**2.2.** **DIODE LOGIC GATES**

Diode can be used to form logic gates, which perform some of the logical operations required in digital computers.

**2.2.1- AND Gate**

 **Truth table**

**E2**

**E1**

**V0**

**0 V**

**0V**

**+5V**

**+5V**

**0 V**

**+5V**

**0V**

**+5V**

**0 V**

**0V**

**0V**

**+5V**



The output of AND Gate becomes 5V only when all input are equal to 5V . The output of OR Gate becomes 5V if one or both inputs are 5V.

**EXAMPLE 2.5**

Determine Vo and I for the logic AND gate of Fig.(2-10)



**SOLUTION**









**2.2.2- OR Gate**

 **Truth table**

**E2**

**E1**

**V0**

**0 V**

**0V**

**+5V**

**+5V**

**0 V**

**+5V**

**0V**

**+5V**

**0 V**

**+5V**

**+5V**

**+5V**





 **logic OR Gate**

**Y=A+B**

**EXAMPLE 2.6**

Determine Vo and I for the network of Fig.(2-11)



Fig.(2-11)

**SOLUTION**





