

Nama : Lutfi ul zaman

NIM :2120239

Jawaban :

$$\begin{aligned} 1. \quad 1110_2 &= (1 \times 2^3) + (1 \times 2^2) + (1 \times 2^1) + (0 \times 2^0) \\ &= (1 \times 8) + (1 \times 4) + (1 \times 2) + (0 \times 1) \\ &= 8 + 4 + 2 + 0 \\ &= 14 \end{aligned}$$

$$\begin{aligned} 2. \quad 11001101_2 &= (1 \times 2^7) + (1 \times 2^6) + (0 \times 2^5) + (0 \times 2^4) \\ &\quad + (1 \times 2^3) + (1 \times 2^2) + (0 \times 2^1) + (1 \times 2^0) \\ &= (1 \times 128) + (1 \times 64) + (0 \times 32) + (0 \times 16) \\ &\quad + (1 \times 8) + (1 \times 4) + (0 \times 2) + (1 \times 1) \\ &= 128 + 64 + 0 + 0 + 8 + 4 + 0 + 1 \\ &= 205 \end{aligned}$$

$$\begin{aligned} 3. \quad 111100_2 &= (1 \times 2^5) + (1 \times 2^4) + (1 \times 2^3) + (1 \times 2^2) \\ &\quad + (0 \times 2^1) + (0 \times 2^0) \\ &= (1 \times 32) + (1 \times 16) + (1 \times 8) + (1 \times 4) + \\ &\quad + (0 \times 2) + (0 \times 1) \\ &= 32 + 16 + 8 + 4 + 0 + 0 \\ &= 60 \end{aligned}$$

$$\begin{aligned} 4. \quad 29A_{16} &= (2 \times 16^2) + (9 \times 16^1) + (10 \times 16^0) \\ &= (2 \times 256) + (9 \times 16) + (10 \times 1) \\ &= 512 + 144 + 10 = 666 \end{aligned}$$

5. 472_8 = pisahkan 472 jadi 4,7,2 konversi ke biner
4=100,7=111,2=010 menjadi 100111010 konversi ke
hexadesimal
(0011=3),(1010=A) jadi 472 oktal=3A hexadesimal

6. $367_8 = 367$ jadi 3,6,7 konversi ke biner $3=011$

$6=110$

$7=111$

Jadi 011110111