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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**M TECH II Year I Semester Regular Examinations Nov/Dec 2019****HVDC TRANSMISSION SYSTEMS****(Power Electronics)**

Time: 3 hours

Max. Marks: 60

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

- 1 a Compare different performance aspects of AC and DC transmission. **6M**
b Draw schematic diagrams of HVDC links and explain the functions of elements in it. **6M**

OR

- 2 With the help of neat schematic diagram explain the operation of three phases, six pulse Grectz circuit and derive equations for average voltage and current. **12M**

UNIT-II

- 3 a Explain what the different special features of the converter transformer. **6M**
b Explain the working of twelve pulse converter circuit? **6M**

OR

- 4 Explain the Effect of Commutation Failure, Misfire and Current Extinction in LCC links? **12M**

UNIT-III

- 5 Write short notes on the following terms i) Individual phase control **12M**
ii) Constant extinction angle

OR

- 6 Explain in detail about equidistance firing angle scheme. Also list the draw backs of this scheme? **12M**

UNIT-IV

- 7 What are the different types of converter faults? Explain briefly about converter Faults? **12M**

OR

- 8 a Briefly explain what the different harmonic instability problems are. **6M**
b Explain the DC power modulation scheme used in interconnected operations of AC and DC systems. **6M**

UNIT-V

- 9 a Discuss series multi terminal HVDC system and its control. **6M**
b Give the comparison between series and parallel MTDC systems. **6M**

OR

- 10 Discuss different types of MTDC systems and explain the control scheme in any one MTDC system. **12M**

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