

[Power System MCQ Questions PDF](#)

1. are the conductors, which connect the consumer's terminals to the distribution

- (a) Distributors
- (b) Service mains
- (c) Feeders
- (d) None of the above

Answer: (b)

2. The underground system cannot be operated above

- (a) 440 V
- (b) 11 kV
- (c) 33 kV
- (d) 66 kV

Answer: (d)

3. The usual spans with R.C.C. poles are

- (a) 40 - 60 metres
- (b) 80 - 100 metres

(c) 80 - 100 metres

(d) 300 - 500 metres

Answer: (c)

4. The [corona](#) is considerably affected by which of the following?

(a) Size of the conductor.

(b) Shape of the conductor.

(c) Surface condition of the conductor.

(d) All of the above.

Answer: (d)

5. Which of the following are the constants of the transmission lines ?

(a) Resistance

(b) Inductance

(c) Capacitance

(d) All of the above.

Answer: (d)

6. The phenomenon of rise in voltage at the receiving end of the open-circuited or lightly loaded line is called the

- (a) Seeback effect .
- (b) Ferranti effect.
- (c) Raman effect.
- (d) none of the above.

Answer: (b)

7. The square root of the ratio of line impedance and shunt admittance is called

- (a) surge impedance of the line.
- (b) conductance of the line.
- (c) regulation of the line.
- (d) none of the above.

Answer: (a)

8. Which of the following is the demerit of a 'constant voltage transmission system'?

- (a) Increase of short-circuit current of the system.
- (b) Availability of steady voltage at all loads at the line terminals
- (c) Improvement of power factor at times of moderate and heavy loads.
- (d) Possibility of carrying increased power for a given conductor size in case of long distance heavy power transmission.

Answer: (a)

9. Which of the following is the source of heat generation in the cables ?

- (a) Dielectric losses in cable insulation.
- (b) I^2R losses in the conductor.
- (c) Losses in the metallic sheathings and armouring.
- (d) all of the above.

Answer: (d)

10. Due to which of the following reasons, the cables should not be operated too hot?

- (a) the oil may lose its viscosity and it may start drawing off from higher levels.
- (b) expansion of the oil may cause the sheath to burst.
- (c) unequal expansion may create voids in the insulation which will lead to ionization.
- (d) the thermal instability may rise due to the rapid increase of dielectric losses with temperature.
- (e) all of the above.

Answer: (e)

11. Which of the following D.C. distribution system is the simplest and lowest in first cost?

- (a) Radial system
- (b) Ring system
- (c) Inter-connected system
- (d) None of the above

Answer: (a)

12. Besides a method of trial and error, which of the following methods is employed for solution of network problems in interconnected system ?

- (a) Circulating current method
- (b) Thevenin's theorem
- (c) Superposition of currents
- (d) Direct application of [Kirchhoff's laws](#)
- (e) All of the above.

Answer: (e)

13. Which of the following faults is most likely to occur in cables ?

- (a) Cross or short-circuit fault

- (b) Open circuit fault
- (c) Breakdown of cable insulation
- (d) All of the above.

Answer: (c)

14. The cause of damage to the lead sheath of a cable is

- (a) crystallization of the lead through vibration.
- (b) chemical action on the lead when buried in the earth.
- (c) mechanical damage.
- (d) all of the above.

Answer: (d)

15. The distributors for residential areas are

- (a) single phase
- (b) three phase three wire
- (c) [three phase four wire](#)
- (d) none of the above.

Answer: (c)

16. The conductors of the overhead lines are

- (a) solid.
- (b) [stranded](#).
- (c) both solid and stranded.
- (d) none of the above.

Answer: (b)

17. High voltage transmission lines use

- (a) [suspension insulators](#).
- (b) pin insulators.
- (c) both.
- (d) none of the above.

Answer: (a)

18. Multi-core cables generally use

- (a) square conductors.
- (b) circular conductors.
- (c) rectangular conductors.
- (d) sector shaped conductors.

Answer: (a)

19. The material commonly used for insulation in [high voltage cables](#) is

- (a) lead.
- (b) paper.
- (a) rubber.
- (d) none of the above.

Answer: (b)

20. The loads on distributors are generally

- (a) balanced
- (b) unbalanced
- (c) either of the above.

Answer: (b)

21. The material generally used for armour of high voltage cables is

- (a) aluminium (b) steel
- (c) brass (d) copper.

Answer: (a)

22. [Transmission line insulators](#) are made of

- (a) glass (b) porcelain

(c) iron (d) P.V.C.

Answer: (b)

23. The material commonly used for [sheaths of underground cables](#) is

(a) lead (b) rubber

(c) copper (d) iron.

Answer: (a)

24. The spacing between phase conductors of a 220 kV line is approximately equal to

(a) 2 m (b) 3.5 m

(c) 6 m (d) 8.6 m

Answer: (6)

25. In a D.C. 3-wire distribution system, balancer fields are cross-connected in order to

(a) boost the generated voltage.

(b) balance loads on both sides of the neutral.

(c) make both machines run as unloaded motors.

(d) equalize voltages on the positive and negative outer.

Answer: (d)

26. In a D.C. 3-wire distributor using balancers and having unequal loads on the two sides

(a) both balancers run as generators.

(b) both balancers run as motors.

(c) balancer connected to lightly loaded side runs as a motor.

(d) balancer connected to heavily-loaded side runs as a motor.

Answer: (c)

27. Transmitted power remaining the same, if supply voltage of a D.C. 2-wire feeder is increased 100 percent, saving in copper is

(a) 25 percent (b) 50 percent

(c) 75 percent (d) 100 percent

Answer: (b)

28. A uniformly-loaded D.C. distributor is fed at both ends with equal voltages. As compared to a similar distributor fed at one end only, the drop at the middle point is

(a) one-fourth (b) one-third

(c) one-half (d) twice

(e) none of the above.

Answer: (a)

29. As compared to a 2 - wire D.C. distributor, in 3 - wire distributor with same maximum voltage to earth uses only

(a) 31.25 percent of copper.

(b) 33.3 percent of copper.

(c) 66.7 percent of copper.

(d) 125 percent of copper.

Answer: (a)

30. Which of the following is usually not the generating voltage ?

(a) 6.6 kV (b) 8.8 kV

(c) 11 kV (d) 13.2 kV

Answer: (b)

31. For an overhead line, the surge impedance is taken as

(a) 20 - 40 ohm. (b) 70 - 80 ohms

(c) 100 - 200 ohms (d) 500 -1000 ohms

Answer: (c)

32. The presence of ozone due to [corona](#) is harmful because it

- (a) reduces power factor
- (b) corrodes the material
- (c) transfer energy to the ground
- (d) none of the above.

Answer: (b)

33. A feeder, in a transmission system, feeds power to

- (a) distributors.
- (b) generating stations.
- (c) service mains.
- (d) all of the above.

Answer: (a)

34. The power transmitted will be maximum when

- (a) corona losses are minimum.
- (b) reactance is high.
- (c) sending end voltage is more.
- (d) receiving end voltage is more.

Answer: (c)

35. A [3-phase 4 wire system](#) is commonly used on

- (a) primary transmission.
- (b) secondary transmission.
- (c) primary distribution.
- (d) [secondary distribution](#).

Answer: (d)

36. Which of the following is not a constituent for making porcelain insulators?

- (a) Quartz (b) Kaolin
- (c) Felspar (d) Silica

Answer: (d)

37. There is a great possibility of occurrence of [corona](#) during

- (a) dry weather (b) winter
- (c) summer heat (d) humid weather.

Answer: (d)

38. Which of the following relays is used on long transmission lines?

- (a) Impedance relay
- (b) Mho's relay
- (c) Reactance relay
- (d) None of the above.

Answer: (b)

39. The steel used in steel cored conductors is usually

- (a) alloy steel
- (b) stainless steel
- (c) mild steel
- (d) high speed steel

Answer: (c)

40. Which of the following distribution system is more reliable ?

- (a) Radial system
- (b) Tree system
- (c) [Ring main system](#)
- (d) All are equally reliable

Answer: (c)

41. Transmission voltage of 11 kV is normally used for distances up to

- (a) 20 - 25 km
- (b) 40 - 50 km
- (c) 60 - 70 km
- (d) 80 - 400 km

Answer: (a)

42. Which of the following [regulations](#) is considered best?

(a) 50% (b) 20%

(c) 10% (d) 2%

Answer: (d)

43. [Skin effect](#) is proportional to

(a) (conductor diameter)²

(b) (conductor diameter)³

(c) (conductor diameter)²

(d) (conductor diameter)^{1/2}

(e) none of the above.

Answer: (c)

44. In A.C.S.R conductors, the insulation between aluminum and steel conductors is

(a) insulin (b) bitumen

(c) varnish (d) no insulation is required

Answer: (d)

45. Which of the following bus-bar schemes has the lowest cost?

- (a) Ring bus-bar scheme
- (b) Single bus-bar scheme
- (c) Breaker and a half scheme
- (d) Main and transfer scheme

Answer: (b)

46. Owing to [skin effect](#)

- (a) current flows through the half cross-section of the conductor.
- (b) portion of the conductor near the surface carries more current and core of the conductor carries less current.
- (c) portion of the conductor near the surface carries less current and core of the conductor carries more current.
- (d) any of the above.

Answer: (b)

47. By which of the following methods string efficiency can be improved ?

- (a) Using a guard ring
- (b) Grading the insulator
- (c) Using long cross arm
- (d) Any of the above

Answer: (d)

48. In aluminum conductors, steel core is provided to

- (a) compensate for skin effect.
- (b) neutralize proximity effect.
- (c) reduce line inductance.
- (d) increase the tensile strength.

Answer: (d)

49. By which of the following a bus-bar is rated ?

- (a) Current only.
- (b) Current and voltage.
- (c) Current, voltage and frequency.
- (d) Current, voltage, frequency and short time current.

Answer: (d)

50. A circuit is disconnected by isolators when

- (a) line is energized.
- (b) there is no current in the line.
- (c) line is on full load.
- (d) circuit breaker is not open.

Answer: (b)

51. For which of the following equipment current rating is not necessary ?

- (a) Circuit breakers
- (b) Isolators
- (c) Load break switch
- (d) Circuit breakers and load break switches

Answer: (b)

52. In a substation the following equipment is not installed

- (a) exciters
- (b) series capacitors
- (c) shunt reactors.

Answer: (a)

53. Overhead lines generally use

- (a) copper conductor
- (b) all aluminium conductors
- (c) [A.C.S.R. conductors](#)
- (d) none of these.

Answer: (c)

54. The minimum clearance between the ground and a 220 kV line is about

- (a) 4.3 m (b) 5.5 m
- (c) 7.0 m (d) 10.5 m

Answer: (c)

55. Corona usually occurs when the electrostatic stress in air around the conductor exceeds

- (a) 6.6 kV (RMS value)/cm
- (b) 11 kV (RMS value)/cm
- (c) 22 kV (maximum value)/cm
- (d) 30 kV (maximum value)/cm

Answer: (d)

56. The use of [strain type insulators](#) is made where the conductors are

- (a) dead ended
- (b) at Intermediate anchor towers
- (c) any of the above
- (d) none of the above.

Answer: (c)

57. The current drawn by the line due to corona losses is

(a) non-sinusoidal (b) sinusoidal

(c) triangular (d) square

Answer: (a)

58. [Pin type insulators](#) are generally not used for voltages beyond

(a) 1 kV (b) 11 kV

(c) 22 kV (d) 33 kV

Answer: (d)

59. Aluminum has a specific gravity of

(a) 1.5 (b) 2.7

(c) 4.2 (d) 7.8

Answer: (b)

60. For transmission of power over a distance of 200 km, the transmission voltage should be

(a) 132 kV (b) 68 kV

(c) 33 kV (d) 11 kV

Answer: (a)

61. For aluminum, as compared to copper, all the following factors have higher values except

- (a) specific volume
- (b) electrical conductivity
- (c) co-efficient of linear expansion
- (d) resistance per unit length for same cress-section

Answer: (b)

62. Which of the following equipment, for regulating the voltage in distribution feeder, will be most economical ?

- (a) Static condenser
- (b) Synchronous condenser
- (c) Tap changing transformer
- (d) Booster transformer

Answer: (d)

63. In a tap changing transformer, the tappings are provided on

- (a) primary winding
- (b) secondary winding
- (c) high voltage winding
- (d) any of the above

Answer: (b)

64. Constant voltage transmission has the following disadvantage

(a) small conductor area is required for same power transmission.

(b) short-circuit current of the system is increased.

(c) either of the above.

(d) none of the above.

Answer: (b)

65. On which of the following factors skin effect depends ?

(a) Frequency of the current

(b) Size of the conductor

(c) Resistivity of the conductor material

(d) All of the above

Answer: (d)

66. The effect of corona can be detected by

(a) presence of ozone detected by odor

(b) hissing sound

(c) faint luminous glow of bluish color

(d) all of the above.

Answer: (d)

67. For transmission of power over a distance of 600 km, the transmission voltage should be in the range

(a) 150 to 220 kV

(b) 100 to 120 kV

(c) 60 to 100 kV

(d) 20 to 50 kV.

Answer: (a)

68. In the analysis of which of the following lines shunt capacitance is neglected ?

(a) Short transmission lines

(b) Medium transmission lines

(c) Long transmission lines

(d) Medium as well as long transmission lines.

Answer: (a)

69. When the interconnector between two stations has large reactance

(a) the transfer of power will take place with voltage fluctuation and noise.

(b) the transfer of power will take place with least loss.

(c) the stations will fall out of step because of large angular displacement between the stations.

(d) none of the above.

Answer: (c)

70. The frequency of voltage generated in case of generators, can be increased by

(a) using reactors

(b) increasing the load

(c) adjusting the governor

(d) reducing the terminal voltage

Answer: (c)

71. When an alternator connected to the bus-bar is, shut down the bus-bar voltage will

(a) fall (b) rise

(c) remain unchanged

(d) none of the above.

Answer: (c)

72. The angular displacement between two interconnected stations is mainly due to

- (a) armature reactance of both alternators
- (b) reactance of the interconnector
- (c) synchronous reactance of both the alternators
- (d) all of the above.

Answer: (b)

73. Electro-mechanical voltage regulators are generally used in

- (a) reactors
- (b) generators
- (c) transformers
- (d) all of the above.

Answer: (b)

74. Series capacitors on transmission lines are of little use when the load VAR requirement is

- (a) large
- (b) small
- (c) fluctuating
- (d) any of the above.

Answer: (b)

75. The voltage regulation in magnetic amplifier type voltage regulator is effected by

- (a) electromagnetic induction
- (b) varying the resistance
- (c) varying the reactance
- (d) variable transformer.

Answer: (c)

76. When a conductor carries more current on the surface as compared to core, it is due to

- (a) permeability variation
- (b) corona (c) skin effect
- (d) unsymmetrical fault.

Answer: (c)

77. The following system is not generally used

- (a) 1-phase 3 wire
- (b) 1-phase 4 wire
- (c) 3-phase 3 wire
- (d) 3-phase 4 wire

Answer: (b)

78. The skin effect of a conductor will reduce as the

- (a) resistivity of conductor material increases
- (b) permeability of conductor material increases
- (c) diameter increases
- (d) frequency increases.

Answer: (a)

79. When a live conductor of public electric supply breaks down and touches the earth which of the following will happen ?

- (a) Current will flow to earth
- (b) Supply voltage will drop
- (c) Supply voltage will increase
- (d) No current will flow in the conductor.

Answer: (a)

80 A 310 km line is considered as

- (a) a long line (b) a medium line
- (c) a short line (d) any of the above.

Answer: (a)

81. The conductors are bundled primarily to

- (a) increase reactance
- (b) reduce reactance
- (c) reduce radio interference
- (d) none of the above.

Answer: (b)

82. The top most conductor in a high transmission line is

- (a) earth conductor (b) R-phase conductor
- (c) Y-phase conductor (d) B-phase conductor

Answer: (a)

83. By which of the following methods voltage of transmission can be regulated ?

- (a) Use of series capacitors to neutralize the effect of series reactance.
- (b) Switching in shunt capacitor at the receiving end during heavy loads.
- (c) Use of tap changing transformers.
- (d) Any of the above methods.

Answer: (d)

84. Which of the following distribution systems is the most economical ?

- (a) A.C. 1-phase system
- (b) A.C. 3-phase 3 wire system
- (c) A.C. 3-phase 4 wire system
- (d) Direct current system.

Answer: (d)

85. Which of the following is the main [advantage of AC transmission system over DC transmission system](#)?

- (a) Less instability problem
- (b) Less insulation problems
- (c) Easy transformation
- (d) Less losses in transmission over long distances.

Answer: (d)

86. A tap changing transformer is used to

- (a) supply low voltage current for instruments
- (b) step up the voltage
- (c) step down the voltage

(d) step up as well as step down the voltage.

Answer: (d)

87. Which of the following bus-bar schemes is the most expensive ?

(a) Double bus-bar double breaker

(b) Ring bus-bar scheme

(c) Single bus-bar scheme

(d) Main and transfer scheme

Answer: (a)

88. By which of the following methods the protection against direct lightning strokes and high voltage sweep waves is provided ?

(a) Lightning arresters

(b) Ground wire

(c) [Lightning arresters](#) and ground wires

(d) Earthing of neutral.

Answer: (c)

89. In which of the following voltage regulators the effect of dead zero is found ?

- (a) Electromagnetic type
- (b) Magnetic amplifier
- (c) Electronic type using integrated circuits
- (d) All of the above.

Answer: (a)

90. Corona results in

- (a) radio interference
- (b) power factor improvement
- (c) better regulation
- (d) none of the above.

Answer: (a)

91. Which of the following has least effect on corona ?

- (a) Atmospheric temperature
- (b) Number of ions
- (c) Site and charge per ion
- (d) Mean free path

Answer: (a)

92. In context of corona, if the conductors are polished and smooth, which of the following statements is correct ?

- (a) Hissing sound will be more intense.
- (b) Power loss will be least.
- (c) Corona glow will be uniform along the length of the conductor.
- (d) Corona glow will not occur.

Answer: (c)

93. Power loss due to corona is not directly proportional to

- (a) spacing between conductors
- (b) supply voltage frequency
- (c) phase to neutral voltage
- (d) all of the above.

Answer: (a)

94. The effect of ice on transmission line conductors is to increase the

- (a) transmission losses
- (b) weight of the conductor
- (c) tendency for corona
- (d) resistance to flow of current

Answer: (b)

95. If the height of transmission tower is increased

(a) the line capacitance will decrease but line inductance will remain unchanged.

(b) the line capacitance and inductance will not change.

(c) the line capacitance will increase but line inductance will decrease.

(d) the line capacitance will decrease and line inductance will increase.

Answer: (a)

96. If string efficiency is 100 percent it means that

(a) potential across each disc is zero

(b) potential across each disc is same

(c) one of the insulator discs is shorted

(d) none of the above.

Answer: (b)

97. In a 70/6 A.C.S.R conductor there are

(a) 35 aluminum conductors and 3 steel conductors

(b) 70 aluminum conductors and 6 steel conductors

(c) 70 steel conductors and 6 aluminum conductors

(d) none of the above.

Answer: (b)

98. On which of the following does the size of a feeder depend ?

(a) Voltage drop (b) Voltage

(c) Frequency (d) Current carrying capacity

Answer: (d)

99. Which of the following are connected by the service mains ?

(a) Transformer and earth

(b) Distributor and relay system

(c) Distributor and consumer terminals

(d) Distributor and transformer.

Answer: (c)

100. In the design of a distributor which of the following is the major consideration ?

(a) Voltage drop

(b) Current carrying capacity

(c) Frequency

(d) kVA of system

Answer: (a)

101. In a distribution system major cost is that of

(a) earthing system

(b) distribution transformer

(c) conductors

(d) meters.

Answer: (b)

102. With which of the following are step-up substations associated ?

(a) Concentrated load

(b) Consumer location

(c) Distributors

(d) Generating stations.

Answer: (d)

103. Which of the following equipment should be installed by the consumers having low power factor?

- (a) Synchronous condensers
- (b) [Capacitor bank](#)
- (c) Tap changing transformer
- (d) Any of the above

Answer: (b)

104. Which of the following equipment is used to limit short-circuit current level in a substation ?

- (a) Isolator
- (b) Lightning switch
- (b) Coupling capacitor
- (c) [Series reactor](#)

Answer: (c)

105. Steepness of the travelling waves is altered by of line.

- (a) capacitance
- (b) inductance
- (c) resistance
- (d) all of the above

Answer: (d)

106. The limit of distance of transmission line may be increased by the use of

- (a) series resistances
- (b) shunt capacitors and series reactance
- (c) series capacitors and shunt reactors
- (d) synchronous condensers.

Answer: (c)

107. By which of the following factors is the sag of a transmission line least affected?

- (a) Current through the conductor
- (b) Ice deposited on the conductor
- (c) Self weight of conductor
- (d) Temperature of surrounding air
- (e) None of the above

Answer: (a)

108. Which of the following causes transient disturbances?

- (a) Faults
- (b) Load variations
- (c) Switching operations
- (d) Any of the above

Answer: (d)

109. A gay wire

(a) protects conductors against short-circuiting

(b) provides emergency earth route

(c) provides protection against surges

(d) support the pole

Answer: (d)

110. Which of the following is neglected in the analysis of short transmission lines?

(a) Series impedance

(b) Shunt admittance

(c) None of the above

(d) All of the above

Answer: (b)

111. Basically the boosters are

(a) synchronous motors

(b) capacitors

(c) inductors

(d) transformers

Answer: (d)

112. Which of the following is a static exciter ?

(a) Rectifier

(b) Rotorol

(c) Amplidyne

(d) D.C. separately excited generator

Answer: (a)

113. For exact compensation of voltage drop in the feeder the booster

(a) must be earthed

(b) must work on line voltage

(c) must work on linear portion of its V-I characteristics

(d) must work on nonlinear portion of its V-I characteristics.

Answer: (c)

114. The purpose of using a booster is to

(a) increase current

- (b) reduce current
- (c) reduce voltage drop
- (d) compensate for voltage drop

Answer: (d)

115. Induction regulators are used for voltage control in

- (a) alternators
- (b) primary distribution
- (c) secondary distribution
- (d) none of the above.

Answer: (b)

116. A synchronous condenser is generally installed at theof the transmission line.

- (a) receiving end
- (b) sending end
- (c) middle
- (d) none of the above

Answer: (a)

117. The area of cross-section of the neutral in a 3-wire D.C. system is generally the area of cross-section of main conductor

- (a) same as
- (b) one-fourth
- (c) one half
- (d) double

Answer: (c)

118. For which of the following, the excitation control method is satisfactory?

- (a) Low voltage lines
- (b) High voltage lines
- (c) Short lines
- (d) Long lines

Answer: (c)

119. In which of the following cases shunt capacitance is negligible ?

- (a) Short transmission lines
- (b) Medium transmission lines
- (c) Long transmission lines

(d) All transmission lines

Answer: (a)

120. A [lightning arrester](#) is usually located nearer to

(a) transformer

(b) isolator

(c) bus-bar

(d) circuit breaker

(e) none of the above

Answer: (a)

121. The material used for the manufacture of grounding wires is

(a) cast iron

(b) aluminum

(c) stainless steel

(d) galvanized steel

Answer: (d)

122. [Surge absorbers](#) protect against.....oscillations.

(a) high voltage high frequency

(b) high voltage low frequency

(c) low voltage high frequency

(d) low voltage low frequency

Answer: (c)

123. Skin effect is noticeable only at frequencies.

(a) audio (b) low

(c) high (d) all

Answer: (c)

124. Power system stability is least affected by

(a) reactance of generator

(b) input torque

(c) losses

(d) reactance of transmission line

Answer: (c)

125. In medium transmission lines the shunt capacitance is taken into account in

(a) T-method (b) π -method

(c) Steinmetz method

(d) all of the above.

Answer: (d)

126. System grounding is done so that

(a) inductive interference between power and communication circuits can be controlled.

(b) the floating potential on the lower voltage winding for a transformer is brought down to an insignificant value .

(c) the arcing faults to earth would not set up dangerously high voltage on healthy phases.

(d) for all above reasons.

Answer: (d)

127. Which of the following can be used for bus-bars?

(a) Tubes (b) Rods

(c) Bars (d) Any of the above.

Answer: (d)

128 If the height of transmission tower is increased, which of the following parameters is likely to change ?

(a) Capacitance (b) Inductance

(c) Resistance (d) All of the above.

Answer: (a)

129. A.C.S.R. conductor having 7 steel strands surrounded by 25 aluminum conductors will be specified as

- (a) 25/7 (b) 7/25 (c) 50/15

Answer: (a)

130. Impedance relay is used on transmission lines.

- (a) short (b) medium
(c) long (d) all

Answer: (b)

131. Corona is likely to occur maximum in

- (a) transmission lines
(b) distribution lines
(c) domestic wiring
(d) all of the above.

Answer: (a)

132. The effect of wind pressure is more predominant on

- (a) supporting towers
- (b) neutral wires
- (c) transmission lines
- (d) insulators.

Answer: (a)

133. As compared to cables, disadvantage of overhead transmission lines is

- (a) inductive interference between power and communication circuits.
- (b) exposure to lightning.
- (c) exposure to atmospheric hazards like smoke, ice, etc.
- (d) all of the above.

Answer: (d)

134. In overhead transmission lines the effect of capacitance can be neglected when the length of line is less than

- (a) 80 km (b) 110 km
- (c) 150 km (d) 210 km.

Answer: (a)

135. The effective resistance of a conductor will be the same as 'ohmic resistance' when

- (a) power factor is unity.
- (b) current is uniformly distributed in the conductor cross-section.
- (c) voltage is low.
- (d) current is in true sine wave form.

Answer: (b)

136. To increase the capacity of a transmission line for transmitting power which of the following must be decreased ?

- (a) Capacitance
- (b) Line inductance
- (c) Voltage
- (d) All of the above.

Answer: (b)

137. By using bundled conductors which of the following is reduced ?

- (a) Power loss due to corona
- (b) Capacitance of the circuit
- (c) Inductance of the circuit
- (d) All of the above.

Answer: (a)

138. Which of the following short-circuits is more dangerous ?

- (a) Dead short-circuit
- (b) Line to ground short-circuit
- (c) Line to line short-circuit
- (d) Line to line and ground short-circuit.

Answer: (a)

139. In case of transmission line conductors with the increase in atmospheric temperature

- (a) length decreases but stress increases.
- (b) length increases but stress decreases.
- (c) both the length and stress increase.
- (d) both the length and stress decrease.

Answer: (b)

140. Skin effect exists only in

- (a) AC transmission
- (b) high voltage DC overhead transmission
- (c) low voltage DC overhead transmission
- (d) cables carrying DC current.

Answer: (a)

141. [Floating neutral, in 3-phase supply](#), is undesirable because it causes

- (a) low voltage across the load
- (b) high voltage across the load
- (c) unequal line voltages across the load
- (d) none of the above.

Answer: (c)

142. The ground ring transmission lines are used to

- (a) reduce the transmission losses
- (b) reduce the earth capacitance of the lowest unit
- (c) increase the earth capacitance of the lowest unit
- (d) none of the above.

Answer: (b)

143. The string efficiency of an insulator can be increased by

- (a) correct grading of insulators of various capacitances.
- (b) reducing the number of strings.

(c) increasing the number of strings in the insulator.

(d) none of the above.

Answer: (a)

144. High voltages for transmitting power is economically available from

(a) d.c. currents

(b) a.c. currents

(c) carrier currents

(d) none of the above.

Answer: (b)

145. [High voltage](#) is primarily used, for long distance power transmission, to

(a) reduce the time of transmission

(b) reduce the transmission losses

(c) make the system reliable

(d) none of the above.

Answer: (b)

146. By using bundle conductors, the critical voltage for the formation of corona will

(a) remain same

(b) decrease

(c) increase

(d) not occur.

Answer: (c)

147. If the voltage is increased x times, the size of the conductor would be

(a) reduced to $1/x^2$ times

(b) reduced to $1/x$ times

(c) increased x times

(d) increased to x^2 times

Answer: (a)

148. In the cables sheaths are used to

(a) prevent the moisture from entering the cable

(b) provide strength to the cable

(c) provide proper insulation

(d) none of the above.

Answer: (a)

149. Ground wire is used to

(a) avoid overloading

(b) give the support to the tower

(c) give good regulation

(d) connect a circuit conductor or other device to an earth-plate.

Answer: (d)

150. Earthing is necessary to give protection against

(a) danger of electric shock

(b) voltage fluctuation

(c) overloading

(d) high temperature of the conductors.

Answer: (a)

151. Resistance grounding is used for voltage between

(a) 3.3 kV to 11 kV

(b) 11 kV to 33 kV

(c) 33 kV to 66 kV

(d) none of the above.

Answer: (a)

152. Solid grounding is adopted for voltages below

- (a) 100 V (b) 200 V
- (c) 400 V (d) 860 V

Answer: (d)

153. The size of the earth wire is determined by

- (a) the atmospheric conditions
- (b) the voltage of the service wires
- (c) the ampere capacity of the service wires
- (d) none of the above.

Answer: (c)

154. Transmission lines link

- (a) generating station to receiving end station.
- (b) receiving end station to distribution transformer.
- (c) distribution transformer to consumer premises.
- (d) service points to consumer premises.

Answer: (a)

155. A booster is a

- (a) series wound generator

- (b) shunt wound generator
- (c) synchronous generator
- (d) none of the above.

Answer: (a)

156. A booster is connected in

- (a) parallel with earth connection
- (b) parallel with the feeder
- (c) series with the feeder
- (d) series with earth connection.

Answer: (c)

157. The voltage drop, for constant voltage transmission, is compensated by installing

- (a) inductors
- (b) capacitors
- (c) synchronous motors
- (d) all of above.

Answer: (c)

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