Fast**National University of Computer & Emerging Sciences, Karachi  
Fall-2017 CS-Department  
Lab Final Exam**

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| **Course Code:** EL-213 | **Course Name:** Computer Organization & Assembly Lang Lab | |
| **Instructor Name(s):** Syed Zain ul Hassan, Sehrish Saeed, Sumaiyah Zahid | | |
| **Student Roll No:** | | **Section No:** |
| **Date:** | | **Time:** |

**Instructions:**

Attempt all tasks

Return the question paper after exam

**Max Marks**: 20 points

**Task1: (5 marks)**Write an assembly program to concatenate two strings taken from the user.

**Sample Output:**

*Enter string 1: FAST*

*Enter string 2: NUCES*

*Concatenated string: FASTNUCES*

**Task 2: (5 marks)**Write a program which contains a procedure named *removeStr* that removes n characters from a string. Pass a pointer to the position in the string where the characters are to be removed. Pass an integer specifying the number of characters to remove.

**Task 3 (a): (2.5 marks)**Write a program that contains a procedure to generate a random integer in the range given by the user. The procedure should be passed a lower bound m and an upper bound n.

**Task 3 (b): (2.5 marks)**

Write a program which contains a byte array of 20 elements. Use the procedure you made in *part a* to fill this array with integers in the range set by the user. The program should exchange each consecutive pair of integers in that array and then display its contents.

**Task 4: (5 marks)**Write an assembly language function that receive two parameters the offset of string array and the string’s size. It must return a count of the longest increasing sequence of vowel values.  
For example, in the following string, the longest increasing sequence begins at index 3 and has a length of 3 {a,i,o}:

**myStr BYTE “Coal is love”, 0**