QUESTION 2009

GROUP – A
(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following:

i) A filter point is a

   a) stream pointer   b) buffer point

   ✓c) pointer to FILE data type   d) all of these

ii) Which is not a storage class?

   a) auto   b) struct   ✓c) typedef   d) static

iii) The declaration of float *a[5]; is

   a) a normal pointer   b) an ordinary array

   ✓c) an array of pointer   d) a pointer to an array

iv) How is a variable accessed from another file?

   a) The global variable referenced via the global specifier

   b) The global variable is referenced via the auto-specifier

   ✓c) The global variable is referenced via the extern specifier

   d) The global variable is referenced via the pointer specifier

v) main()

```
{
    int a = 3;
    printf("%d%d%d%d%d",a++, ++a, ++a, a++);
```

}

a) 3566 ✓b) 6653 c) 3565 d) 6666

vi) main()
{
    printf("%d%d%d%d",sizeof(3.14f),sizeof(3.14),
    sizof(314))
}

a) 422 b) 421 ✓c) 482 d) 442

vii) If the array begins at address 6548?
```
main()
{
        int a[ ]={12, 14, 15, 23};
        printf("%u%u",a,&a);
}
```

a) 6548 6558 b) 6548 6548 c) 6548 6550 ✓d) none of these

viii) How many times the message *Hello* will be printed in the following program?
```
void main()
{
    int x;
    for(x=-1; x<=10; x++)
    {
            if (x<5)
            continue;
            else
            break;
            printf("Hello");

    }
}
```

a) 11 times b) 10 times c) once ✓d) 0 times

ix) What would be the correct output of the following program?
```
void main()
{
    int k, num=30;
    k=(num>5? (num<=10?100:200):500);
    printf("%d%d",num,k);

}
```

a) 200 30 b) 30 100 ✓c) 30 200 d) 30 500

BCA IP-138

x) Choose the correct output:

```
void main()
{
    char str[20]="Hello";
    char*const p=str;
    *p='M';
    printf("%s",str);
}
```

✓a) Mello   b) Hello   c) HMello   d) MHello

GROUP – B
(Short Answer Type Questions)

2. a) What do you mean by Recursion? Give example.
b) What are strings? Explain with example.
a) See Topic: **FUNCTIONS, Short Answer Type Question No. 10.**
b) See Topic: **C FUNDAMENTALS, Short Answer Type Question No. 3.**

3. a) Explain the difference between structure & union with examples.
b) What is Pointer?
a) See Topic: **STRUCTURES AND UNIONS, Long Answer Type Question No. 1(c).**
b) See Topic: **POINTERS, Short Answer Type Question No. 5.**

4. Using pointer write a program to find out length of the given string without using strlen ( ) function.
See Topic: **POINTERS, Long Answer Type Question No. 3.**

5. Write a program to check whether a given string palindrome or not.
See Topic: **ARRAYS, Short Answer Type Question No. 1.**

6. What do you mean by scope of a variable? Explain the storage classes available in C.
1ˢᵗ Part: See Topic: **FUNCTIONS, Short Answer Type Question No. 6.**
2ⁿᵈ Part: See Topic: **FUNCTIONS, Long Answer Type Question No. 4.**

GROUP – C
(Long Answer Type Questions)

7. What is structure? How does a structure differ from any array? What do you mean by call by value and call by reference? Write a C program, which accepts an integer numbers and prints the multiplication of the digits.
1ˢᵗ & 2ⁿᵈ Part: See Topic: **STRUCTURES AND UNIONS, Short Answer Type Question No. 2.**
3ʳᵈ Part: See Topic: **POINTERS, Long Answer Type Question No. 2.**
4ᵗʰ Part: See Topic: **OPERATORS, EXPRESSIONS & MANAGING INPUT OUTPUT, Long Answer Type Question No. 5.**

8. a) What do you mean by malloc ( ) and calloc ( )? Explain their difference.

b) Using pointer write a function that will calculate maximum and minimum of a given set of numbers.

c) Write a recursive function that will calculate HCF of two numbers.

a) See Topic: DYNAMIC MEMORY ALLOCATION, Short Answer Type Question No. 3.

b) See Topic: POINTERS, Long Answer Type Question No. 4.

c) See Topic: FUNCTIONS, Long Answer Type Question No. 7.

9. a) Explain strcat ( ), strcmp ( ), strrev ( ), strlen ( )

b) Write C code to print

```
 1
 2    3
 4    5    6
 7    8    9   10
11   12   13   14   15
```

c) Write C code to print

```
A  B  C  D  E  F  E  D  C  B  A
A  B  C  D  E     E  D  C  B  A
A  B  C              C  B  A
A  B                    B  A
A                          A
```

a) See Topic: ARRAYS, Long Answer Type Question No. 7.

b) See Topic: FLOW OF CONTROL N, Long Answer Type Question No. 14(a).

c) See Topic: FLOW OF CONTROL, Long Answer Type Question No. 14(b).

10. a) What is a function?

b) What do you mean by the following:
   i)   Function declaration
   ii) Function calling
   iii) Function definition.

c) When is it necessary to declare prototype of a function?

d) Write a program to arrange a group of numbers into positive & negative numbers.

See Topic: FUNCTIONS, Long Answer Type Question No. 8.

11. What is loop? Discuss the different types of loops with syntax and appropriate examples. Write a program to print the summation of the following series:

$$1+\frac{1}{2^2}+\frac{1}{3^2}+\frac{1}{4^2}+\ldots\ldots+\frac{1}{N^2}.$$

1st Part: See Topic: FLOW OF CONTROL, Short Answer Type Question No. 4.

2nd Part: See Topic: FLOW OF CONTROL, Long Answer Type Question No. 3.

3rd Part: See Topic: FLOW OF CONTROL, Long Answer Type Question No. 15.