

99443132

امين خالقي

$$f = \sum m(2, 3, 4, 7, 11, 12, 13) + d(4)$$

سوال 1- الف

-4 for missed PIs

ab \ cd	00	01	11	10
00			1	1
01		1	1	1
11	1		1	1
10	1	1		

+3

$$PI \Rightarrow \bar{a}c, \bar{a}bd, bc, a\bar{c}\bar{d}, a\bar{b}\bar{c}$$

$$EPI \Rightarrow \bar{a}c, \bar{a}bd, bc, a\bar{c}\bar{d}, a\bar{b}\bar{c}$$

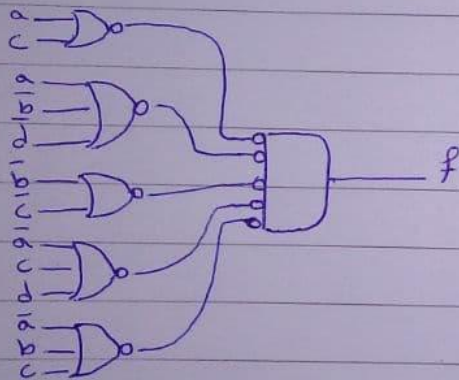
-2

+0.5

$$f = \bar{a}c + \bar{a}bd + bc + a\bar{c}\bar{d} + a\bar{b}\bar{c}$$

-2.5

$$NoR \Rightarrow f = (\bar{a} + c)(\bar{a} + b + \bar{d})(\bar{b} + \bar{c})(\bar{a} + c + d)(\bar{a} + b + c)$$



-5

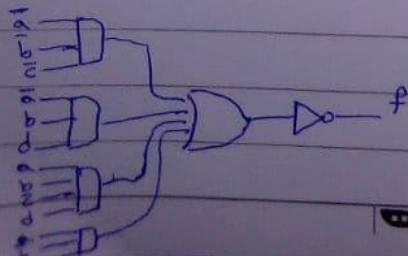
$$AOI \Rightarrow \bar{f} = \sum m(0, 1, 4, 9, 14, 15) + d(4)$$

ab \ cd	00	01	11	10
00	1	1		
01	1			1
11		1		
10			1	1

$$PI \Rightarrow \bar{a}\bar{c}\bar{d}, \bar{a}\bar{b}\bar{c}, \bar{a}b\bar{c}\bar{d}, \bar{a}b\bar{c}d, \bar{a}b\bar{c}$$

$$EPI \Rightarrow \bar{a}\bar{b}\bar{c}, \bar{a}\bar{b}\bar{c}, \bar{a}b\bar{c}\bar{d}, \bar{a}b\bar{c}$$

$$\bar{f} = \bar{a}\bar{b}\bar{c} + \bar{a}\bar{b}\bar{c} + \bar{a}b\bar{c}\bar{d} + \bar{a}b\bar{c}$$



-5

<del>1</del>	✓ 1	✓ (1, 3) ①	(1, 3, 4, 5) <del>①</del> (1, 4)	(?)
<del>2</del>	✓ 1	✓ (1, 4) ①	(1, 3, 4, 5) (1, 1)	
<del>3</del>	✓ 1	✓ (1, 10) ①	(1, 3, 4, 5, 11) (1, 1)	+8
<del>4</del>	✓ 1	(1, 10) ①	(1, 3, 4, 5, 11) (1, 1)	
<del>5</del>	✓ 1	(1, 11) ①	(1, 3, 4, 5, 11) (1, 1)	
<del>6</del>	✓ 1	(1, 12) ①		
<del>7</del>	✓ 1	✓ (1, 13) ①		
<del>8</del>	✓ 1	✓ (1, 14) ①		
<del>9</del>	✓ 1	✓ (1, 15) ①		
<del>10</del>	✓ 1	✓ (1, 16) ①		
<del>11</del>	✓ 1	✓ (1, 17) ①		
<del>12</del>	✓ 1	✓ (1, 18) ①		
<del>13</del>	✓ 1	✓ (1, 19) ①		
<del>14</del>	✓ 1	✓ (1, 20) ①		
<del>15</del>	✓ 1	✓ (1, 21) ①		
<del>16</del>	✓ 1	✓ (1, 22) ①		
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<del>18</del>	✓ 1	✓ (1, 24) ①		
<del>19</del>	✓ 1	✓ (1, 25) ①		
<del>20</del>	✓ 1	✓ (1, 26) ①		
<del>21</del>	✓ 1	✓ (1, 27) ①		
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<del>23</del>	✓ 1	✓ (1, 29) ①		
<del>24</del>	✓ 1	✓ (1, 30) ①		
<del>25</del>	✓ 1	✓ (1, 31) ①		
<del>26</del>	✓ 1	✓ (1, 32) ①		
<del>27</del>	✓ 1	✓ (1, 33) ①		
<del>28</del>	✓ 1	✓ (1, 34) ①		
<del>29</del>	✓ 1	✓ (1, 35) ①		
<del>30</del>	✓ 1	✓ (1, 36) ①		
<del>31</del>	✓ 1	✓ (1, 37) ①		
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<del>33</del>	✓ 1	✓ (1, 39) ①		
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<del>36</del>	✓ 1	✓ (1, 42) ①		
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<del>40</del>	✓ 1	✓ (1, 46) ①		
<del>41</del>	✓ 1	✓ (1, 47) ①		
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<del>45</del>	✓ 1	✓ (1, 51) ①		
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<del>56</del>	✓ 1	✓ (1, 62) ①		
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<del>70</del>	✓ 1	✓ (1, 76) ①		
<del>71</del>	✓ 1	✓ (1, 77) ①		
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<del>73</del>	✓ 1	✓ (1, 79) ①		
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<del>75</del>	✓ 1	✓ (1, 81) ①		
<del>76</del>	✓ 1	✓ (1, 82) ①		
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<del>85</del>	✓ 1	✓ (1, 91) ①		
<del>86</del>	✓ 1	✓ (1, 92) ①		
<del>87</del>	✓ 1	✓ (1, 93) ①		
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<del>90</del>	✓ 1	✓ (1, 96) ①		
<del>91</del>	✓ 1	✓ (1, 97) ①		
<del>92</del>	✓ 1	✓ (1, 98) ①		
<del>93</del>	✓ 1	✓ (1, 99) ①		
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<del>99</del>	✓ 1	✓ (1, 105) ①		
<del>100</del>	✓ 1	✓ (1, 106) ①		

PI  $\Rightarrow \bar{a}c, \bar{a}bd, bc, a\bar{c}\bar{d}$

$\bar{a}\bar{b}\bar{c}$

-4

+3

PI	1	2	3	4	5	6	7	8	9	10
$\bar{a}c$	x	x						x	x	
$\bar{a}bd$					x	x				
$bc$	x	x		x						
$\bar{a}\bar{c}\bar{d}$					x			x		
$a\bar{b}\bar{c}$			x							x
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

$$f = \bar{a}c + \bar{a}bd + bc + a\bar{c}\bar{d} + a\bar{b}\bar{c}$$

(8)