Code No: D5402 **R09**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech II - Semester Examinations March/April, 2011
HIGHVOLTAGE D.C. TRANSMISSION
(POWER ELECTRONICS & ELECTRIC DRIVES)

Time: 3hours **Max.Marks:60**

Answer any five questions
All questions carry equal marks

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1. Give detailed comparison between HVDC and AC transmission. [12]

2. Derive average DC voltage equation for rectifier and inverter in terms of ignition angle, commutation reactance and extinction angle. [12]

3. Why HVDC control is necessary and explains various poritions of HVDC control characteristics. [12]

4. What is meant by individual phase control and what are the draw backs of this control and explain how these drawbacks can be eliminated? [12]

5. What is the role of VDCOL in HVDC control and explain the circumstances under which the VDCOL control is initiated? [12]

6. Discuss in detail how AC-DC load flow is Different compare to conventional power flow studies. [12]

7. What is the significance of short circuit Ratio and Effective Short circuit Ratio and explain the impact of SCR on the performance of the HVDC system? [12]

8. What is purpose of filters in HVDC systems and give a design methodology for low pass filter? [12]

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