

**COAL**  
**BS DS Fall 2022 Morning**  
**Quiz 3**

**Time allowed: 20 min**

**Total marks: 25**

**Roll Number:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Question 1:**

**[10]**

Consider the Data section of a Program given below (where the address of first Variable i.e V1 is 0010) How this data will be stored in the memory.

( fill the given area with suitable addresses and contents in hexadecimal form)

**V1    BYTE        0ABh, 0CDh, 0EFh, 40h, 50h, 60h**  
**V2    SBYTE      -1**  
**V3    BYTE        123D,1011B**  
**V4    WORD        1234h, 0ABCDh**  
**V5    DWORD      45768923h, 1234ABCDh**  
**V6    WORD      10 Dup(?)**  
**V7    BYTE      "AAAAA"**  
**V8    WORD      V2**

(Note : ASCII code of character A is 41h)

0010	0011	0012	0013	0014	0015	0016	0017	0018	0019	001A	001B	001C	001D	001E	001F
AB	CD	EF	40	50	60	FF	7B	0B	34	12	CD	AB	23	89	76
0020	0021	0022	0023	0024	0025	0026	0027	0028	0029	002A	002B	002C	002D	002E	002F
45	CD	AB	34	12	00	00	00	00	00	00	00	00	00	00	00
0030	0031	0032	0033	0034	0035	0036	0037	0038	0039	003A	003B	003C	003D	003E	003F
00	00	00	00	00	00	00	00	00	41	41	41	41	41	16	00
0040	0041	...	...	...	...	...	...	...	...	...	...	...	...	...	004F

**Question 2:**

**[5]**

Consider the same Data area of the Program (discussed earlier in Question 1), Give the Values of the mentioned operand, after the execution of the given instructions?

	INSTRUCTION	OUTPUT
1	MOV CL,0AH	CL = 0A
2	MOV AL,[0017]	AL = 7B
3	MOV CX,V1	Error
4	MOV AX,V4 +2	AX = ABCD
5	MOV BX,OFFSET V7	BX = 0039

**Question 3:****[10]**

What is stored at each location of array2 with reference to the following code? Assume array1 is stored at address 0200h and array2 at address 0208h. What is in SI, DI and CX when program terminates.

```
.CODE
MAIN PROC

    MOV SI,OFFSET ARRAY1
    MOV DI,OFFSET ARRAY2
    MOV CX,08
AB:  MOV AL,[SI]
     CMP AL,40H
     JL  AA
     ADD AL,20H
AA:  MOV [DI],AL
     INC SI
     INC DI
     DEC CX
     JNZ AB
MAIN ENDP

.DATA
ARRAY1 DB 45H,85H,35H,95H,50H,80H,70H,90H
ARRAY2 DB 8 DUP (00)

END MAIN
```

**Answer:**

<b>Array2</b>	65h, 85h, 35h, 95h, 70h, 80h, 90h, 90h	<b>[7]</b>
<b>CX</b>	0	<b>[1]</b>
<b>SI</b>	208	<b>[1]</b>
<b>DI</b>	210	<b>[1]</b>