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Degree B.S (software Engr)

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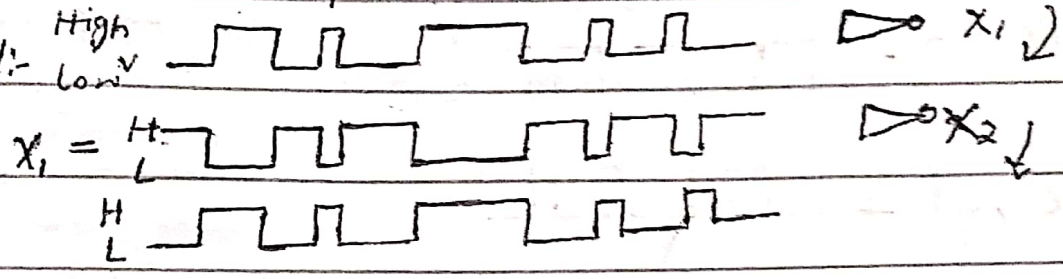
Assignment DLD

Assignment 2

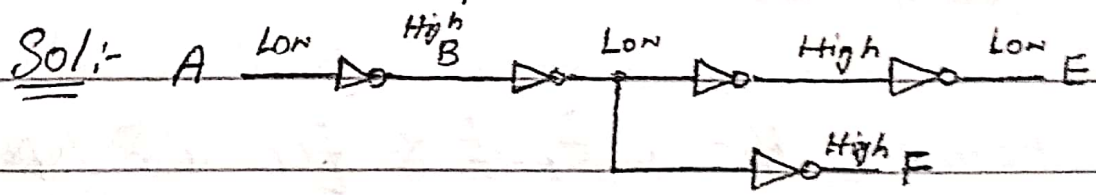
Q1:- The input waveform in figure is applied to a system of two inverters connected in series Draw the output waveform across each inverters in proper relation to the input.

Sol:-



Q2:- A combination of inverters is shown in figure if a low is applied to the point A determine the output at point E and F.

Sol:-

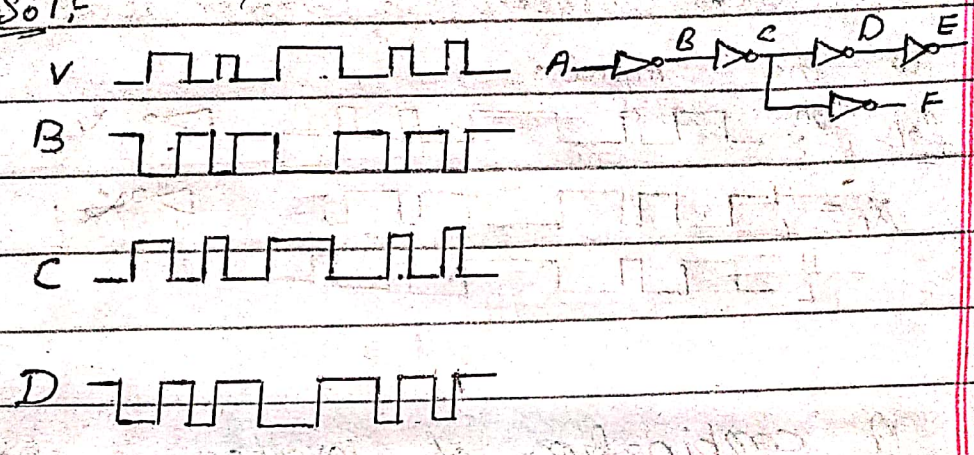


E = Low

F = high

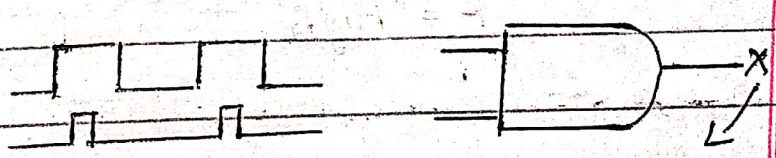
Q3:- if waveform in Q.1 is applied to figure in Q.2 at point A. Determine the waveform from point B to F.

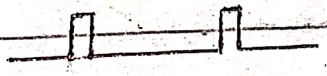
Sol:-



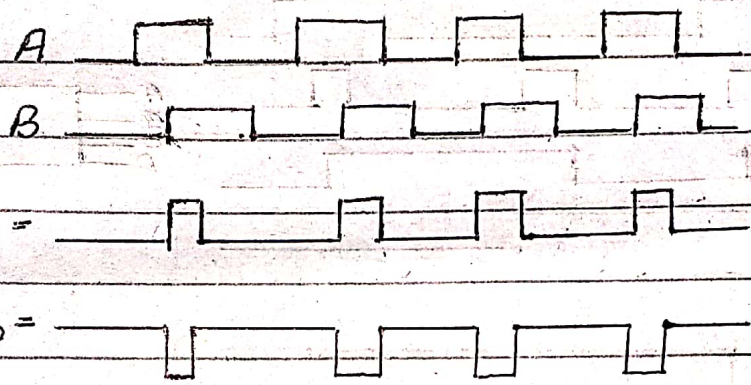
Q4:- Determine the output x for a 2 input AND gate with the input waveform.

Sol:-



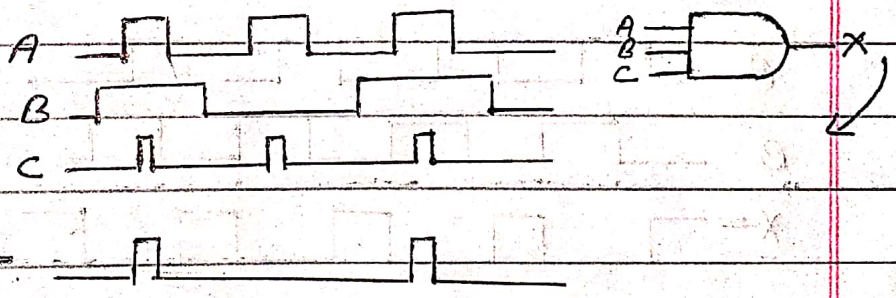
X =  Ans

Q5:- The waveform in figure are applied to point A & B at a 2-input And gate followed by inverter. Draw the output waveform.

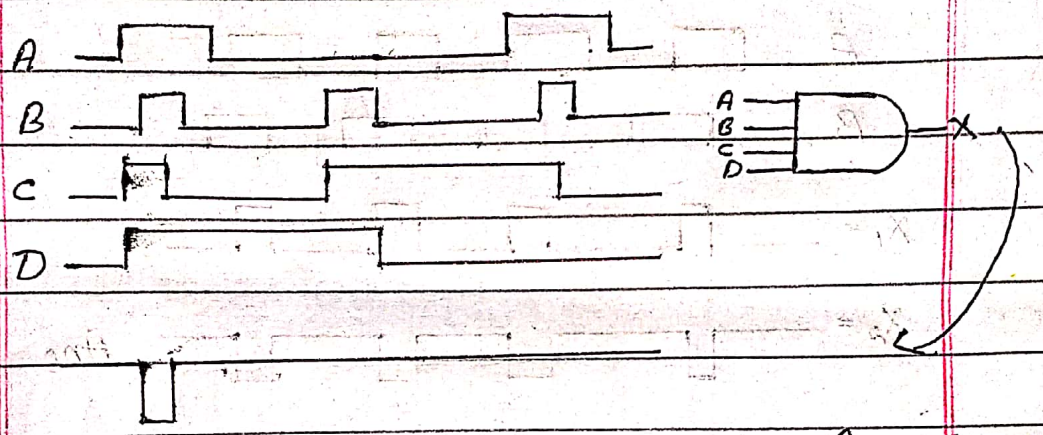


Ans

Q6:- The input waveform applied to 3-input AND gate ~~are~~ are as indirected in figure. Show the output waveform in proper relation to inputs with a timing digram.

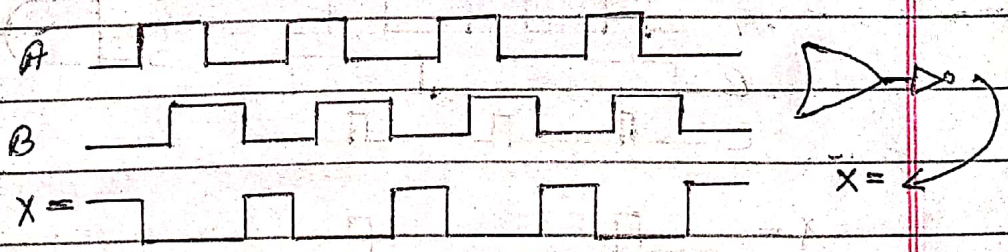


Q7:- The input waveform applied to a 4 input AND gate as indirected in figure. the output is fed to inverter. Draw the net output waveform of this system.

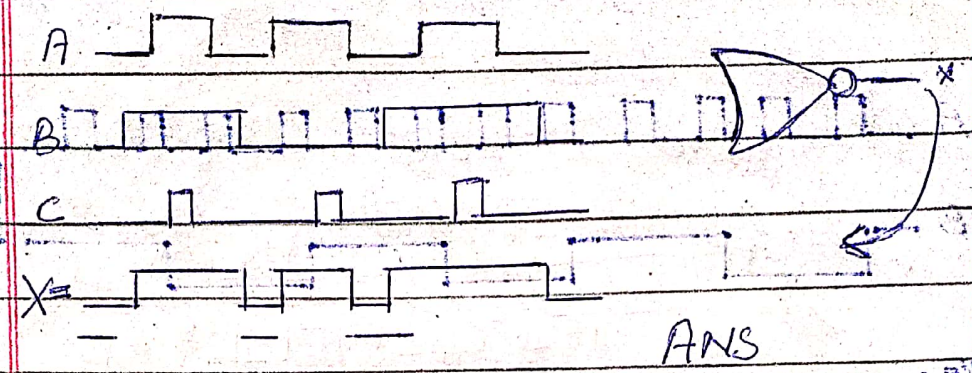


Ans

Q8:- Determine the output for a two input OR gate when the input waveform are as in figure 04 and draw a timing digram.

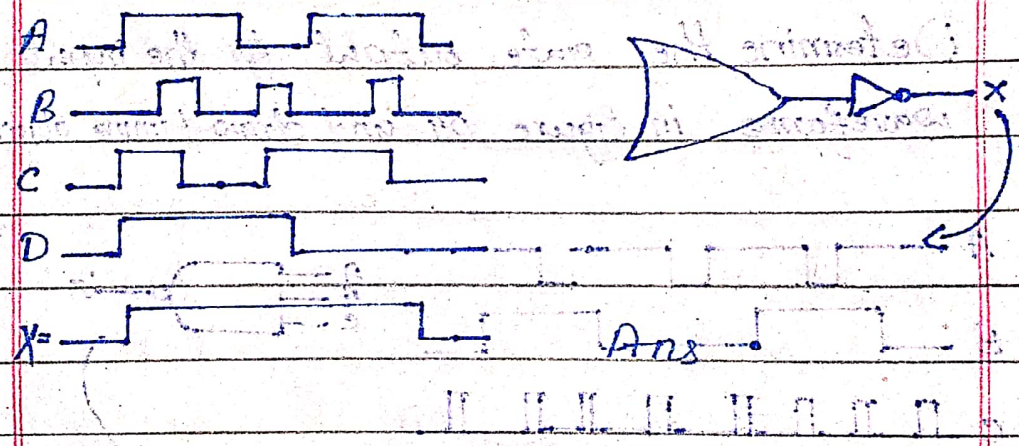


Q9:- Repeat Q.6 for 3-input OR gate.



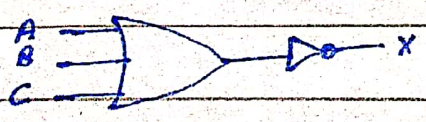
ANS

Q10 Repeat Q7 for 4-input OR gate.

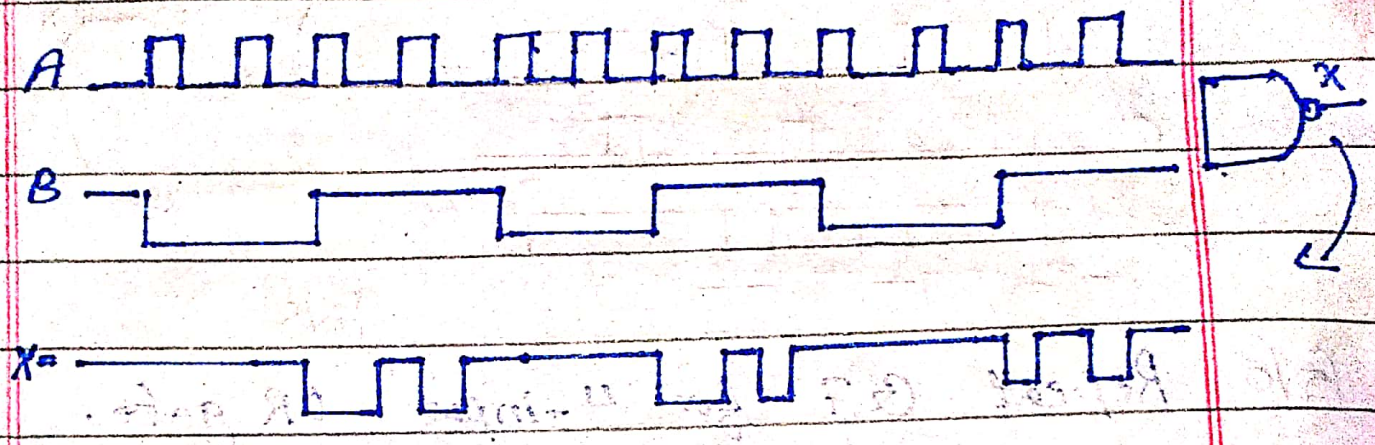


Q12:- Show that truth table for a system of a 3-input OR gate followed by inverter

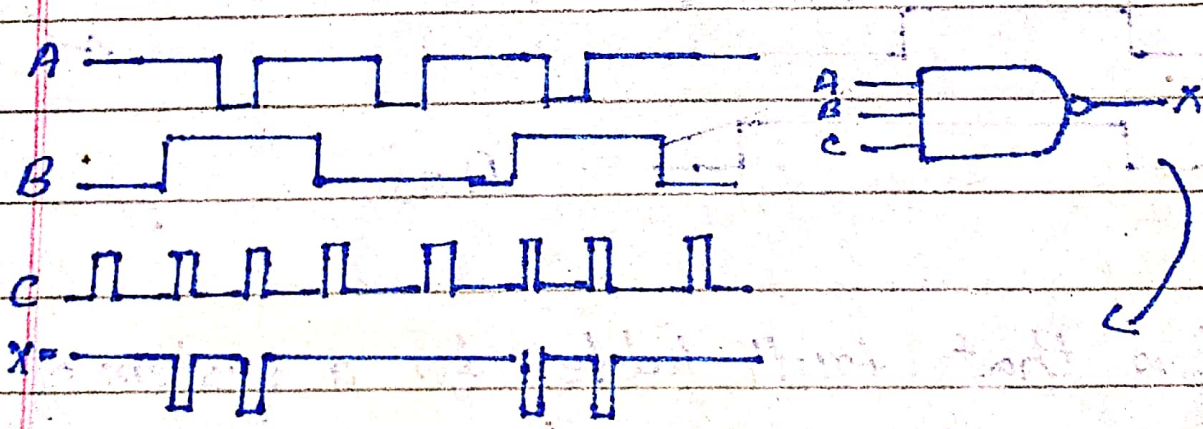
A	B	C	A+B+C	$\overline{(A+B+C)}$
0	0	0	0	1
0	0	1	1	0
0	1	0	1	0
0	1	1	1	0
1	0	0	1	0
1	0	1	1	0
1	1	0	1	0
1	1	1	1	0



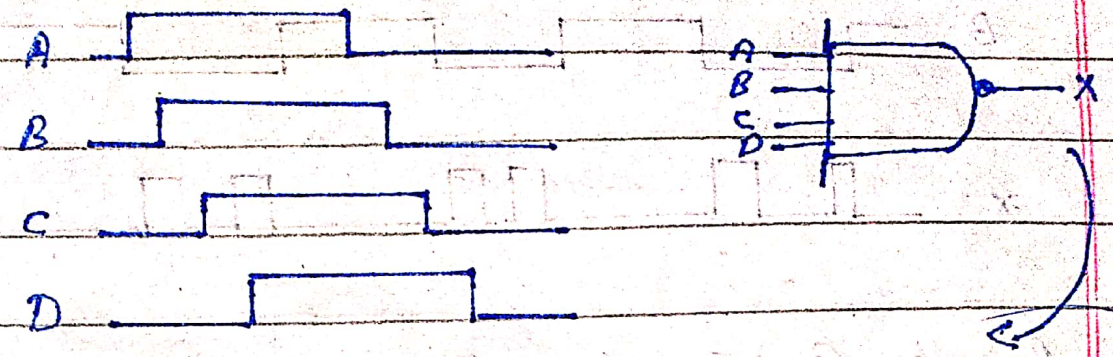
Q 13:- For the set of input waveforms, Determine the output for the gate show in timing digram.



Q 14 Determine the gate output for the input waveforms in figure 09 and draw timing digram.



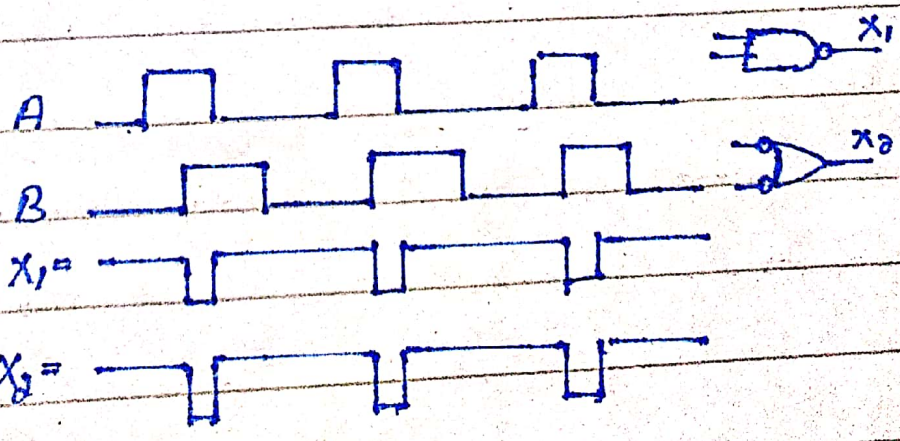
Q15: Determine the output waveform in figure 10.



X=  Ans

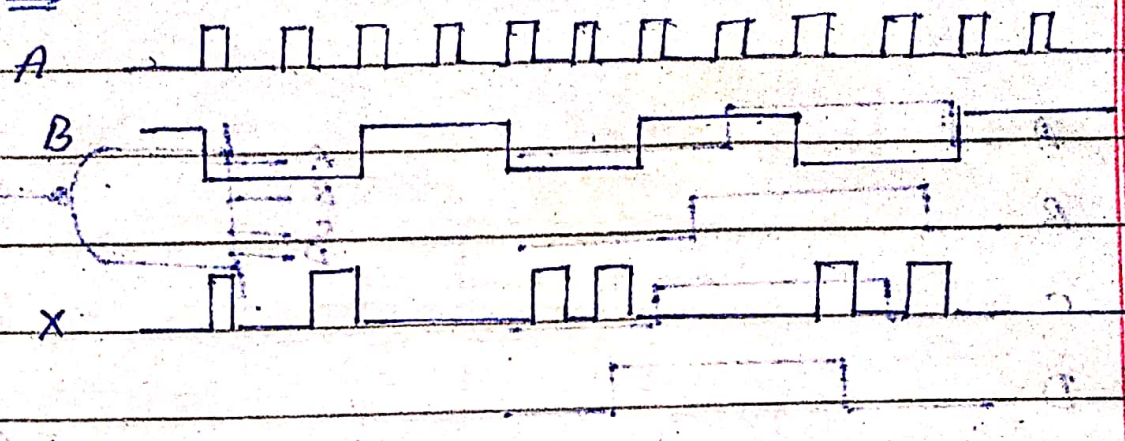
Q16: The two logic symbols shown in figure 11 represent equivelent operation. The difference between the two is strictly from a functional viewpoint. For the NAD symbol. Look for two Highs on the inputs to give low output. For the negative-OR. Look for at least one low on the inputs to give a high on the output.

Ans:

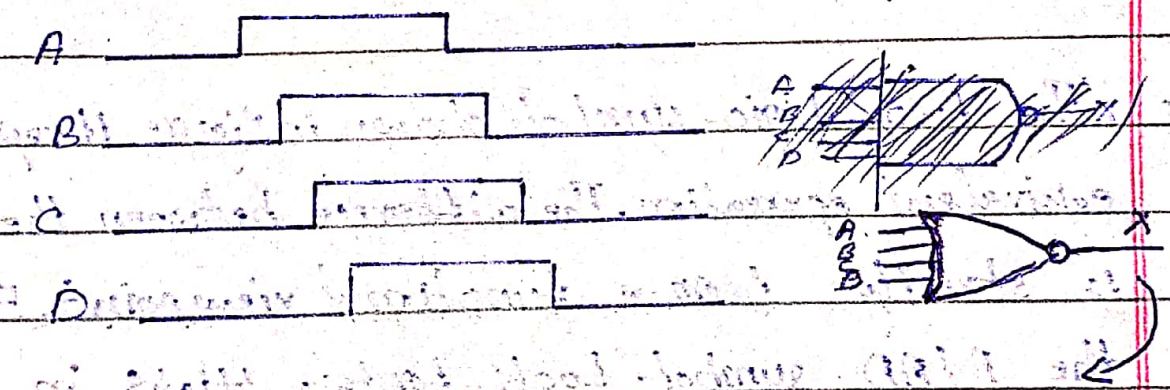


Q17:- Repeat Q 13 for 2 input Nor gate.

Ans:-

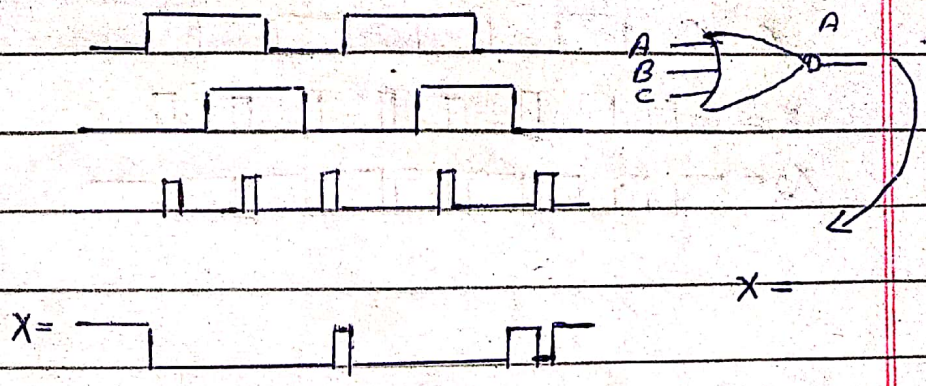


Q18:- Repeat Q 15 for four input Nor gate



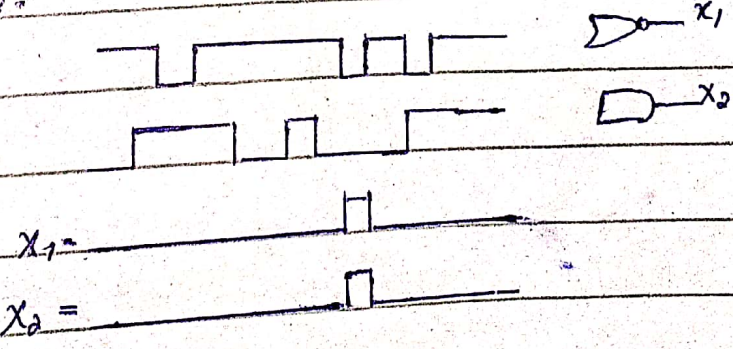
Q19:- Determine the output waveform in figure 12 and draw timing diagram.

Ans:-



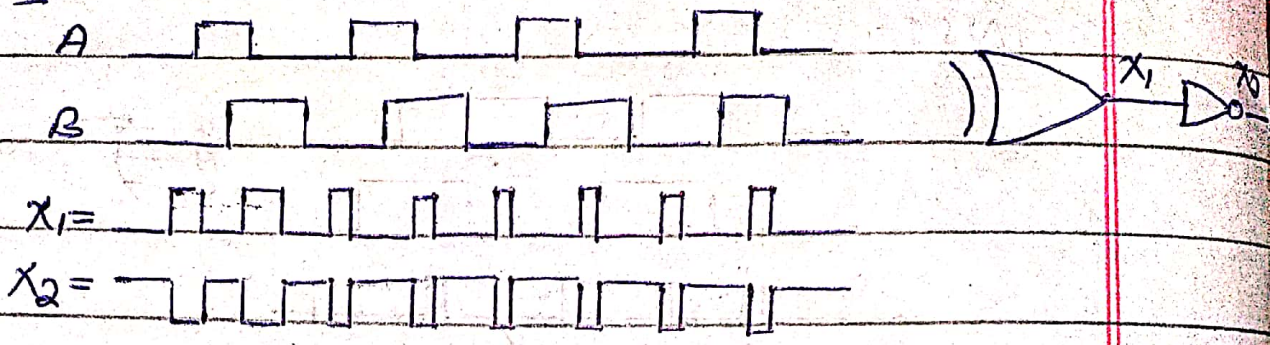
Q20:- The NOR and the negative-AND symbols represent equivelent operations but they are functionaly different. For the NOR symbol, look for at least one High on the inputs to give a low on the inputs. For the negative-AND, look for two Lows on the inputs to give high output. Using these two functionally points of views, show that both gates in figure 12 will produce the seame output

Ans:-

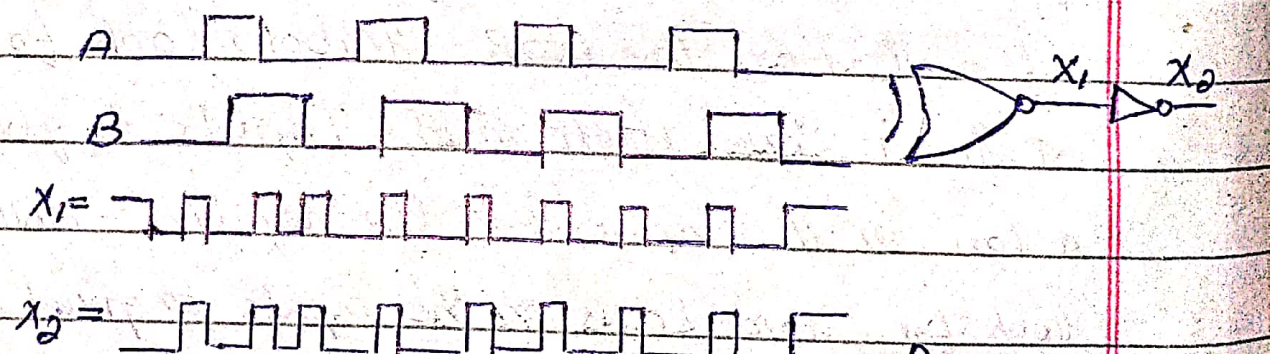


Q21:- Repeat Q.5 for an Exclusive OR gate

Ans:-



Q22:- Repeat Q5 for an Exclusive NOR gate



ANSWER