

K.E.Society's
Rajarambapu Institute of Technology, Rajaramnagar
 (An Autonomous Institute, affiliated to SUK)

Unit Test-01
First Year B.Tech.

Q. P. Code

UT3507

SEMESTER: I

Course: **Programming for Problem Solving.**

Course Code: SH1334

Day & Date : Friday 6/7/10/2025

Time : 2:30 To 3:30

Max Marks- 25

Instructions: 1) All questions are compulsory.

2) Figures in rounded () brackets within the question, indicate the 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 calculators is allowed.

Q.1 Attempt the following.

(a) What are the characteristics of algorithms? (1 mark for each character)

CO	BL	Mark
2	2	07

OR

(a) What is flowchart? Draw the flowchart to calculate sum of 3rd and 4th power of entered number. (Definition -2 marks Flowchart-5marks)

2	3	07
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(b) Design an algorithm to convert total days into years, months and days. (1 mark for each step)

1	3	05
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Q.2 Attempt the following.

(a) Write a program to calculate distance between two points. (1 mark for each step)

2	3	05
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OR

(a) What are the identifiers in C, list the rules for constructing identifiers? (definition -1, rules-4marks)

1	3	05
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(b) Predict output of following codes

1	3	08
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```
1.
#include<stdio.h>
int main()
{
    int p=20, q=30, R;
    R=(p>q)?(p-q):(p+q);
    printf("Result= %d", R);
    return 0;
}
```

```
2.
#include<stdio.h>
int main()
{
    int x=89;
    printf("%u \n", sizeof(x));
    printf("\n %u", sizeof(int));
    printf("\n %u", sizeof(char));
    printf("\n %u", sizeof(float));
}
```



3.

```
#include <stdio.h>
int main()
{
    int num=25367,temp,sum=0;
    temp=num;
    num%=10;
    sum+=num;
    temp/=10000;
    sum +=temp;
    printf("Sum = %d", sum);
}
```

4.

```
#include<stdio.h>
int main()
{
    int a,z,x=5,y=10;
    z=x*++y;
    a=x*y;
    printf("z=%d\ na=%d ",z++,--a);
}
```

2 marks for each code

