

Chap . 4 Over voltage in EHV system covered by switching operations

Multiple Choice Questions

1. With the single frequency transients, the ratio of peak restriking voltage/time between voltage zero and peak voltage is known as
- A. Recovery voltage
 - B. Restriking voltage
 - C. Rate of rise restriking voltage
 - D. Active recovery voltage

ANS: C

2. On a lightly loaded transmission line
- A. Receiving end voltage can exceed sending end voltage
 - B. Receiving end voltage can't exceed sending end voltage
 - C. Capacitive charging current is reduced
 - D. None of these

ANS: A

3. System which suffers from maximum voltage fluctuations is
- A. Ring type
 - B. Mesh type
 - C. Radial type
 - D. None of these

ANS: C

4. Critical voltage of the line can be increased by increasing
- A. Diameter
 - B. Spacing
 - C. Both A & B
 - D. None of these

ANS: C

5. An infinite bus bar has a surge impedance equal to
- A. Zero
 - B. infinite
 - C. Surge impedance of the transmission line connected to it
 - D. All of these

ANS: A

6. Difference between surge impedance and characteristic impedance is that in surge impedance
- A. Line resistance is considered
 - B. Line impedance is assumed to be zero
 - C. Line capacitance is assumed to be zero
 - D. Line resistance is assumed to be zero

ANS: A

7. Charging current of a line is more at

- A. Mid-point
- B. Sending end
- C. Receiving end
- D. One-third of line

ANS: B

8. For a 400 kV transmission line, the switching overvoltage crest in kV is
- A. 400
 - B. $400\sqrt{2}$
 - C. 825
 - D. 1155

ANS: D

9. If the voltage as well as reactance of a transmission line is double, the maximum steady state power limit of the
- A. Remains unaltered
 - B. Doubles
 - C. Becomes 4 times
 - D. Becomes 8 times

ANS: B

10. Constant voltage transmission have the advantage(s) of
- A. Increase of short-circuit current of the system
 - B. Large reserve of lines in case of line trouble
 - C. Improvement of power factor at the times of moderate and heavy loads
 - D. All of these

ANS: C

11. Voltage control in a power transmission line is achieved by
- A. Booster transformer
 - B. Tap-changing transformer
 - C. Injection of reactive power
 - D. All of these

ANS: D

12. The most accurate and versatile method of achieving reactive power compensation is by using
- A. Switched capacitors
 - B. Fixed capacitor with controlled reactor
 - C. Saturable reactor with capacitor bank
 - D. Switched capacitor with controlled reactor

ANS: D

13. Switching over-voltages are more hazardous than lightning surges in case of
- A. Low voltage systems
 - B. 11 kV systems
 - C. Unbalanced systems
 - D. EHV and UHV systems.

ANS: D

14. The over-voltage surges in power systems may be caused by
- A. lightning
 - B. switching
 - C. resonance
 - D. any of the above.

ANS: D

15. The protection against over-voltage due to lightening is provided by
- A. use of surge diverters
 - B. low tower footing resistance
 - C. use of overhead ground wires
 - D. any of the above

ANS: D