# **CPC ACM ICPC Training Class**

## **Daffodil International University**

## **Permanent Campus**

(Solving Class Plan)

## **Mathematics & Number Theory**

| Class | Topic                         | Trainer                 |
|-------|-------------------------------|-------------------------|
| 1     | Series                        | Amir Sohel              |
| 2     | Linear Algebra                | Md. Almabud Juwal       |
| 3     | GCD-LCM & NOD-SOD             | Fahim Abrar             |
| 4     | Combinatorics                 | Md. Razibul Hasan Mithu |
| 5     | Probability & Expectation     | Rijoanul Hasan          |
| 6     | Modular Exponentiation        | Mohammad Shakil Mahmud  |
| 7     | Euler's Totient Function      | Fahim Abrar             |
| 8     | Euclidean algorithms          | Md. Almabud Juwal       |
| 9     | Prime number                  | Mohammad Shakil Mahmud  |
| 10    | Sieve of Eratosthenes         | Md. Razibul Hasan Mithu |
| 11    | Bitwise Sieve of Eratosthenes | Rijoanul Hasan          |
| 12    | Segmented Sieve               | Md. Razibul Hasan Mithu |

#### **Data Structure**

| 13 | Array (Advance Operations) | Mohammad Shakil Mahmud  |
|----|----------------------------|-------------------------|
| 14 | Linked List                | Md. Razibul Hasan Mithu |
| 15 | Stack                      | Amir Sohel              |
| 16 | Queue                      | Md. Almabud Juwal       |
| 17 | Tree                       | Mohammad Shakil Mahmud  |
| 18 | Graph                      | Rijoanul Hasan          |

### **Sorting**

| 19 | Bubble sort    | Md. Almabud Juwal       |
|----|----------------|-------------------------|
| 20 | Insertion sort | Rijoanul Hasan          |
| 21 | Selection sort | Amir Sohel              |
| 22 | Counting sort  | Fahim Abrar             |
| 23 | Merge sort     | Mohammad Shakil Mahmud  |
| 24 | Quick sort     | Md. Razibul Hasan Mithu |

## Searching

| 25 | Linear Search  | Md. Razibul Hasan Mithu |
|----|----------------|-------------------------|
| 26 | Binary Search  | Md. Almabud Juwal       |
| 27 | Ternary Search | Fahim Abrar             |
| 28 | Backtracking   | Rijoanul Hasan          |

## Organized by

ACM ICPC Team

Computer and Programming Club

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