \hline 1 \\ 2 \end{array}$$

$$= (FF2)_{16}$$

(Q7)  $(432.2)_8$

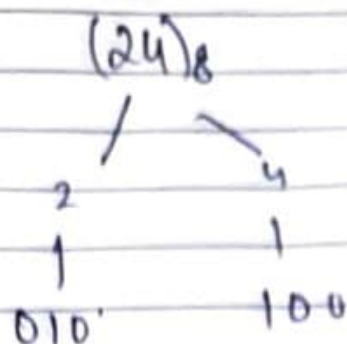
$$= 5 \times 8^2 + 3 \times 8^1 + 2 \times 8^0 + 2 \times 8^{-1}$$

$$= 5 \times 64 + 3 \times 8 + 2 \times 1 + 2 \times \frac{1}{8}$$

$$= 320 + 24 + 2 + 0.25$$

$$= (346.25)_{10}$$

(Q10)



$$= (010100)_2$$

(Q11)

$$(110\ 110\ 001\ 010)_2 \rightarrow (?)_8$$

$$\begin{array}{cccc} 110 & 110 & 001 & 010 \\ \hline 6 & 6 & 1 & 2 \end{array}$$

$$= (6612)_8$$

(Q12)

$$(1E2)_{16}$$

$$E = 14$$

$$= 2 \times 16^2 + 14 \times 16^1 + 2 \times 16^0$$

$$= 2 + 224 + 256$$

$$= (482)_{10}$$

(Q14)

Equation is true for any value  $x \geq 2$ .