



'समामो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 2nd Semester Examination, 2022

GE1-P2-COMPUTER SCIENCE (GE-2AL) & (GE-2BL) (PRACTICAL)

Time Allotted: 2 Hours

Full Marks: 20

*The questions are of equal value.
The figures in the margin indicate full marks.
All symbols are of usual significance.*

**The question paper contains GE-2AL and GE-2BL.
The candidates are required to answer any *one* from *two* courses.
Candidates should mention it clearly on the Answer Book.**

GE-2AL

PROGRAMMING IN C LAB

Answer any *one* question

20×1 = 20

1. Write a program to convert a decimal number to its equivalent binary number. 20
2. Write a program with a function named prime(n), which determines whether a given input 'n' is prime or not. 20
3. Write a program to sort 'n' integers in descending order using any sorting technique. 20
4. Write a program to find the sum of the individual digits of a number. 20
5. Write a program to display the following: 20

```
1
2 1
3 2 1
4 3 2 1
5 4 3 2 1
```

6. Write a program to find all the Armstrong numbers within a given range. 20
7. Write a program to display the following: 20

```
1
1 2 1
1 2 3 2 1
1 2 3 4 3 2 1
1 2 3 4 5 4 3 2 1
```

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| 8. | Write a program to implement a simple calculator using switch case. | 20 |
| 9. | Write a program to count the number of vowels in a string. | 20 |
| 10. | Write a program to convert a binary number to decimal. | 20 |

**GE-2BL
MICROPROCESSOR LAB**

Answer any *one* question

20×1 = 20

Candidates should provided algorithm / flowcharts with their programs.

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|-----|--|----|
| 1. | Write an assembly language program to create an even parity generator. | 20 |
| 2. | Write an assembly language program to rotate a 32-bit number. | 20 |
| 3. | Write an assembly language program to generate the Fibonacci series. | 20 |
| 4. | Write an assembly language program to sort 10 numbers using bubble sort. | 20 |
| 5. | Write an assembly language program to multiply two 8-bit numbers. | 20 |
| 6. | Write an assembly language program to generate the truth table of a J-K Flip Flop. | 20 |
| 7. | Write an assembly language program to find the square root of a number. | 20 |
| 8. | Write an assembly language program to find the sum of first 20 natural numbers. | 20 |
| 9. | Write an assembly language program to perform linear search. | 20 |
| 10. | Write an assembly language program to convert binary to decimal. | 20 |

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