9. $10001110_2 = 1\times2^7 + 0\times2^6 + 0\times2^5 + 0\times2^4 + 1\times2^3 + 1\times2^2 + 1\times2^1 + 0\times$

$128 + 0 + 0 + 0 + 8 + 4 + 2 + 0$

$= \boxed{142_{10}}$

Convert the following binary numbers to hexadecimal

10. 00110011_2 $= 0011_2 = 3_{16}$

$0011_2 = 3_{16}$ $\Big] = \boxed{33_{16}}$

11. 11000000_2

$1100_2 = C_{16}$

$0000_2 = \emptyset_{16}$ $\Big] = \boxed{C\emptyset_{16}}$

12. 11111_2 $0001 = 1_{16}$

$1111 = F_{16}$ $\Big] = \boxed{1F_{16}}$