**Department of Electronics and Computer Engineering**

**List of Programs**

**8086 based**

1. Write an 8086 based ALP for addition of 10, 16 bit binary numbers
2. Write an 8086 based ALP for multiplication of 2 , 32 bit numbers
3. Write an assembly language program for 8086 to find factorial of a number
4. .Write an 8086 based ALP to find average of 10 numbers stored in memory and store it in a memory
5. Write an 8086 based ALP to transfer a block of data from Source to destination using string instructions
6. Write 8086 based ALP to generate Fibonacci series of 08 numbers. The first two numbers in the series are 00 and 01
7. Write an 8086 based Program to display 2 strings on monitor with a software delay of \_\_\_\_\_msec. Use DOS utility functions. Show delay calculations.
8. Write an 8086 based ALP to find whether a given string is a palindrome or not. Use DOS utility function

**8051 based**

1. Write an Assembly language program for 8051 to forward/reverse transfer a block of \_\_\_\_\_\_\_\_bytes of data stored in memory at \_\_\_\_\_\_ to destination address \_\_\_\_\_\_\_\_\_.
2. Write an Assembly language program for 8051 to exchange a block of\_\_\_\_\_\_\_\_\_\_\_bytes data stored in memory at \_\_\_\_\_\_ to destination address \_\_\_\_\_\_\_\_\_.
3. Write an Assembly language Program for 8051 to find average of N bytes stored at location \_\_\_\_ onwards. Store the result in memory location \_\_\_\_\_\_\_\_\_.
4. Write an Assembly language/C program for 8051 to find Largest/smallest number in an array of \_\_\_\_\_\_\_\_ numbers stored at location \_\_\_\_\_\_\_ onwards. Display result at PORT\_\_\_\_\_\_.
5. Write an Assembly language program for 8051 to find cube of an 8 bit number available at memory location \_\_\_\_\_\_\_\_\_ and store the result in ML \_\_\_\_\_
6. .Write a C program for 8051 to generate a square wave of \_\_\_KHz, 50% duty cycle using Timer 0/1 in Mode 1. Show delay calculation
7. Write a C program to interface DAC to 8051 to generate ramp/triangular/sine/square waveform on Port \_\_\_\_\_\_
8. Write a C program for 8051 to display "\_\_\_\_\_\_" string on first/second row starting from \_\_\_\_\_\_\_ position of LCD; Cursor ON/OFF, Blinking ON/OFF

data segment

a1 dw 1234h

a2 dw 5678h

b1 dw 1234h

b2 dw 5678h

res dw 4 dup(0)

data ends

code segment

assume ds:data, cs:code

start:

mov ax, data

mov ds, ax

mov ax, a2

mul b2

mov res, ax

mov res+2, dx

mov ax, a1

mul b2

add res+2, ax

adc res+4, dx

adc res+6, 0

mov ax, b1

mul a2

add res+2, ax

adc res+4, dx

adc res+6, 0

mov ax, b1

mul a1

add res+4, ax

adc res+6, dx

mov ah, 4ch

int 21h

code ends

end start