

ONE TIME EXIT SCHEME

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10EC73

Seventh Semester B.E. Degree Examination, April 2018
Power Electronics

Q. No. 5 c.

For the Auxiliary commutation circuit shown below Fig.Q5(c), compute the value of commutation capacitor 'C' and commutating inductor 'R' for the following data:

$E_{dc} = 50 \text{ V}$, $I_{L(max)} = 50 \text{ A}$, t_{off} of $SCR_1 = 30 \mu\text{s}$, chopping frequency $f = 500 \text{ Hz}$ and the load voltage variation required is 10% to 100%. Assume 50% tolerance on turn-off time of SCR_1 .

(08 Marks)

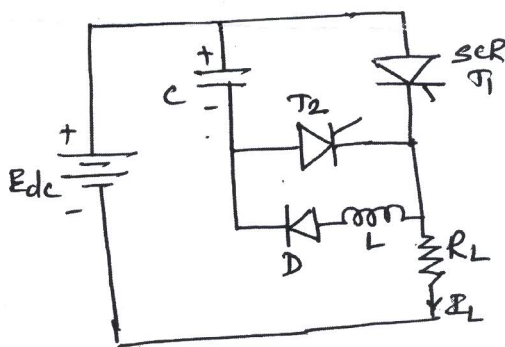


Fig.Q5(c)