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Roll No

EE-7201-GS

B.E. VII Semester

Examination, December 2020

Grading System (GS)

High Voltage Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. Explain the tesla coil. How is damped high frequency oscillations obtained from a tesla coil?
2. Explain the partial discharge test on high voltage cables. How is a fault in the insulation located in this test.
3. a) Derive an expression for ripple voltage of a multistage Cockcroft-Walton circuit.
b) Explain clearly basic principle of operation of an electrostatic generator.
4. a) What are the requirement of a sphere gap for measurement of high voltage? Discuss the disadvantages of sphere gap for measurements.
b) Explain the principle of operation of electrostatic volt meter.
5. Discuss the terms “mobility of ions and electrons”, “diffusion coefficient” and “electron energy distributions”.

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6. Explain the generating voltmeter used for measuring high dc voltages. How does it compare with a potential divider for measuring high dc voltages?
7. Explain the various theories that explain breakdown in commercial liquid dielectrics.
8. Explain the following (Any two) :
 - a) Need for generating high voltages in laboratory.
 - b) Important applications of high voltage.
 - c) BIL.
 - d) Methods of insulation co-ordinator.

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