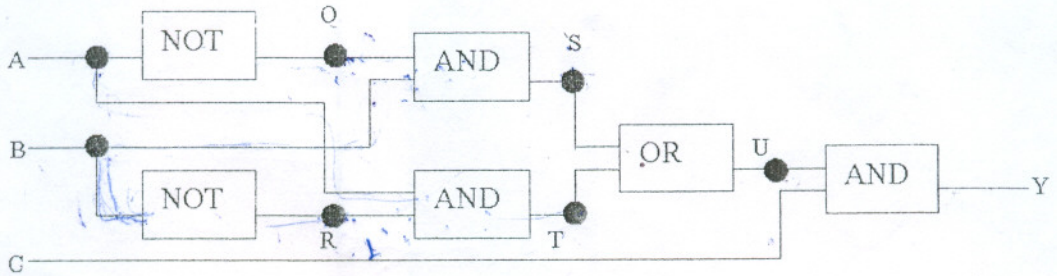
Combinational Circuit

Experiment No. 2

Aim: Implementation of combinational circuits using MSI Logic

Construct and identify the function performed by the 'Block Diagram' shown below.

Activity-1. Block Diagram-1



Observations

(i) When C is at Logic '0'

Inputs			*Intermediate Outputs*					*Outputs*
A	*B*	*C*	*Q*	*R*	*S*	*T*	*U*	*Y*
0	0	0						
0	1	0						
1	0	0						
1	1	0						

(ii) When C is a Logic '1'

Inputs			*Intermediate Outputs*					*Outputs*
A	*B*	*C*	*Q*	*R*	*S*	*T*	*U*	*Y*
0	0	1						
0	1	1						
1	0	1						
1	1	1						

(iii) By observing the 'Truth-Tables' write the name of the operation (*when C is logic '1'*) finally performed by the 'Block Diagram.1' shown above. .....

(iv) What is the significance of the input C in the above circuit .....

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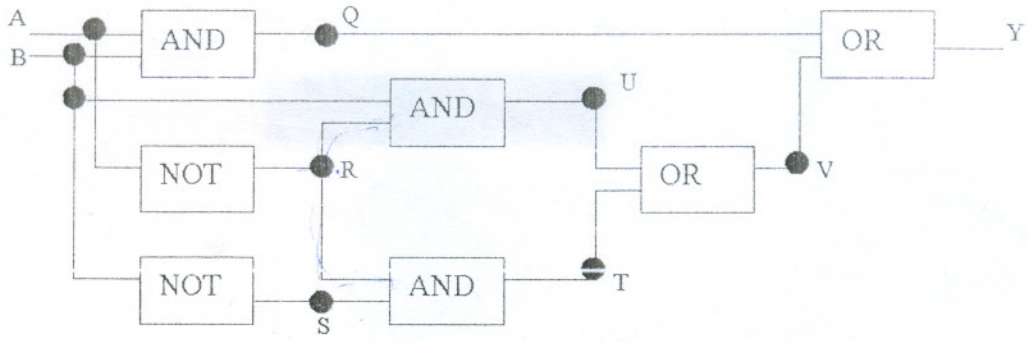
Activity-2. Block Diagram-2

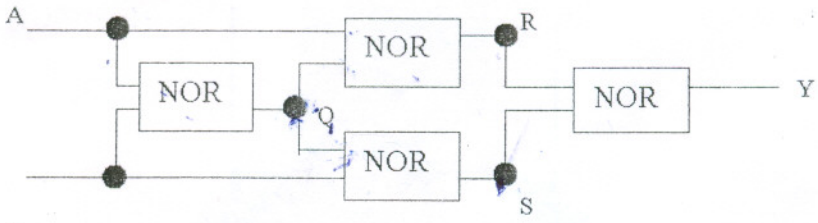


Observations

Inputs		*Intermediate Outputs*						*Outputs*
A	*B*	*Q*	*R*	*S*	*T*	*U*	*V*	*Y*
0	0							
0	1							
1	0							
1	1							

By observing the 'Truth-Tables' write the name of the operation finally performed by the 'Block Diagram.2' shown above .....

Exercise.9. Block Diagram-3



Observations

Inputs		*Intermediate Outputs*			*Outputs*
A	*B*	*Q*	*R*	*S*	*Y*
0	0				
0	1				
1	0				
1	1				

(i) By observing the 'Truth-Tables' write the name of the operation finally performed by the 'Block Diagram-3' shown above. .....

(ii) Suggest a modification in the circuit shown above to get an 'Logic XOR' function .....
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