

Assignment - 2

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1) Initialize

MVI B, 00H

Display

MOV A, B

Display

OUT PORT 100H

Loop

LXI H, Count

DCX H

MOV A, L

ORAH

JNZ Loop

INR B

MOV A, B

CD I & AH

JNZ Display

JMP NEXT

10T-0-2 display
GT Update
↓
check (0-9)

Delay = delay in loop + delay outside loop

$$15 = (24 \times \text{Count}) + 45$$

$$15 = \text{Count} \times 24 \times 10^{-6} + 45 \times 10^{-6}$$

$$\text{Count} = 2124$$

```

② MVI D, AAH
   MOV A, D
   RLL B, A
   ANI 01H
   OUT PORT
   MVI B, COUNT
   DCR B
   JNZ X
   JMP X

```

Total $T_d = T_0 + T_2$
 ... 36H

③ Main program

```

LXI SP, XX95H

```

```

XX70: SERV

```

```

EI

```

```

PUSH B

```

```

MVI A, 00H

```

```

PUSH PSW

```

```

OUT PORT

```

```

MVI B, 00H

```

```

MVI C, 01H

```

```

MVI A, 00H

```

```

CALL Delay

```

```

OUT PORT 1

```

```

INRA

```

```

MVI C, 01H

```

```

JMP NYTENT

```

```

CALL DELAY

```

```

CMA

```

Interrupt instructions

```

BCR B

```

```

EI

```

```

JNZ A1ASH

```

```

At 20028H JMP XX70H

```

```

POP PSW

```

```

POP B

```

```

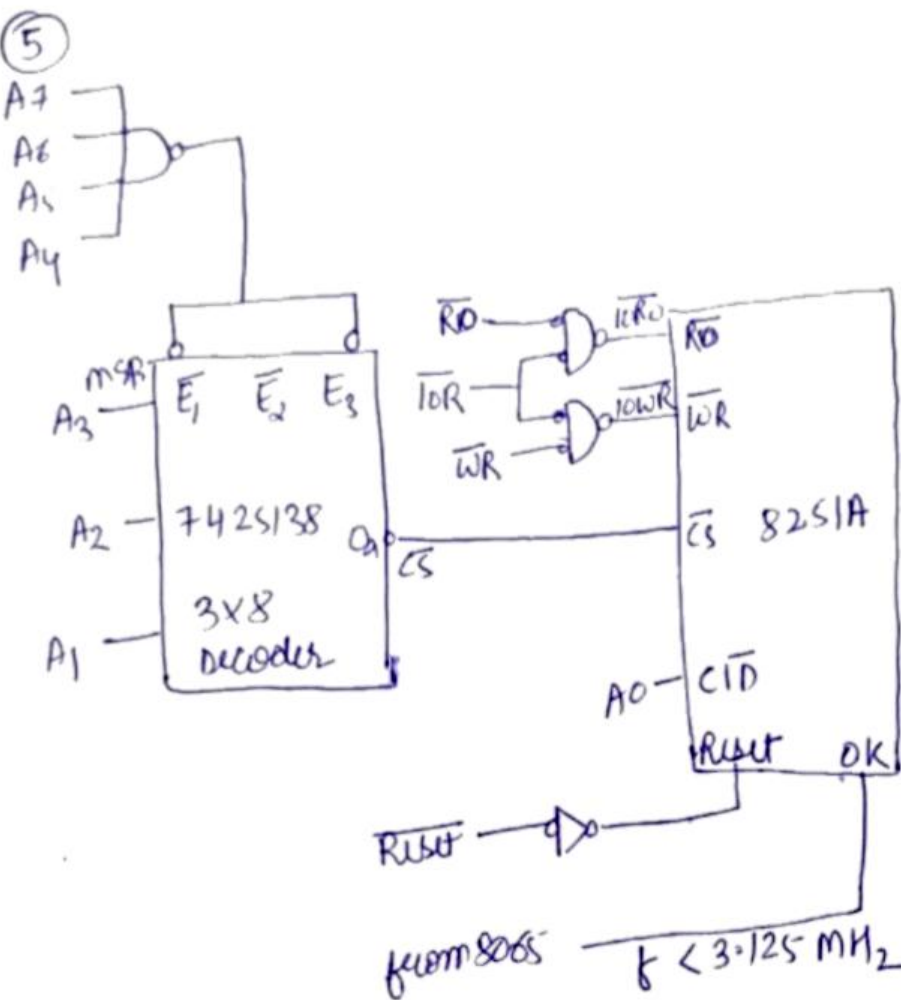
EI

```

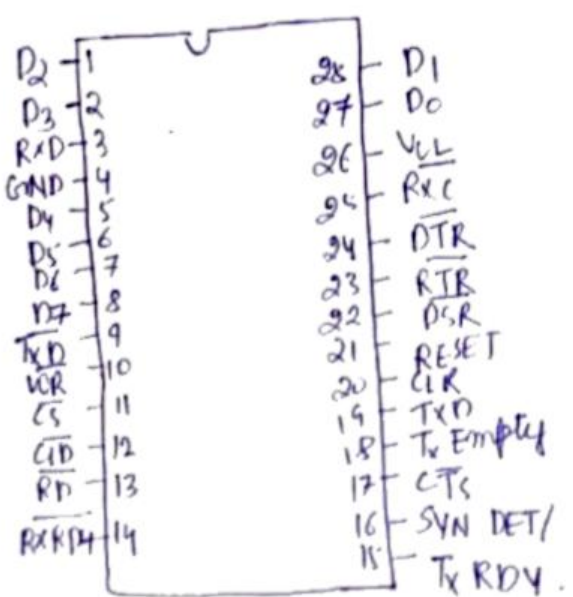
```

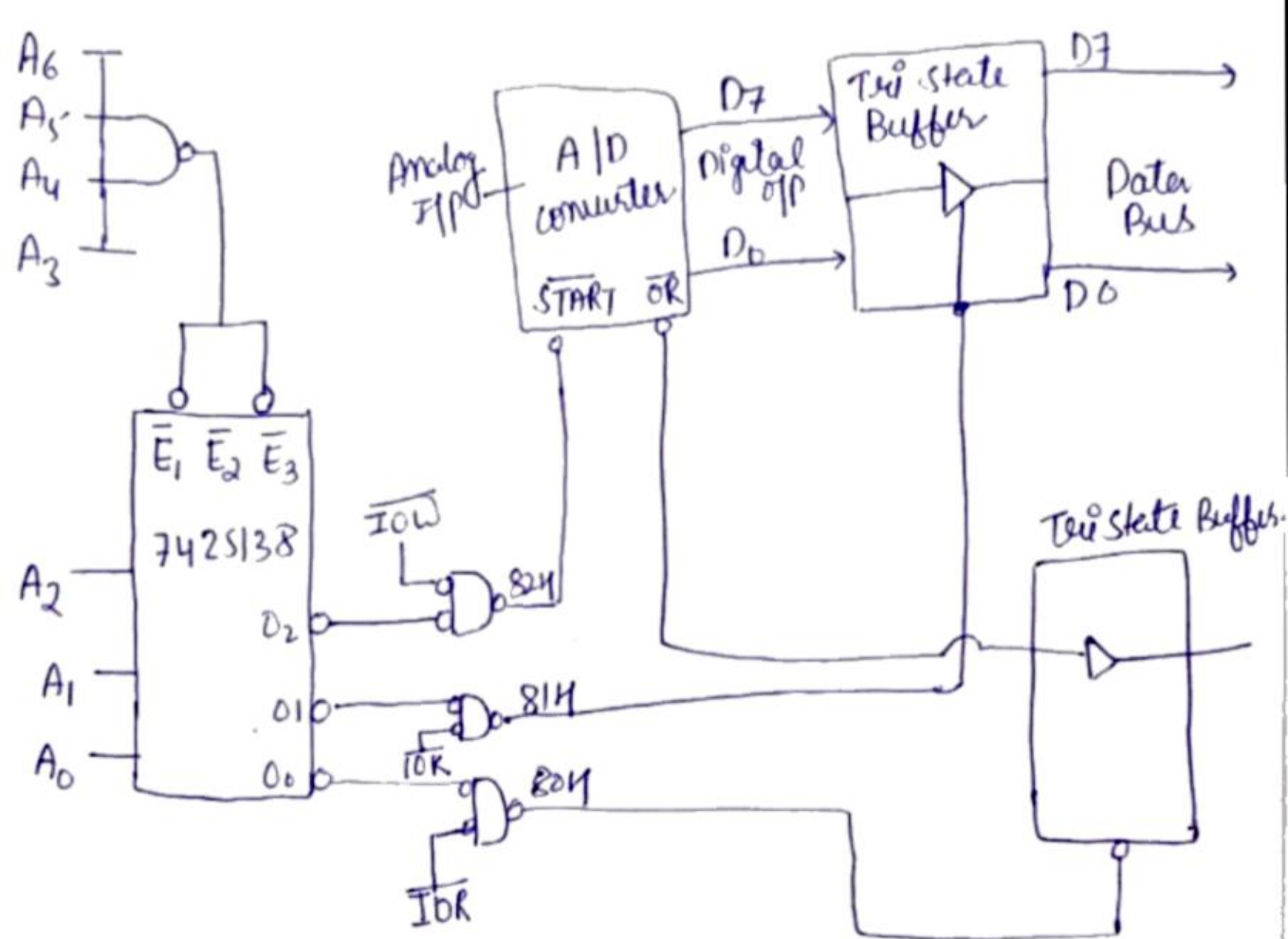
RET

```



pin diagram





Interfacing A/D with microprocessor.