EX. 23

C PROGRAM TO CONVERT BINARY TO DECIMAL

#include <stdio.h>

void main()

{

// declaration of variables

int num, binary\_num, decimal\_num = 0, base = 1, rem;

printf (" Enter a binary number with the combination of 0s and 1s \n");

scanf (" %d", &num); // accept the binary number (0s and 1s)

binary\_num = num; // assign the binary number to the binary\_num variable

while ( num > 0)

{

rem = num % 10; /\* divide the binary number by 10 and store the remainder in rem

variable. \*/

decimal\_num = decimal\_num + rem \* base;

num = num / 10; // divide the number with quotient

base = base \* 2;

}

printf ( " The binary number is %d \t", binary\_num); // print the binary number

printf (" \n The decimal number is %d \t", decimal\_num); // print the decimal

}