MCQ 20 Marks

1. What will be the output of the following C code if it is executed on 64 bit compiler?

```c
#include<stdio.h>
union Student
{
    int rollno;
    char gender; //F or M
};
int main()
{
    union Student s;
    printf("%d", sizeof(s));
    return 0;
}
```

   a. 9
   b. 5
   c. 8
   d. 4

2. What will be the output of the following code?

```c
#include <stdio.h>
int main()
{
    enum {Rose = 5, Jasmine, Tulip = 4, Mogra};
    printf("Mogra = %d\n", Mogra);
}
```

   a. Mogra = 4
   b. Mogra = 5
   c. Mogra = 7
   d. Mogra = 6

3. What will be the output of the following code?

```c
#include <stdio.h>
void main()
{
    int const Alpha = 7;
    Alpha++;
    printf("Alpha = %d",Alpha);
}
```

   a. 7
   b. 8
   c. error: increment of read-only variable 'Alpha'
   d. Runtime Error

4. What will be the output of the following code?

```c
#include <stdio.h>
void main()
{
    int a = 4, b = 0, c = 2;
    int x = a && b || c++;
    printf("%d", c);
}
```

a. 4
b. 5
c. 3
d. 6

5. We cannot use relational operators with _____

a. structure
b. strings
c. long
d. float

6. Which type of conversion is NOT accepted?

a. From float to char pointer
b. From negative int to char
c. From double to char
d. From char to int

7. What will be the output of the following code?

```c
#include <stdio.h>
    void main()
    {
        func();
    }
    void func()
    {
        printf("Hello");
        func();
    }
```

a. Hello
b. Infinite Hello
c. Compilation Error
d. Runtime Error

8. What will be the output of the following code?

```c
#include <stdio.h>
    int main()
    {
        int a = 1, b = 1, c;
        c = a++ + b;
        printf("%d", c);
    }
```

a. 2

b. 3
c. 4
d. 1

9. What will be the output of the following code?

```
#include <stdio.h>
void main()
{
    int b = 3 + 7 * 2 - 8 * (4, 2);
    printf("%d", b);
}
```

a. 5
b. 2
c. 3
d. 1

10. What will be the output of the following code?

```
#include <stdio.h>
int main()
{
    int a = 0, i = 0, b;
    for (i = 0;i < 5; i++)
    {
        a++;
        if (i == 2)
            break;
    }
    printf("%d",a);
}
```

a. 2
b. 3
c. 1
d. 4

11. Which loop is most suitable to first perform the operation and then test the condition?
    a. for loop
    b. while loop
    c. do-while loop
    d. none of the mentioned
12. What will be the output of the following code?

```c
#include <stdio.h>
int *a()
{
    int *ptr = 4;
    return ptr;
}
void main()
{
    int *z = a();
    printf("%d", z);
}
```

a. Garbage value
b. 4
c. 0
d. Compilation Error

13. If storage class is not specified for a local variable, then the default class will be auto.
    a. True
    b. False
    c. Depends on compiler
    d. Neither true nor false
14. What will be the output of the following code?

```c
#include <stdio.h>
struct student
{
    char *name;
};
void main()
{
    struct student St, Ab;
    St.name = "Hello";
    Ab = St;
    printf("%s %s", St.name, Ab.name);
}
```

a. Hello Hello
b. Hello
c. Compilation Error
d. Nothing is printed

15. What will be the output of the following code?

```c
#include <stdio.h>
int main()
{
    int *ptr, a = 7;
    ptr = &a;
    *ptr += 1;
    printf("%d,%d", *ptr, a);
}
```

a. 7,7
b. 8,8
c. 7,8
d. 8,7

16. Choose a correct C Statement about Strings.
    a. PRINTF is capable of printing a multi word string.
    b. PUTS is capable of printing a multi word string.
    c. GETS is capable of accepting a multi word string from console or command prompt
    d. None of them
17. What will be the output of the following C code?

```c
#include <stdio.h>
int main()
{
    struct table
    {
        int height;
        int width;
    };
    struct table tab={10};
    printf("%d ",tab.width);
    printf("%d",tab.height);
    return 0;
}
```

a. 10 10
b. 10 11
c. 0 10
d. 10 0

18. Where is a file temporarily stored before read or write operation in C language?
    a. Notepad
    b. RAM
    c. Hard disk
    d. Buffer

Section-B

Q.2 State three difference between the following with suitable examples with respect to 'C' programming Language. [Any 3] **[12]**

1. Call by value vs Call by reference

2. while loop vs do..while loop

3. Structure vs Union

4. Compiler vs Interpreter

5. Global variable vs Local Variable

Q.3 Define and explain the following Functions with appropriate examples: [Any 5] [10]

1. strcmp()

2. gets()

3. strcat()

4. rewind()

5. fseek()

6. getch()

7. fopen()

8. fclose()

Q.4 Answer the following questions: [Any 4](3 Marks each) [12]

1. Explain recursion with appropriate example.

Definition: 1 Mark Explanation with example: 2 Marks.

2. List down operators available in C and explain any one with an example.

List of 8 operators 1 mark, 2 marks for explanation

3. Draw and Explain the basic structure of C program.

Drawing-2 marks Explaination: 1 marks

4. Which are the modes supported by fopen( ) for file? What are the reasons to close a file using fclose( )?

3 Modes: 1 Marks, 2 Reasons: 2 Marks

5. Explain no argument but with return type function category with example.

Explanation with syntax: 2 marks and example: 1 mark

Q.5 Write C Programs[Any 4](4 marks each) [16]

1. Write a program that performs following operation using switch...case statement.

If input is 1: it checks whether the number is odd or even.

If input is 2: it checks whether the number is positive or negative. (0 is positive)

If input is 3: it finds the factorial of a given number.

Declaration: 1 Mark, Input: 1 Mark, Main logic:3 Marks, Output: 1 Mark

2. Define a structure named Country having members like country name, population, and national language. Input data of 3 countries, using arrays of structure and print them using user defined function. Use appropriate datatype for the data members.

Structure Definition and Declaration: 1 Mark, Input: 1 Mark, Main logic:2

Marks

3. Write a C Program to draw the following pattern using nesting of loops.

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

2 marks for declaration of variables.

2 marks for outer loop and inner loop.

4. Write a C program that will find the maximum and minimum number from one Dimensional array. Take input of 10 elements from the user.

(1 mark for correct initialization of array, 1 mark to find maximum , 1 mark for

finding minimum , 1 mark for correct output statement)

5. Define two user defined functions add() and mul() in a C Program which performs addition and multiplication of two numbers respectively. Write main() to call both the functions.

2 marks for add() function

2 marks for mul() function

2 marks for main() function