05.04. VII седмица С.Ч.
2022 г.

Зад 1.

$f_{дом} = A\bar{B}D + ABC + \bar{B}\bar{C}D = A\bar{B}(C+\bar{C})D + ABC(D+\bar{D}) + (A+\bar{A})B\bar{C}D =$
$= A\bar{B}DC + AB\bar{D}\bar{C} + ABCD + AB\bar{C}\bar{D} + B\bar{C}D$

Зад 2. $f = V_m(5,6,7,8,9)^1 + V_m(10,11,13,14,15)^*$

МОНУс = 7

УКУ

AB \ CD	00	01	11	10
00	0	1	3	2
01	4	5	7	6
11	12	*13	*15	*14
10	8	9	*11	*10

$f_{МОНУс} = A\bar{B} + BD + BC$

зад 3 $f(A,B,C,D) = \overline{\overline{A}+\overline{C}} \cdot \overline{B+\overline{D}} + \overline{\overline{\overline{A+\overline{D}}\ (B+C)}\ \overline{\overline{B}\ \overline{D}}}$
$+ AC$

1) ДЧНФ
2) СДНФ, СКНФ
3) МДНФ, МКНФ
4) КК ЛМ
5) И-НЕ

а)
$f = AC\overline{B}D + \overline{\overline{\overline{A+\overline{D}}}}(B+C) + \overline{\overline{\overline{B}\ \overline{D}}} + AC$

$= AC\overline{B}D + \overline{A+\overline{D}}(B+C) + \overline{B}\ \overline{D} =$
$= AC\overline{B}D + \overline{A}D(B+C) + \overline{B}\ \overline{D} =$
$= AC\overline{B}D + \overline{A}DB + B\overline{A}DC + \overline{B}\ \overline{D} + AC$ ДЧНФ

б) $f = A\overline{B}CD + \overline{A}B(C+\overline{C})D + \overline{A}(B+\overline{B})CD + (A+\overline{A})B(C+\overline{C})\overline{D} + A(B+\overline{B})$ [illegible] $C(D+\overline{D}) =$

$= \cancel{A\overline{B}CD} + \cancel{\overline{A}BCD} + \overline{A}B\overline{C}D + \overline{A}BCD + \overline{A}\overline{B}CD +$
$+ A\overline{B}C\overline{D} + AB\overline{C}\overline{D} + \overline{A}BC\overline{D} + \overline{A}B\overline{C}\overline{D} + ABCD + ABC\overline{D} +$
$+ A\overline{B}CD + \cancel{A\overline{B}C\overline{D}}$ # МКНФ (11, 7, 5, 3, 10, 8, 2, 0, 15, 14)

СКНФ (1, 4, 6, 9, 12, 13) $= (A+B+C+\overline{D})(A+\overline{B}+C+D)\ldots$

в) КК

AB \ CD	00	01	11	10
00	0	0	1	1
01	0	1	1	0
11	0	0	1	1
10	1	0	1	1

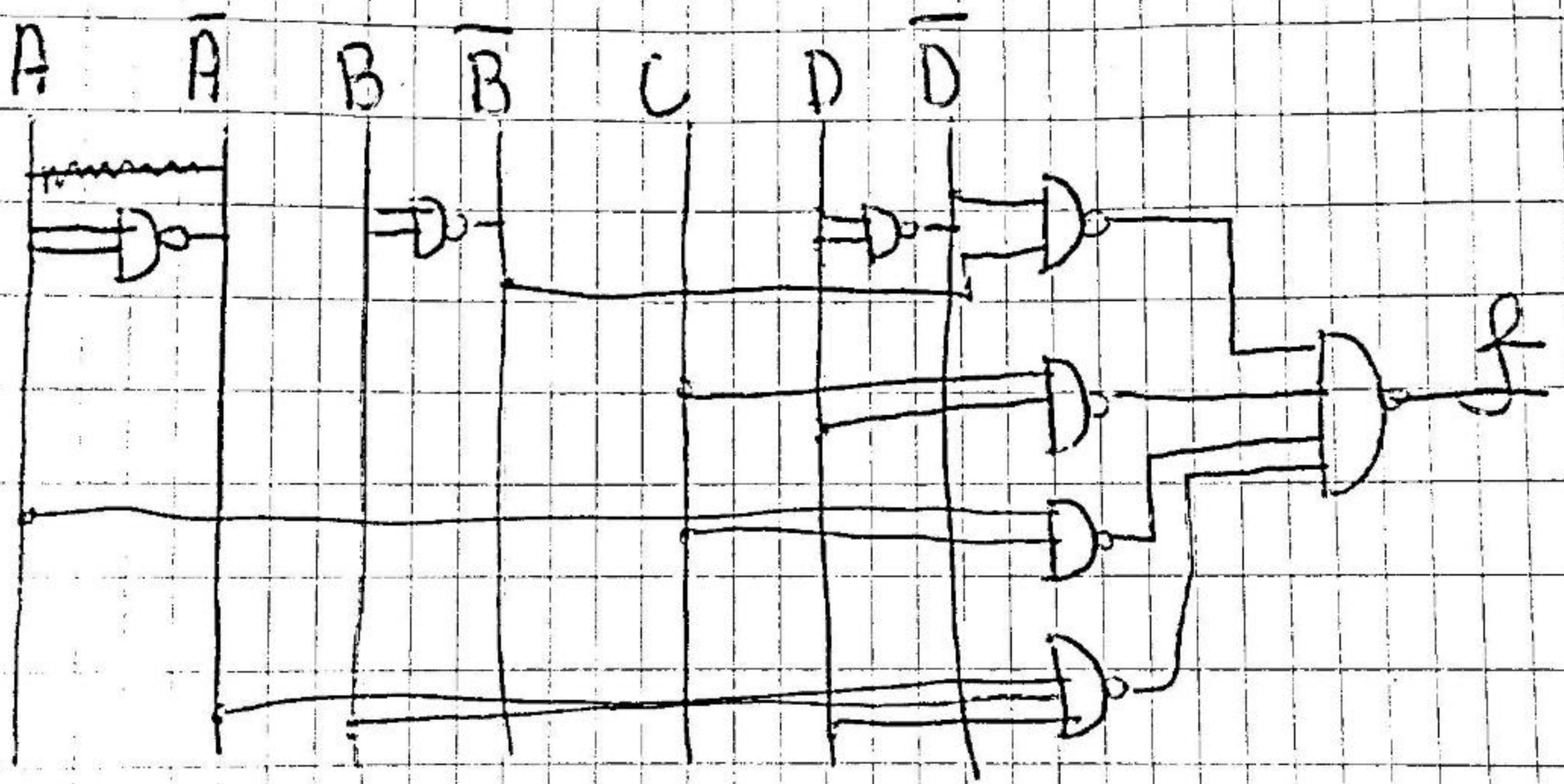
в) функция = $\overline{B}\,\overline{D} + CD + AC + \overline{A}BD$

функция = $(B + C + \overline{D})(A + \overline{B} + D)(\overline{A} + \overline{B} + C)$

г) базис „и-не"

$$f = \overline{\overline{\overline{B}\,\overline{D} + CD + AC + \overline{A}BD}} =$$

$$= \overline{\overline{B}\,\overline{D}} \cdot \overline{CD} \cdot \overline{AC} \cdot \overline{\overline{A}BD}$$



д) базис „или-не"

$$f = \overline{\overline{(B + C + \overline{D})(A + \overline{B} + D)(\overline{A} + \overline{B} + C)}} =$$

$$= \overline{B + C + \overline{D}} + \overline{A + \overline{B} + D} + \overline{\overline{A} + \overline{B} + C}$$

а) $\overline{B}\;\overline{D}\;\overline{D}\quad \overline{CDD}\quad \overline{A}\,BD\quad \overline{A}\,\overline{C}\,\overline{C}\quad \overline{ACC}$ 3 входове ,,и-не''