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| **Course Title** | Computer Org & Assembly Language |
| **Session** | Fall 2020 |
| **Exam** | Midterm |



**Answer NO 1:**

[org 0x0100]

mov al, [num1] ; load first number in al

mov bl, [num1+1] ; load second number in bl

add al, bl ; accumulate sum in al

mov bl, [num1+2] ; load third number in bl

add al, bl ; accumulate sum in al

mov bl, [num1+3] ; load third number in bl

add al, bl ; accumulate sum in al

mov [num1+4], al ; store sum at num1+4

mov ax, 0x4c00 ; terminate program

int 0x21

num1: db 1, 3, 5, 7, 0

**Answer NO 3:**

[org 0x0100]

mov ax, [num1] ; load first number in ax

mov [num1+8], ax ; store first number in result

mov ax, [num1+2] ; load second number in ax

add [num1+8], ax ; add second number to result

mov ax, [num1+4] ; load third number in ax

add [num1+8], ax ; add third number to result

mov ax, [num1+6] ; load fourth number in ax

add [num1+8], ax ; add fourth number to result

mov ax, 0x4c00 ; terminate program

int 0x21

num1: dw 2, 4, 6, 8, 0

**Answer NO 4:**

[org 0x100]

mov bx, num1

mov ax, [bx]

add bx, 2

add ax, [bx]

add bx, 2

add ax, [bx]

add bx, 2

add ax, [bx]

add bx, 2

add ax, [bx]

add bx, 2

mov [bx], ax

mov ax, 0x4c00

int 0x21

num1: dw 2, 4, 6, 8, 10, 0

**Answer NO 5:**

[org 0x0100]

mov bx, num1 ; it stores the address of first date in base register (bx)

mov cx, 12 ; I initialized cx to 12

mov ax, 0 ; I initialized ax to 0

l1: add ax, [bx] ; a label which means an address ; it will add up the data of the memory

add bx, 2 ; increment the bx to access the subsequent (remining) data

sub cx, 1 ; Decrement the counter

jnz l1 ; if cx is not zero then jump to 'l1'

mov [Result], ax ; store the result in memory

mov ax, 0x4c00

int 0x21

num1: dw 2,4,6,8,2,5,2,3,5,2,6,2

Result: dw 0