

**PRAGATI ENGINEERING COLLEGE: SURAMPALEM**  
**(AUTONOMOUS)**  
**I B.Tech I Semester Supplementary Examinations, July – 2024**  
**PROGRAMMING FOR PROBLEM SOLVING USING C**  
 (Common to all Branches)

Time: 3 hours

Max. Marks: 70

Answer ONE Question from each Unit  
 All Questions Carry Equal Marks

Q. No.	Questions	BTL	CO	Marks
<b>UNIT – I</b>				
1.	a) Define algorithm. Write an algorithm to find the largest of three numbers.	K3	CO1	7M
	b) Explain the Structure of a C Program.	K2	CO1	7M
<b>OR</b>				
2.	a) List the symbols used in flowchart. Draw the flowchart for finding largest among the given numbers	K3	CO1	8M
	b) List any five header files. Explain the use of any three header files	K2	CO1	6M
<b>UNIT – II</b>				
3.	a) Explain switch statement with syntax and example	K2	CO2	8M
	b) What is the basic difference between while and do-while loop. Explain with examples	K2	CO2	6M
<b>OR</b>				
4.	a) Explain in detail about 'C' data types and variables.	K2	CO2	8M
	b) Explain break, goto and continue statements with syntax	K2	CO2	6M
<b>UNIT – III</b>				
5.	a) Write a C program to concatenate two strings	K3	CO3	8M
	b) Explain two dimensional array with an example	K2	CO3	6M
<b>OR</b>				
6.	a) Write a program in C to find the sum and mean of all elements in an array.	K3	CO3	6M
	b) Explain any four string handling functions with examples	K2	CO3	8M
<b>UNIT – IV</b>				
7.	a) Write a program that inputs seven integers in an array and passes the array to a function. The function counts a total number of even and odd numbers and returns to the main function to display it.	K3	CO4	8M
	b) Explain parameter passing methods with example	K2	CO4	6M
<b>OR</b>				
8.	Explain dynamic memory allocation functions malloc, calloc, realloc, and free with syntax and examples.	K2	CO4	14M
<b>UNIT – V</b>				
9.	a) Define structure. Write a C program using structures to read, write, compute average marks and display the student's scoring above and below the average marks for a class of N students	K3	CO5	8M
	b) What is the difference between structure and union.	K2	CO5	6M
<b>OR</b>				
10.	a) Explain any four file handling functions with example	K2	CO5	8M
	b) Write a c program to copy the content of one file to another file	K3	CO5	6M