BEEE UNIT-5 IMP

Explain the half and full adder circuits with their logic tables.

Draw and explain VI characteristics of diode.

Explain different operating regions of a Bipolar Junction Transistor.

Simplify the Boolean function $Z = AB+\bar{A}C+BC$, therefore design the logic circuit using AND and OR logic gates.

Explain the working principle of JK flip-flop.

Convert as directed: 7

निरूपण करें।

i) $(39)_{10}$ decimal to $(?)_2$ binary

ii) $(1213)_8$ octal to $(?)_{10}$ decimal

iii) $(16E)_{16}$ Hexadecimal to $(?)_2$ binary

iv) $(10101011)_2$ binary to $(?)_8$ octal

What is a transistor? Draw electrical symbol of transistor. Also describe the currents in a typical transistor? 7

Logic gates

Explain how a transistor acts as switch?

Differentiate between level and edge triggering. Draw the logic circuit and truth table for J K flip flop.

De Morgan's Theorem