

R09

Code No: D5402

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 portions 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]
