Q1. Write the decimal equivalent of the binary number 10110

Ans:

The decimal equivalent of the binary number 10110 is 22.
To convert a binary number to its decimal equivalent, we need to multiply each digit of the binary number by the corresponding power of 2 and then add the results together. Starting from the rightmost digit, the powers of 2 are 2^0, 2^1, 2^2, 2^3, and so on.
In this case,
we have: 0 x 2^0 + 1 x 2^1 + 1 x 2^2 + 0 x 2^3 + 1 x 2^4 = 0 + 2 + 4 + 0 + 16 = 22.
Therefore, the decimal equivalent of the binary number 10110 is 22.

Q2. Write the decimal equivalent of the binary number 110101

Ans:
The decimal equivalent of the binary number 110101=53
we have:1 x 2^0 + 0 x 2^1 + 1 x 2^2 + 0 x 2^3 + 1 x 2^4 + 1 x 2^5 = 1 + 0 + 4 + 0 + 8 + 16 + 32=53

Q3. Write the binary equivalent of the decimal number 45

Ans:
To find the binary equivalent of decimal number 45 we need to keep dividing 45 by 2 and simultaneously keep returning the reminders at each step . Once we reach 1 we return the remainders in reverse order. The reverse order of the remainders is the binary form of the respective decimal number.
Solution:
45/2=22 remainder 1
22/2=11 remainder 0
11/2=5 remainder 1
5/2=2 remainder 1
2/2=1 remainder 0
1/2=0 remainder 1

Hence the binary form of 45 is 101101

Q4. Write the binary equivalent of the decimal number 60
Ans:
To find the binary equivalent of decimal number 60 we need to keep dividing 60 by 2 and simultaneously keep returning the reminders at each step . Once we reach 1 we return the remainders in reverse order. The reverse order of the remainders is the binary form of the respective decimal number.
Solution:
60/2=30 remainder 0
30/2=15 remainder 0

15/2=7 remainder 1
7/2=3 remainder 1
3/2=1 remainder 1
1/2=0 remainder 1

Hence binary form of 60 is 111100

Q5. Write the binary equivalent of the decimal number 33

Ans:
To find the binary equivalent of decimal number 33 we need to keep dividing 33 by 2 and simultaneously keep returning the reminders at each step . Once we reach 1 we return the remainders in reverse order. The reverse order of the remainders is the binary form of the respective decimal number.

33/2=16 remainder 1
16/2=8 remainder 0
8/2=4 remainder 0
4/2=2 remainder 0
2/2=1 remainder 0
1/2=0 remainder 1

Hence binary form of 33 is 100001.