

Physics Board Questions

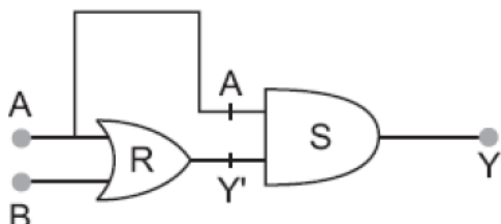
Class: 12

Logic Gates

Delhi 2014

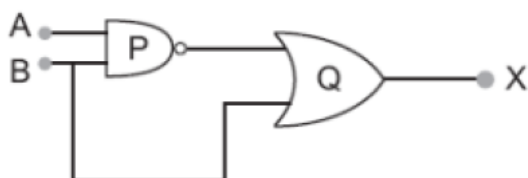
1. Write the truth table for the combination of the gates shown. Name the gates used.

[R - OR , S - AND]



2. Identify the logic gates marked 'P' and 'Q' in the given circuit. Write the truth table for the combination.

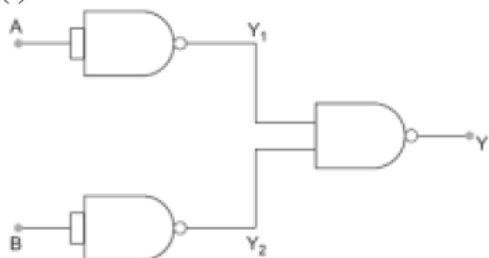
[P- NAND, Q- OR]



Foreign 2014

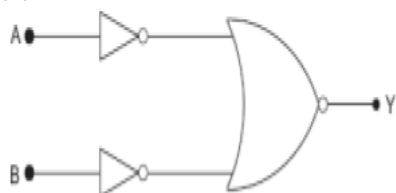
1. Identify the equivalent gate represented by the circuit shown in the fig. Draw its logic symbol & write the truth table.

(i)



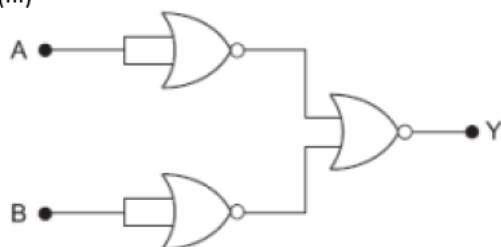
[OR]

(ii)



[AND]

(iii)

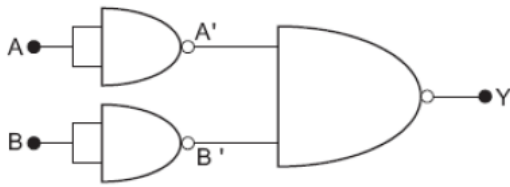


[AND]

AI2013

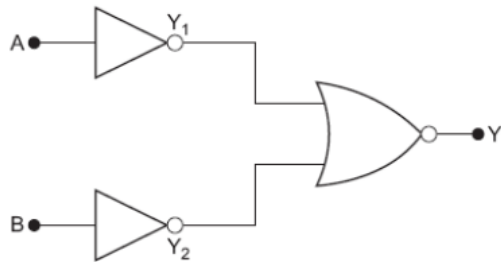
1. In the circuit shown in the figure, identify the equivalent gate of the circuit and make its truth table.

(i)



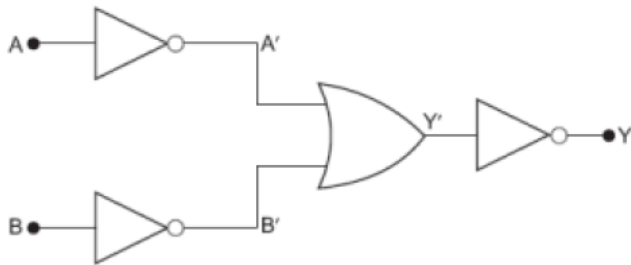
[OR]

(ii)



[AND]

(iii)

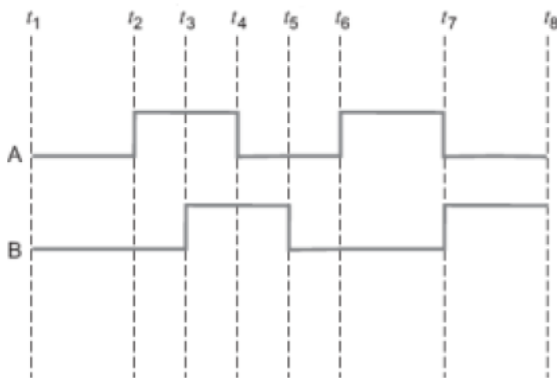


[AND]



Delhi 2012

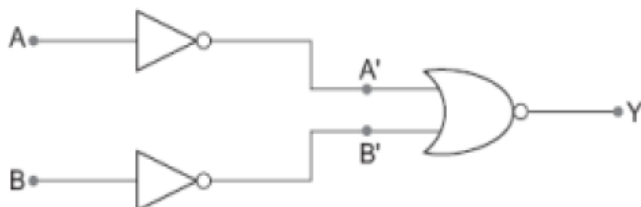
1. Show the output waveforms (Y) for the following inputs A and B of (i) OR gate (ii) NAND gate



AI 2012

Identify the equivalent gate for the following circuit and write its truth table.

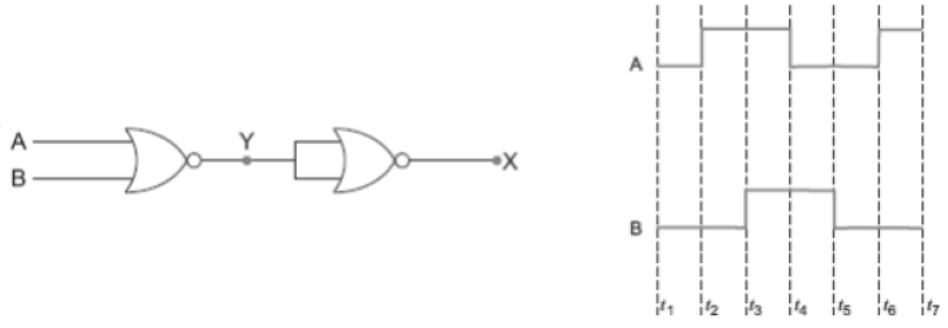
[AND]



Delhi 2011

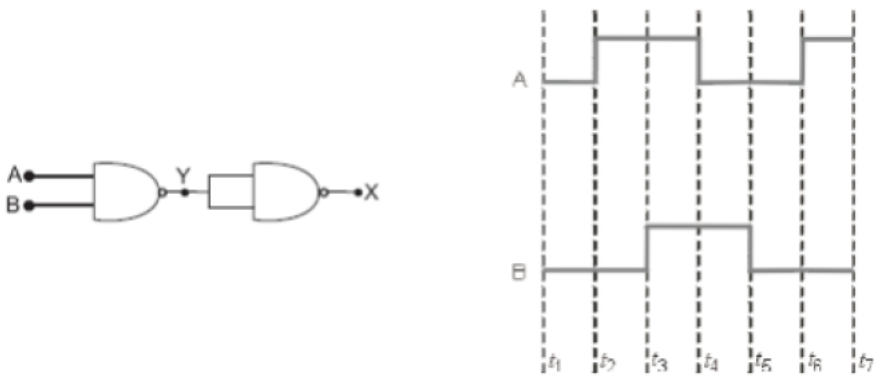
1. Draw the output waveform at X, using the given inputs A and B for the logic circuit shown below. Also, identify the logic operation performed by this circuit.

(i)



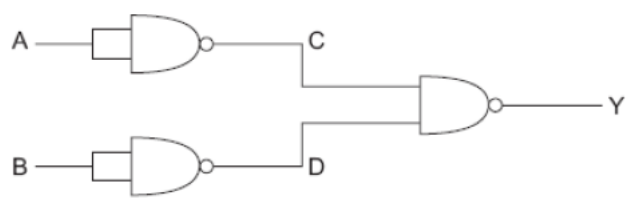
[OR]

(ii)



[AND]
[OR]

2. Write the truth table for the logic circuit shown & identify the logic operation performed by this circuit.

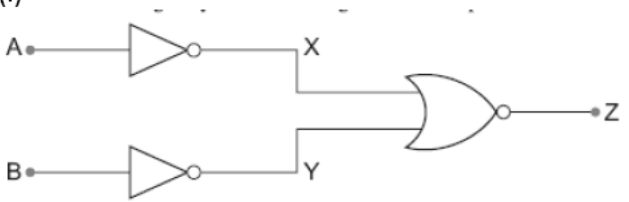


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AI 2011

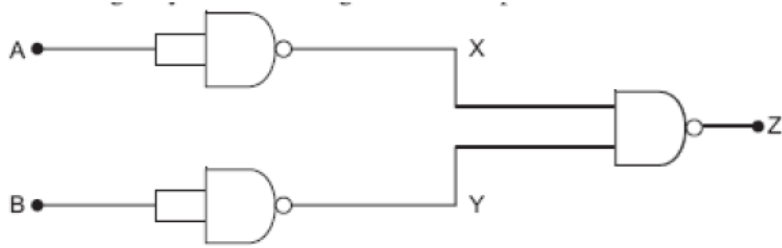
1. You are given a circuit below. Write its truth table. Hence, identify the logic operation carried out by this circuit. Draw the logic symbol of the gate it corresponds to.

(i)



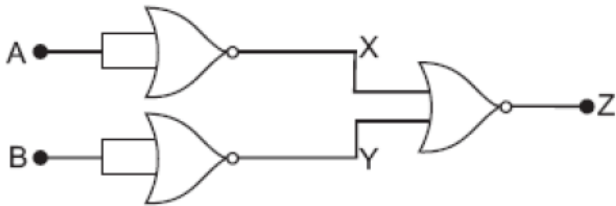
(ii)

[AND]



[OR]

(iii)



[AND]

Foreign 2011

1. Draw the logic circuit gate and write the truth table of (i) NAND(ii) AND (iii) NOT

Delhi 2010

1. Identify the logic gate represented by the circuit as shown and write its truth table.

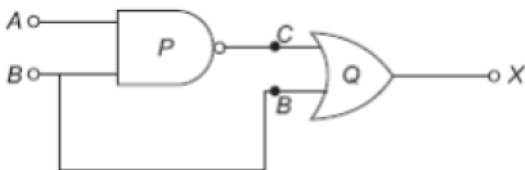


[AND]

All India 2010

1. (i) Identify the logic gates marked P and Q in the given logic circuit.

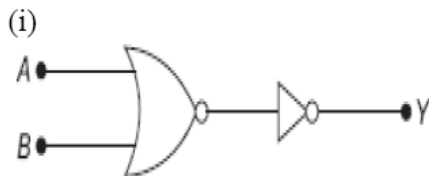
[P-NAND,Q- OR,1,1]



- (ii) Write down the output at X for the inputs $A = 0, B = 0$ and $A = 1, B = 1$.

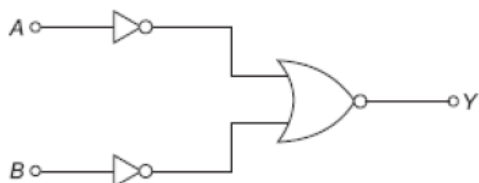
Foreign 2010

1. Write the truth table for the following circuit. Name the equivalent gate that this circuit represents.



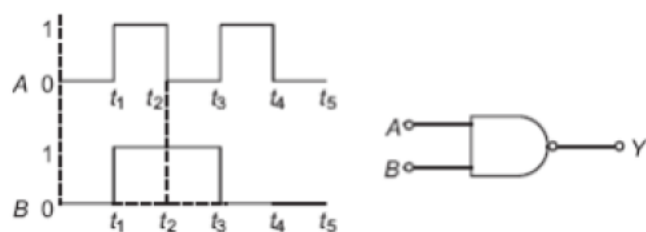
[OR]

(ii)



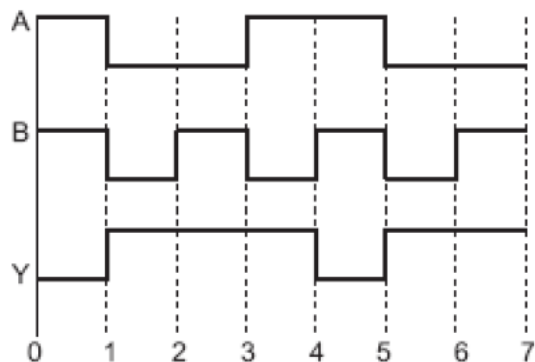
2. Draw the output waveform for the following gate. Also, name the gate.

[AND]
[NAND]

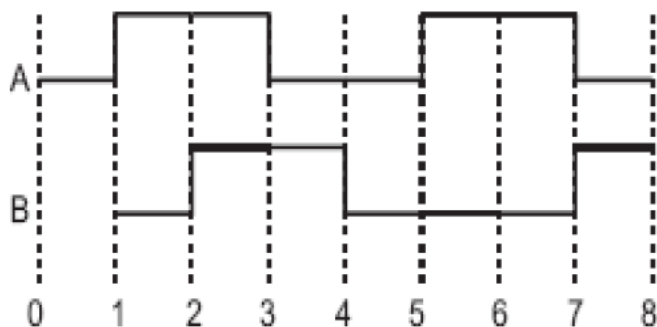


Delhi 2009

1. The following figure shows the input waveforms (A , B) and the output waveform (Y) of a gate. Identify the gate, write its truth table and draw its logic symbol. [NAND]



2. The output of a 2-input AND gate is fed to a NOT gate. Give the name of the combination and its logic symbol. Write down its truth table. [NAND]
3. (i) Sketch the output waveform from an AND gate for the inputs A and B shown in the figure.



- (ii) If the output of above AND gate is fed to a NOT gate, name the gate of the combination so formed. [NAND]

AI2009

1. Give the logic symbol of (i) NOR gate (ii) NAND gate (iii) AND gate

Foreign 2009

1. Draw the logic symbol of the gate whose **truth** table is given below:

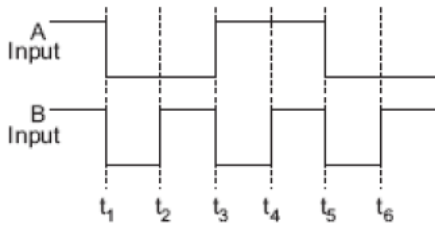
Input		Y
A	B	
0	0	1
0	1	0
1	0	0
1	1	0

If this logic gate is connected to NOT gate, what will be output when (i) $A = 0, B = 0$ and (ii) $A = 1, B = 1$? Draw the logic symbol of the combination. [NOR, 0, 1]

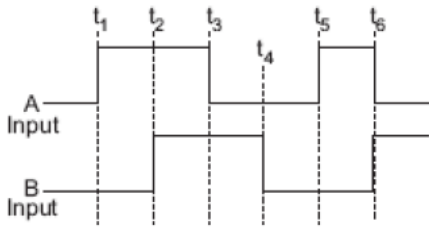
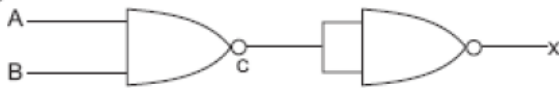
2. A logic gate is obtained by applying output of :
 - (i) OR gate to a NOT gate. Name the gate so formed. Write the symbol and truth table of this gate. [NOR]
 - (ii) AND gate to a NOT gate. Name the gate so formed. Write the symbol and truth table of this gate. [NAND]

Delhi 2008

1. The given inputs A, B are fed to a 2-input NAND gate. Draw the output wave form of the gate.



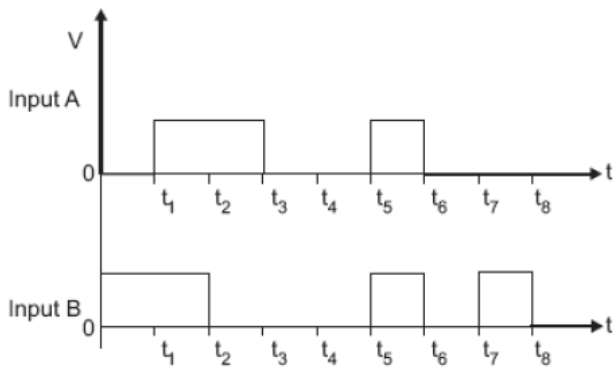
2. Draw the output wave form at X , using the given inputs A, B for the logic circuit shown below. Also identify the gate. [AND]



3. If the output of a 2 input NOR gate is fed as both inputs A and B to another NOR gate, write down a truth table to find the final output, for all combinations of A, B .

AI2008

1. Two signals A, B as given below, are applied as input to (i) AND (ii) NOR and (iii) NAND gates. Draw the output wave-form in each case.



- Years with no questions on gates : AI(14),D(13),F(13),F(12)
- Here parts represents different set question
F(14)-Q1,AI(13)-Q1, D(11)-Q1,AI(11)-Q1,F(11)-Q1,AI(09)-Q1,F(09)-Q2