

Sub Code: MEET-122

ROLL NO.

Model Question Paper

COURSE: M.TECH.

BRANCH: ELECTRICAL ENGINEERING

SEMESTER: 1

SUBJECT: HVDC TRANSMISSION SYSTEMS

Duration: 3:00 hrs

Max marks: 100

Note: Attempt all questions.

1. Attempt any four parts of the following.

5x4 = 20

- A. What are the applications of DC Transmission and also mention the modern trends in HVDC Technology?
- B. Explain the basic conversion Principles of a HVDC Transmission Systems?
- C. Give the comparison between AC and DC Transmission and explain the factors in detail?
- D. Draw the typical layout of HVDC transmission Systems and explain each part?
- E. Explain the basic conversion principles of HVDC Transmission Systems?
- F. Explain the limitation of HVDC Transmission?

2. Attempt any two parts of the following.

10x2=20

- A. With the help of neat schematic diagram explain the operation of 3 Phase 6 Pulse Greatz`'s Circuit?.
- B. Explain the rectifier and inverter operation of a power converter and also write a equivalent circuit of converter?
- C. What is voltage dependent current order limit(VDCOL) ?Explain in details?

3. Attempt any two parts of the following.

10x2=20

- A. What is Harmonics and filters? Explain the characteristics of current harmonics?
- B. Explain Filter with voltage source converter in HDVC scheme?.
- C. List Out different type of multi terminal DC links with suitable diagrams?

4. Attempt any two parts of the following.

10x2=20

- A. Give detailed explanation of about two firing angle controls?
- B. Explain the Principles of Link Control in a VSC HVdc system?
- C. Explain Generation of harmonics by converters?

5. Attempt any two parts of the following.

10x2=20

- A. Discuss series-parallel multi-terminal HVDC system and its control?
- B. What are the advantages of Multi-terminal DC links?.

C. Discuss series-parallel multi-terminal HVDC system and its control?