QUESTION 2007

Group – A
(Multiple Choice Type Questions)

1. A) Choose the correct alternatives for any ten of the following:

i) Stdio. h is a

   a) Function   ✓b) Processor Directive   c) Variable   d) Constant

ii) An array is a

   a) group of elements   ✓b) group of similar elements

   c) variable   d) constant

iii) Which of the following is not a logical operator?

   ✓a) &   b) & &   c) || d) !

iv) The keyword used to transfer control from a function back to the calling function is
Switch   b) goto   c) Exit   ✓d) return

B) Answer any three questions:
What would be the output of the following program segments:

i) Main ( )
```
{
int a = 1234, b = 5678:
int c;
c = a% b;
print f ( " % d", c);
}
```
1234

ii) main ( )
```
{
int x, y;
int * ptr;
x = 10;
ptr = &x;
y = *ptr;
print f ( " value of x is %d",  x);
print f ( " % d is stored at % u", * & x, & x);
}
```
value of x = 10
    10 is stored at 2000(address of x)

iii) main ( )
```
{
int i;
for ( i = 0; i < 10; i + + );
print f ( " % d \n" , i );
}
```
10

iv) main ( )
```
{
print f ( " \n % d % d % d", sizeof ( '3 '), sizeof ( " 3 " ), sizeof ( 3 ));
}
```
1, 2, 2

GROUP – B
(Short Answer Type Questions)

2. What are the automatic variables? List the limitations of register variables.
See Topic: OPERATORS, EXPRESSIONS & MANAGING INPUT OUTPUT, Long Answer Type Question No 1.(c) (iii).

3. Write a program to evaluate the series

$$1+\frac{x}{1!}+x^2/2!+x^3/3!\ldots\ldots\ldots+x^n/n!.$$

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

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

5. Distinguish between actual argument and formal argument with the help of a simple program.
See Topic: FUNCTIONS, Short Answer Type Question No. 12.

6. Explain by reference with suitable examples.
See Topic: POINTERS, Long Answer Type Question No. 2.

GROUP – C
(Long Answer Type Questions)

7. What is recursion? What is its advantage? Write a program in C to find the factorial of a positive integer n.
1st & 2nd Part: See Topic: FUNCTIONS, Short Answer Type Question No. 10.
3rd Part: See Topic: FUNCTIONS, Long Answer Type Question No. 5.

8. What is meant by dynamic memory allocation? Write a program segment that dynamically allocates a two dimensional array of size m × n, where m and n are to be supplied during execution.
See Topic: DYNAMIC MEMORY ALLOCATION, Long Answer Type Question No. 3.

9. Distinguish between (any five):
   a) Array and structure
   b) (*p ++) and (++ *p)
   c) macro and function
   d) do while and while
   e) structure and union
   f) feof and ferror
   g) malloc ( ) and calloc ( ).

a) See Topic: **STRUCTURES AND UNIONS**, Short Answer Type Question No. 2.

b) See Topic: **POINTERS**, Short Answer Type Question No. 6.

c) See Topic: **FUNCTIONS**, Short Answer Type Question No. 4.

d) See Topic: **FLOW OF CONTROL**, Short Answer Type Question No. 3.

e) See Topic: **STRUCTURES AND UNIONS**, Long Answer Type Question No. 4 (b).

f) See Topic: **FILES**, Short Answer Type Question No. 2.

g) See Topic: **DYNAMIC MEMORY ALLOCATION**, Short Answer Type Question No. 1.

10. a) Write a program in C to find the GCD of two numbers.

b) Write a program to multiply two matrices.

c) Write program in C using function to reverse a number and calculate the difference of these two numbers.

a) See Topic: **FUNCTIONS**, Short Answer Type Question No. 13.

b) See Topic: **ARRAYS**, Long Answer Type Question No. 6.

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

11. Write short notes on (any three):

   a) Algorithm

   b) Flow chart

   c) Switch case

   d) Nested loop

   e) Static variable.

a) See Topic: **INTRODUCTION**, Long Answer Type Question No. 4(b).

b) See Topic: **INTRODUCTION**, Long Answer Type Question No. 4(c) of Questions.

c) See Topic: **OPERATORS, EXPRESSIONS & MANAGING INPUT OUTPUT**, Long Answer Type Question No. 7(b).

d) See Topic: **OPERATORS, EXPRESSIONS & MANAGING INPUT OUTPUT**, Long Answer Type Question No. 7(c).

e) See Topic: **FUNCTIONS**, Long Answer Type Question No. 6(c).