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**4th Sem / Branch : Mechatronics**  
**Subject:- Computer Programming & Application**

Time : 3Hrs. M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 Printf() is a predefined function in \_\_\_\_\_ header file.  
a) stdlib.h      b) ctype.h  
c) stdio.h      d) stdarg.h

Q.2 Who is known as the Father of C?  
a) Rasmus Lerdorf      b) William Makepiece  
c) Dennis Ritchie      d) List Barely

Q.3 How many keywords are there in C language?  
a) 24      b) 32  
c) 33      d) None

Q.4 Which of the following is not a valid C variable name?  
a) int number      b) int variable\_count;  
c) float rate;      d) int\$main;

Q.5 C is a \_\_\_\_\_  
a) Low level language  
b) High level language  
c) None of above  
d) Middle level language

Q.6 Which operator is used to find the remainder of two numbers in C?

- a) \      b) //
- c) None of the above      d) %

Q.7 Which of these is an exit-controlled loop?  
a) for      b) do..while  
c) while      d) if

Q.8 A string is terminated by \_\_\_\_\_  
a) Newline('n')      b) Whitespace  
c) Null('0')      d) None of the above

Q.9 Which of these is not a valid parameter passing method in C?  
a) Call by value      b) Call by reference  
c) Call by pointer      d) All of the above

Q.10 Before using a pointer variable, it should be \_\_\_\_\_  
a) Declared      b) Initialized  
c) Both A and B      d) None of the above

**SECTION-B**

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

Q.11 What do you mean by Recursion?

Q.12 What is pointer?

Q.13 Define array.

Q.14 What is operator?

Q.15 Define Local Variable.

Q.16 Write the name of two header files.

Q.17 What is the acronym for ANSI?

Q.18 What is the maximum length of an identifier?

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- Q.19 What is an infinite loop?  
Q.20 What are the functions to open and close the file in C language?

### SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Write an algorithm to find the SUM and AVERAGE of three numbers.  
Q.22 Describe various steps involved in problem solving of a program.  
Q.23 What is the difference between Array and Structure?  
Q.24 Discuss various features of MATLAB.  
Q.25 Briefly explain Break Statement.  
Q.26 What do you mean by Array? Explain various types of Array in detail.  
Q.27 State five differences between Compiler and Interrupter?  
Q.28 Describe file operations in C language.  
Q.29 Discuss Arithmetic operators used in C language.  
Q.30 Distinguish between Local variable and Global Variable.  
Q.31 Explain storage classes in C programming.  
Q.32 Describe the operations performed on String.  
Q.33 What is Pointer in C programming? Explain its benefits.

- Q.34 What is the difference between Call by Value and Call by Reference?  
Q.35 What is Function? Explain the need of Function.

### SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What are the basic Datatypes supported in C Programming Language? Explain in detail.  
Q.37 What is Control Loop? Explain different types loop used in C language with example?  
Q.38 1) Write a program to print the Fibonacci Series.  
2) Write a program to find Factorial of a number.