

## EXPERIMENT NO. - 8

### Aim of the Experiment:

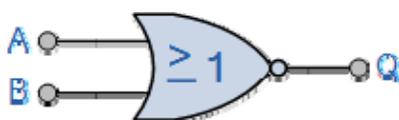
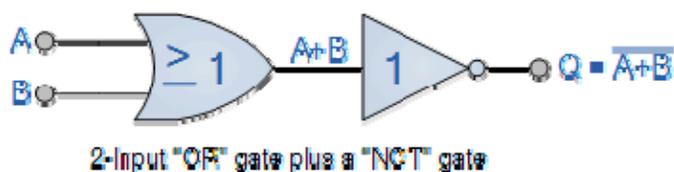
Digital logic gate testing

### Theory:

Digital [electronics](#), or digital (electronic) circuits, represent [signals](#) by discrete bands of [analog levels](#), rather than by a continuous range. All levels within a band represent the same signal state. Relatively small changes to the analog signal levels due to [manufacturing tolerance](#), [signal attenuation](#) or [parasitic noise](#) do not leave the discrete envelope, and as a result are ignored by signal state sensing circuitry.

In most cases the number of these states is two, and they are represented by two voltage bands: one near a reference value (typically termed as "ground" or zero volts), and the other a value near the supply voltage. These correspond to the "false" ("0"), and "true" ("1"), values of the [Boolean domain](#), respectively.

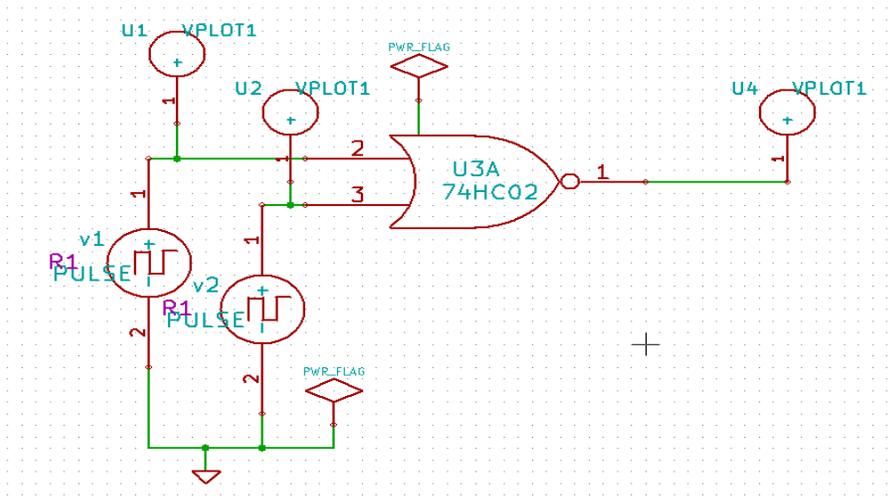
Digital techniques are useful because it is easier to get an electronic device to switch into one of a number of known states than to accurately reproduce a continuous range of values.



Truth Table

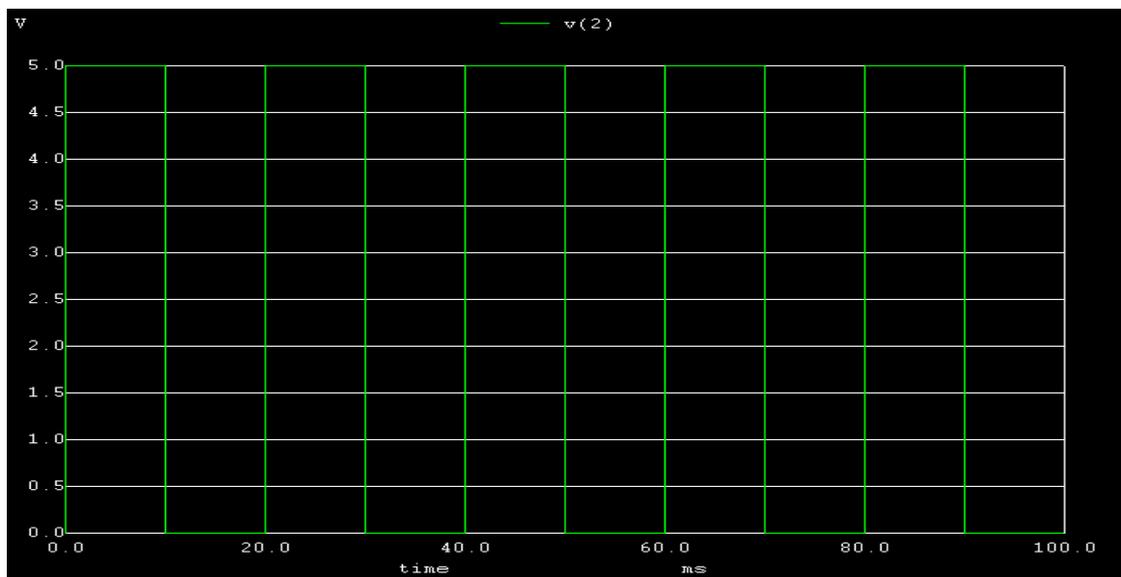
Input A	Input B	Output Q
0	0	1
0	1	0
1	0	0
1	1	0

Schematic Circuit:

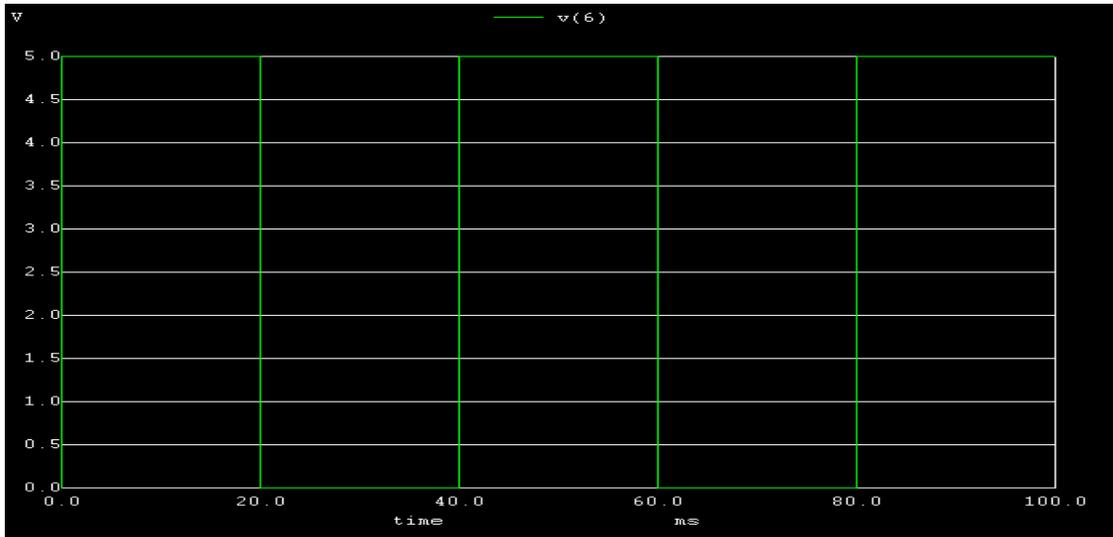


Input Waveform:

A:

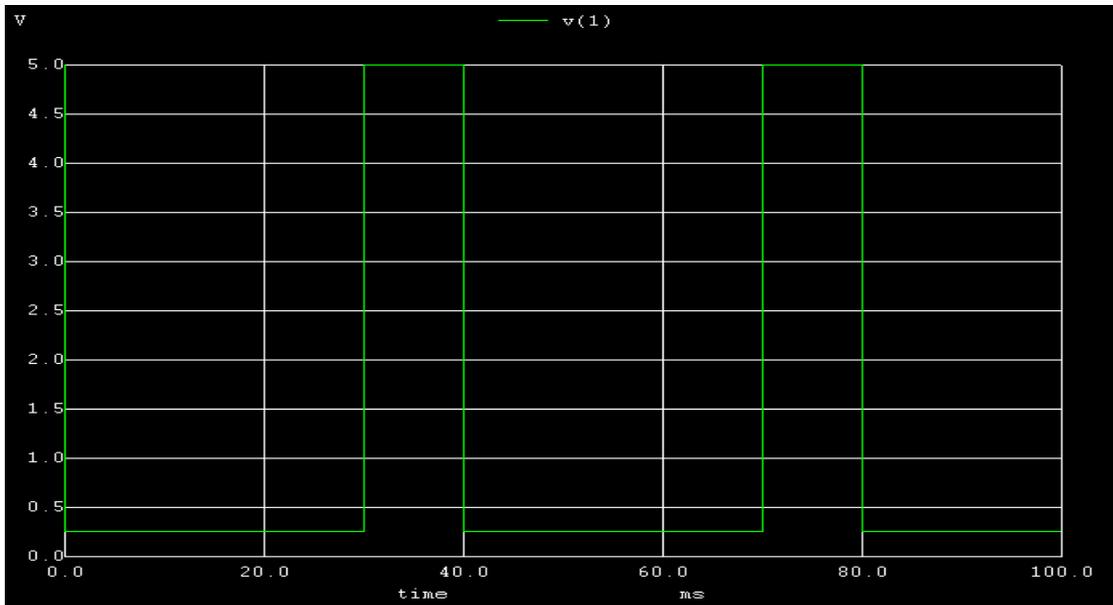


**B:**



**Output Waveform:**

**Q:**



**Conclusion:**

**Date:**

**Signature of the Student**

**NAME:**

**ROLL NO.:**

**GROUP ID:**

**SUB GROUP NO.:**

**Experiment Mark:            / 20**

**Instructor's Signature**