Group – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following:

i) Which of the following is a valid typecast?

    a) To (int, x)   b) X (int)   ✓c) (int) X   d) (integer) X

ii) How many times is a do while loop guaranteed to loop?

    a) 0   ✓b) 1   c) infinite   d) variable

iii) Which of the following operators represent logical AND?

    a) &   b) AND   ✓c) &&   d) ☐ ☐

iv) Which of the following characters ends all strings?

    a) '\n'   b) '\r'   c) '\s'   ✓d) '\0'

v) Which of the following is a complete function?

    ✓a) int fn (int a) {return a --; }   b) int fn ( ) ;

    c) int fn (int a) {return a -- }   d) int fn (int a) {return a --};

vi) Which of the following adds one string to the end of another?

    a) append()   ✓b) strcat()   c) strconcat()   d) stradd()

vii) Which is not the correct variable type in c?

    a) int   b) float   c) char   ✓d) real

viii) What is the index number of the last element of an array with 50 elements?

    a) 50   ✓b) 49   c) 0   d) 1

ix) Union item {char name; int code; float price;} u;
How much space is occupied by this union?

    a) 1 byte   b) 2 bytes   ✓c) 4 bytes   d) 7 bytes

x) Conditional operator is a .... operator.

    a) unary   b) binary   ✓c) ternary   d) quarter

Group – B
(Short Answer Type Questions)

2. What do you mean by local variable and global variable? Discuss various available storage classes in C.

1st Part: See Topic: FUNCTIONS, Short Answer Type Question No. 18.

2nd Part: See Topic: FUNCTIONS, Long Answer Type Question No. 4.

3. Write a program to print the sum of the following series.

$$S = 1^2 + 2^2 + 3^2 + \ldots\ldots\ldots\ldots + n^2.$$

See Topic: FLOW OF CONTROL, Short Answer Type Question No. 10.

4. Write down the difference between structure and union. Write a function to print the sum of the even numbers from 1 to n.

Answer:

1st Part: See Topic: STRUCTURES AND UNIONS, Long Answer Type Question No. 1(c).

2nd Part: See Topic: FUNCTIONS, Short Answer Type Question No. 10.

5. Discuss call by value and call by reference with example.

See Topic: POINTERS, Long Answer Type Question No. 1.

6. What is header file in C? What are the differences between inbuilt and user defined function? What is pre-processor directive?

See Topic: C FUNDAMENTAL, Short Answer Type Question No. 6.

Group – C
(Long Answer Type Questions)

7. a) What are the basic differences between while, do while and for loop?

b) Write a C program to print natural numbers from 1 to n.

c) Write a C program to find factorial of a given integer.

a) & b) See Topic: FLOW OF CONTROL, Long Answer Type Question No. 19.

c) See Topic: FUNCTIONS, Long Answer Type Question No. 5.

8. a) Write a C program to print integers from 1 to n omitting those integers which are divisible by 10.

b) Write a C program to find the square of the sum of the digital of any given positive integer.

See Topic: FLOW OF CONTROL, Long Answer Type Question No. 20.

9. a) Is printf a function? If yes, then what does it return?

b) Determine how much money is in a piggy bank that contains several 50, 25, 20, 20, 10 and 5 paise coins. Use the following values to test the program ; five 50 paise, three 25 paise, two 20 paise, one 10 paise and fifteen 5 paise.

c) Write a C program to find out the biggest among three numbers using one extra variable?

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a) & b) See Topic: C FUNDAMENTAL, Long Answer Type Question No. 5 (a) & (b).

c) See Topic: FLOW OF CONTROL, Short Answer Type Question No. 11.

10. a) What are the basic advantages of using recursive function?

b) Write a C program to display the Fibonacci Series of n numbers using recursion.

c) Write a C program to check whether a number is prime or not.

a) See Topic: FUNCTIONS, Short Answer Type Question No. 10.

b) See Topic: FUNCTIONS, Short Answer Type Question No. 1.

c) See Topic: FLOW OF CONTROL, Short Answer Type Question No. 12.

11. a) Write a program to print the series as given along with the sum:

  $1 \quad -2+3-4+5-\ldots\ldots n.$

b) Write a program to find the LCM of two numbers.

See Topic: FLOW OF CONTROL, Long Answer Type Question No. 21.