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Roll No. ....

**3rd Sem / Eltx., Mechatronics, Med. Eltx.**  
**Subject:- Computer Programming using**  
**C / Comp. Prg. & App.**

Time : 3Hrs.    M.M. : 100

**SECTION-A**

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

- Q.1 Which one of the following is a loop construct that will always be executed once?  
a) for                                      b) while  
c) switch                                  d) do while
- Q.2 Which is valid expression in c language?  
a) intmy\_num = 100,000;  
b) intmy\_num = 100000;  
c) int my num = 1000;  
d) int my num == 10000;
- Q.3 Array is a \_\_\_\_\_ data structure.  
a) Non-linear                              b) Primary  
c) Linear                                      d) Data type
- Q.4 A global variable is declared \_\_\_\_\_.  
a) Outside of the function  
b) Inside of the function  
c) With the function  
d) Anywhere in the program

- Q.5 Which of the following is not an arithmetic operation?  
a)  $x* = 65;$                                   b)  $x /= 42;$   
c)  $x \% = 2;$                                   d)  $x != 56;$
- Q.6 Which symbol is used to declare a pointer?  
a) \*    b) #  
c) &    d) &&
- Q.7 Who is the father of C language?  
a) Steve Jobs                                  b) James Gosling  
c) Dennis Ritchie                              d) RasmusLerdorf
- Q.8 All keywords in C are in \_\_\_\_\_  
a) LowerCase letters  
b) UpperCase letters  
c) CamelCase letters  
d) None of the mentioned
- Q.9 What will be the final value of x in the following C code?  
1) #include <stdio.h>  
2) void main()  
3) {  
4) int x = 5\*9/3+9;  
5) }  
a) 3.75    b) Depends on compiler  
c) 24    d) 3
- Q.10 Maximum number of elements in the array declaration int a [5][8] is  
a) 28    b) 32  
c) 35    d) 40

### SECTION-B

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

- Q.11 What is a nested loop?
- Q.12 What is the modulus operator?
- Q.13 What is the difference between the = symbol and == symbol?
- Q.14 Which of the following operators is incorrect ( $\geq$ ,  $\leq$ ,  $<>$ ,  $==$ )
- Q.15 What is debugging?
- Q.16 What does the `||` operator do in a program code?
- Q.17 Define an array.
- Q.18 In C programming, what command code can be used to determine if a number is odd or even?
- Q.19 What does the function `toupper()` do?
- Q.20 Give the syntax of "if statement" in C language.

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Compare and contrast compilers from interpreters.
- Q.22 Write a program to print N natural numbers.
- Q.23 What is the difference between break and continue?
- Q.24 Describe the order of precedence with regards to operators in C.

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- Q.25 What are multidimensional arrays? Explain with example.
- Q.26 Define recursion. Explain with an example program.
- Q.27 Give the difference between call by reference and call by value.
- Q.28 What is the difference between for and while loop?
- Q.29 Write short note on arithmetic operators?
- Q.30 Explain various logical operators.
- Q.31 What is a pointer? How is it declared in C?
- Q.32 Give the syntax of switch statement with example.
- Q.33 Define an algorithm. Write an algorithm to swap two numbers.
- Q.34 Define an array. How is it declared in C.
- Q.35 Write the advantages of using function.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain the steps involved in development of a program.
- Q.37 What are loop constructs. Discuss various loop constructs used in C.
- Q.38 Write a program to add two matrices.

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