# POWER ELECTRONICS II

ASSIGNMENT 01

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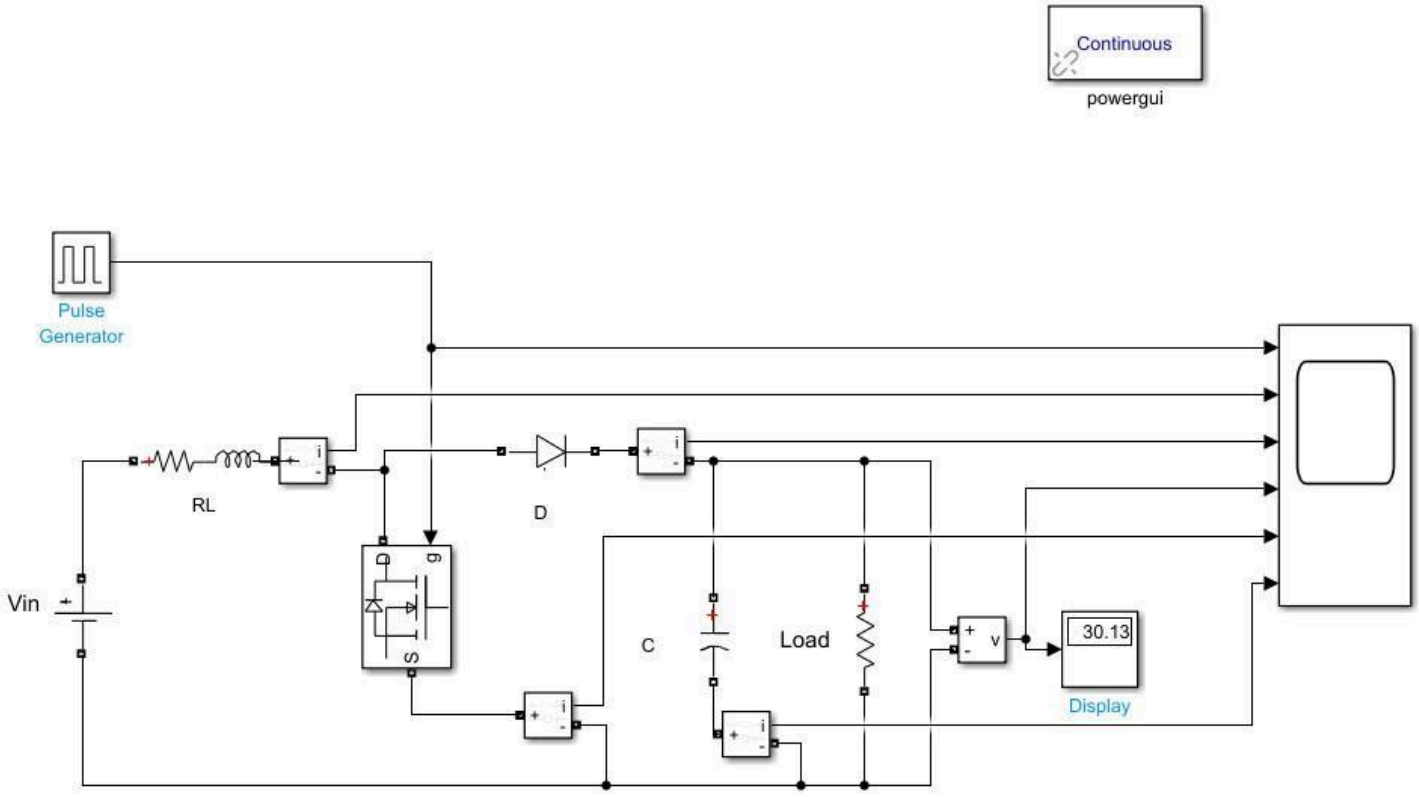
Enrolment No. GJ8949
Course Code: EEC3210




BOOST CONVERTER

# CIRCUIT MODEL

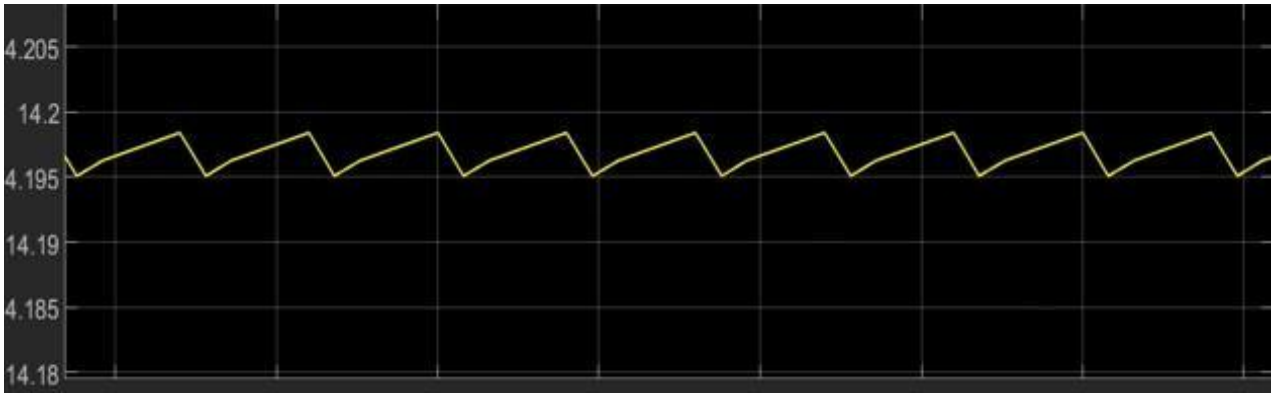
## CONTINUOUS CONDUCTION MODE

R=100 Ω  C=400 µF  Vin=12 V  f= 100KHz

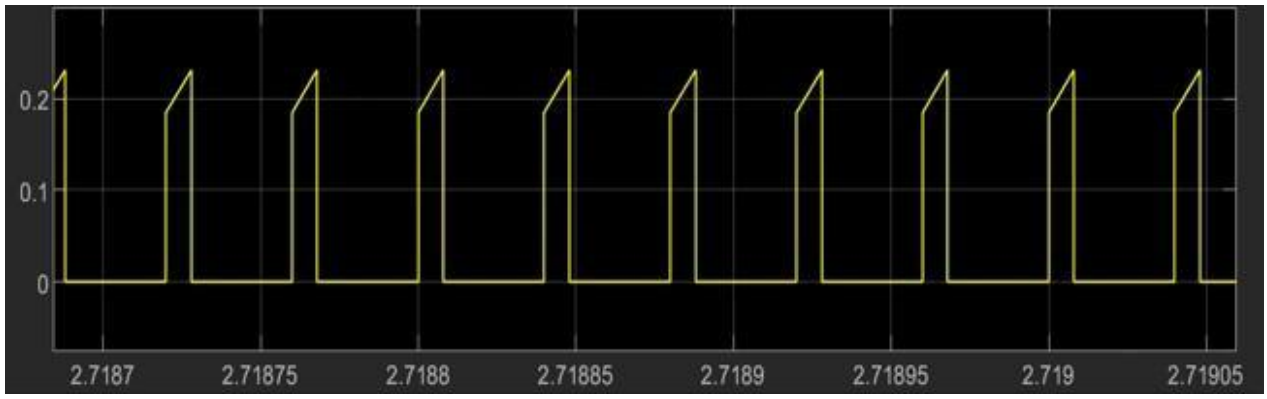
## # WAVEFORMS:

1) For L=2mH and D=0.2

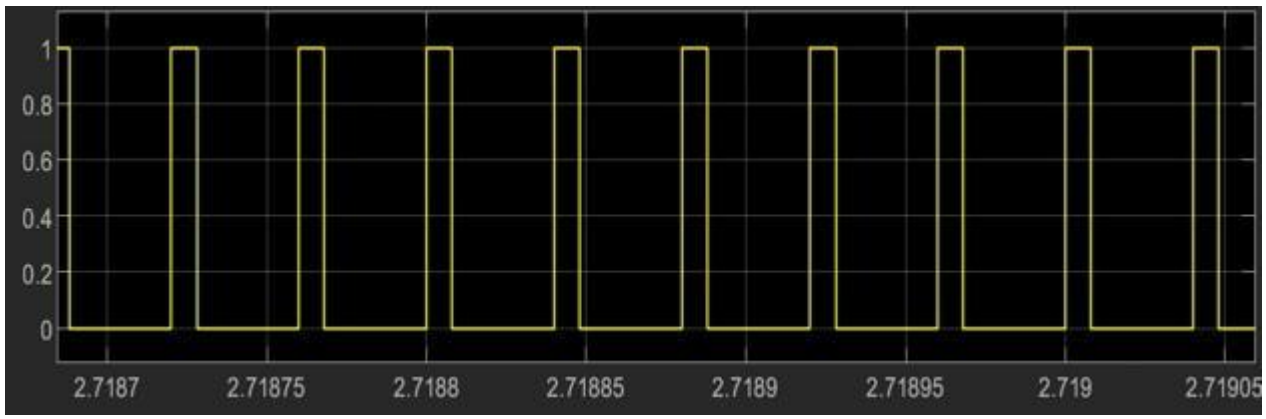
Input Voltage



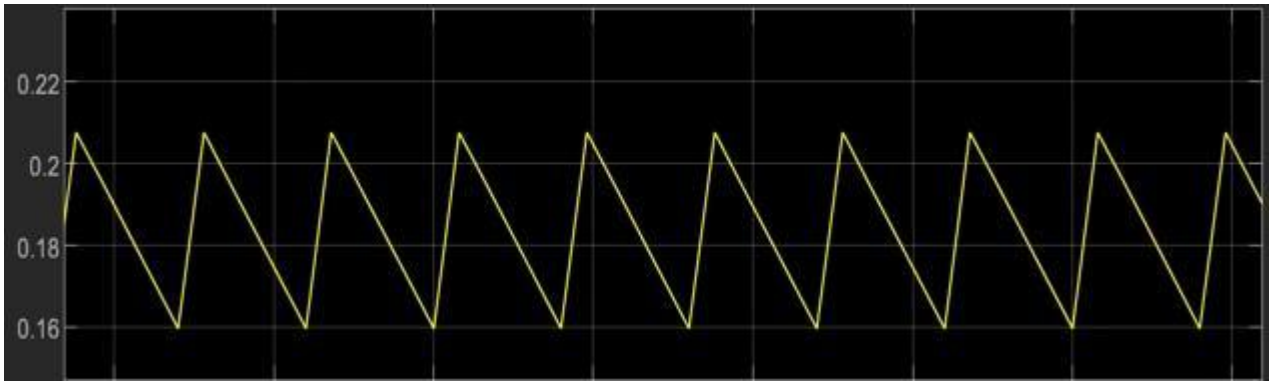

Output Voltage



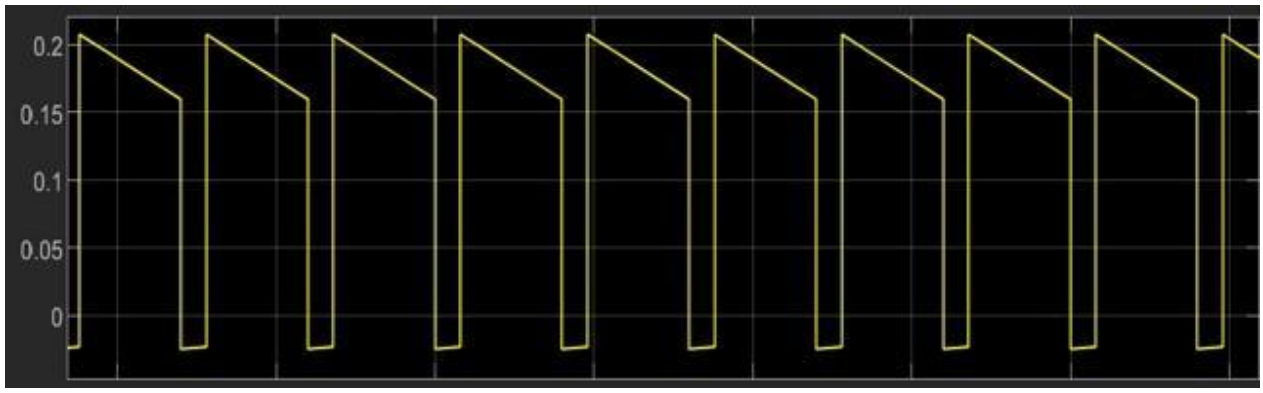

Switch Current




Clock Pulse



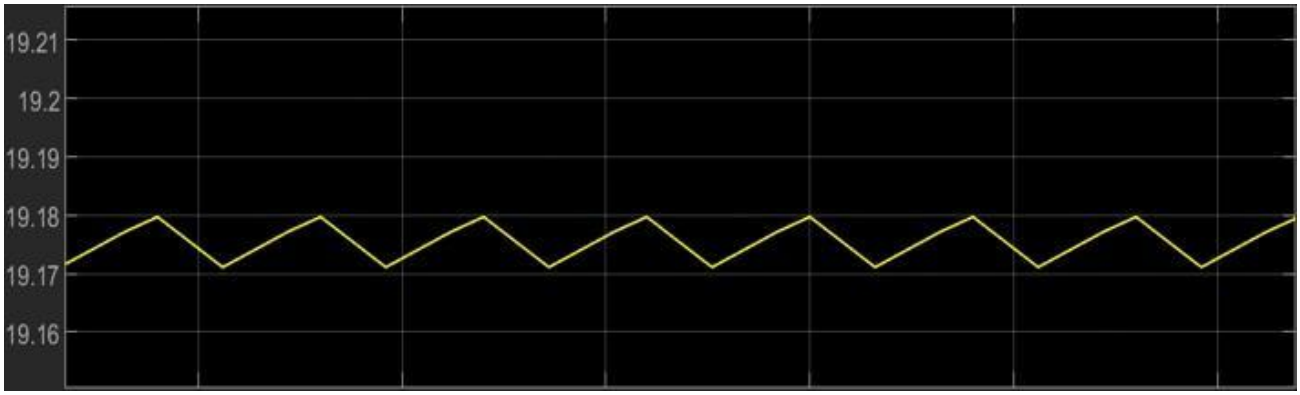

Inductor Current



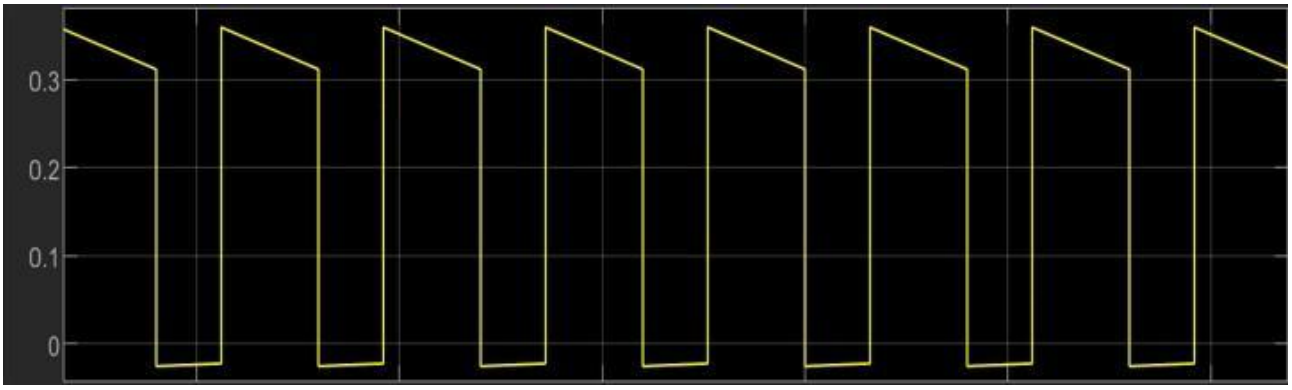

Diode Current

2) For L=4mH and D=0.4

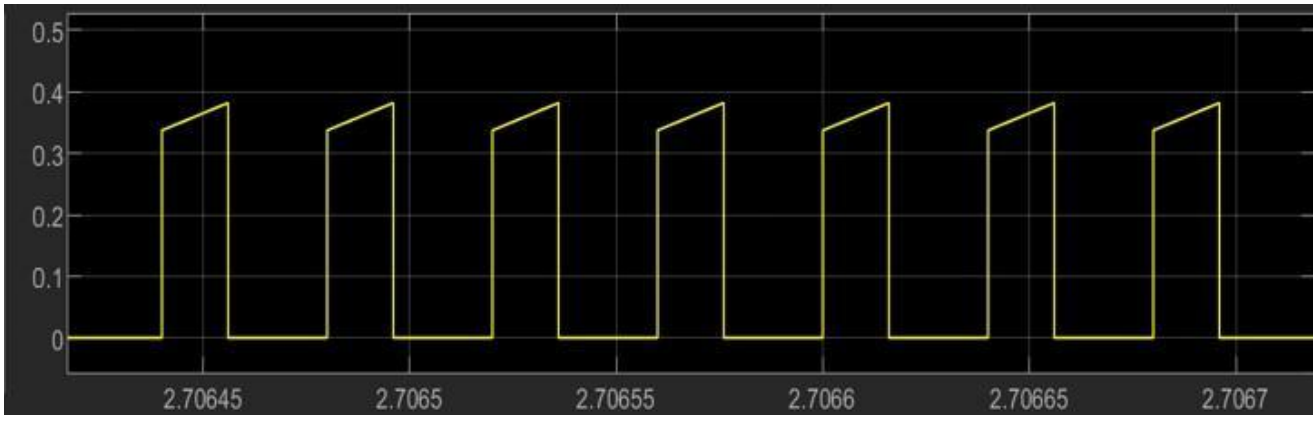
Input Voltage



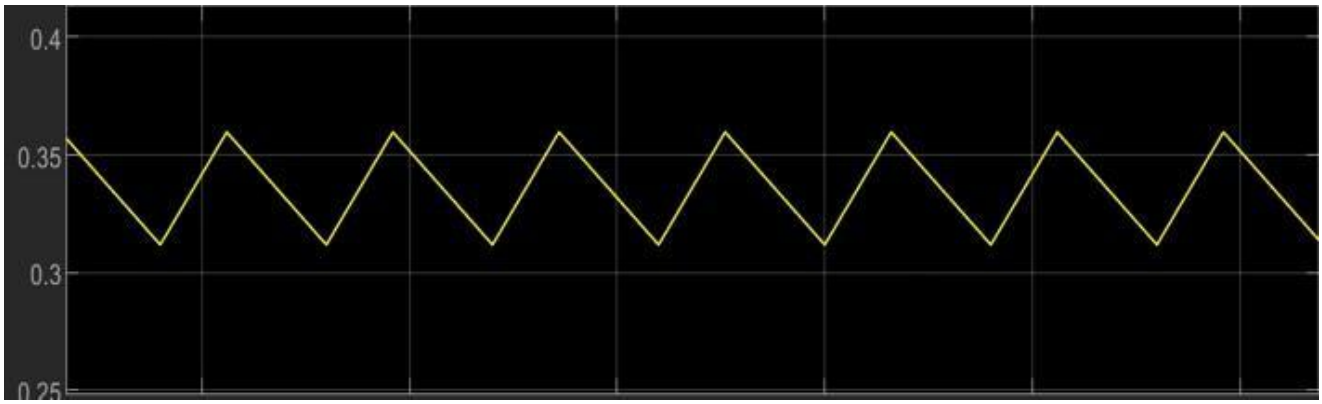

Output Voltage



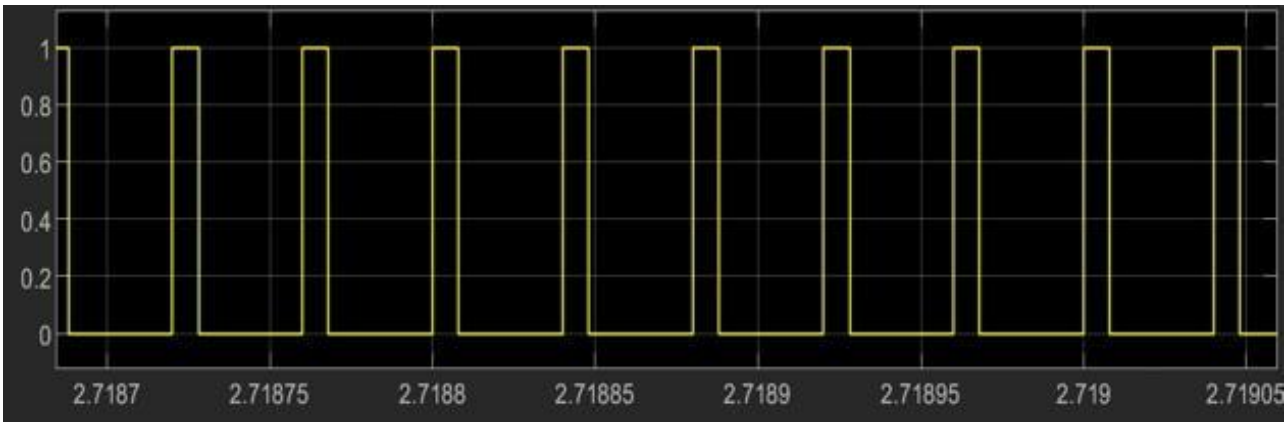

Diode Current




Switch Current




Inductor Current




Clock Pulse

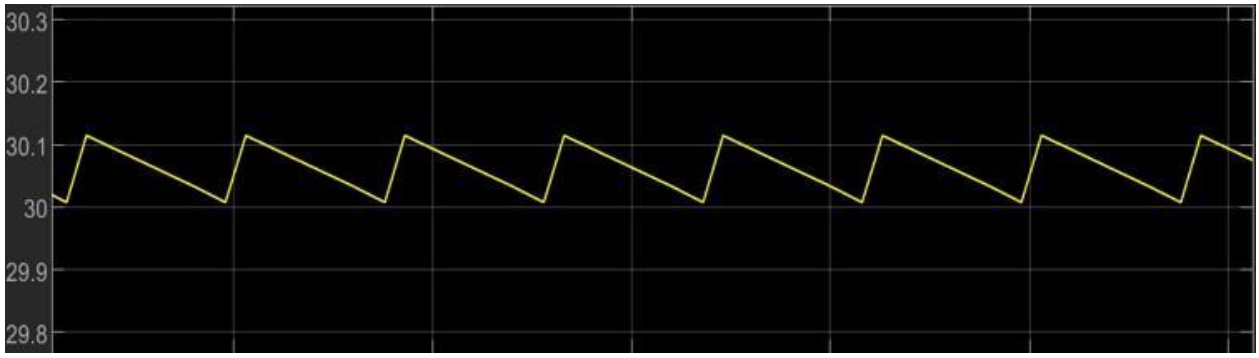
## DISCONTINUOUS CONDUCTION MODE

R=100 Ω C=100 µF Vin=12 V f= 100KHz

## # WAVEFORMS:

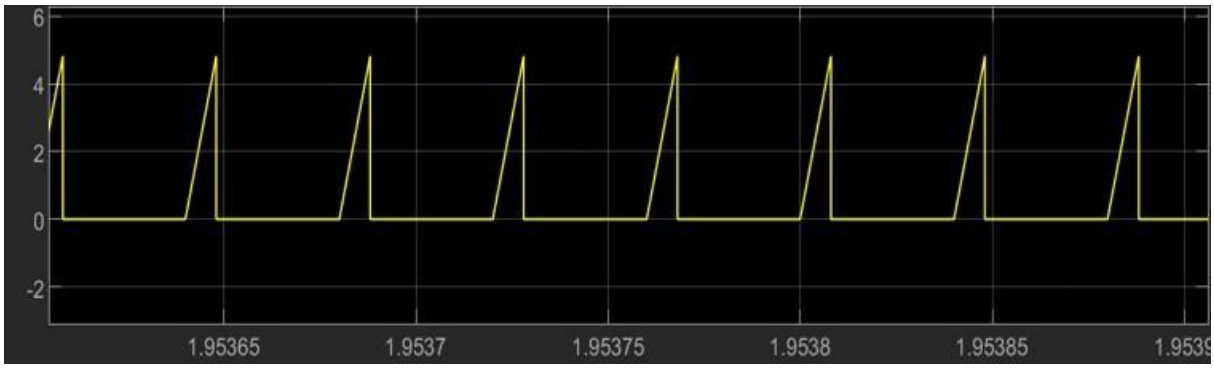
1) For L=20µH and D=0.2

Input Voltage



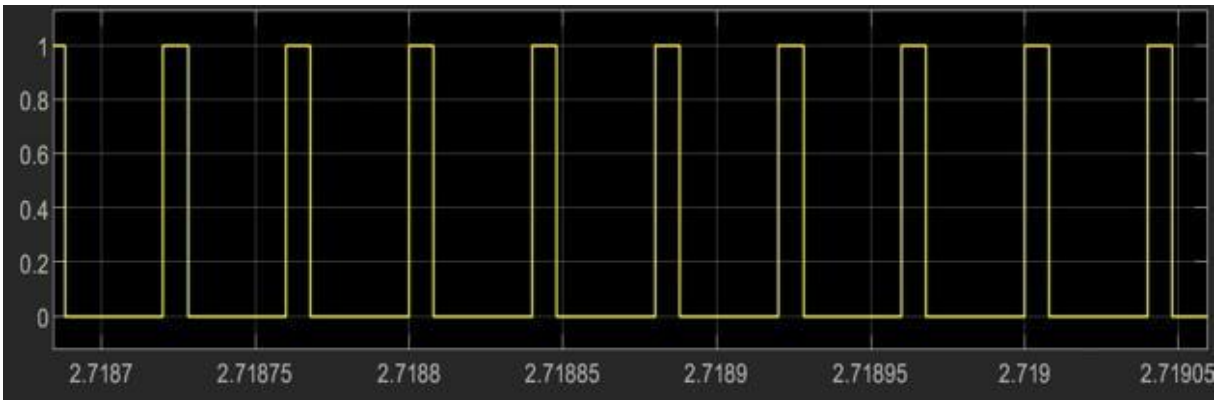

Output Voltage

Diode Current



Switch current

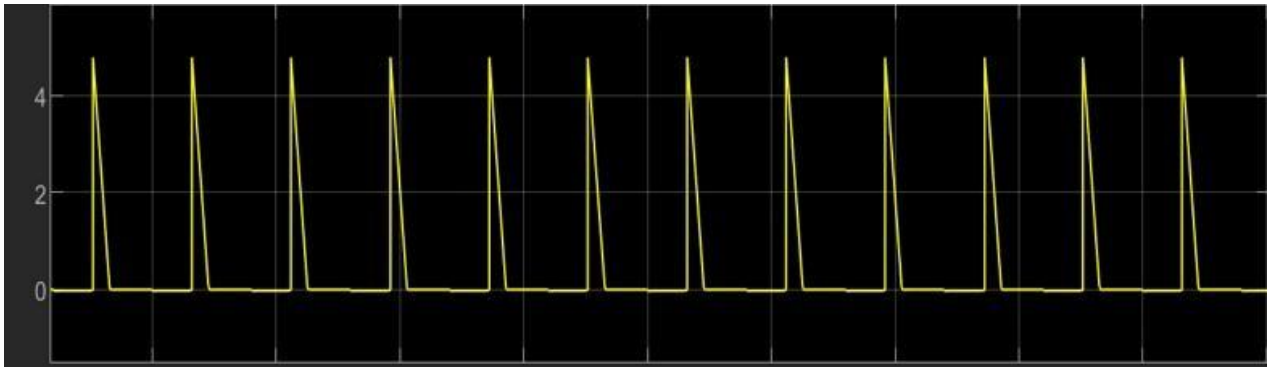
Inductor Current



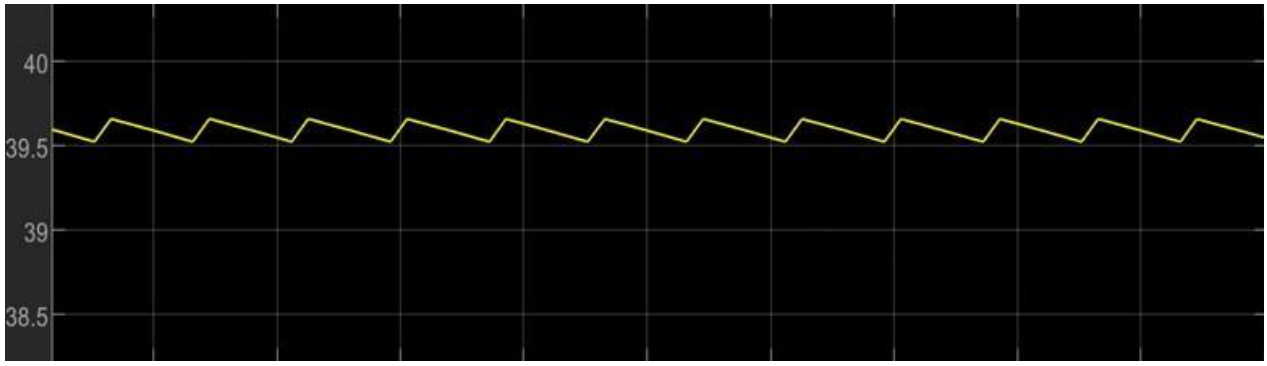

Clock Pulse

2) For L=40µH and D=0.4

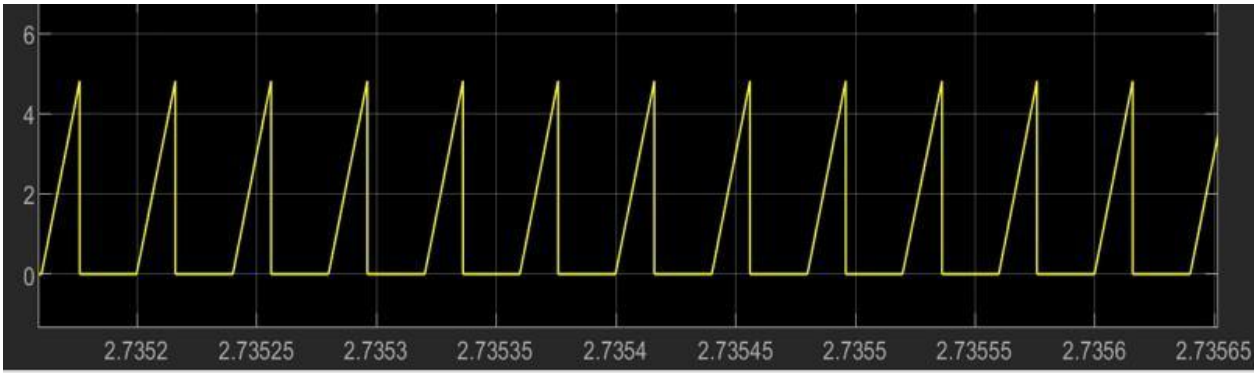
Input Voltage



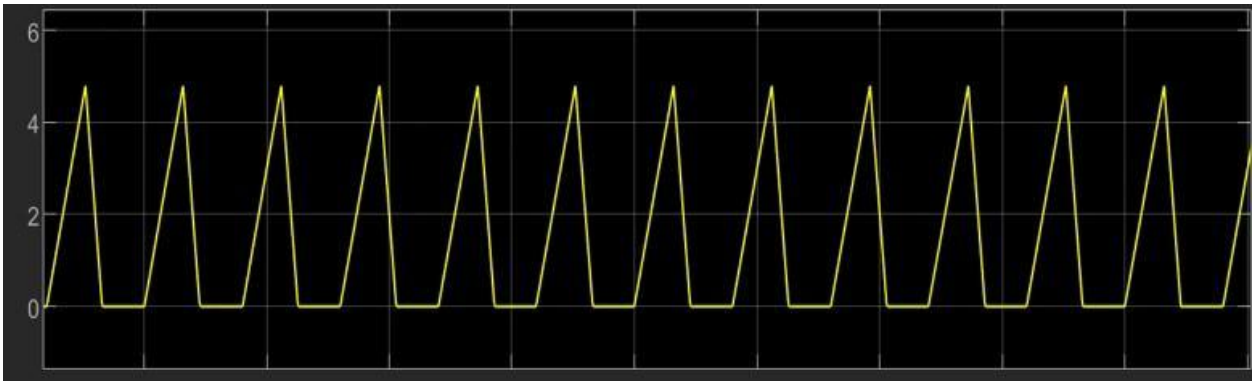

Diode Current



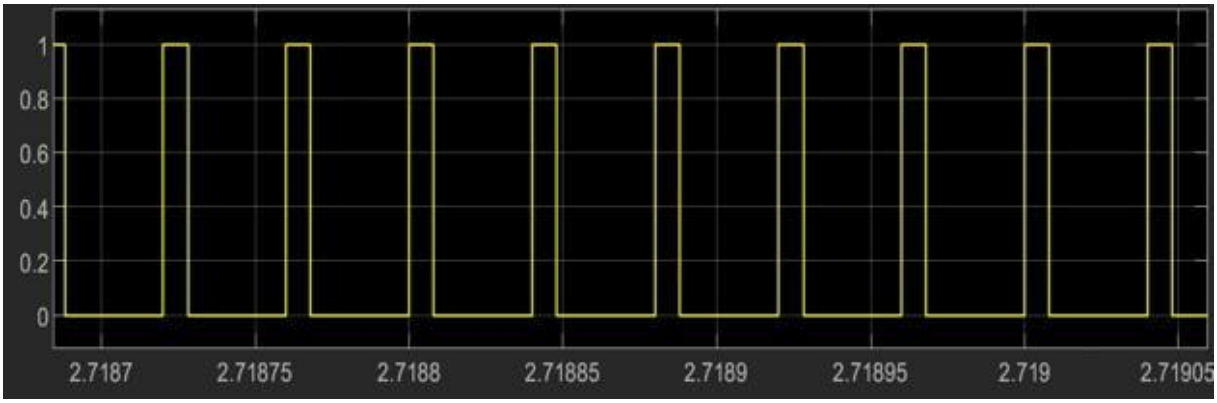

Output Voltage




Switch Current




Inductor Current




Clock Pulse