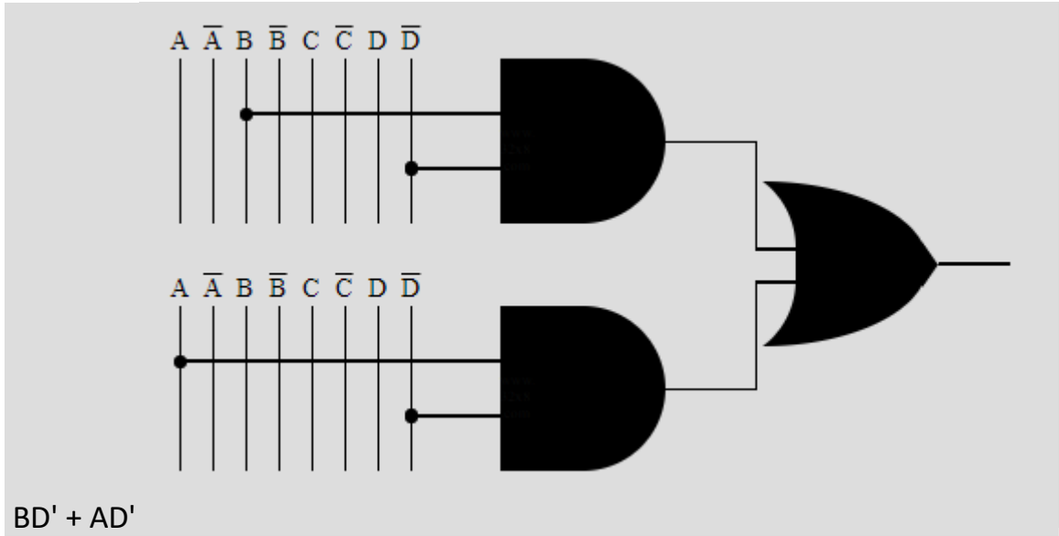
Group - 9, Section - B1

OPCODE				CODE	Operation	ALU Operation	ALU Selection		RegDST	ALUSRC	MemToReg	RegWrite	MemRead	MemWrite	Branch	Jump
OP3	OP2	OP1	OP0				S1	S0								
0	0	0	1	I	lw	Add	0	0	0	1	1	1	1	0	0	0
0	0	1	0	J	sw	Add	0	0	X	1	X	0	0	1	0	0
0	0	1	1	K	beq	Sub	0	1	X	0	X	0	0	0	1	0
0	1	0	0	L	j	X	X	X	X	X	X	0	0	0	X	1
0	1	0	1	C	addi	Add	0	0	0	1	0	1	0	0	0	0
0	1	1	0	H	ori	OR	1	1	0	1	0	1	0	0	0	0
0	1	1	1	A	add	Add	0	0	1	0	0	1	0	0	0	0
1	0	0	0	G	or	OR	1	1	1	0	0	1	0	0	0	0
1	0	0	1	B	sub	Sub	0	1	1	0	0	1	0	0	0	0
1	0	1	0	E	and	AND	1	0	1	0	0	1	0	0	0	0
1	0	1	1	D	subi	Sub	0	1	0	1	0	1	0	0	0	0
1	1	0	0	F	andi	AND	1	0	0	1	0	1	0	0	0	0

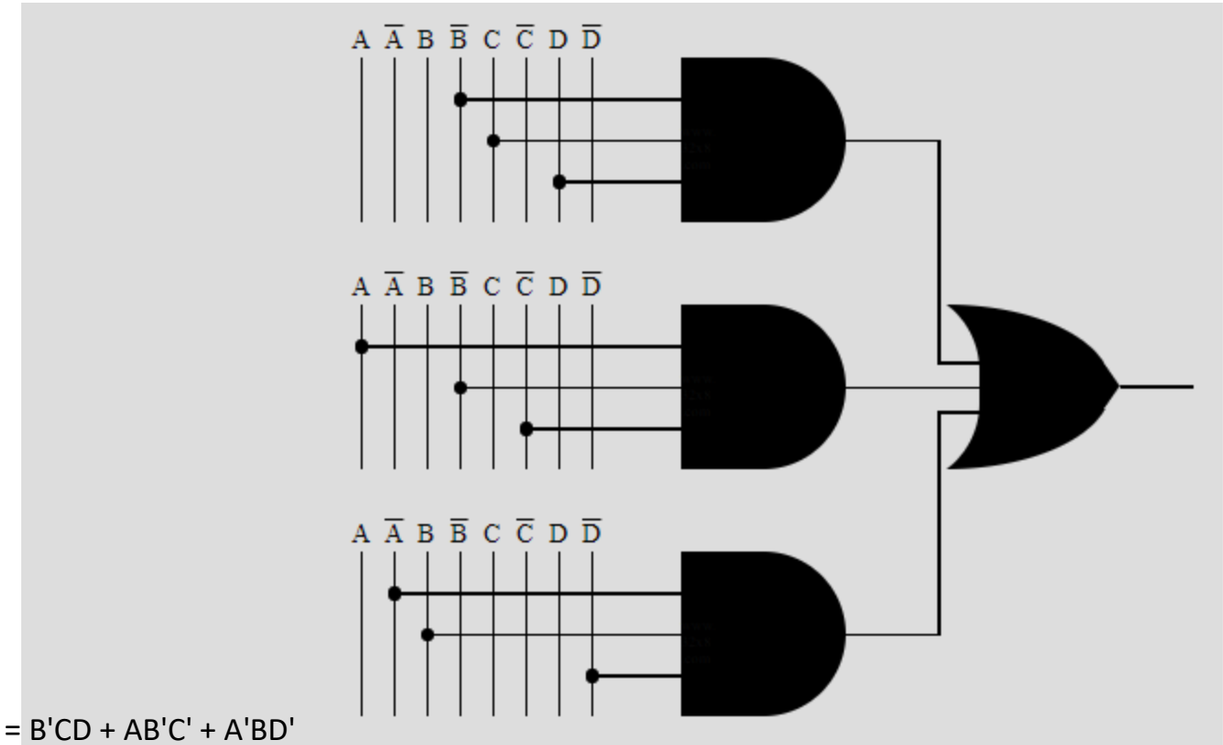
ICs

1. ALU - IC74LS381
2. ROM - IC2764
3.
4. 2114
5. 2732

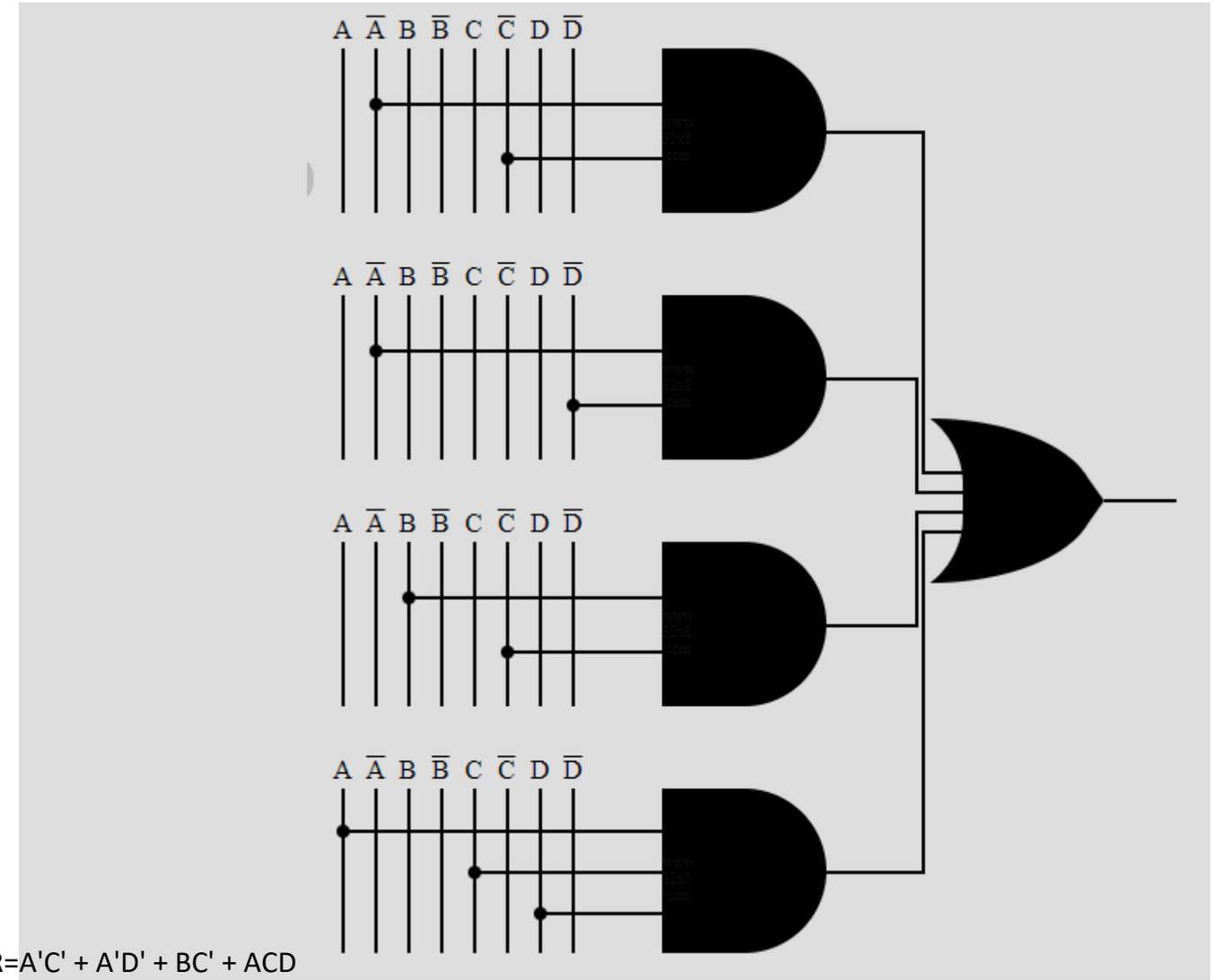
Functions



1. S1 = BD' + AD'

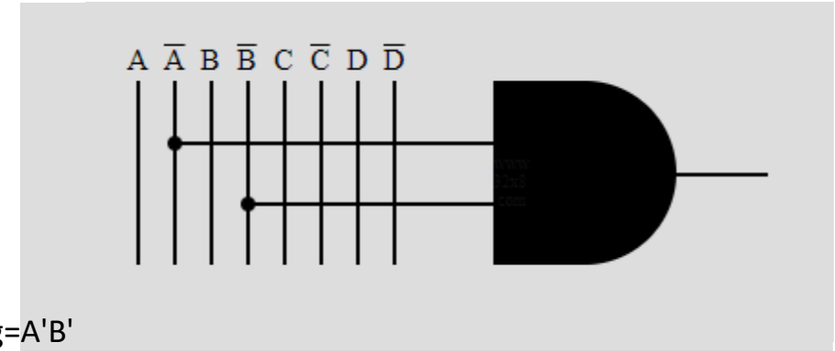


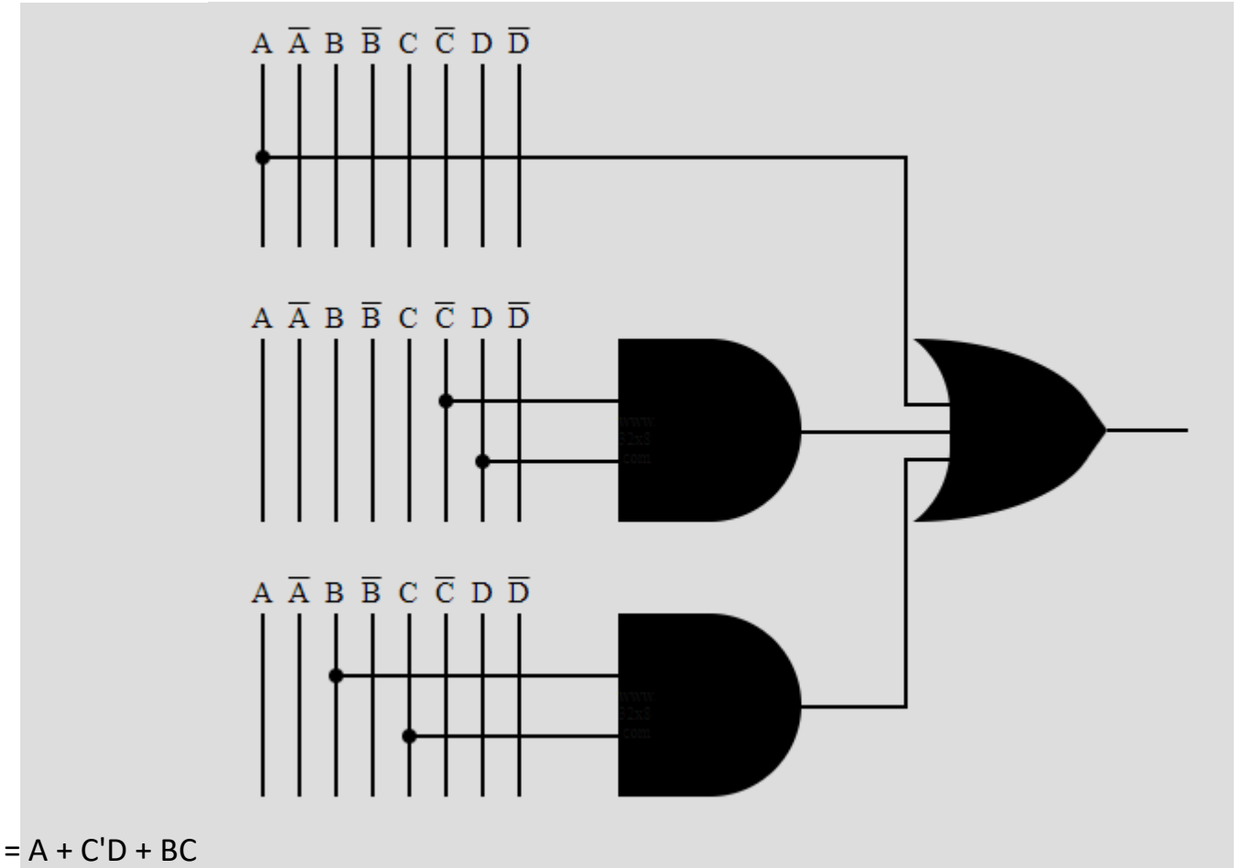
2. S0 = B'CD + AB'C' + A'BD'
3. RegDST = B'D' + AB'C' + A'CD



4. ALUSCR=A'C' + A'D' + BC' + ACD

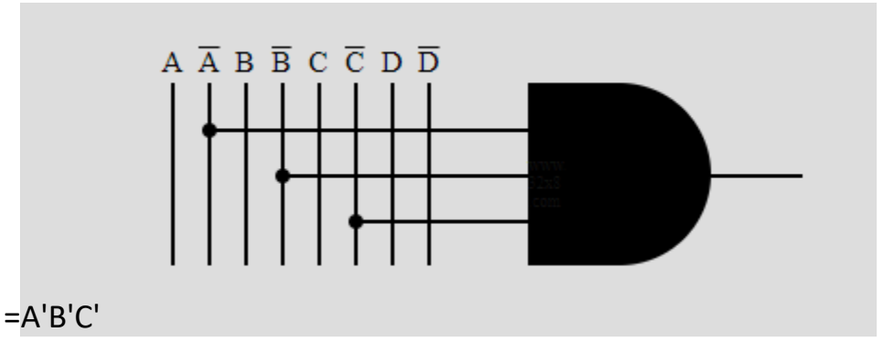
5. MemToReg=A'B'



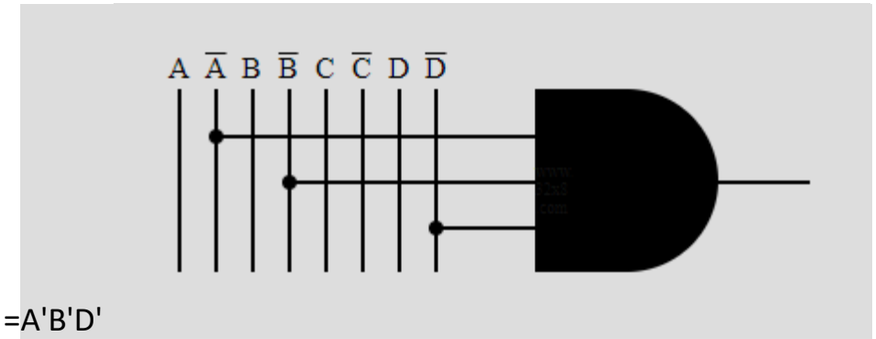


6. RegWrite = A + C'D + BC

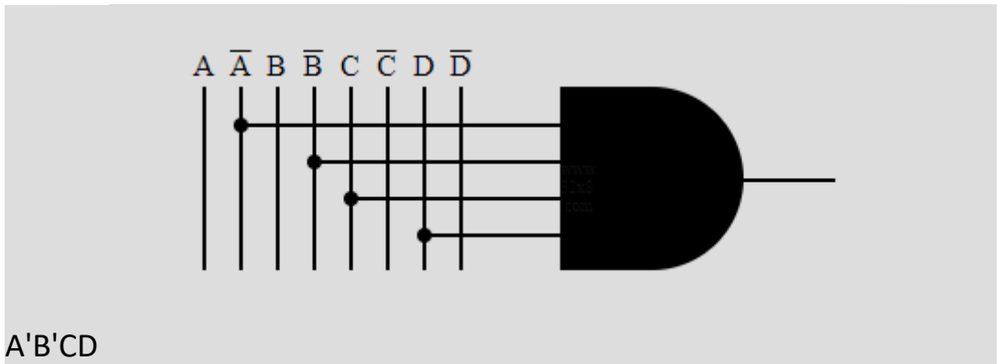
7. MemRead =A'B'C'

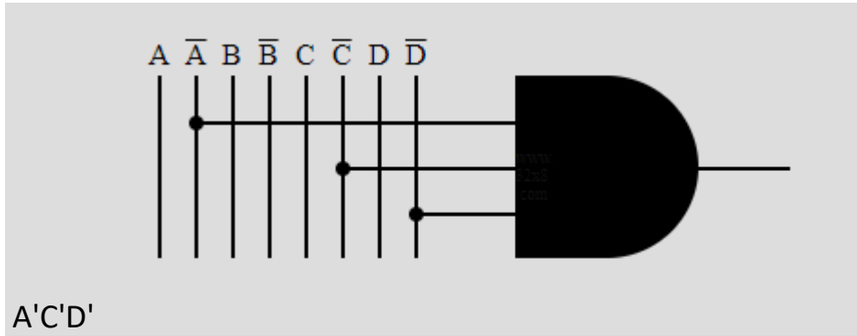


8. MemWrite =A'B'D'



9. Branch = A'B'CD





10.Jump = A'C'D'