

(b) What is the purpose of command line arguments?

(c) Write a code segment in C to arrange the elements of an array in their descending order of magnitude. 3+2+5

4. (a) Find the output of the following program segment in C.

```
main ( )
{
    int i = 20, k = 0; j;
    for (j = 1; j < i; j = 1 + 4 * (i/j))
    {
        k += j < 10 ? 4 : 3 ;
    }
    printf ("%d", K);
}
```

Handwritten notes:
 $j = 1, 4, 11, 25, 21, 17, 14, 11, 8, 6$
 $k = 3, 6, 7, 12, 15, 19, 20, 6$
 $100 < 100 \rightarrow 100$
 $100 < 50$
 $k = 100 < 10 \rightarrow 11, 3$
 $k = 100 + 11 + 3$

(b) What do you mean by Auto variable and External variable? Give examples.

(c) Write a program segment in C to find the average of a list of non-negative numbers out of n numbers. 3+3+4

5. (a) Give examples of two relational and two logical operators in C.

(b) What is the function of a switch statement? Write its general form having multiple cases.

(c) Write a program segment in C to print RED, WHITE and BLUE if choice represents either 'r' or 'R' for RED, 'w' or 'W' for WHITE and 'b' or 'B' for BLUE. 2+4+4

6. (a) Distinguish between getch () and getchar () functions with example.

(b) Write a function to swap two variables.

(c) What do you mean by call by reference and call by value in C? Give examples. 3+3+4

7. (a) What are function prototypes?

(b) What is the use of fflush (stdin) function in C? What do you mean by 'stdin'?

(c) Write a program in C to implement the operation : Read a text file 'a.txt' containing integer values. Split the file 'a.txt' into 'even.txt' and 'odd.txt' containing even numbers and odd numbers respectively. 2+(2+1)+5

8. (a) Distinguish between 'do-while ()' and 'while ()' statements with suitable examples.

(b) What are the different ways the data files can be categorized in C?

(c) In how many ways a data file can be opened?

(d) Write a program in C to read the contents of a data file and display them on the screen.

2+2+1+5

2018

COMPUTER SCIENCE – HONOURS

Paper : CC-2

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **Question no. 1** and **any four** from the rest.

1. Answer **any five** questions :

2×5

(a) Name and describe the four basic data types in C.

(b) How are initial values assigned to variables within a type declaration? Give example.

(c) If f is a floating point variable whose value is 7.6, then what will be the output of the expression
((int) f) % 2?

(d) `int a = 2, b = 3, c ;`
`c = (a++) + (++b) + (++b);`

What will be the value of a , b , c after execution of the statements?

(e) Write down the prototypes of

'`sscanf ()`' function

(f) In what way does an array differ from an ordinary variable?

(g) How does a structure differ from an array?

(h) Define 'macro' in C.

2. (a) `int a ;`

`a = printf ("Hello");`

`printf ("%d", a);`

Is any above statement wrong? Explain.

(b) How can the value of an expression be converted to a different data type? What is it called?

(c) Write the code in C to convert a line of text from lower case to upper case without using any library function.

2+(2+1)+5

3. (a) Write an appropriate array definition for a one dimensional 12-element integer array called array 1. Assign the values 1, 4, 7, 10, 34 to the array elements.

Please Turn Over