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**Question Paper Code: 95T07**

M.E. DEGREE EXAMINATION, MAY 2022

Elective

19PPE507 - SWITCHED MODE AND RESONANT CONVERTERS

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Explain about the reactive elements in power electronic systems CO1- U (20)  
Or  
(b) Explain about the capacitors for power electronic applications CO1- U (20)
2. (a) Derive the transfer function and Obtain the gain and phase plot of the non-ideal boost converter CO2-App (20)  
Or  
(b) Analyze the operation of CUK converter and derive output voltage equation. CO2-Ana (20)
3. (a) Analyze Slope Compensation to Correct Problems in Current Mode control method? CO3- Ana (20)  
Or  
(b) Analyze the typical Current Mode PWM Control? CO3- Ana (20)
4. (a) Analyze the resonant dc link inverters with zero voltage switching? CO4- Ana (20)  
Or  
(b) Briefly explain about electrical isolation in feedback loop CO4- U (20)
5. (a) Draw a block schematic and explain the principle of operation of linear power supplies. What are the main shortcomings and applications? CO5-App (20)  
Or  
(b) Analyze how EMI is Generated and Filtered in SMPS? CO5-Ana (20)

