

<b>COLLEGE OF ENGINEERING CHENGANNUR</b> (Managed by IHRD, A Govt of Kerala Undertaking) <b>DEPARTMENT OF COMPUTER ENGINEERING</b>		
<b>B.TECH. DEGREE SECOND SEMESTER COMPUTER SCIENCE AND ENGINEERING</b> <b>FIRST INTERNAL EXAMINATION – MARCH 2020/June 2020</b>		<b>Academic Year:</b> <b>2019-2020</b>
Course Code: EST 102	Course Title: Programming in C ( S2C )	
Duration: 2 Hr	Max. Marks: 50	

**Answer the questions legibly and precisely. Programs and algorithms should be indented properly.**

<b>PART-A</b> (Answer All Questions)		<b>CO</b>	<b>Marks</b>
1	Name different types of computer memory.	1	4
2	Draw a flowchart to read three positive integers and check whether a triangle could be formed with these values as side lengths.	1	4
3	Name any four different types of operators in C. Give examples for each of them with constant values and expected results.	1	4
4	Write a C program to read 5 integers and print the largest and smallest among them	2	4
5	Illustrate how strcpy function works with an example. (program not required)	1	4
<b>PART-B</b>			
6	a) Draw the functional block diagram of a computer. Write one sentence each to describe the functions of each block. b) Write a language independent algorithm to solve $ax+b=0$ for real number solution.  OR	1	5 5
7	a) In one or two sentences tell what are compiler, interpreter, high level language, and low level language. Give one example each. b) Draw a flowchart to solve a quadratic equation for real number solutions.		4 6

8	<p>a) Write a C assignment statement to assign this mathematical expression to a variable <math>ut + \frac{1}{2}at^2</math>. Here variables are single lettered.</p> <p>b) A student writes three tests in three subjects Physics, Maths, Chemistry. To qualify the student has to either score 150 marks overall or 45 marks in each subject. Write a C program to check whether a student qualifies or not?</p> <p style="text-align: center;">OR</p>	2	3
9	<p>a) In a while loop read an integer and print it out if it is between 50 and 100 both inclusive, do nothing otherwise. The loop terminates when the input value is 0. Write a C program for this task.</p> <p>b) What is the binary equivalent of the octal number 522 ?</p>		7
10	<p>a) Write a C program to read and store a 5x5 matrix A. Create matrix B from A by subtracting 4 from each element.</p> <p style="text-align: center;">OR</p>	3	10
11	<p>b) Write a C program to read and store a 5x5 matrix. Find the largest number in the matrix.</p>		10