Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17CA2004** | **Duration :** | **3 Hrs.** |
| **Sub. Name :** | **PROGRAMMING IN C** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | List down the various symbols used in Flowchart and mention their purpose. | CO1 | 7 |
| b. | Classify the different types of computers. | CO1 | 10 |
| c. | Write down the algorithm for finding the area of rectangle. | CO1 | 3 |
| **(OR)** | | | | |
| 2. | a. | Justify why C programming is insisted as structured programming through suitable examples. | CO2 | 10 |
| b. | Write a C program to calculate the distance travelled by providing speed and time as input. | CO3 | 5 |
| c. | List and explain the different types of Software. | CO1 | 5 |
|  |  |  |  |  |
| 3. |  | Discuss the following with valid C programs.  i) Arithmetic Operators ii) Relational Operators iii) Unary Operators  iv) Logical Operators v) Conditional Operator. | CO1 | 20 |
| **(OR)** | | | | |
| 4. | a. | What is the result of following operation?  a) 1 1 0 1 b) 1 1 1 0 c) 1 1 0 1 d) 1 011  0 1 0 1 & 0 1 0 0 ( | ) 1 1 0 0 ( ^) (~) | CO1 | 8 |
| b. | List and explain the different types of constants supported by C. | CO1 | 10 |
| c. | List any two qualifiers used in C program. | CO1 | 2 |
|  |  |  |  |  |
| 5. | a. | Explain the various types of decision making statements in C with suitable programs. | CO4 | 15 |
| b. | Write a program to find the sum of all elements stored in an array. | CO5 | 5 |
| **(OR)** | | | | |
| 6. | a. | Distinguish entry controlled loop from exit controlled loop through suitable examples. | CO4 | 5 |
| b. | Justify the need of user defined function. Explain the four categories of functions in C with suitable examples. | CO4 | 15 |
|  |  |  |  |  |
| 7. | a. | Write a C program to perform matrix addition. | CO3 | 8 |
| b. | Discuss any 4 string handling functions in C with suitable example. | CO4 | 12 |
| **(OR)** | | | | |
| 8. | a. | Discuss the concept of structures in C with suitable example. | CO4 | 5 |
| b. | Differentiate between Union and Structure. | CO4 | 5 |
| c. | Write a C program to sort ‘n’ numbers in ascending and descending order. | CO6 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss the different modes of opening a file. | CO5 | 6 |
| b. | Justify the advantages of using pointers in a C program. | CO5 | 4 |
| c. | Write a program to get the student information from the user and store the contents in a file. | CO6 | 10 |