

Govt. College of Engineering & Textile Technology, Serampore

Year-2017

Subject: Basic Computation & Principles of Computer Programming
Stream: CSE
Credit: 2

Code: CS291

1. Familiarization with the DOS commands and Editors (Preliminaries).
2. Write a program to print your name, stream & roll number (use printf function).
3. Assume that char x, integer y, float z are three variables. Write a program to take the input from user and then print the value, address and size of x, y, z.
4. Write a program to convert temperature in Celsius to Fahrenheit and vice-versa.
5. Write a program to find out whether a number is even or odd.
6. Write a program to find the real roots of a quadratic equation.
7. Write a program to implement calculator using switch case (Option-Addition, Subtraction, Division, Multiplication).
8. Write a program to print the following pattern:

(a)

```
*
* *
* * *
* * * *
```

(b)

```
      *
      * *
    * * *
  * * * *
```

(c)

```
          1
        1 * 3
      1 * 3 * 5
    1 * 3 * 5 * 7
```

9. Write a program to generate the Fibonacci series (use while loop).
10. Write a program to check whether a number is Prime or not (use for loop).
11. Write a program to check whether a number is Armstrong or not.
12. Write a program to compute the following series using function:
$$F(n) = 1 + (1+2) + (1+2+3) + \dots + (1+2+3+\dots+n)$$
13. Write a recursive function to implement factorial.
14. Write a recursive function to calculate G.C.D of two numbers.
15. Write a recursive function to implement Fibonacci series.
16. Write a program to print a 1-D array as ascending order.
17. Write a program to add 2 matrices of size 3×3.
18. Write a program to swap two variables using function to show the difference between call-by-value and call-by-reference.
19. Write a program using pointers to read an array of integers and display them.
20. Write a program to implement strlen, strcat and strcmp functions of strings.
21. Write a program to show whether a string is a palindrome, or not without using string library function.
22. Declare a structure with the following members:
-Name, Stream, Age. Read these data for 4 student and print the names of all those students whose Age > 20.
23. Write a C program to read data from a file and copy all the contents to a new file.

Signature of Faculty