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| **National University of Computer and Emerging Sciences, Lahore Campus** | | | | |
| C:\Users\saif\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Word\final design.jpg | **Course:** | **COAL** | **Course Code:** | **EE2003** |
| **Program:** | **BS(CS,DS)** | **Semester:** | **Fall 2022** |
| **Duration:** | **1 Hour** | **Total Marks:** | **30** |
| **Paper Date:** | **26-11-2022** | **Page(s):** | **4** |
| **Section:** | **All** | **Roll No.** |  |
| **Exam:** | **Midterm-II** | **Your Section:** |  |
| **Instruction/Notes:** | **This is an open notes/book exam. Sharing notes and calculators is NOT ALLOWED.** All the answers should be written in provided space on this paper. Rough sheets can be used but will not be collected and checked. In case of any ambiguity, make reasonable assumptions. Questions during exams are not allowed. | | | |

**Question 1 [CLO 1,2,3,5] [15 Marks]:**

Write a subroutine INSERT that will insert a string STRING1 into the string STRING2 at a specified point.

*The parameters to the subroutine are*

offset address of STRING 1

offset address of STRING2

length of STRING 1

length of STRING2

offset address at which to insert STRING 1

e.g.,

STRING1: db ‘abcdefgh’

STRING2: db “123456”

If the offset address at which to insert the STRING1 is 2, then after the execution of the subroutine, STRING2 will become

STRING2: db: “12abcdefgh3456”

Assume that there is unlimited space allocated for STRING2 and the offset at which to insert the STRING1 is within the length of STRING2.

Do this question using STRING INSTRUCTIONS only.

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**Write Your Code here:**

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**Question 02 [CLO 1,2,3,5] [15 Marks]:**

Write a subroutine which takes a character as a parameter and print that character in a diagonal form on the screen. The character should be blinking, the foreground color should be Green with high intensity and background color should be white.

Sample Output if the character in parameter is A

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| A  A  A  A  A  A  A  A  A  A  A  A  A  A  A  **……….** |

**Write your Code here:**

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