

M.Sc. ELECTRONICS
First Semester
C - PROGRAMMING
(MSE - 102)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

Answer any four from Question no. 2 to 8
Question no. 1 is compulsory.

1. Why user defined function is used in a program? Explain the categories of user defined function. (4+6=10)
2. What do you mean by File Handling in C? Explain fopen() & fclose() functions with examples. (2+4+4=10)
3. What is the difference between array & string? Write a program to enter two strings & copy one string to another. (5+5=10)
4. What is the significance of looping in a program? How to use nested for loop in a program, explain with the help of an example. (3+7=10)
5. What is a structure? Write the syntax of declaring a structure. Write a program to input 10 records in a student structure & display only those student records whose course is MSE. (2+3+5=10)
6. What is the importance to use switch case statement in a program? Write a program to check an alphabet is vowel or consonant. (6+4=10)
7. What is pre-processor? Write about the different types of pre-processor directive. Describe dynamic memory management technique in C. (2+4+4=10)

8. What is a recursive function? Write a program to calculate the factorial of a number by using a recursive function & explain the program execution. (2+6+2=10)

M.Sc. ELECTRONICS
First Semester
C - PROGRAMMING
(MSE - 102)

Duration: 20 minutes

Marks – 20

(PART A - Objective Type)

I. Choose the correct answer:

1×12=12

1. When we mention the prototype of a function?

- a) Defining
- b) Declaring
- c) Prototyping
- d) Calling

2. && and & are called _____ and _____ operators.

- a) binary & logical
- b) logical & bitwise
- c) logical & address
- d) both b & c

3. main()

```
{int i,j;  
for (i=1;i<2;i++)  
for (j=1;j<=2;j++)  
{if(i==j)  
continue;  
else  
printf("%d\t%d\n",i,j); }}
```

4. If s1 is hello and s2 is hen then strcmp(s1,s2)=?

- a) 0
- b) non zero
- c) s1=s2
- d) none

5. The main difference between a structure and a union is:

- a) The syntax used to define them.
- b) The syntax used to access their members.
- c) Structure members have separate memory, union members share memory.
- d) Structure and Union are really different names for the same thing.

6. What will be the value of i and k at the end of the program segment?

```
{  
int i, j, k;  
j=5; i=2*j/2; k=2*(j/2)  
}
```

- a) i=5, k=5
- b) i =4, k=4
- c) i =5, k=4
- d) i =4, k=5

7. output=?

```
int x;
for(x=2;x<=10,x=x*2)
printf("%d\t",x);
```

- e) 2 3.....10 b) 2 4 6 8
c) 2 4 6 8 10 d) none

8. Which of the following declares a pointer variable (**ptr**) and initializes it to the address of **x**?

- a) int *ptr = *x b) int *ptr = &x
c) int &ptr = *x d) int &ptr = &x

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

```
void main()
{
    int x,y=10,z=10;
    x = (y==z);
    printf("%d",x);
}
```

- a) 0 b) 1 c) 10 d) None of these

10. Which is the correct output of the following?

```
int a=1;
do
{
    printf("%d %d", a,15%a);
    a++;
} while (15/a!=3);
```

- a) 1 0 b) 2 1 c) 3 0 d) All

11. We want to round off x, afloat, to an int value, then correct way to do is

- a) (int)(x+0.5) b) int (x+0.5)
c) (int) x+0.5 d) (int) ((int)x+0.5)

12. Which of the following is the correct usage of conditional operators used in C?

- a) a>b ? c=30 : c=40;
b) a>b ? c=30;
c) max = a>b ? a>c?a:c:b>c?b:c;
d) return (a>b)?(a:b)

II. State true or false:

1×4=4

1. The functions **malloc ()** and **calloc ()** are used to dynamically allocate memory.
2. Break statement causes the loop to be terminated.

3. Automatic variables can be declared within any block and remain in existence until the block is terminated.

4. In C, an argument is passed by VALUE when a copy of its value of is passed to the function's parameter.

III. Fill in the blanks:

1×4=4

1. Default return type of a function is.....

2. The library function used to copy one string to another is.....

3. A function which calls itself is said to be.....function.

4. Closing a file simplify involves calling fclose with the..... as its argument.
