

Code No: 138CP

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, July - 2021

HIGH VOLTAGE ENGINEERING

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) Explain different types of insulating materials used in
i) High voltage transformers and ii) H.V bushings
- b) How do you consider Vacuum as Insulator? Explain. [8+7]
- 2.a) State and explain Paschen's law? Give its limitations.
- b) What is ionization process? Explain different ionization processes. [8+7]
3. Discuss the various theories that explain breakdown in commercial liquid dielectrics. [15]
4. Explain the generation of high D.C voltages using Vaandee Graff generator. [15]
5. Explain various methods of measuring high Alternating currents. [15]
6. What are the partial discharges and how are they detected under power frequency operating conditions? [15]
7. What are the different power frequency tests done on Insulators? Discuss them in detail. [15]
8. Explain the principle of insulation coordination on H.V power systems. [15]

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