

**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)**  
 Faculty of Science and Technology (FST)  
 Department of Computer Science (CS)  
 Introduction to Programming [Coding Test] [**Total Marks: 30**]

***“Copy and pasting code without understanding is like chewing a gum that is already chewed by someone else.”***

**Answer any 3 from Question 1 to 5**

**(3 X 10 = 30)**

1. AIUB provides Academic Scholarship and Financial aid to students. To get the scholarship or the aid, students need to meet some criteria. Now write a C++ program to implement the criteria described below, take user input for CGPA, Number of grade lower than B+ and Number of course drop.

**CGPA should be  $\geq 3.75$  and no grade lower than B+ and no Course Drop**

You are Applicable for 45% Scholarship

**CGPA should be  $\geq 3.65$  and no grade lower than B+ but maximum 1 Course Drop**

You are Applicable for 20% Financial AID

**CGPA should be  $\geq 3.50$  and there is 1 or more grade lower than B+ but maximum 3 Course Drop**

You are Applicable for 10% Financial AID

**In any other criteria show**

You are not Applicable for Scholarship or Financial AID

**Sample output:**

CGPA: 3.58

Number of Grade lower than B+: 1

Number of Course Drop: 1

You are Applicable for 10% Financial AID

2. Write a program in C++ to Reverse an Integer Number that will only contain the Odd digits.

**Sample output:**

Enter an Integer Number: 123456

Reverse of the Odd Digit Integer: 531

3. Write a Function that takes Marks of Four Subject as parameters and it calculates the percentage and returns the result.

Hint: Total = sub1mark + sub2mark + sub3mark + sub4mark

Percentage = (Total/400) \* 100

**Sample output:**

Subject 1 Mark = 80

Subject 2 Mark = 91.50

Subject 3 Mark = 78.50

Subject 4 Mark = 96

Percentage = 86.5

4. Write a program in C++ use array to take N students quiz\_1[N] and quiz\_2[N] marks as input. After that find the worst quiz marks from two quizzes and save results on worst\_quiz[N] array and show the results.

**Sample output:**

Number of Students: 4

Quiz-1 Marks:

14

25.5

28

10

Quiz-2 Marks:

20

27

26

18

Worst Quizzes: 14 25.5 26 10

5. Write a program in C++ to take N Students Mid Term Marks as input and find Lowest and Second Lowest mark from N students.

**Sample output:**

Number of Students: 3

87.5

78

94

Lowest Mark is: 78

Second Lowest Mark is: 87.5

\*\*\*\*\* GOOD LUCK \*\*\*\*\*