

Roll No.

OLE-3244

B. Tech. 5th Semester (EE) (Elective - I) Examination – April, 2021

HIGH VOLTAGE ENGINEERING

Paper : PEC-EE-07-G

Time : Three Hours]

[Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) What is Corona Discharge ?
- (b) What do you mean by Intrinsic Breakdown ?
- (c) What is Impulse voltage ?
- (d) Define Loss Factor.
- (e) What is Radio Interference Measurements ?
- (f) Define Dielectric Constant. $2.5 \times 6 = 15$

UNIT – I

2. What is Collision Process and Ionization Processes ?
Explain Townsend's Current Growth Equation. 15

OR

3. Explain the process of Conduction and Breakdown in
Pure Liquids in detail. 15

UNIT – II

4. Explain Generation of High Direct Current Voltages
and Generation of Impulse Voltages in detail. 15

OR

5. Discuss the use of Cathode Ray Oscillographs for
Impulse Voltage and Current Measurements. 15

UNIT – III

6. Discuss Lightning Phenomenon in detail. 15

OR

7. What is Partial Discharge Measurements ? Explain
principles of insulation coordination on High Voltage
and Extra High Voltage Power Systems. 15

UNIT – IV

- 8.** Explain the process of Testing of Isolators and Circuit Breakers in detail. 15

OR

- 9.** Discuss the Testing of HVDC Values and Equipment. 15
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