

Name: \_\_\_\_\_ Number: \_\_\_\_\_



## Questions

1. Write down the binary representations of following numbers:

$$\begin{aligned}(15)_{10} &= \\ (54)_{10} &= \\ (43)_{10} &= \\ (86)_{10} &= \end{aligned}$$

**Solution:**  $(15)_{10} = (1111)_2$ ,  $(54)_{10} = (110110)_2$ ,  $(43)_{10} = (101011)_2$ ,  $(86)_{10} = (1010110)_2$ ,

2. Write down the hexadecimal representations of following numbers:

$$\begin{aligned}(15)_{10} &= \\ (54)_{10} &= \\ (43)_{10} &= \\ (86)_{10} &= \end{aligned}$$

**Solution:**  $(15)_{10} = (F)_{16}$ ,  $(54)_{10} = (36)_{16}$ ,  $(43)_{10} = (2B)_{16}$ ,  $(86)_{10} = (56)_{16}$ ,

3. Calculate following questions in decimal base

$$\begin{aligned}25 \vee 13 &= \\ 41 \wedge 7 &= \\ 3 \oplus 17 &= \end{aligned}$$

**Solution:**  $25 \vee 13 = 29$ ,  $41 \wedge 7 = 1$ ,  $3 \oplus 17 = 18$

4. Fill the following tables

$$\begin{array}{c|c|c} \wedge & 0 & 1 \\ \hline 0 & 1 & 0 \\ 1 & 0 & 1 \end{array} \oplus \begin{array}{c|c|c} 0 & 0 & 1 \\ \hline 0 & 1 & 1 \end{array}$$