895

COMPUTER PROGRAMMING IN C

Time Allowed: 3 Hours   *Full Marks: 60*

Answer the following questions from Group-A, B & C as directed.

GROUP –A

1. Choose the correct alternative (Any ten)   1 x 10=10

i) 'C' is often called a a) Object oriented language b) High level language c) Assembly language   d) Machine level language

ii) Which operator has the lowest priority? a)++ b)% c)+ d) ||

iii) Which escape character can be used to begin a new line in C? - a)\a   b)\b   c)\m   d)\n.

iv) Which is false? a) A variable defined once can be defined again with different scope. b) A single variable cannot be defined with two different types in the same scope. c) A variable must be declared and defined at the same time. d) A variable refers to a location in memory.

v) The function Strcpy(s1,s2) call means_ a) copies s1 string into s2 b)copies s2 string into s1 c)copies both s1 and s2   d) None of these

vi) File manipulation functions in C available in header file _ a) streams.h b)stdio.h c)stdlib.h d)files.h

vii) What is the limit for number of functions in a C Program? a) 16   b) 31   c) 32   d) No Limit

viii) Address stored in the pointer variable is of type _____.a) Integer   b) Float   c) Array d) Character

ix) int main()
```
{
    int i = -5;
    int k = i %4;
    printf("%d\n", k);
}
```
a) Compile time error b) -1 c) 1 d) None

x) How many times will the following loop execute for(j = 1; j <= 10; j = j-1)? A) forever b) never c) 0 d) 1

xi What is the output of the following program?
```
#include<stdio.h>
main()
{
    int r, x = 2;
    float y = 5;
    r = y%x;
    printf("%d", r);
}
```
a) 1   b) 0   c) 2   d) Compile error

xii) The machine registers are sometimes called a) local variables b) global variables c) accumulators d) static variables

xiii) The value of - 17 % - 5 is _ a) 3.4 b) 3   c) - 3   d) None

xiv) x=5; y=x++; The values of x and y will be _
   a) x=5,y=6   b) y=5,x=6   c) x=5,y=5   d) x=6,y=6

xv) Which is valid C expression? a) int my_num = 100,000; b) int my_num = 100000; c) int my num = 1000; d) int $my_num = 10000

2. Fill in the blanks (Any ten):   1 x 10=10

i) Long int I; In 32-bit compiler occupies _____ bytes in main memory.
ii) The C language consist of _____ number of keywords.
iii) Each string is terminated with a _____ character.
iv) scanf() is a predefined function in_____header file.
v) The _____ is equivalent to a = a-1.
vi)_____ is unconditional control structure in C.
vii) The EOF is equivalent to _____
viii) If the function returns no value then it is called _____.
ix) The union holds_____.
x) By default a variable is assigned with _____ in static storage class.
xi) Array subscripts in C always start at_____.
xii) The run time library is collection of _____ files
xiii) The operator "- -'' is known as ------------ operator.
xiv) If a is an integer variable, a=11/2 will store in a _____.
xv) The C language was originally developed from_____ language.

3. Answer the following question (any ten)   1 x 10 =10

i) What is keywords?
ii) What is prototype declaration of a function?
iii) What do you mean by library function in C program?
iv) What do you mean by debugging?
v) What is the difference between declaring a header file with <> and " "?
vi) What is the use of a '\0' character?
vii) What is a syntax error?
viii) What is token?
ix) Write the difference between = and == in C programming.
x) What is global variable?
xi) What is malloc ()?
xiii) What is typecasting?
xiv) What is the job of Assembler in C programming?
xv) What are macros?

GROUP –B

4. Answer the questions (Any six)   2x6=12

i) What is Bit wise operation in C?
ii) What is header file?
iii) Write down the advantage of the Structured program.
iv) State the types of User-Defined Functions.

v) What is the difference between do-while and while loop?
vi) Evaluate c=a+++--b-a+++b where a=8,b=4.
vii) Convert (167) base 10 to binary.
viii) Explain size of operator with example
ix) Write the differences between Compiler and Interpreter.
x) Name the types of Arrays.
xi) What is looping in C?
xii) Differentiate Source Codes from Object Codes.

GROUP –C

5. Answer the question (any one)   6x1

a) What do you mean by associativity of an operator? Explain break and continue statement with an example.

b) Write a program to calculate GCD of two numbers. Why goto statement should be avoided in c?

c) What do you mean by nested loop structure? b) Write a program in C to find the sum of the series $1 + (1 + 2) + (1 + 2 + 3) + \ldots$ up to 'n' terms, the value of 'n' should be given from the keyboard.

6. Answer the question (any one)   6x1

a) Discuss with programming examples the different types of String Handling Function in C.

b) Discuss different Storage Class with example.

c) Write a C program to find reverse of a string.

7. Answer the question (any one)   6x1

a) What do you mean by a pointer to a function? Write a C program to access a one dimensional array using pointer.

b) Write a recursive function to obtain the returning sum of first 25 natural numbers. Write a program to find weather a year is leap year or not

c) Write a c program for reading and writing some integer value using the concept of Dynamic Memory Allocation.