

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2024**

**PROGRAMMING IN C**

[Maximum Marks: 75]

[Time: 3 Hours]

**PART-A**

**I. Answer ‘all’ the following questions in one word or one sentence. Each question carries ‘one’ mark.**

**(9 x 1 = 9 Marks)**

		Module Outcome	Cognitive level
1.	Write the syntax of <b>if-else if</b> ladder conditional statement.	M1.01	R
2.	Define recursion.	M1.07	R
3.	The lowest index number of an array is.....	M2.01	R
4.	To store a matrix .....dimensional array is used.	M2.02	U
5.	..... built-in function is used to find the length of a string.	M2.06	R
6.	Define pointers.	M3.01	R
7.	Write an example to declare a floating array and assigning to a pointer.	M3.04	U
8.	Write the syntax of <b>union</b> .	M4.06	R
9.	State command line arguments.	M4.08	R

**PART-B**

**II. Answer any ‘eight’ questions from the following. Each question carries ‘three’ marks.**

**(8 x 3 = 24 Marks)**

		Module Outcome	Cognitive level
1.	Compare the syntax of while and do-while looping statements.	M1.01	U
2.	List any four features of an array.	M2.01	R
3.	Develop a program to find the smallest element stored in a single dimensional integer array.	M2.02	A
4.	Describe string copy and string concatenation operations on strings using built-in functions with syntax.	M2.06	U
5.	Describe the steps to pass one dimensional array to a function using an example.	M2.07	U
6.	Write a function using pointers to find the largest of two numbers.	M3.01	U
7.	State any three advantages of passing parameter as pointer to a function.	M3.02	R
8.	Write the method to declare a string using pointer. Give an example	M3.04	U
9.	Describe array of pointers. Give an example to declare an array of pointers.	M3.04	U
10.	State the term enumerated data type. Give the syntax and example.	M4.06	R

### PART-C

Answer ‘all’ questions from the following. Each question carries ‘seven’ marks.

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level
III.	List any two pre-processor directives. Describe their syntax, uses and examples.	M1.02	U
	<b>OR</b>		
IV.	List the storage classes in C. Explain the scope and lifetime of any three storage classes.	M1.05	U
V.	Write a recursive function program to print the even numbers up to <b>n</b> .	M1.08	A
	<b>OR</b>		
VI.	Develop a function oriented program to reverse a number. Find the reverse of number using another user-defined function. Print the result in main() function.	M1.04	A
VII.	Explain the steps of binary search operation in an array.	M2.04	U
	<b>OR</b>		
VIII.	Write a program to implement selection sort in an integer array.	M2.04	A
IX.	Develop a program to find the sum of odd numbers stored in an array using <b>pointers</b> .	M3.05	A
	<b>OR</b>		
X.	State dynamic memory allocation in C. Write the use and syntax of any three dynamic memory allocation functions.	M3.03	U
XI.	Develop a program using <b>structure</b> to read and display <b>register_number, name, and cgpa of n</b> students of a class.	M4.02	A
	<b>OR</b>		
XII.	Describe the steps to pass a structure as a parameter to a function. Give an example that include structure definition, function definition, and passing of structure to function.	M4.04	U
XIII.	Write a program using <b>structure</b> to add two complex numbers stored in two structures and store the result in a third structure. Members of structure are <b>real, imaginary</b> parts of a complex number. ( <b>a+ib</b> form where <b>a</b> -real part, <b>b</b> -imaginary part).	M4.02	A
	<b>OR</b>		
XIV.	Explain about library functions used for opening, reading and writing of characters on a sequential file. Give syntax and examples.	M4.07	U

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