

Roll No .....

## EX-7004 (1) (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 carry equal marks.

1. a) What is the advantage of transmitting electrical power at High voltage and importance of high voltage? 7  
b) Discuss the Basic classification of testing voltages in high voltage engineering. 7
2. a) Explain the criteria for gaseous insulation breakdown based on Townsends theory with limitations. 7  
b) State Paschen's law and Streamer's theory breakdown based on non uniform fields. 7
3. a) Describe Cockroft Walton circuit to produce DC high voltages. 7  
b) Define the standard impulse voltage wave. Why is it necessary to standardize the impulse wave for testing? 7
4. a) Explain with a neat diagram the principle of operation and construction of an electrostatic voltmeter. 7  
b) Discuss the advantages and limitations for high voltage measurements. 7

5. a) What are the different tests done on high voltage circuit breaker? Explain the procedure of each test. 7  
b) What is the procedure of conducting impulse test on high voltage transformer? 7
6. Draw the Marx circuit arrangement for multistage impulse generator. How is the basic arrangement modified to accommodate the wave time control resistance. 14
7. a) What is a Cascaded transformer? Explain why cascading is done. Describe with neat diagram a three stage cascaded transformer. 7  
b) Explain briefly various theories of breakdown in liquids dielectrics. 7
8. Write a short notes on :  
a) Testing of isolator 7  
b) Testing of circuit breaker 7

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