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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

M.Tech I Year II Semester Regular Examinations October-2020

SWITCHED MODE AND RESONANT CONVERTERS

(Power Electronics)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

- 1 a Explain the Buck Switching Regulator with neat sketch. 8M
b List out the advantages of Buck Switching Regulator. 4M

OR

- 2 a Explain the modes of operation of Boost Switching Regulator with neat sketch. 8M
b List out the advantages of Boost Switching Regulator. 4M

UNIT-II

- 3 a Explain the current-mode control in SMPS with necessary wave forms. 8M
b List out the applications of SMPS. 4M

OR

- 4 Explain the flux-imbalance problem in bridge transformer. 12M

UNIT-III

- 5 Explain briefly about the resonant converters with necessary waveforms. 12M

OR

- 6 Explain transformer core materials, geometries and peak flux density selection. 12M

UNIT-IV

- 7 Explain the current mode control for push-pull converter with necessary waveforms. 12M

OR

- 8 a What are the deficiencies and limitations of current mode control? 8M
b Explain the advantages of current mode control. 4M

UNIT-V

- 9 Discuss the Layout of Power Circuit for minimum EMI in SMPS with neat sketch. 12M

OR

- 10 Write short notes on Shielding and Grounding to reduce EMI in SMPS. 12M

*** END ***