Name:.....

Roll No:.....

MAR ATHANASIUS COLLEGE OF ENGINEERING
KOTHAMANGALAM – 686666
(Govt. Aided Autonomous Institution)
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B. TECH FIRST SERIES EXAMINATION, SEPTEMBER 2026

(S1 ECE B) B24ES1T01A PROBLEM SOLVING AND PROGRAMMING TECHNIQUES

Max. Marks: 40 Duration: 1.5 Hours

PART A

Answer all questions. Each question carries 3 marks.

1	What is the output of the following code block? Justify your answer.	(CO1)	3 marks

```
# include<stdio.h>
int main ( ) {
    int a=5, b=10, c;
    c= ++a + b--;
    printf (”%d %d %d \ n ” ,a ,b ,c ) ;
    return 0 ;
}
```

2	Explain any three operators used in C programming.	(CO1)	3 marks
3	Predict the output of the following C program and justify your answer.	(CO2)	3 marks

```
#include<stdio.h>
int main ( )
{
int x = 100, y = 200;
printf (“%d”, (x > y)? x : y);
}
```

4	Draw a flowchart to represent a switch statement in C programming.	(CO2)	3 marks

PART B

Answer all questions. Each question carries 14 marks.

5	a)	Draw a flowchart to read a positive number as input and find the factorial of the number.	(CO1)	7 marks
	b)	Write an algorithm to read a positive number, *n*, and find the sum of all the even numbers and the sum of all the odd numbers upto *n*.	(CO1)	7 marks

P.T.O.

6 Write a menu driven C program to perform the following operations: (CO2) 14 marks

1. Print area of a rectangle
2. Print area of a square
3. Print area of a circle

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