

COAL
BS CS Fall 2022
Quiz 4

Time allowed: 20 min

Total marks: 20

Roll Number: _____

Name: _____

Question#1

[2*4=8]

Suppose AL contains 11001011 and CF=1 gives new contents of AL after each of the following instructions is executed. Before the execution of each instruction the value AL is 11001011.

	Binary	Hexa
SHR AL, 1	AL= <u>01100101</u>	AL= <u>65</u>
ROL AL, CL if CL contains 2	AL= <u>00101111</u>	AL= <u>2F</u>
SAR AL, CL if CL contains 2	AL= <u>11110010</u>	AL= <u>F2</u>
RCR AL, CL if CL contains 3	AL= <u>11111001</u>	AL= <u>F9</u>

Question#2

Create a program that prompts the user to input a string, converts all lowercase letters to uppercase and vice versa, and then displays the modified string.

[12]

Sample output:

Enter a string: COAL is an Interesting Subject

New String is: coal IS AN iNTERESTING sUBJECT

```
.MODEL SMALL
.STACK 100H
.data
str1 db 'Enter a string: $'
str2 db 'New String is: $'
str3 db 50 dup ('$')
.CODE
MAIN PROC
    Mov ax, @data
    mov ds, ax

    mov dx, offset str1
    mov ah, 9
    int 21h

    mov si, offset str3

again:  mov ah, 1
        int 21h
        cmp al, 13
        je exit
        xor al, 20h
        mov [si], al
        inc si
        jmp again

exit:   mov dx, offset str2
        mov ah, 9
        int 21h
```

```
mov dx, offset str3  
mov ah,9  
int 21h
```

```
MOV AH,4CH  
INT 21H  
MAIN ENDP  
END MAIN
```