

# Mid-Semester Examination 2022

Name of the Program: MCA

Semester 1

Name of the Course: Programming Methodology Using 'C'

Course Code: TMC-101

Time: 1:30 Hours

MM: 50

Note:

- (i) Answer all the questions by choosing any one of the sub questions.
- (ii) Each question carries 10 Marks.

<b>Q.1</b>	<b>(10 Marks)</b>	
a)	Write an algorithm and draw flowchart to find the factorial of a number.	CO1
	OR	
b)	Define token in C language. Differentiate between keywords and identifiers by giving suitable example.	CO1
<b>Q.2</b>	<b>(10 Marks)</b>	
a)	Write in brief about various data types available in C. Write their format specifiers, range and memory requirements.	CO1
	OR	
b)	Justify the need of type conversion in C. Discuss Implicit and Explicit type conversion with the help of suitable example.	CO1

<b>Q.3</b>	<b>(10 Marks)</b>	
a)	Discuss the need of Storage classes in C language. Explain the types of Storage classes with the help of suitable example.	CO2
	OR	
b)	Determine the value of X if a=10, b=5, c=15. a. $X = a > b \ \&\& \ b < c$ b. $X = a > b \    \ b < c$ c. $X = a == b \    \ a < c$ d. $X = a \&\& b$ e. $X = !5 \    \ b$	CO2
<b>Q.4</b>	<b>(10 Marks)</b>	
a)	What do you mean by operators in C? Discuss the different types available in C language.	CO2
	OR	
b)	Determine the output of the following code <pre>int x=10, y=12; printf("%d", x&amp;y); printf("%d", x y); printf("%d", x^y); printf("%d", x&lt;&lt;2); printf("%d", y&gt;&gt;2);</pre>	CO2

Q5	(10 Marks)	
a)	Discuss the role of Precedence and Associativity of operators in C Language by taking suitable example.	CO2
	OR	
b)	<p>Determine the output of the following :-</p> <pre> a. int main() {     int b=052;     printf("%d", b);     return 0; }  b. int main() {     int a,b;     a=10,20,30,40,50;     b=(10,20,30,40,50);     printf("%d", a);     printf("%d", b);     return 0; }  c. void main() {     int k;     k=1;     k--;     k--;     k--;     printf("%d", k);     k=printf("GEHU");     printf("%d", k);     k--; }  d. int main() {     int k=1,s=2;     int t;     t=k++ + s;     printf("%d%d%d", t,k,s);     return 0; }  e. int main() {     int b=0,k=0;     k= b++ + ++b + b++;     printf("%d%d", k,b);     return 0; } </pre>	CO2