1a) Vin = 110V

D	Vout/Vin
0.1	0.1
0.2	0.2
0.3	0.3
0.4	0.4
0.5	0.5
0.6	0.6
0.7	0.7
0.8	0.8
0.9	0.9

1b)

D = 0.5

For CCM L = 0.2mH

Vout = 55 Volts

For DCM L = 0.5uH

Vout = 91.71 Volts

CCM	DCM
55	91.71

2a)

Case i)

Parasitic Resistance = 0ohms

Vin = 57

D	Vout	Vout/Vin
0.1	-6.332	-0.11109
0.2	-14.25	-0.25
0.3	-24.42	-0.42842
0.4	-37.99	-0.66649
0.5	-56.97	-0.99947
0.6	-85.48	-1.49965
0.7	-133	-2.33333
0.8	-228	-4
0.9	-513	-9

Case ii)

Parasitive Resistance = 5% RL = 0.576

Vin = 57

D	Vout	Vout/Vin
0.1	-5.964	-0.10463
0.2	-13.21	-0.23175
0.3	-22.16	-0.38877
0.4	-33.36	-0.58526
0.5	-47.47	-0.83281
0.6	-65.12	-1.14246
0.7	-85.48	-1.49965
0.8	-101.3	-1.77719
0.9	-85.5	-1.5

2b

III)

Duty ratio	Input Current	Output Current
0.1	0.147	-5.486
0.2	0.5	-1.235
0.3	0.9	-2.115
0.4	1.817	-3.292
0.5	2.47	-4.92
0.6	4.192	-7.363
0.7	8.566	-11.45
0.8	22.44	-19.62
0.9	107.77	-44.27

2c)

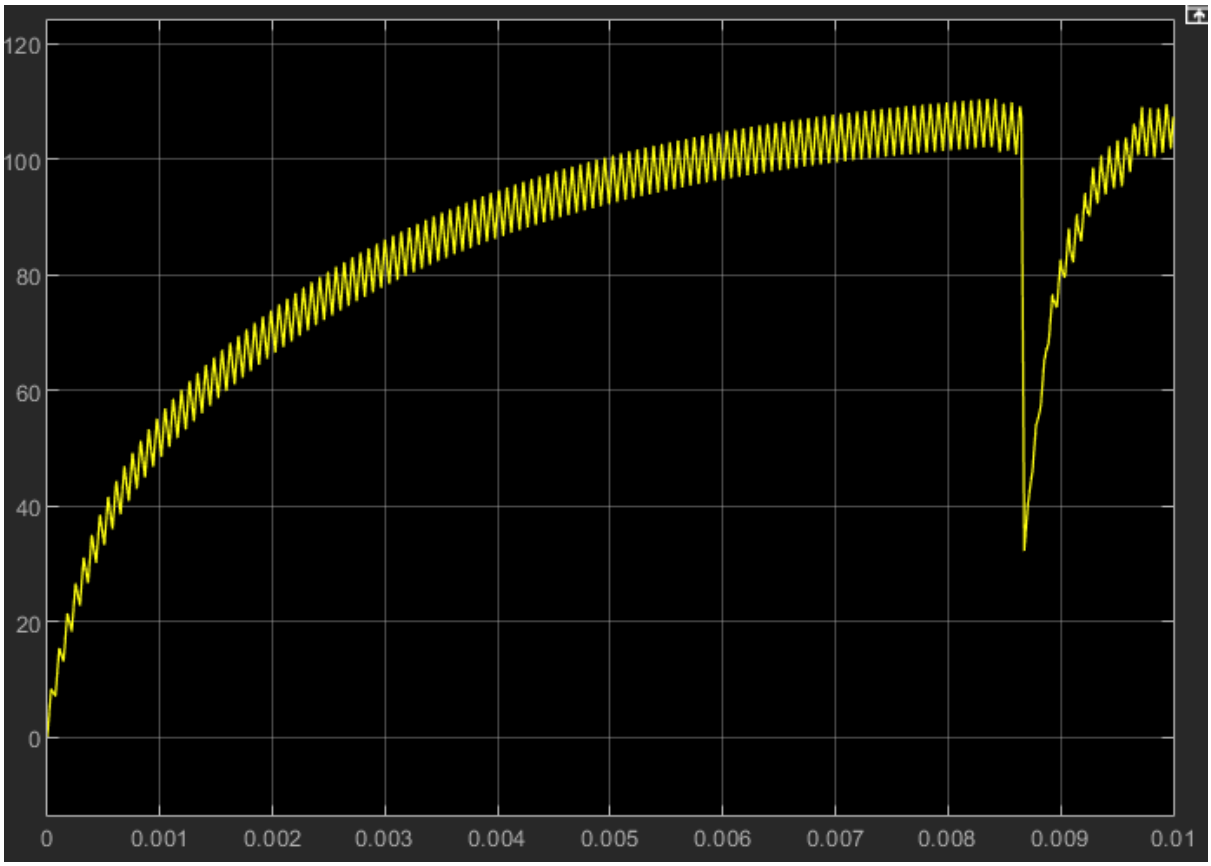
II)

From calculation Fs = 13.839KHz is verge

IL at 7Khz = 58.54Amps

IL at 13.8 = 104.5Amps

Il at 14Khz = 68.85Amps



At 13.8Khz graph.