Date of Assessment: 29*/03/2021*

AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Department: Computer Science and Engineering

Program: Bachelor of Science in Computer Science and Engineering

Final Assessment: Spring 2020

Year: 2nd Semester: 2nd

Course Number: CSE2214

Course Name: Assembly Language Programming

Time: 30 Minutes Full Marks: 14

[*Marks allotted are indicated in the right margin.*]

SET - B

Id: ……. Name: ……Obtained Marks: ……..

Q1. Write an assembly code to perform the following operations. (You can use INDEC and OUTDEC procedure for input and output respectively) [7]

i) Take a number **N** from the range [-10,10] as input and replace the number in AX by its absolute value.

ii) The Fibonacci sequence is one of the most famous formulas in mathematics. Each number in the sequence is the sum of the two numbers that precede it. Calculate the sum upto **Nth** Fibonacci number and put the sum in variable **SUM**. The first 10 Fibonacci numbers are :

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

iii) Finally display the sum with a message. A sample output can be -

"The sum is **"

Here ** indicates the decimal value of **SUM.**

Q2. You have been given a message which does not make any sense. A decode key is given with the message which represents the corresponding letter from **A** to **Z.** [7]

Message: **Fjccz Mrklclrklril Kjz**

Decode Key: **XQPOGHZBCADEIJWFMNKLRSTVUY**

i) Write an assembly code to decode the message. You must handle the small letters. (The given decode key is the same for small letters)

ii) Display the message. (The message can be displayed in capital letters)