

***B. Tech Degree VII Semester (Supplementary Examination
June 2011***

**EE 705 (B) HIGH VOLTAGE DC TRANSMISSION
(2006 Scheme)**

Time : 3 Hours

Maximum Marks : 100

PART - A
(Answer ALL questions)

(8 x 5 = 40)

- I. (a) What are the applications of DC transmission?
(b) Explain about the over voltage valve protection of thyristor valve.
(c) Explain the effect of source reactance on converter without AC filters.
(d) Explain the inverter characteristics.
(e) Discuss briefly about the individual phase control of DC links.
(f) Write short note on DC surge arresters.
(g) What are the different functions of the smoothing reactors?
(h) Explain about the sources of reactive power.

PART – B

(4 x 15 = 60)

- II. Compare AC and DC transmission system. (15)
- OR**
- III. (a) Explain about the thyristor valve design considerations. (5)
(b) Discuss briefly about the different types of thyristor valve tests. (10)
- IV. With suitable wave forms analyse the working of Graetz circuit with and without overlap. (15)
- OR**
- V. Explain briefly about the working of bridge converter circuit in two and three valve conduction modes. (15)
- VI. Explain briefly about the principles of DC link control. (15)
- OR**
- VII. Explain briefly about different types of converter faults. (15)
- VIII. Explain about the basic concepts, types and characteristics of DC breakers. (15)
- OR**
- IX. Write short note on: (15)
(i) Different types of multi terminal DC system
(ii) Control and protection of MTDC system.