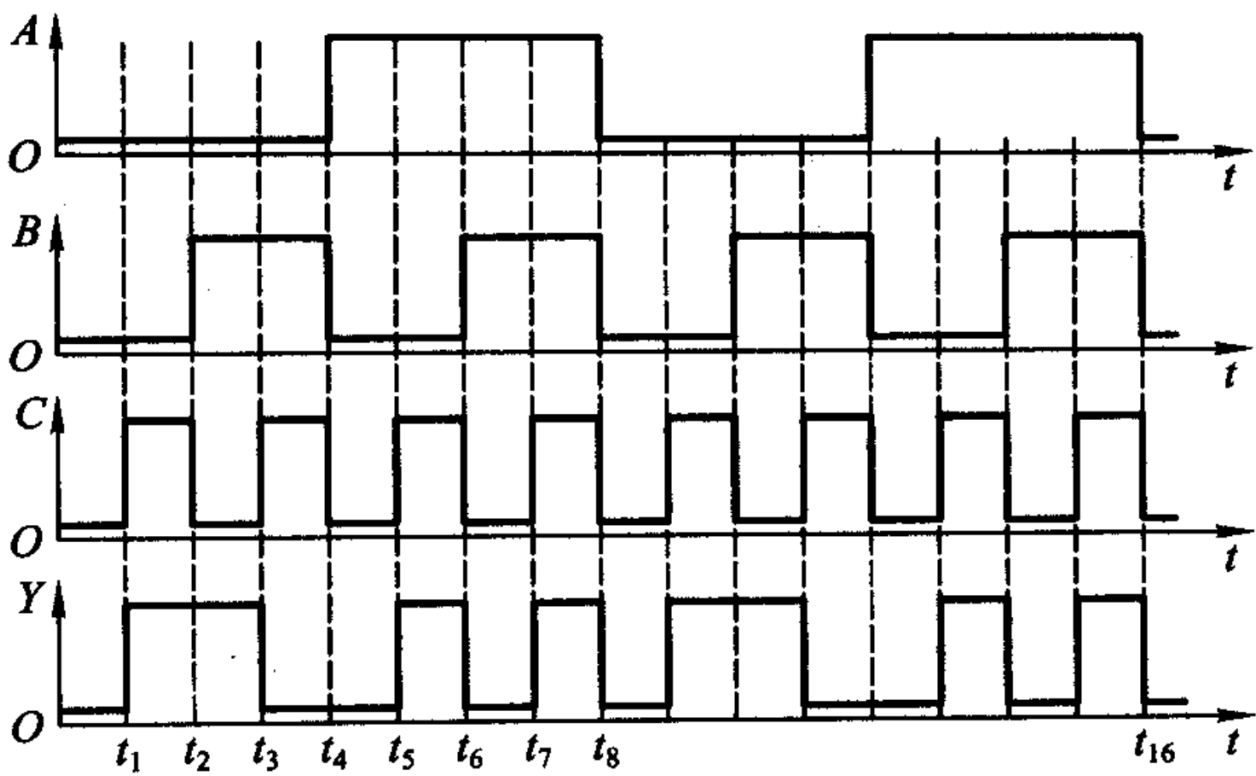


- Exam1
- Exam2
- Exam3
- exam4
- Exam5
- Exam6
- Exam7
- Exam8

Exam1

Please give the logic circuit according to the following waveform.



Exam2

$$SOPC - \sum, POS - \prod,$$

Only use NANDs or Nor to implement the logic function.

$$Y = \overline{A}B + AC$$

Exam3

To prove:

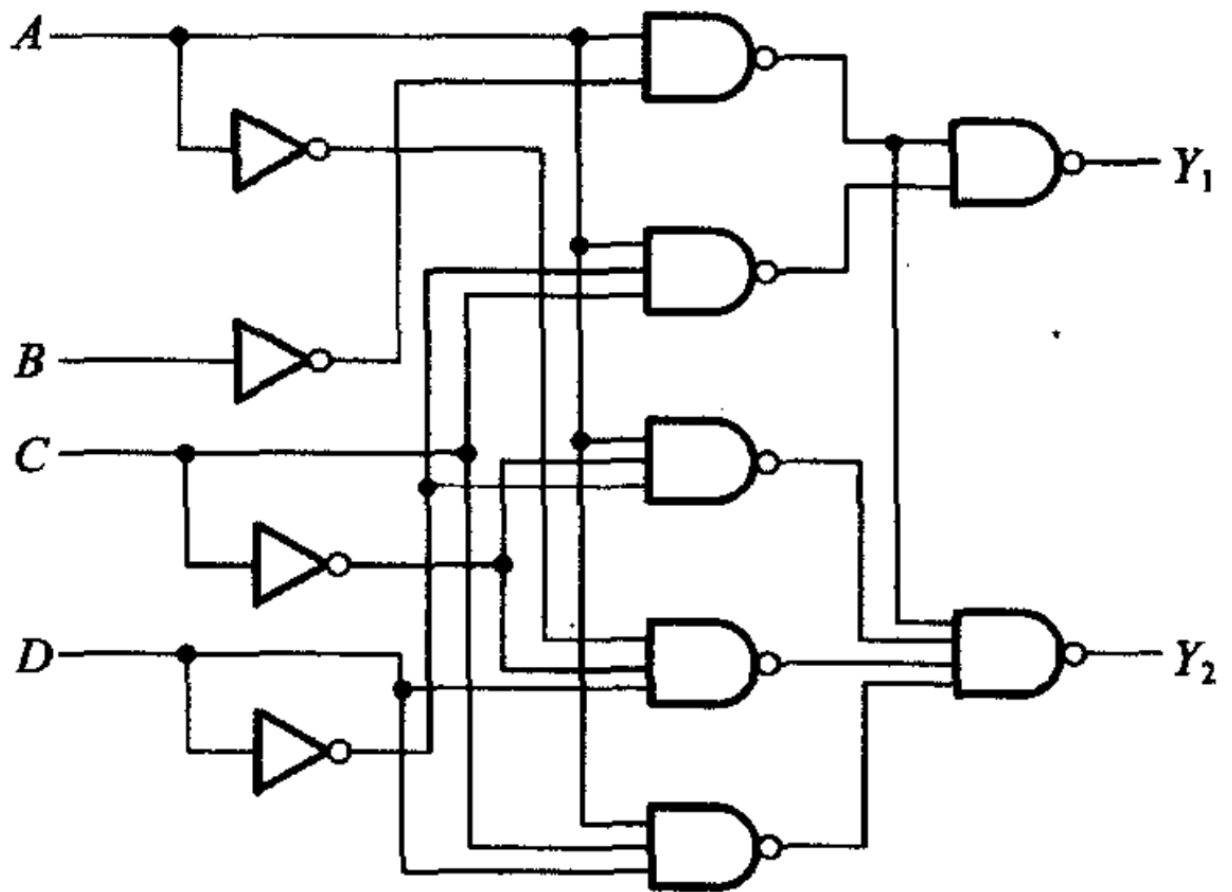
$$A\overline{B} + B + \overline{A}B = A + B$$

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

exam4

Please describe the logic functions of

$$Y_1 \text{ and } Y_2.$$

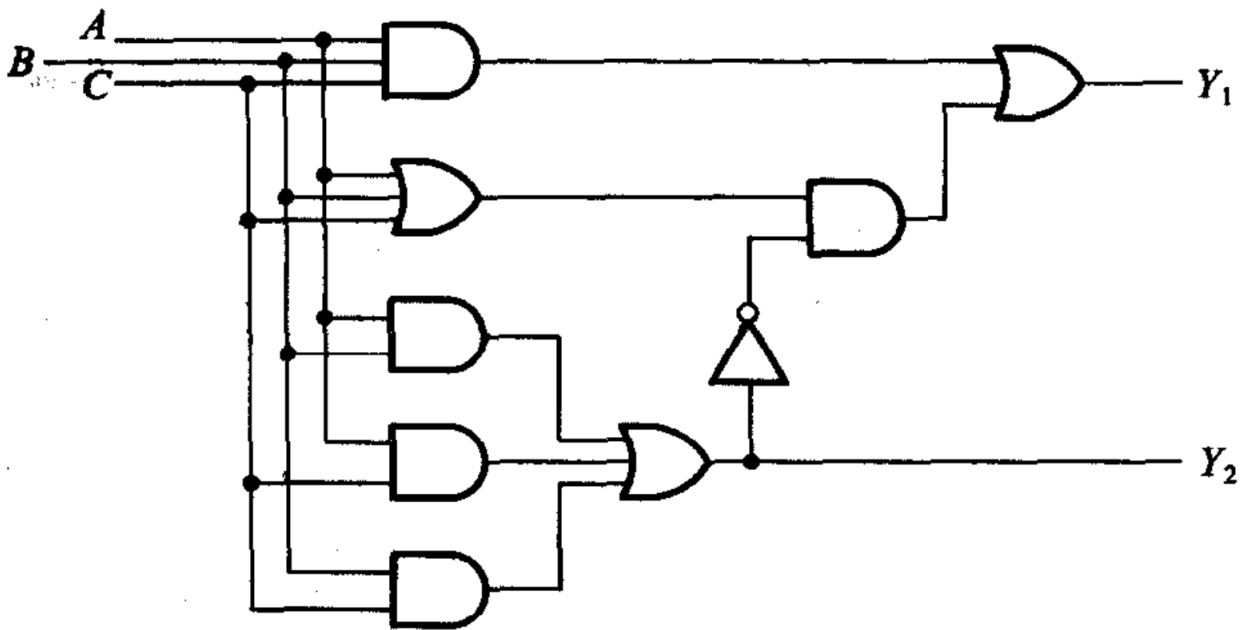


Exam5

$$(3) Y_3(A, B, C, D) = \sum m(3, 5, 6, 7, 10) + d(0, 1, 2, 4, 8)$$

$$(4) Y_4(A, B, C, D) = \sum m(2, 3, 7, 8, 11, 14) + d(0, 5, 10, 15)$$

Exam6



Exam7

To design a subtractor via basic gates, 3-line-to-8-line decoder, 1-of-8 data selector, 1-line-to-8-line demultiplexer.

Exam8

Design a ternary adder circuit.