

**Bachelor of Science (B.Sc.) Semester—VI (C.B.S.) Examination**

**ELECTRONICS (Programming in “C”)**

**Compulsory Paper—1**

Time : Three Hours]

[Maximum Marks : 50

**N.B. :—** (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

**EITHER**

1. (A) Explain in detail constant and variable in C language. Discuss how various variables are declared. What are keywords ? Why keywords can not be declared as variables ? 5+3+2

**OR**

(B) What is an operator ? Explain any four types of C operators with example. 2+8

**EITHER**

2. (A) What are the different methods of initializing one dimensional array ? Explain with suitable example. Write a program in ‘C’ to sort an array of n element in descending order. 4+2+4

**OR**

(B) Explain the if-else statement with flowchart. Compare while and do-while statement. Explain the working of switch statement. 4+4+2

**EITHER**

3. (A) What is a function ? State rules for writing function. Differentiate between standard library function and user defined function.

Explain the terms :

(i) Call by value  
(ii) Call by reference.

1+2+3+4

**OR**

(B) State difference between structure and union. What is meant by array of structure ? Explain its declaration and initialization using suitable example. 3+7

## EITHER

4. (A) Explain the utility of a pointer. How is pointer variable declared and initialized ? Write the rules for pointer arithmetics. Write a ‘C’ program to swap value of two variables using pointer.

2+3+2+3

## OR

(B) List any four errors that may occurs during I/O operation on a file. Explain in brief fopen ( ) function. Write a program to create and count number of characters in a file. 2+3+5

5. Solve any **TEN** :

(A) What is identifier ?

(B) Differentiate between printf( ) and scanf( ) function.

(C) What will be the output of the following program :

```
main ( )  
{  
    int g = 300 * 300/300;  
    printf ("g = % d", g);  
}
```

(D) What would happened if you try to put excess values into a predefined array ?

(E) Write the syntax of goto statement.

(F) What will be the output of the following program :

```
main ( )  
{  
    int a = 20, b = 3;  
    if (a < 10)  
        a = a - 5;  
    b = b + 5;  
    printf (" % d % d" a, b);  
}
```

- (G) Define nesting of function.
- (H) What is the scope of members of union ?
- (I) What is the size of following structure :

```
struct AA
```

```
{  
    int a;  
    float y ;  
}
```

- (J) Why is pointers called an indirection operator ?
- (K) Write syntax for fclose ( ).
- (L) What is the significance of eof ?

1×10