**Lab No. 6**

**Department of Electrical Engineering**

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| **Faculty Member:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Dated: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **Semester:\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Section: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

**EE-222: Microprocessor Systems**

**Writing Assembly Programs**

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| **Name** | **Reg. No.** | **Report Marks / 10** | **Viva Marks / 5** | **Total/15** |
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**Objective:**

The aim of this lab is to learn about stacks and their working in Assembly Language. The use of push and pop instructions will also be a part of this lab.

**Assembly Program:**

Write an assembly program that takes two WORD sized arrays of first 20 even and first 20 odd numbers (arrayE and arrayO) **from the user** and display them on the screen. Place the arrayO in stack. Now **write two procedures** arraySum and arraySub that add (arrayO[stack]+arrayE[mem]) and subtract(arrayO[stack]-arrayE[mem]) the two arrays. Display your results on screen using the strings "sum of two arrays" and "difference of two arrays".

**[10 marks]**

**Note:** viva will be taken at the end of lab carrying **5 marks**