

B. D. COLLEGE OF ENGINEERING, SEVAGRAM

Department of Electrical Engineering

Set – III

Subject: (Elective-II) EHVAC & HVDC Power Transmission System

01. Bundled conductors are used for EHV transmission lines primarily for reducing the
- a) **corona loss**
 - b) copper loss
 - c) voltage drop across the line
 - d) surge impedance of the line
02. Which of the following statements is true? Corona loss increases with
- a) decrease in conductor size and decrease in supply frequency
 - b) increase in conductor size and decrease in supply frequency
 - c) **decrease in conductor size and increase in supply frequency**
 - d) increase in conductor size and increase in supply frequency
03. The corona loss on a particular system at 50 Hz is 1 kW/km per phase. What is the corona loss at 60 Hz in kW/km per phase?
- a) 1
 - b) 1.25
 - c) 0.89
 - d) **1.13**
04. A 1- phase transmission line operating at 30 kV has radius of 1 cm and distance between conductors is 0.5 m. Assume $m = \delta = 1$, $g = 21$ kV/cm and frequency $f = 50$ Hz. Find the critical disruptive voltage?
- a) 17.32 kV/phase
 - b) 34.64 kV/phase
 - c) **82.15 kV/phase**
 - d) 41.075 kV/phase
05. Which of the following statements is/are true? Due to corona,
- a) interference increases
 - b) power loss increases
 - c) charging current increases
 - d) **all of the above**
06. Critical disruptive voltage is a voltage at which
- a) **corona is just initiated**
 - b) corona is visible with blue or violet colour
 - c) both 1 and 2
 - d) nether 1 nor 2

07. Which of the following statements is/are true? Corona is reduced by
- a) increasing the radius of the conductor
 - b) increasing the distance between the conductor
 - c) decreasing the supply frequency
 - d) **all of the above**
08. Critical visual voltage is the voltage at which
- a) corona is just initiated
 - b) **corona is visible with blue or violet colour**
 - c) both 1 and 2
 - d) none of the above
09. Which of the following statements is/are true?
- a) **Corona loss is more in HVAC system**
 - b) Corona loss is more in HVDC system
 - c) same in both cases
 - d) none of the above
10. If the conductor diameter decreases, inductance of the line,
- a) **increases**
 - b) decreases
 - c) remains unaffected
 - d) none of the above