

R16

Code No: 138CP

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, December - 2020

HIGH VOLTAGE ENGINEERING
(Electrical and Electronics Engineering)

Time: 2 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

1. What is Finite Element Method for evaluation of field distribution? Discuss the procedure associated with this method and discuss its advantages and limitations. [15]
2. Discuss the applications of insulating materials in rotating machines and transformers. [15]
3. Describe the current growth phenomenon in a gas subjected to uniform electric fields. [15]
4. Explain Thermal breakdown in solid dielectrics. How this mechanism is more significant than the other mechanisms? [15]
5. Explain with neat sketches Cockroft-Walton voltage multiplier circuit. Explain clearly its operation when the circuit is (a) unloaded (b) loaded. [15]
6. What is Rogowski Coil? Explain with a neat diagram its principle of operation for measurement of high impulse currents. [15]
7. Explain briefly various tests to be carried out on a bushing. [15]
8. Explain the importance of switching overvoltages in EHV power systems. How is the protection against over voltages achieved? [15]

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