

Roll No. ()

EE-7001 (CBGS)

B.E. VII Semester

Examination, November 2019

Choice Based Grading System (CBGS)

High Voltage Engineering

Time : Three Hours

Maximum Marks : 70

- Note:* i) Attempt any five questions.
ii) All questions carries equal marks.

1. a) Describe the advantages of Transmitting electrical power at high voltages. 5
b) Justify the need for generating high voltages in Laboratory. 5
c) Write important applications of High voltages. 4
2. a) Discuss the various factors which affect the breakdown of Gases. 4
b) What is Paschen's law and write its significance? 5
c) What are the limitations of Townsend's theory? 5
3. a) Define Corona. Explain how corona discharge takes place. 6
b) Define Intrinsic breakdown, Avalanche breakdown, Thermal breakdown and Electromechanical breakdown. 8

4. a) What is Tesla coil? 3
b) Write the advantages of series resonant circuit. 5
c) Derive the expression for Output impulse voltage. 6
5. With a neat circuit diagram, explain the triggering of the impulse generator with a three Electrode gap method. 14
6. a) With a neat sketch explain the principle of operation of an Electrostatic voltmeter for HVAC measurement. What are the merits and demerits? 8
b) Describe in detail about sphere gap for measurement of high voltage. 6
7. a) What is Surge current? Why does a surge current occur? Mention its prevention. 8
b) What are the merits of series resistance Micro ammeter method? 6
8. Write short notes on following.
a) Testing of isolators. 5
b) Testing of circuit breakers 4
c) Testing of Transformers 5

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