

High Voltage Engineering – Important Questions

1. Define High Voltage (HV). Write its applications sector-wise and list the advantages.
2. Explain the Marx Circuit used for the generation of multi-stage impulse (pulse) voltages.
3. Write short notes on the types of breakdown in solid dielectric materials.
4. Describe the Transformer Oil Filtration Process.
5. Explain the construction and working principle of a Van de Graaff Generator.
6. What is an Electrostatic Generator? Explain briefly.
7. Describe the Cockcroft–Walton Voltage Multiplier Circuit.
8. Explain the working of a Voltage Doubler Circuit.
9. Define Ionization. What are its different types?
10. Explain the phenomena of Treeing and Tracking in solid dielectric materials.
11. What is a Cascade Transformer? Explain its construction and applications.
12. Describe the concept of Thermal Breakdown in different dielectric media (solid, liquid, gaseous).
13. List the factors affecting the dielectric strength of gaseous media.
14. Explain the construction and working principle of a Resonant Transformer.
15. Define Dielectric Material. Write down any 7 examples with their dielectric strength values.
16. State Townsend's First Ionization Law.
17. Classify the different liquid dielectric materials used in high voltage applications.

18. Define the following terms with respect to insulating oils:

- Flash Point
- Fire Point
- Pour Point

19. Explain the Breakdown Voltage (BDV) Test of insulating oil with the help of a typical breakdown graph.

20. Differentiate between Thermal Breakdown and Erosion Breakdown.

21. Discuss the different characteristics of liquid dielectric materials.

This question bank does not include 1st chapter questions.
You have to cover it by yourself.
Already provided in self study.