

Roll No.

3012

**B. Tech. 2nd Semester (Common for All
Branches Except CSE, ECE, CSE,-AI &
MLE, Data Science, CSE, ITCSE, IT, CS
& IT, CS & T and EEE)
Examination – July, 2021**

PROGRAMMING FOR PROBLEM SOLVING

Paper : ESC-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 : Question No. 1 is compulsory. Attempt any five questions by selecting any one question from each Section.

1. Answer the following questions : 5 × 3 = 15
- (a) Explain data types used in C.
 - (b) What are loops ? Explain their usage in programming.

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- (c) Find 2's complement of 111001 10000.
- (d) Explain functional units of a computer system.
- (e) Explain character codes used in computer system.

SECTION - A

- 2. What are the various operators used in C ? Explain them with their precedence. 15
- 3. (a) What is a flowchart ? Draw flowchart to check number is odd or even. 7
- (b) Define algorithm with their advantages and disadvantages. Write algorithm to find the factorial of a number. 8

SECTION - B

- 4. Explain various conditional and branching statements used in C programming with example. 15
- 5. Write note on : 15
 - (i) Data types in C
 - (ii) Header files in C
 - (iii) Conditional statements in C

SECTION - C

- 6. (a) Difference between do while and while do loop in C. 7
- (b) Write a program to check if a number is palindrome or not. 8
- 7. (a) Explain call by value & call by reference with example. 7
- (b) Write a program in C to generate Fibonacci series. 8

SECTION - D

- 8. (a) Define functions. Difference between user defined functions and built in functions in C with examples. 10
- (b) Explain recursion with help of example in C. 5
- 9. (a) Dynamic memory allocation. 7
- (b) File handling. 8