

# DATA STRUCTURES & ALGORITHMS 1

BATCH – B

[WEDNESDAY JANUARY 9, 2020: 2:00 PM – 5:00 PM]

ASSIGNMENTS – 1

CODE:assign01

NOTES:

- i) Please carefully read all assignments and there is no choice.
- ii) Each problem in this assignment has to be answered in the same c file.
- iii) Create a .c file following the file name convention:

If your roll number is **abc** and assignment code is: **assign01**  
Then use the following file name convention as follows:  
**abc-assign01.c**

For example, if the roll number is **92** and assignment code is **assign01**,  
then the file name should be **092-assign01.c**

- iv) Strictly follow the file name convention.

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PROBLEMS [Total Marks: 20]:

- 1) **[Marks: 3]**  
Compute the sum of first 20 prime numbers in [1... 500]  
Print the sum as the output.
- 2) **[Marks: 3]**  
Identify all integers that are divisible by 3 but not 2 in [1, 50].  
Print all integers.
- 3) **[Marks: 4]**  
Write a C program that reads an integer n from the keyboard and prints out the factorial of n. Don't accept negative numbers as input.
- 4) **[Marks: 5]**  
Write a program to count the number of odd digits in a given number  
Print the count as the output.
- 5) **[Marks: 5]**  
Write a program to generate Fibonacci sequence up to 80.  
Compute their sum of the Fibonacci Sequence as well  
  
Print the Fibonacci Sequence and the sum in a separate line.

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