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Roll No

EE-7001-CBGS

B.E. VII Semester

Examination, December 2020

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.
b) Write important applications of High voltages.
2. a) Describe various of insulations used in power transformer. Explain the effect of oxidation on transformer oil.
b) Explain HV DC - voltage doubler circuit and Cockcroft-Walton type high voltage DC set.
3. a) Explain working of multistage Marx impulse generator.
b) Describe working principle of electrostatic voltmeter and define impulse voltage.
4. a) Write the advantages of series resonant circuit.
b) Derive the expression for Output impulse voltage.
5. a) Explain the different mechanisms by which breakdown occurs in solid dielectrics in practice.
b) How does the “Internal discharge” phenomena lead to breakdown in solid dielectrics?

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6. a) What is a composite dielectrics and what are its properties?
b) Describe the mechanism of short term breakdown of composite insulation.

7. Give the basic circuit for measuring the peak voltage of
 - i) A.C. voltage
 - ii) Impulse voltageWhat is the difference in measurement techniques in the above two cases?

8. Write short notes on following.
 - a) Testing of isolators.
 - b) Testing of circuit breakers
 - c) Testing of Transformers
