

COAL
BS CS Fall 2022
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 A1 is 0010) How this data will be stored in the memory.

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

A1 BYTE 0ABh, 0CDh, 0EFh, 40h, 50h, 60h
A2 SBYTE -1
A3 BYTE 123D,1011B
A4 WORD 1234h, 0ABCDh
A5 DWORD 45768923h, 1234ABCDh
A6 WORD 10 Dup(?)
A7 BYTE "AAAAA"
A8 WORD A2

(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,A1	Error
4	MOV AX,A4 +2	AX = ABCD
5	MOV BX,OFFSET A7	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 0250h and array2 at address 0258h. 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,55H,35H,75H,50H,80H,70H,40H
ARRAY2 DB 8 DUP (00)

END MAIN
```

Answer:

Array2	65h, 75h, 35h, 95h, 70h, 80h, 90h, 60h	[7]
CX	0	[1]
SI	258	[1]
DI	260	[1]