

Question 1

$$a) 10011011_2 \Rightarrow 1 + 2 + 8 + 16 + 128 \Rightarrow 155_{10}$$

$$b) 1101101_2 \Rightarrow 1 + 4 + 8 + 32 + 64 \Rightarrow 109_{10}$$

$$c) 3A8_{16} \Rightarrow 8 + 10 \times 16 + 3 \times 16^2 \Rightarrow 936_{10}$$

$$d) 2214_5 \Rightarrow 4 + 1 \times 5 + 2 \times 5^2 + 2 \times 5^3 \Rightarrow 309_{10}$$

Question 2

$$a) 69_{10} \Rightarrow \begin{array}{ccccccc} 1 & 0 & 0 & 0 & 1 & 0 & 1 \\ 64 & 32 & 16 & 8 & 4 & 2 & 1 \end{array}_2$$

$$b) 485_{10} \Rightarrow \begin{array}{cccccccc} 1 & 1 & 1 & 1 & 0 & 0 & 1 & 0 & 1 \\ 256 & 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 \end{array}_2$$

$$c) 6D1A_{16} \Rightarrow \begin{array}{cccc} 110 & 1101 & 0001 & 1010 \\ \hline 6 & D & 1 & A \end{array}_2$$