

K.E.Society's
Rajarambapu Institute of Technology, Rajaramnagar
 (An Autonomous Institute, affiliated to SUK)
Unit Test-02
First Year B.Tech.

Enroll No

Q. P. Code
UT 3493

SEMESTER: I
 Day & Date : Friday 28/11/2025
 Time : 2:30 To 3:30

Course: **Programming for Problem Solving.**

Course Code: SH1334

Max Marks- 25

- Instructions:
- 1) All questions are compulsory.
 - 2) Figures in rounded () brackets within the question, indicate scheme of marking for respective part of the question, whereas, figures in the first right column indicate total marks for that whole question.
 - 3) CO is the index number of the Course Outcome statement.
 - 4) The Bloom's taxonomy level (BL) for 1,2,3,4,5 and 6 is remember, understand, apply, analyze, evaluate and create respectively.
 - 5) Assume suitable data if necessary.
 - 6) Use of non-programmable calculator is allowed.

Q.1 Attempt the following.

	CO	BL	Mark
(a) Write a program to print types of triangles taking lengths of three sides from user using nested if else statement.	3	3	07
<ul style="list-style-type: none"> • A triangle is equilateral triangle, If it's sides are equal. • A triangle is isosceles triangle, If any two sides of a triangle are equal. • A triangle is scalene triangle, If none of the sides are equal 			

OR

(a) Implement a program to compute sum of $1+x^1+x^2+x^3+\dots+x^n$, Using while loop	3	3	07
(b) Predict the output of following codes.	4	4	04

1. <pre>#include<stdio.h> int main() { int i; for (i = 10; i > 0; i--) { if (i == 4) { continue; } printf("%d\n", i); } }</pre>	2. <pre>#include<stdio.h> int main() { int i; for (i = 10; i > 0; i=i-3) { if (i == 4) { break; } printf("%d\n", i); } }</pre>
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Q.2 Attempt the following.

(a) What are the different categories of user defined function? Explain the execution of function with argument with return value with its general structure.	3	3	06
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- (b) Write C Program to find the given number is prime or not using user defined function. 3 4 08

OR

- (b) Find whether given number is Armstrong number or not using user defined function 3 4 08

Armstrong Number: If the number is equal to sum of cube of each digit in number.

