## Problem 1:

A B Ci, AVBV C AAB Ci, $\Lambda(AVB)$ Cout  O O O O O O O O O O O O O O O O O O O	10010111 11			
00000000000000000000000000000000000000	406	ALGUE AAR	C. A(AVB)	Cent
$\begin{array}{c} 1 & 0 & 0 \\ 0 & 1 & 1 \\ 0 & 0 \\ 1 & 1 \\ 0 & 0 \\$	ARC	1 4000	0	0
$\begin{array}{c} 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	000		0	0
$\begin{array}{c} 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	0 1 0	1 0	0	0
$\begin{array}{c} 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 &$	110		0	
1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	001		0	0
a) $S=(A \land \neg B \land \neg C:_{-}) \lor (\neg A \land B \land \neg C:_{-}) \lor (\neg A \land B \land C:_{-}) \lor (\neg A \lor B \lor C:_{-}) \land (\neg A \lor B \lor C:_{-}) $	101	0 0	1	
a) $S=(A \land TB \land TC:_{A}) \lor (TA \land B \land TC:_{A}) \lor (TA \land TB \land C:_{A}) \lor (A \land B \land C:_{A})$ Lout = $(A \land B \land TC:_{A}) \lor (A \land TB \land C:_{A}) \lor (TA \land B \land C:_{A}) \lor (A \land B \land C:_{A})$ b) $S=(A \lor B \lor C:_{A}) \land (TA \lor TB \lor C:_{A}) \land (TA \lor B \lor C:_{A}) \land (TA $	0 1 1	0 0	1	
$C_{out} = (A \land B \land \neg C_{in}) \lor (A \land \neg B \land C_{in}) \lor (\neg A \land B \land C_{in}) \lor (A \land B \land C_{in})$ $b) S = (A \lor B \lor C_{in}) \land (\neg A \lor \neg B \lor C_{in}) \land (\neg A \lor B \lor \neg C_{in}) \land (A \lor \neg B \lor C_{in}) \land (A \lor \neg B \lor C_{in})$ $C_{out} = (A \lor B \lor C_{in}) \land (\neg A \lor B \lor C_{in}) \land (A \lor \neg B \lor C_{in}) \land (A \lor B \lor \neg C_{in})$ $c) \land A \lor B = \neg A \land \neg B$ $A \land B = \neg (A \land B)$ $A \lor B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$	111		0	
$C_{out} = (A \land B \land \neg C_{in}) \lor (A \land \neg B \land C_{in}) \lor (\neg A \land B \land C_{in}) \lor (A \land B \land C_{in})$ $b) S = (A \lor B \lor C_{in}) \land (\neg A \lor \neg B \lor C_{in}) \land (\neg A \lor B \lor \neg C_{in}) \land (A \lor \neg B \lor C_{in}) \land (A \lor \neg B \lor C_{in})$ $C_{out} = (A \lor B \lor C_{in}) \land (\neg A \lor B \lor C_{in}) \land (A \lor \neg B \lor C_{in}) \land (A \lor B \lor \neg C_{in})$ $c) \land A \lor B = \neg A \land \neg B$ $A \land B = \neg (A \land B)$ $A \lor B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$			MIN	
b) $S = (AVBVC_{in}) \Lambda (TAVBVC_{in}) \Lambda (TAVBVC_{in}) \Lambda (AVBVC_{in}) \Lambda (AVBVC_{in$				
b) $S = (AVBVC_{in}) \Lambda (TAVBVC_{in}) \Lambda (TAVBVC_{in}) \Lambda (AVBVC_{in}) \Lambda (AVBVC_{in$	Cout	= (AABATCia)V(A/	17B 1 Cia) V (7A.	ABACin) V (AABACin)
$C_{out} = (AVBVC_{in})\Lambda(TAVBVC_{in})\Lambda(AVBVC_{in})\Lambda(AVBVTC_{in})$ $C) AVB = TATB$ $AVB = T(ATB)$ $AVB = (AT(ATB))T(BT(ATB))$				
$C_{out} = (AVBVC_{in})\Lambda(TAVBVC_{in})\Lambda(AVBVC_{in})\Lambda(AVBVTC_{in})$ $C) AVB = TATB$ $AVB = T(ATB)$ $AVB = (AT(ATB))T(BT(ATB))$	b) S=	(AVBVC) A (TAVIB	VCiA)A(TA)	VBV1C; ) A (AATBAS)
C) $A \lor B = 7A \uparrow 7B$ $A \land B = 7(A \uparrow B)$ $A \lor B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$		(1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,	4 7 7 9 7	AVIBVICA
C) $A \lor B = 7A \uparrow 7B$ $A \land B = 7(A \uparrow B)$ $A \lor B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$			200	10110 \ 101121111
C) $A \lor B = 7A \uparrow 7B$ $A \land B = 7(A \uparrow B)$ $A \lor B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$	Cont	= (AVBVC)/(TAVE	BAC: VIV (AA	18 V Cin ) M (AV D VICin)
$A \wedge B = 7(A \uparrow B)$ $A \vee B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$		(SAQ ALB) A	MARAGE	14 14 14 14 14 14 14 14 14 14 14 14 14 1
$A \wedge B = 7(A \uparrow B)$ $A \vee B = (A \uparrow (A \uparrow B)) \uparrow (B \uparrow (A \uparrow B))$	()	A V D = 3 A T3B	10/13/10/	A B I A B I I I I I I I I I I I I I I I
$A\dot{V}B = (A\Upsilon(A\Upsilon B))\Upsilon(B\Upsilon(A\Upsilon B))$				
		A AB = 7 (ATB)	0 7 V F2 A	
		0 (100100)	OTIATEL	
S= [(AVB) T ((AVB) TCin)] T [(in T ((AVB) TCin)]	1	AVB = (ATCATE))	( BICATO)	
S = (AVB) T ((AVB) T Cin ) [ Cin T ((AVB) T Cin )]			1000	12220
	5	>= [(A VB) T ((A VB) TC)	a)] Te Cia Te	AVO) (Cia/)
	1		1-10 0000	
Cout = 7 (7 (ATB)) / 7 (7 (Cin 1 (AVB)))	C			
= (ATB) 1 (Cin T(AVB))		- (ATB) 1 (C: 1)	(AJB)	
		7 (10)		

Problem2: