

Class 10

Lab Sheet 1 (Modular Programming)

Write a program for the following.

- 1) To calculate the area of four walls of a room using SUB procedure. $[A=2H(L+B)]$
- 2) To calculate the area of a circle using FUNCTION procedure. $[A=\pi R^2]$
- 3) To calculate the volume of a cylinder using FUNCTION procedure. $[V=\pi R^2 H]$
- 4) To calculate the area of a triangle when three sides are given by the user using SUB procedure.
 $s = (a+b+c)/2$, $A = \sqrt{s(s-a)(s-b)(s-c)}$
- 5) To calculate the circumference of a circle using SUB procedure. $[C=2\pi R]$
- 6) To calculate the square and cube of a given number using SUB procedure.
- 7) To convert the temperature given in centigrade to Fahrenheit using Function. $[F=9C/5+32]$
- 8) To calculate the area and volume of a sphere using FUNCTION procedure. $[A=4\pi R^2]$
 $V=4/3\pi R^3]$
- 9) To calculate distance travelled by a bus when initial velocity(u), acceleration (a), and time is given by the user using FUNCTION procedure. $[S=ut+1/2at^2]$
- 10) To check whether the given number is even or odd using SUB procedure.
- 11) To check whether the given number is positive, negative or neutral using FUNCTION procedure.
- 12) To input three sides of a triangle and check whether the triangle is equilateral, isosceles or scalene using SUB procedure.
- 13) To display the greatest number among the three numbers given by the user using FUNCTION procedure
- 14) To input the marks of any three subjects and display whether the student is pass or fail using FUNCTION procedure. [Assume the pass marks of each subject is 40]
- 15) To check whether the given number is exactly divisible by 7 or not using SUB procedure.
- 16) To display the middle number (neither greater nor smaller) from the three numbers given by the user using SUB procedure.
- 17) To display the given string in reverse order using SUB procedure.
- 18) To calculate the factorial of a given number using FUNCTION procedure.
- 19) To count the number of vowels present in the given string using FUNCTION procedure.
- 20) To check whether the given string is palindrome or not using FUNCTION procedure.
- 21) To display all the numbers from 100 to 1 using SUB procedure.
- 22) To display the following series using SUB procedure.
 - a) 100 97 94 91.....up to 20th terms
 - b) 5 55 555.....up to 5th terms
 - c) 3 9 27.....up to 10th terms
 - d) 1 1 2 3 5.....up to 10th terms
 - e) 1 22 333 4444 55555
- 23) To display the alternate characters present in the given string using FUNCTION procedure.
- 24) To display the following string pattern using SUB procedure
 - a) NEPAL b) NEPAL c) NEPAL d) L e) B
 - NEPA EPA PAL AL A
 - NEP P L PAL S
 - NE EPAL I
 - N NEPAL C
- 25) To display whether the number is prime or composite using FUNCTION procedure.
- 26) To count the number of consonants present in the given string using FUNCTION procedure.
- 27) To display the given number in reverse order using SUB procedure.
- 28) To display the sum of the individual digits of a given number using FUNCTION procedure.
- 29) To count the total number of words present in the given sentences using SUB procedure