Code No: 138CP **R16**

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]

---ooOoo---