

EE6391E POWER ELECTRONICS LAB

SIMULATION EXPERIMENTS

FIRST CYCLE

List of experiments

3. Modelling and Simulation of Buck, Boost and Buck-Boost Converters
6. Modelling and Simulation of Isolated DC/DC Converters (Fly back & Forward Converters)
7. Study of Phase Controlled Rectifiers and PWM Rectifiers

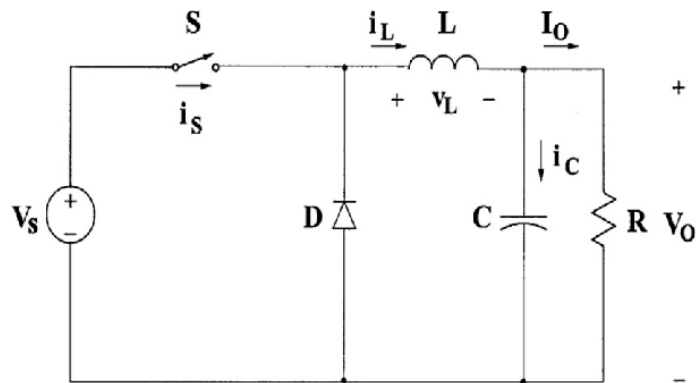
Experiment 3

Modelling and Simulation of Buck, Boost and Buck-Boost Converters

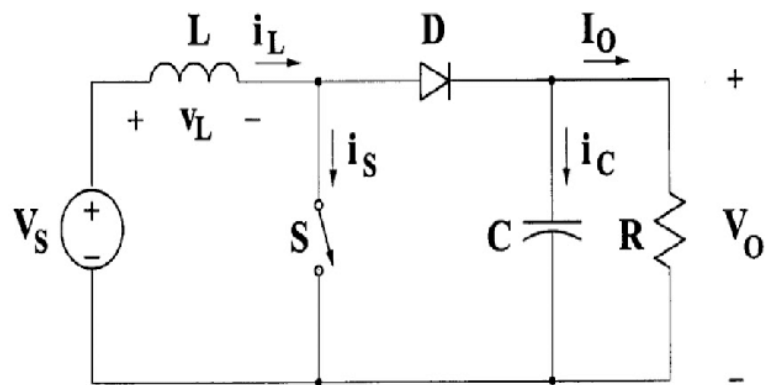
Aim: To model and simulate Buck, Boost and Buck – Boost converters.

Circuit diagram:

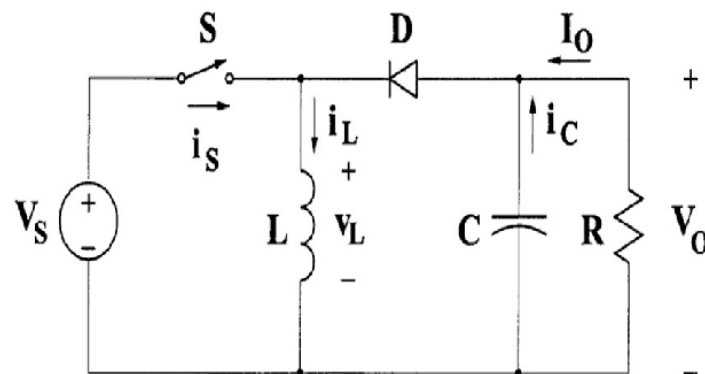
Buck Converter



Boost Converter



Buck Boost Converter



Design Equations:

Write equations for each converter separately keeping space for value substitution.

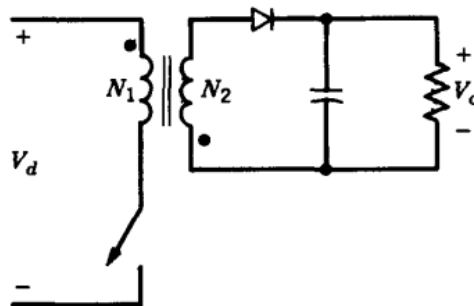
Results and waveforms:**Experiment 6**

Modelling and Simulation of Isolated DC/DC Converters (Fly back & Forward Converters)

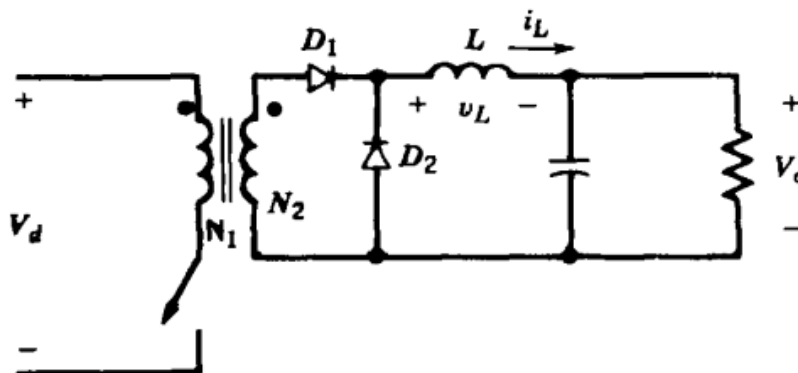
Aim: To model and simulate isolated DC DC converters.

Circuit diagram:

Flyback converter



Forward converter

**Design Equations:**

Write equations for each converter separately keeping space for value substitution.

Results and waveforms:

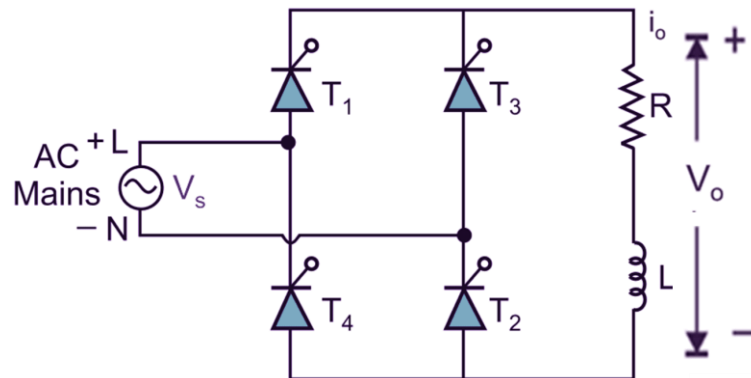
Experiment 7

Study of Phase-Controlled Rectifiers and PWM Rectifiers

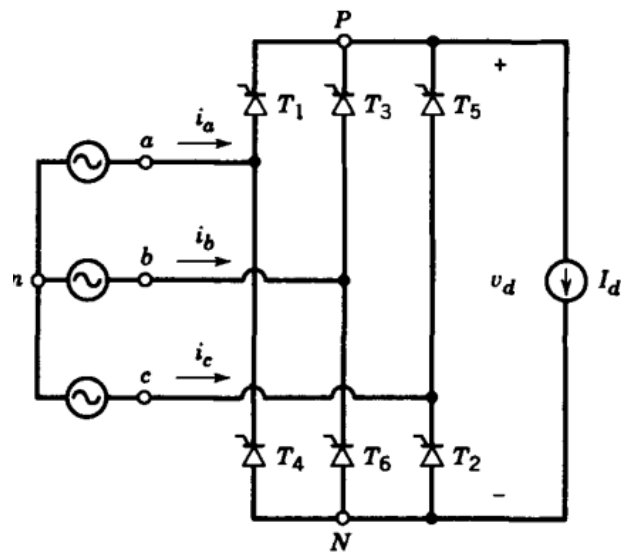
Aim: To study phase controlled rectifiers and PWM rectifiers.

Circuit diagram:

Phase controlled rectifiers



PWM Rectifiers



Design Equations:

Write equations for each converter separately keeping space for value substitution.

Results and waveforms: