# Data Structure Lab 

المرحة الاولى / قسم هنسة الحاسوب

$$
\begin{gathered}
\text { المدرس المساعد . هبة اكرم علي }
\end{gathered}
$$

Q1// Size of operator returns the size of a variable. For example, size of (a), where ' $a$ ' is integer, and will return 4 find size of (char, short int, long int, float, double, wchar_t).

Q2// Write a program shows the difference between signed and unsigned integers.
Q3// Write a program uses a nested for loop to find the prime numbers from 2 to 100?

Q4// Find the smaller number if you enter two different numbers (use of if-else statements).

Q5// Write a program computes Fibonacci Series up to n number of terms (Fibonacci Series: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34).

Q6// Find the Sum of Natural Numbers using loop For Example (Enter a positive integer: 50 Sum = 1275).

Q7// Write a program Check Vowel or a Consonant Manually For Example (Enter an alphabet: $u \quad u$ is a vowel).

Q8// Find the Power of any Number For Example (Enter base and power: 53 Power is: 125).

Q9// Find the Square Root of a Number For Example (Enter any Num: 9 Squre of 9 is: $\mathbf{3}$ ).

Q10// Write a program copy one String into another String For Example (Enter string s1: Kumar String s2: Kumar).

Q11// Write a program Print Stars Pattern like.

$$
\begin{gathered}
* \\
* * * \\
* * * * * \\
* * * * * * * \\
* * * * * * * * *
\end{gathered}
$$

Q12// Write a program for making a Swap between two numbers using third variables.

Q13//Write a Program to Find number of Digits from any number.

Q14//Write a program to Find Largest Number among three numbers.

Q15// Write a program to find sum of digits of a number.
Q16// Write a program to convert decimal number to binary number.

Q17// Write a program to Reverse a String For Example (Enter any string: hitesh Reverse String is : hsetih).

Q18// Write a program to Combined two string For Example (1 st String: john 2 nd String :porter Combined string is : johnporter ).

Q19// Write a program to Sort Elements of Array in Ascending Order A [10].

Q20// Write a program to Sort Elements of Array in Descending Order A [10].

Q21// Write a program to Addition of two matrix $\mathrm{X}[3][3], \mathrm{Y}[3][3]$.

Q22// Write a program to Merge two Arrays in third array A[10],B[10],C[20].

Q23// Write a program to Find Even and Odd Elements in Array A[20].

Q24// Write a program to Reverse an Array.

Q25// Write a program to Find Sum of an Array Elements A[4].

Q26// Write a program to Find Duplicate Elements in Array A[5].

Q27// Write a program to Calculate $(1 * 1)+(2 * 2)+(3 * 3)+(4 * 4)+(5 * 5)+\ldots+$ ( $\mathbf{n} * \mathbf{n}$ ) series.

Q28// Write a program to Calculate the Sum of Series $1+1 / 2+1 / 3+1 / 4+\ldots+$ 1/N.

Q29// Write a program to Compute the Sum of Series $1 / 1!+1 / 2!+1 / 3!+1 / 4!+.$. $+\mathbf{1} / \mathrm{n}$ !

Q30// Write a program to add all number entered by user until user enters 0 using break statement.

Q31// Write a program to display integer from 1 to 10 except 6 and 9 using Continue statement.

