

Lösningar tenta 2011-10-18 – Del B

Uppgift 6

DipSwP	equ	\$600	; Def Inport P
DipSwQ	equ	\$601	; Def Inport Q
OutTt	equ	\$400	; Def SifferIndikator TioTal
OutTe	equ	\$401	; Def SifferIndikator EnTal
	org	\$1000	
	ldx	#SegTab	
Loop	ldaa	DipSwP	; Läs P
	staa	Temp	
	adda	#0	; Är P NBCD?
	daa		; Ger P+0
	cmpa	Temp	; .. samma värde?
	jne	Error	; ... annars hoppa
	tfr	a,b	; Spara NBCD-talet P
	ldaa	DipSwQ	; Läs Q
	staa	Temp	
	adda	#0	; Är Q NBCD
	daa		; Ger Q+0
	cmpa	Temp	; .. samma värde?
	jne	Error	; .. annars hoppa
	aba		; P+Q
	daa		
	bcs	Error	; Hoppa om > 99
	staa	Temp	; Spara kopia
	anda	#\$0f	; Ta fram EnTalen
	movb	a,x,OutTe	; .. och visa
	ldaa	Temp	; Ta fram TioTalen
	lra		
	lra		
	lra		
	lra		
	movb	a,x,OutTt	; .. och visa
	bra	Loop	
Error	ldaa	#\$5D	; Visa Error
	staa	OutTt	
	staa	OutTe	
	bra	Loop	
Temp	rmb	1	
SegTab	fcbl	\$77,\$22,\$5B,\$6B,\$2E,\$6D,\$7C,\$23,\$7F,\$2F	

Uppgift 7

Q_2	Q_1	Q_0	Q_2^+	Q_1^+	Q_0^+	T_2	T_1	T_0
0	0	0	1	1	0	1	1	0
0	0	1	-	-	-	-	-	-
0	1	0	1	0	0	1	1	0
0	1	1	0	0	0	0	1	1
1	0	0	0	1	1	1	1	1
1	0	1	-	-	-	-	-	-
1	1	0	0	1	0	1	0	0
1	1	1	-	-	-	-	-	-

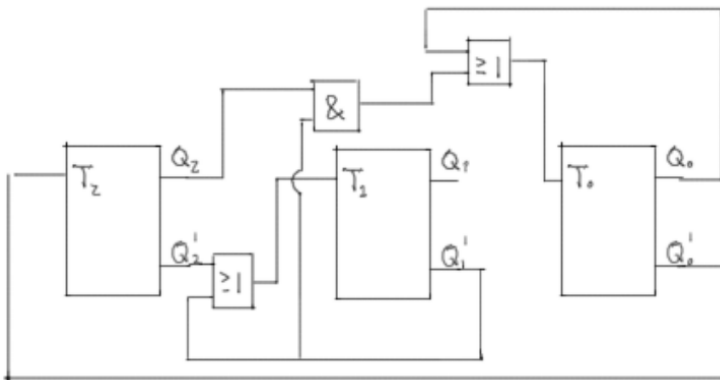
		Q_1, Q_0				
T_2	Q_1	Q_0	00	01	11	10
0	1	-	0	1		
1	1	-	-	-	1	

 $T_2 = Q_0'$

		Q_2, Q_0				
T_1	Q_2	Q_0	00	01	11	10
0	1	-	1	1	1	1
1	1	-	-	-	0	

 $T_1 = Q_2' + Q_0'$

		Q_1, Q_0				
T_0	Q_1	Q_0	00	01	11	10
0	0	-	1	0		
1	1	-	-	-	0	

 $T_0 = Q_0 + Q_2 Q_1'$


Uppgift 8

		a_{15}	a_{14}	a_{13}	a_{12}	a_{11}	a_{10}	a_9	a_8	a_7	a_6	a_5	a_4	a_3	a_2	a_1	a_0
RW1	START	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	STOP	7	F	F	F	0	1	1	1	1	1	1	1	1	1	1	1
ROM	START	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	STOP	F	F	F	F	1	1	1	1	1	1	1	1	1	1	1	1
IO	START	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	STOP	0	0	F	F	0	0	0	0	0	0	0	0	0	0	0	0

$$\overline{CS_{RW1}} = a_{15}' E'$$

$$\overline{CS_{ROM}} = a_{15} a_{14} RW' E'$$

$$\overline{CS_{IO}} = a_{15}' a_{14}' \dots a_9' E'$$