

Electrostatic Voltmeters – Sphere Gaps - High current shunts- Digital techniques in high voltage measurement.

UNIT 5: HIGH VOLTAGE TESTING & INSULATION COORDINATION

9

High voltage testing of electrical power apparatus as per International and Indian standards – Power frequency, impulse voltage and DC testing of Insulators, circuit breakers, bushing, isolators and transformers- Insulation Coordination& testing of capabilities

TOTAL: 45 PERIODS

COURSE OUTCOMES: At the end of the course, the student will be able to

CO1: Ability to understand Generation and measurement of high voltage.

CO2: Ability to understand High voltage testing.

CO3: Ability to understand various types of over voltages in power system.

CO4: Ability to measure over voltages.

CO5: Ability to test power apparatus and insulation coordination

CO-PO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	2	2	1						1	1	1	1
CO2	3	2	2	2	2						1	2	2	2
CO3	2	2	2	2	1						2	2	1	2
CO4	2	2	2	2	1						2	3	2	2
CO5	2	3	2	2	1						1	2	1	1

TEXT BOOKS:

1. 1. S.Naidu and V. Kamaraju, 'High Voltage Engineering', Tata McGraw Hill, Fifth Edition, 2013.

2. E. Kuffel and W.S. Zaengl, J.Kuffel, 'High voltage Engineering fundamentals', Newnes Second Edition Elsevier , New Delhi, 2005.

3. C.L. Wadhwa, 'High voltage Engineering', New Age International Publishers, Third Edition, 2010.

REFERENCE BOOKS:

1. "L.L. Alston, 'High Voltage Technology', Oxford University Press, First Indian Edition, 2011.

2. Mazen Abdel – Salam, Hussein Anis, Ahdab A-Morshedy, Roshday Radwan, High Voltage Engineering – Theory & Practice, Second Edition Marcel Dekker, Inc., 2010.

3. Subir Ray,' An Introduction to High Voltage Engineering' PHI Learning Private Limited, New Delhi, Second Edition, 2013.

WEB RESOURCES:
1. High voltage DC Transmission https://archive.nptel.ac.in/courses/108/104/108104013/
2. Generation of High Test voltages https://archive.nptel.ac.in/courses/108/104/108104048/