

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**  
**End Semester Examination, Winter-2018**

Course: B. Tech.

Semester: I

Subject Name: Computer Programming in C

Subject Code: CP1204

Max Marks: 60

Date: 19/12/2018

Duration: 3 Hr.

**Instructions to the Students:**

1. All the questions are compulsory.
2. The level question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level/CO)	Marks
<b>Q. 1 Solve Any Two of the following.</b>		
<b>A)</b> What are the different symbols, its purpose and give its description which is used for different states in flow chart?	(Understand)	<b>(6)</b>
<b>B)</b> With the help of suitable example, explain the Assignment Operators in C.	(Understand)	<b>(6)</b>
<b>C)</b> With the help of suitable example, explain the Relational Operators in C.	(Understand)	<b>(6)</b>
<b>Q.2 Solve Any Two of the following.</b>		
<b>A)</b> What will be the output of the following C codes?	(Application)	<b>(6)</b>
i.) <pre>#include &lt;stdio.h&gt; void main(){     int a = 1, b = 1, c;     c = a++ + b;     printf("%d, %d", a, b); }</pre>		
a) a = 1, b = 1	b) a = 2, b = 1	
c) a = 1, b = 2	d) a = 2, b = 2	
ii.) <pre>#include &lt;stdio.h&gt; void main(){     int i = 0;     int j = i++ + i;     printf("%d\n", j); }</pre>		
a) 0	b) 1	c) 2
		d) Compile time error
iii.) <pre>#include &lt;stdio.h&gt; void main(){     int i = 2;     int j = ++i + i;     printf("%d\n", j); }</pre>		
a) 6	b) 5	c) 4
		d) Compile time error
<b>B)</b> Write a program in C to count the number of digits in an integer.	(Synthesis)	<b>(6)</b>
<b>C)</b> Write the program using Switch Statement which takes an arithmetic operator +, -, *, / and two operands from the user as an input and performs the calculation on the two operands.	(Synthesis)	<b>(6)</b>

**Q. 3 Solve the following.**

- A)** What is function? Differentiate between Call by value and function call by reference function. (Analysis) **(6)**
- B)** Write a program in C to print factorial of a number (Synthesis) **(6)**
- i) without using User Define Function
- ii) User Define Function
- iii) Using Recursion

**Q.4 Solve Any Two of the following.**

- A)** Write a program in C by using array to insert an element 22 at location 4. The number of elements and elements enter by taking input from the user. (Synthesis) **(6)**
- B)** Write a program in C by using array to sort the numbers in descending order by taking input from the user. (Synthesis) **(6)**
- C)** Write a program in C to calculate the average age by passing an array to function. (Synthesis) **(6)**

**Q. 5 Solve the following.**

- A)** Write a program in C by using structure to add two distances in inch-feet. Data type of feet is integer type and inch is float type. (Synthesis) **(6)**
- Input:** (Distance1 (feet: 23, inch: 8.6))(Distance2 (feet: 3, inch: 6.5)).
- Output:** Sum of distances = 27'-2.1"
- B)** Explain the following with examples. (Understand) **(6)**
- i.) What is structure? How to create structure? (Understand)
- ii.) How to initialize structure members? How to access structure elements? (Understand)

**\*\*\* End \*\*\***