**CSE-210 Assembly Language Sessional**

**Practice Problems**

**1.** Write a program to display “Enter a uppercase letter:” and read a character and display the lowercase of the input character.

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| **Input** | **Output** |
| Enter an uppercase letter:  M | In lower case letter:  m |

**2.** Translate the following assignment statement into assembly language, where X, Y and Z are variables. R = 3X-Y+2Z

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| **Input:**  Enter the value of X : 3  Enter the value of Y : 4  Enter the value of Z : 1  **Output:**  The value of R is : 7 | **Input:**  Enter the value of X : 2  Enter the value of Y : 0  Enter the value of Z : 1  **Output:**  The value of R is : 8 |

**3.** Write a program in assembly language that will check Whether a Number is Even or Odd

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| **Input:**  Enter the value of X : 2  **Output:**  Given input is an even number | **Input:**  Enter the value of X : 3  **Output:**  Given input is an odd number |

**4.** Write a program in assembly language that will Check Whether a Character is Vowel or Consonant

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| **Input:**  Enter a character : t  **Output:**  It is a consonant | **Input:**  Enter a character : e  **Output:**  It is a vowel |

**5.** Write a program in assembly language to find maximum between three numbers.

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| **Input:**  Enter 1st number : 2  Enter 2nd number: 8  Enter 3rd number: 4  **Output:**  Maximum : 8 | **Input:**  Enter 1st number : 7  Enter 2nd number: 1  Enter 3rd number: 3  **Output:**  Maximum : 7 |

**6.** Write a program in assembly language that will count the number of vowels , consonants & digits from a user given input. The program will take input until ‘ENTER’ button is pressed. (count vowels and consonants from lower case letters, any input other than lowercase letters and digits will not be considered).

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| **Input:**  lkjowa  **Output:**  Number of vowels: 2  Number of consonants: 4  Number of digits: 0 | **Input:**  AXcvb1ui\*  **Output:**  Number of vowels: 2  Number of Consonants: 3  Number of digits: 1 |

**7.** Take an input **n** & calculate the sum of the series upto **nth** term. Then display the output in decimal , **1 + 2 + 3 + 4 + 5 + 6 + 7 +...**

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| **Input:**  5  **Output:**  Sum is: 15 | **Input:**  3  **Output:**  Sum is: 6 |

**8.** Take an input n & calculate the sum of the series upto nth term. Then display the output in decimal , **1 + 3 + 5 + 7 +...**

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| **Input:**  4  **Output:**  Sum is: 16 | **Input:**  3  **Output:**  Sum is: 9 |

**9.** Take an input n & calculate the sum of the series upto nth term. Then display the output in decimal , **1 + 4 + 9 + 16 +... (1^2+2^2+3^2+...)**

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| **Input:**  3  **Output:**  Sum is: 14 | **Input:**  2  **Output:**  Sum is: 5 |

**10.** Take an input n & calculate the sum of the series upto nth term. Then display the output in decimal ,**1.1 + 2.3 + 3.5 + 4.7 +…**

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| **Input:**  3  **Output:**  Sum is: 22 | **Input:**  2  **Output:**  Sum is: 7 |

**11.** Take an input n & calculate the sum of the series upto nth term. Then display the output in decimal, **1 + (1+2) + (1+2+3) + …**

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| **Input:**  3  **Output:**  Sum is: 10 | **Input:**  2  **Output:**  Sum is: 4 |

**12.** Write a program to input marks(decimal number) of any subjects. Check the mark and print grade according to following:

mark > =90 : Grade A

mark >= 80 and mark < 90 : Grade B

mark >= 70 and mark < 80 : Grade C

mark >= 60 and mark < 70 : Grade D

mark >= 50 and mark < 60 : Grade E

mark >= 40 and mark < 50 : Grade F

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| **Input:**  Enter a mark : 65  **Output:**  Grade D | **Input:**  Enter a mark : 90  **Output:**  Grade A |

**13. Input: 5**

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| 12345  1234  123  12  1  **14. Input: 5**  5  45  345  2345  12345  **15. Input: 5**  5  44  333  2222  11111  **16. Input: 5**  12345  4321  123  21  1  **17. Input: 4**  1  01  101  0101 |

**18.** Take a number **n** as input and print the factorial of **n** as output in decimal.

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| **Input:**  Enter the number:  4  **Output:**  Factorial of 4 is: 24 | **Input:**  Enter the number:  5  **Output:**  Factorial of 5 is:120 |

**19.** Take two decimal numbers as input and find out whether number\_1 is divisible by number\_2 or not.

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| **Input:**  Enter number\_1 :  15  Enter number\_2 :  5  **Output:**  15 is divisible by 5 | **Input:**  Enter number\_1 :  11  Enter number\_2 :  3  **Output:**  11 is not divisible by 3 |

**20.** Take a decimal number **n** as input and find out whether it is palindrome or not.

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| **Input:**  Enter the number:  15351  **Output:**  15351 is a palindrome number | **Input:**  Enter the number:  122  **Output:**  122 is not a palindrome number |