Day 5

C Assignments: Control statements and loops

S.No	Assignment	Test Cases	
		Input	**Output**
1	Write a C Program to Find the Smallest Number among Three Numbers (integer values) using Nested if-else statement	90 -19 -28	-28 is the smallest number.
		40 30 60	30 is the smallest number.
		45 70 10	10 is the smallest number.
		60 120 190	60 is the smallest number.
2	Write a program to find the factorial of a given number using while loop 5! = 5*4*3*2*1 6! = 6*5*4*3*2*1 0! = 1 1! = 1 -5! = 1 -10! = 1	7	The Factorial of 7 is : 5040
		5	The Factorial of 5 is : 120
		10	The Factorial of 10 is : 3628800
		0	The Factorial of 0 is : 3628800
3	Write a C Program to find the Smallest Integer among Three integers using IF and Logical && operator.	90 -19 -28	-28 is the smallest number.
		40 30 60	30 is the smallest number.
		45 70 10	10 is the smallest number.
		60 120 190	60 is the smallest number.
4	Write a C program to find power of a number using while loops. The base number (>0) and exponent (>=0) is taken from the test cases.	6 0	The result is : 1
		4 8	The result is : 65536
5	Write a C program to calculate the Sum of First and the Last Digit of a given Number. For example if the number is 1234 the result is 1+4 = 5.	20000	Sum of First and Last digit = 2
		45632	Sum of First and Last digit = 6

6	What is the purpose of the given program? n is the input number given by the user.
	#include <stdio.h>
	int main()
	{
	int n, x = 0, y;
	printf("Enter an integer: ");
	scanf("%d", &n);
	while (n != 0)
	{
	y = n % 10;
	x = x * 10 + y;
	n = n/10;
	}
	printf("Output is = %d", x);
	return 0;
	}

7	What is the output of the following C code?
	#include <stdio.h>
	int main()
	{
	int a = 1;
	if (a--)
	printf("True\n");
	if (++a)
	printf("False\n");
	return 0;
	}

8	What will be the output of the following code?
	#include<stdio.h>
	int main()
	{
	int p,t,si;
	float r;
	p=5000; t=4; r=7.5;
	si=(p*t*r)/100;
	printf("%f",si);
	return 0;
	}

9	What the following program will print?
	#include<stdio.h>
	int main()
	{
	int a=0101;
	printf("\n a=%d", a);
	return 0;
	}		

10	Choose the correct output of the following C code.
	#include<stdio.h>
	int main()
	{
	int var1=10, var2=6;
	if(var1=5)
	{
	var2++;
	}
	printf("%d %d", var1, var2++);
	return 0;
	}		

11	What will be the output? (&& is logical AND operation)
	#include <stdio.h>
	int main()
	{
	int i=0, j=1;
	printf("\n %d", i++ && ++j);
	printf("\n %d %d", i, j);
	return 0;
	}		

12	Write a C program to count total number of digits of an Integer number (n).	570	The number 570 contains 3 digits.
		934528	The number 934521 contains 6 digits.
		9456	The number 3456 contains 4 digits.
		30801	The number 30001 contains 5 digits.
13	Write a C program to check whether the given	6572	6572 cannot be expressed as power of 2.

	number(n) can be expressed as Power of Two (2) or not. For example 8 can be expressed as 2^3.	512	512 is a number that can be expressed as power of 2.
		8	8 is a number that can be expressed as power of 2.
		46	46 cannot be expressed as power of 2.
14	Write a C program to find sum of following series where the value of n is taken as input: 1+ 1/2 + 1/3 + 1/4 + 1/5 + .. 1/n	100	Sum of the series is: 5.19
		20	Sum of the series is: 3.60
		6	Sum of the series is: 2.45
		50	Sum of the series is: 4.50
15	Write a C program to print the following Pyramid pattern upto Nth row. Where N (number of rows to be printed) is taken as input.	7	******* ****** ***** **** *** ** *
		5	***** **** *** ** *
16	Write a C program to check whether a given number (n) is a perfect number or not? (Perfect Number - A perfect number is a positive integer number which is equals to the sum of its proper positive divisors. For example 6 is a perfect number because its proper divisors are 1, 2, 3 and it's sum is equals to 6.)	8000	8000 is not a perfect number.
		8128	8128 is a perfect number.
		6	6 is a perfect number.
		87	87 is not a perfect number.
17	Write a program to find the GCD (Greatest Common Divisor) of 2 (two) numbers using 'for' loop. The two numbers are taken as input from the test cases.	46 9	GCD of the numbers 46 and 9 is 1
		15 75	GCD of the numbers 15 and 75 is 15
		4 70	GCD of the numbers 4 and 70 is 2

		10 5	GCD of the numbers 10 and 5 is 5