

Practical-1

Q1 convert $(1056)_{16}$ to $(?)_8$

$$(1056)_{16} \rightarrow (?)_2$$

$$\begin{array}{cccc} 1 & 0 & 5 & 6 \\ 0001 & 0000 & 0101 & 0110 \end{array}$$

$$(0001\ 0000\ 0101\ 0110)_2$$

$$\begin{array}{ccccc} 001 & 000 & 001 & 010 & 110 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 0 & 1 & 2 & 6 \end{array}$$

$$\rightarrow (10126)_8$$

Q2 $(11672)_8$ to $(?)_{16}$

$$(11672)_8 \rightarrow (?)_2$$

$$\begin{array}{ccccc} 1 & 1 & 6 & 7 & 2 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 001 & 001 & 110 & 111 & 010 \end{array}$$

$$(00100111011010)_2$$

$$\begin{array}{cccc} 001 & 0011 & 1011 & 1010 \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 3 & B & A \end{array}$$

$$11 = B \quad 10 = A$$

$$\rightarrow (13BA)_{16}$$

Q3 $(2724)_8 \rightarrow (?)_{10}$

$$\downarrow$$

$$4 \times 8^0 + 2 \times 8^1 + 7 \times 8^2 + 2 \times 8^3 = (1492)_{10}$$

Q4 $(3211)_4 \rightarrow (?)_5$

$$(3211)_4 \rightarrow (?)_{10}$$

$$1 \times 4^0 + 1 \times 4^1 + 2 \times 4^2 + 3 \times 4^3$$

$$1 + 4 + 32 + 192$$

$$(229)_{10} \rightarrow (?)_5$$

5	229	
5	45	4
5	9	0
5	1	4
	0	1

$$(1404)_5$$

Q5 $(1001001100)_2 \rightarrow (?)_6$

$$1001001100$$

$$\rightarrow (?)_{10}$$

$$2^0 \times 0 + 0 \times 2^1 + 1 \times 2^2 + 1 \times 2^3 + 0 \times 2^4 + 0 \times 2^5 + 1 \times 2^6 + 0 \times 2^7$$

$$0 \times 2^8 + 1 \times 2^9$$

$$\rightarrow 0 + 0 + 4 + 8 + 0 + 0 + 64 + 512$$

$$(588)_{10} \rightarrow (?)_6$$

6	588	
6	98	0
6	16	2
	2	4
	0	2

$$(2420)_6$$