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Q1:

.data

bVal BYTE 100

bVal2 BYTE ?

wVal WORD 2

dVal DWORD 5

.code

Mov 45,45

It is incorrect. It should be corrected to Mov ax,45. It is because when we are dealing with an integer value, then it should be stored in a variable or a register. Otherwise, we get error.

Mov 45, ds

It is incorrect and it should be written like mov ds,45. We cannot use an integer value as a destination value.

mov esi, wVal

It is incorrect and it should be written like mov ds,si.It is due to the fact that esi register cannot be used as destination but instead, it should be used with di. Similary, si register is used with ds.

mov eip, dVal

It is incorrect because just like esi, epi is also a register that only has some particular function to perform and here it is locating a variable which is incorrect.

mov 25, bVal

It is incorrect because the integer value is never destination. It can be like mov bVal,25.

mov bVal2, bVal

It is incorrect because both the destination and source are memory locations/variables and there is no integer value.

Q2:

.model small

.stack 100h

.data

DoubleArray dw 3,1,2

.code

Mov dx,@data

Mov ax,ds

Mov cx,DoubleArray

Xchg cx,[DoubleArray+4]

Mov dx,[DoubleArray+4]

Xchg dx,[DoubleArray+8]

Mov [DoubleArray+4] ,dx

Mov ah,4ch

Int 21h

Q3:

.data

myBytes BYTE 80h,66h,0A5h, 60

.code

Mov al, myBytes

This instruction stores the zero index value of the array myBytes into the register al.

Add al, [myBytes]

This instruction will add 80h to register al. Al is already 80h so after adding 80h again it will become AO.

Add al, [myBytes+4]

This instruction will add 60h to register al(Due to fourth index). It is already AO so before adding it was 160 but now it is 220 and become DC.

Mov ax, myBytes

The given instruction will not execute as it is containing an error. We know that ax is a 16 bits register and it will not store an 8 bits array which is myBytes.

Add ax, [myBytes+1]

The given instruction will also not execute as it is containing an error. We know that ax is a 16 bits register and it will not add an 8 bits array which is myBytes.

Add ax, [myBytes+2]

The given instruction will also not execute as it is containing an error. We know that ax is a 16 bits register and it will not add an 8 bits array which is myBytes.

Q5:

.code

Mov bx,0A69Bh

This instruction stores the value 0A69Bh into a register which is bx it is 16 bits.

Movzx eax,bx

This instruction stores the value of 16 bits into a register of 32 bits called eax by zero extension.

movzx edx,bl

This instruction stores the value of 16 bits into a register of 32 bits called eax by zero extension.

mov bl,7Bh

It has no error in it.

movzx cx,bl

This instruction stores the value of 16 bits into a register of 32 bits called eax by zero extension.

Q6:

Q7: