

Roll No.

3012

**B. Tech. 1st Semester (Common for All
Branches Except CSE, ECE, IT, CS & IT
and EEE)**

Examination – February, 2022

PROGRAMMING FOR PROBLEM SOLVING

Paper : E5C-CSE-102-G

Time : Three Hours]

[Maximum Marks : 75

*Before answering the questions, candidates should ensure that they have
been supplied the correct and complete question paper. No complaint in
this regard, will be entertained after examination.*

Note : Attempt *five* questions in all, selecting *one* question
from each Unit. Question No. 1 is compulsory. All
questions carry equal marks.

1. Answer the following questions : 5 × 3 = 15
- (a) What is Number System ?
 - (b) What are header files ? Give some examples of header files.
 - (c) Explain different data types used in C.

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- (d) What are loops why they are important in C programming language ?
(e) Explain character codes used in computer system

UNIT - I

2. Describe the functional units of computer. 15
3. Calculate the following. 15
(i) $(10011101)_2$ Binary to Decimal
(ii) $(0.626)_{10}$ Decimal to Binary
(iii) $(25.116)_{10}$ Octal to Binary

UNIT - II

4. (a) What are the properties of a good Algorithm ?
(b) Write down the difference between Pseudocode and Algorithm. 15
5. (a) What is a flow chart ? Why these are important ?
Give an example to explain flow chart.
(b) What are various operators used in C ? 15

UNIT - III

6. Explain various conditional and branching statements used in C language. 15
7. (a) Difference between while and do while loop in C language.
(b) Write a program in C language to check whether a given number is prime or not. 15

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UNIT - IV

8. (a) Explain the importance of recursion in C language. 5
(b) Write a program in C language to print first 50 natural numbers using recursion. 10
9. Describe the following 15
(a) Parameter passing in functions
(b) Passing array to function

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