

SEAL

R/A/PR EXAM.
2021

400026

COMPUTER APPLICATION

Time : 1½ hours]

[Full Marks : 50

Practical Programming/Web Design

Choose *any one* of the following :

50×1=50

1. Given two inputs, namely, a large number (i.e., N) and a single-digit (i.e., d), write a program to find out the number of occurrences of the digit in the given number.

For example :

Test case 1 :

Input : $N = 13456733342$, $d = 3$

Output : 4

Test case 2 :

Input : $N = 45546762459$, $d = 5$

Output : 3

2. Fibonacci sequence is a series of numbers where each number is the addition of the last two numbers and the sequence starts with 0 and 1. Given an input integer n , write a linear-time program (i.e., without recursion) to print the sequence up to n number of Fibonacci numbers.

For example :

Test case 1 :

Input : $n = 7$

Output : 0, 1, 1, 2, 3, 5, 8

Test case 2 :

Input : $n = 10$

Output : 0, 1, 1, 2, 3, 5, 8, 13, 21, 34

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3. Given a string and a substring as input, write a program to count the occurrences of the substring in the string.

For example :

Input (a string) : program practice is good

Input (a substring) : ra

Output : 2