

[Transformer MCQ Questions and Answers PDF](#)

1. In a power transformer

- (a) primary winding is closer to core.
- (b) secondary winding is closer to core.
- (c) low voltage winding is closer to core.
- (d) high voltage winding is closer to core.

Answer: (c) low voltage winding is closer to core.

2. In a transformer, the magnetic coupling between primary and secondary circuit can be increased by

- (a) increasing the number of turns
- (b) using soft material for windings
- (c) using the magnetic core of low reluctance
- (d) using transformer oil of better quality.

Answer: (c) using the magnetic core of low reluctance

3. If the flux density in the core of a transformer is increased

- (a) frequency of secondary winding will change.
- (b) wave shape on secondary side will be distorted.
- (c) size of transformer can be reduced.
- (d) eddy current loss will reduce.

Answer: (c) size of transformer can be reduced.

4. If the supply frequency is increased keeping voltage constant

- (a) [eddy current losses](#) will decrease
- (b) hysteresis losses will decrease
- (c) eddy current losses will remain unchanged
- (d) hysteresis losses will remain unchanged.

Answer: (c) eddy current losses will remain unchanged

5. At no load, the current taken by a transformer

- (a) lags behind the applied voltage by 80 degree.
- (b) lags behind the applied voltage by 50 degree.
- (c) leads the applied voltage by 80 degree.

(d) leads the applied voltage by 50 degree.

Answer: (a) lags behind the applied voltage by 80 degree.

6. If the secondary of a 1:10 step up transformer is connected to the primary of a 1:5 step up transformer, the total transformation ratio will be

(a) 15

(b) 30

(c) 50

(d) 2500

Answer: (c) 50

7. A 1600 kVA, 200 Hz transformer is operated at 50 Hz. Its kVA rating should be restricted to

(a) 800 kVA

(b) 400 kVA

(c) 200 kVA

(d) 100 kVA

Answer: (b) 400 kVA

8. Leakage flux of a transformer may be minimized by

- (a) sectionalizing and interleaving the primary and the secondary windings
- (b) constantly cooling the core
- (c) under rating the transformer
- (d) reducing the reluctance of the iron core to the minimum.

Answer: (a) sectionalizing and interleaving the primary and the secondary windings.

9. Power transformers are usually designed to have [maximum efficiency](#)

- (a) near full load.
- (b) at 75% of full load.
- (c) at 50% of full load.
- (d) between 50% and 75% of full load.

Answer: (a) near full load.

10. Distribution transformers are usually designed to have maximum efficiency

- (a) near full load
- (b) at 75% of full load

(c) near 50% of full load

(d) between 50% and 75% of full load.

Answer: (c) near 50% of full load

11. In a transformer it is difficult to measure the efficiency by output-input measurement method because

(a) the output is sinusoidal and hence cannot be measure.

(b) losses are abnormally high.

(c) efficiency of transformer is usually high and hence extremely accurate measurements will be necessary.

(d) output is out of phase with respect to input.

Answer: (c) Efficiency of transformer is usually high and hence extremely accurate measurements will be necessary.

12. The leakage flux in a transformer depends upon

(a) load current.

(b) load current and voltage.

(c) load current, voltage and frequency.

(d) load current, voltage, frequency and power factor.

Answer: (a) load current.

13. What is maximum order of flux density used in cores using CRGO sheets

- (a) 0.04 webers/m²
- (b) 0.4 webers/m²
- (c) 1.04 webers/m²
- (d) webers/m²

Answer: (b) 0.4 webers/m²

14. The phase difference between the primary and the secondary voltage of a transformer is

- (a) 0 degree
- (b) 180 degree
- (c) 90 degree
- (d) between 30 degree and 60 degree

Answer: (b) 180 degree

15. The desirable properties of [transformer core material](#) is

- (a) low permeability and low hysteresis loss
- (b) high permeability and high hysteresis loss

(c) low permeability and high hysteresis loss

(d) high permeability and low hysteresis loss

Answer: (d) high permeability and low hysteresis loss

16. Full load [copper loss in a transformer](#) is 1600 watts. At half load the losses will be

(a) 6400 W

(b) 1600 W

(c) 800 W

(d) 400 W

Answer: (d) 400 W

17. [Buchholz relay](#) is generally not provided on transformer below

(a) 1 kVA

(b) 5 kVA

(c) 50 kVA

(d) 500 kVA

Answer: (d) 500 kVA

18. Operating time of Buchholz relay is in the order of

- (a) 0.1 micro second
- (b) 0.1 milli second
- (c) 0.1 second
- (d) 1 second

Answer: (c) 0.1 second

19. For a transformer, operating at a constant load current, [maximum efficiency](#) will occur at

- (a) Zero power factor
- (b) unity power factor
- (c) 0.8 leading power factor
- (d) 0.8 lagging power factor.

Answer: (b) unity power factor

20. "A" class insulation can withstand

- (a) temperature rise of 105 degree Celsius
- (b) maximum temperature rise of 105 degree Celsius
- (c) temperature gradient of 105 degree Celsius
- (d) heating rate of 105 Celsius in 24 hours.

Answer: (b) maximum temperature rise of 105 degree Celsius

21. In a 50 kVA transformer the number of turns in the primary and secondary windings are 834 and 58 respectively. If the primary is connected to 3300 V supply the secondary current will be

(a) 15 A

(b) 30 A

(c) 218 A

(d) 238 A

Answer: (c) 218 A

22. If full load copper loss of a transformer is 800 W, its copper loss at 75% load will be

(a) 800 W

(b) 450 W

(c) 400 W

(d) 200 W

Answer: (b) 450 W

23. The secondary of a current transformer is always short circuited under operating conditions because

- (a) it avoids core saturation and high voltage induction.
- (b) it avoids high voltage surges.
- (c) it protects the primary circuit.
- (d) it is same for operation.

Answer: (a) it avoids core saturation and high voltage induction.

24. The main [advantage of an autotransformer](#) over a two winding transformer is that

- (a) no cooling is required
- (b) hysteresis losses are minimized
- (c) eddy current losses are minimized
- (d) only one winding is used as a result there is substantial saving in material

Answer: (d) only one winding is used as a result there is substantial saving in material

25. If a break occurs in a 200 : 100 volt autotransformer in the winding which is common to high voltage as well as low voltage side, then the output voltage on the low voltage side will be

(a) 200 V

(b) 100 V

(c) $100\sqrt{2}$

Answer: (a) 200 V

26. In an autotransformer, effective saving on copper and copper loss will occur when the transformation ratio is

(a) more than 1

(b) nearly equal to 1

(c) less than 1

(d) 0.707

Answer: (b) nearly equal to 1

27. Which of the following conditions should be full filled for the parallel operation of two transformers?

(a) percentage impedance should be the same.

(b) polarities of both secondaries should be the same.

(c) voltage ratings should be the same.

(d) all of the above.

Answer: (d) all of the above.

28. If the transformer core is made of copper

(a) copper losses will be less

(b) eddy current losses will be more

(c) hysteresis losses will be more.

Answer: (b) eddy current losses will be more

29. If the secondary of a 5:1 step-down transformer is connected to the primary of 10:1 step-down transformer, the total step-down ratio of transformation will be

(a) 5:1

(b) 10: 1

(c) 50:1

(d) 2500:1

Answer: (c) 50:1

30. An engineer uses an ohmmeter to measure the DC resistance of a transformer winding. The engineer notices that, when one of the

ohmmeter leads is disconnected from the transformer, a spark results. What accounts for this phenomenon?

- (a) Ohm's law
- (b) Faraday's law
- (c) The Thomson effect
- (d) The Seeback effect.

Answer: (b) Faraday's law

31. The efficiency of two identical transformers under load conditions can be determined by

- (a) back to back test.
- (b) [open circuit test](#).
- (c) [short circuit test](#).
- (d) any of the above.

Answer: (a) back to back test.

32. Oil impregnated paper condenser bushing generally used on transformers operating at

- (a) 11 kV
- (b) 132 kV

(c) 33 kV

(c) 66 kV

Answer: (b) 132 kV

33. If a transformer core is made of copper and coils are made up of steel wires, then

(a) magnetizing current will be reduced

(b) copper losses in the winding will be more

(c) eddy current loss will be less

(d) all of the above.

Answer: (b) copper losses in the winding will be more

34. As a general rule, the kVA rating ratio of transformers operating in parallel should be within

(a) 2:1

(b) 3:1

(c) 4:1

(d) 5:1

Answer: (b) 3:1

35. If the two transformers not having the same percentage impedances are connected in parallel for sharing a load then

- (a) one of the transformer will be always fully loaded.
- (b) one of the transformer is likely to get burnt.
- (c) load sharing of the transformers will not be proportional to kVA ratings.
- (d) power factor of both the transformers will be lagging.

Answer: (c)

36. Harmonic currents in a transformer cause

- (a) increased I^2R losses.
- (b) increased core losses.
- (c) all of the above.

Answer: (c) all of the above.

37. Which of the following is the most likely source of harmonics in a transformer?

- (a) Over load.

(b) Core saturation.

(c) Poor insulation.

(d) Loose connections.

Answer: (b) Core saturation.

38. A 100 W, 220 V incandescent bulb is connected in series with the primary of a 220 V, 20 kVA transformer. When the secondary of the transformer is open circuited, the bulb will

(a) not glow

(b) glow with less than normal brightness

(c) glow with normal brightness

(d) glow with more than normal brightness

Answer: (b) glow with less than normal brightness

39. A tap changer is used on transformer for

(a) adjustments in primary voltage.

(b) adjustments in secondary voltage.

(c) adjustments in both primary and secondary voltage.

(d) adjustments in power factor.

Answer: (b) adjustments in secondary voltage.

40. A 30/10 P 15 [current transformer](#) will have output of

- (a) 30 VA
- (b) 10 VA
- (c) 15 VA
- (d) 45 VA

Answer: (a) 30 VA

41. A voltage transformer of which class of accuracy can be used for precision testing in standard laboratories?

- (a) 0.1 class.
- (b) 10 class.
- (c) 5.00 class.
- (d) 1000 class.

Answer: (a) 0.1 class.

42. The reactance of a transformer depends on

- (a) size of the core
- (b) size of the tank
- (c) leakage flux
- (d) all of the above.

Answer: (c) leakage flux

43. In a transformer the tappings are generally provided on

- (a) primary side
- (b) secondary side
- (c) low voltage side
- (d) high voltage side

Answer: (c) low voltage side

44. The function of conservator in a transformer is

- (a) to protect against internal fault.
- (b) to reduce copper as well as core losses.
- (c) cool the transformer oil.
- (d) take care of the expansion and contraction of transformer oil due to variation of temperature of surroundings.

Answer: (d)

45. A Buchholz relay can be installed on

- (a) auto-transformers .
- (b) air-cooled transformers.

(c) welding transformers.

(d) oil cooled transformers.

Answer: (d)

46. Gas is usually not liberated due to dissociation of transformer oil unless the oil temperature exceeds..... degree Celsius.

(a) 50

(b) 80

(c) 100

(d) 150

Answer: (d) 150

47. The main reason for generation harmonics in a transformer could be

(a) fluctuating load.

(b) poor insulation.

(c) mechanical vibrations.

(d) saturation of core.

Answer: (d) saturation of core.

48. Distribution transformers are generally designed for maximum efficiency around

- (a) 90% load
- (b) zero load
- (c) 25% load
- (d) 50% load

Answer: (d) 50% load

49. Star/star transformers work satisfactorily when

- (a) load is unbalanced only
- (b) load is balanced only
- (c) on balanced as well as unbalanced loads
- (d) none of the above.

Answer: (b) load is balanced only

50. Delta/star transformer works satisfactorily when

- (a) load is balanced only
- (b) load is unbalanced only
- (c) on balanced as well as unbalanced load
- (d) none of the above

Answer: (c) on balanced as well as unbalanced load

51. Buchholz's relay gives warning and protection against

- (a) electrical fault inside the transformer itself.
- (b) electrical fault outside the transformer in outgoing feeder.
- (c) none of the above .

Answer: (a) electrical fault inside the transformer itself.

52. The magnetizing current of a transformer is usually small because it has

- (a) small air gap
- (b) large leakage flux
- (c) laminated silicon steel core
- (d) fewer rotating parts.

Answer: (a) small air gap

53. The path of the magnetic flux in transformer should have

- (a) high reluctance.
- (b) low reactance.
- (c) high resistance.

(d) low resistance.

Answer: (b) low reactance.

54. Noise level test in a transformer is a

(a) special test.

(b) routine test.

(c) type test.

(d) none of the above.

Answer: (c) type test.

55. Which of the following is not a routine test on transformers ?

(a) Core insulation voltage test.

(b) Impedance test.

(c) Radio interference test.

(d) Polarity test.

Answer: (c) Radio interference test.

56. A transformer can have zero [voltage regulation](#) at

(a) leading power factor

(b) lagging power factor

(c) unity power factor

(d) zero power factor

Answer: (a) leading power factor

57. Helical coils can be used on

(a) low voltage side of high kVA transformers.

(b) high frequency transformers.

(c) high voltage side of small capacity transformers.

(d) high voltage side of high kVA rating transformers.

Answer: (a) low voltage side of high kVA transformers.

58. Harmonics in transformer result in

(a) increased core losses.

(b) increased I^2R loss.

(c) magnetic interference with communication circuits.

(d) all of the above.

Answer: (d) all of the above.

59. The core used in high frequency transformer is usually

(a) copper core.

(b) cast-iron core.

(c) air core.

(d) mild-steel core.

Answer: (c) air core.

60. The value of flux involved in the E.M.F. equation of a transformer is

(a) average value.

(b) R.M.S.value.

(c) maximum value.

(d) instantaneous value.

Answer: (c) maximum value.

61. Silicon steel used in laminations mainly reduces

(a) [hysteresis loss](#).

(b) [eddy current losses](#).

(c) copper losses.

(d) all of the above.

Answer: (a) hysteresis loss.

62. The reactance of a transformer depends on

- (a) size of the core.
- (b) size of the tank.
- (c) leakage flux.
- (d) all of the above.

Answer: (c) leakage flux.

63. Which winding of the transformer has less cross-sectional area ?

- (a) Primary winding
- (b) Secondary winding
- (c) Low voltage winding
- (d) High voltage winding

Answer: (d) High voltage winding

64. Which of the following is the main advantage of an auto-transformer over a two winding transformer ?

- (a) Hysteresis losses are reduced.
- (b) Saving in winding material.
- (c) Copper losses are negligible.
- (d) Eddy losses are totally eliminated.

Answer: (b) Saving in winding material.

65. During [short-circuit test](#), iron losses are negligible because

- (a) the current on secondary side is negligible.
- (b) the voltage on secondary side does not vary.
- (c) the voltage applied on primary side is low.
- (d) full-load current is not supplied to the transformer.

Answer: (c) the voltage applied on primary side is low.

66. The change in volume of transformer cooling oil due to variation of atmospheric temperature during day and night is taken care of by which part of transformer ?

- (a) Conservator.
- (b) Breather.
- (c) Bushings.
- (d) Buchholz relay.

Answer: (a) Conservator.

67. An [ideal transformer](#) is one which has

- (a) no losses and magnetic leakage.

- (b) interleaved primary and secondary windings.
- (c) a common core for its primary and secondary windings.
- (d) core of stainless steel and winding of pure copper metal.

Answer: (a) no losses and magnetic leakage.

68. When a given transformer is run at its rated voltage but reduced frequency, its

- (a) flux density remains unaffected
- (b) iron losses are reduced
- (c) core flux density is reduced
- (d) core flux density is increased.

Answer: (d) core flux density is increased.

69. If the supply frequency to the transformer is increased the [iron loss](#) will

- (a) not change.
- (b) decrease.
- (c) increase.
- (d) any of the above.

Answer: (c) increase.

70. Negative voltage regulation is indicative that the load is

(a) capacitive only.

(b) inductive only.

(c) inductive or resistive.

(d) none of the above.

Answer: (a) capacitive only.

71. [Iron loss of a transformer](#) can be measured by

(a) low power factor wattmeter.

(b) unity power factor wattmeter.

(c) frequency meter.

(d) any type of wattmeter.

Answer: (a) low power factor wattmeter.

72. When secondary of a current transformer is open-circuited its iron core

(a) will be hot because of heavy iron losses taking place in it due to high flux density.

(b) hot because primary will carry heavy current.

(c) cool as there is no secondary current.

(d) none of above will happen.

Answer: (a) will be hot because of heavy iron losses taking place in it due to high flux density.

73. Which type of winding is used in 3-phase shell type transformer ?

(a) Circular type.

(b) Sandwich type.

(c) Cylindrical type.

(d) Rectangular type.

Answer: (a) Circular type

74. For the parallel operation of single-phase transformers it is necessary that they should have

(a) same efficiency.

(b) same polarity.

(c) same kVA rating.

(d) same number of turns on the secondary side.

Answer: (b) same polarity .

75. The transformer oil should have.....volatility and..... viscosity.

(a) high, high

(b) low, high

(c) low, low

(d) high, low

Answer: (c)

76. The function of breather in a transformer is

(a) to provide oxygen inside the tank.

(b) to cool the coils during reduced load.

(c) to cool the transformer oil.

(d) to arrest flow of moisture when outside air enters the transformer.

Answer: (d)

77. The secondary winding of which of the following transformers is always kept closed ?

(a) Step-up transformer.

(b) Step-down transformer.

(c) Potential transformer.

(d) [current transformer](#).

Answer: (d)

78. The size of a transformer core will depend on

(a) frequency.

(b) frequency and area of the core.

(c) flux density of the core material.

Answer: (b) frequency and area of the core.

79. Natural air-cooling is generally restricted for transformers, up to

(a) 1.5 MVA

(b) 15 MVA

(c) 50 MVA

Answer: (a) 1.5 MVA

80. A [shell-type transformer](#) has

(a) high eddy current losses

(b) reduced magnetic leakage

(c) negligibly hysteresis losses

(d) none of the above

Answer: (b) reduced magnetic leakage

81. A transformer can have regulation closer to zero

- (a) on full-load.
- (b) on overload.
- (c) on leading power factor.
- (d) on zero power factor.

Answer: (c) on leading power factor.

82. Reduction in core losses and increase in permeability are obtained with transformer employing

- (a) core built-up of laminations of cold rolled grain oriented steel.
- (b) core built-up of laminations of hot rolled sheet.
- (c) either of the above.
- (d) none of the above.

Answer: (a)

83. In a power or distribution transformer about 10 percent end turns are heavily insulated

- (a) to withstand the high voltage drop due to line surge produced by the shunting capacitance of the end turns.
- (b) to absorb the line surge voltage and save the winding of transformer from damage.

(c) to reflect the line surge and save the winding of a transformer from damage.

(d) none of the above.

Answer: (a)

84. Which of the following transformers is smallest ?

(a) 2 kVA 500 Hz

(b) 2 kVA 400 Hz

(c) 2 kVA 200 Hz

(d) 2kVA 50 Hz

Answer: (a) 2 kVA 500 Hz

85. The purpose of a breather in a transformer is to

(a) provide cooling to the winding

(b) take insulating oil from the conservator

(c) provide insulation to the winding

(d) extract moisture from the air

Answer: (d) extract moisture from the air

86. Cross-over windings are used for

- (a) high voltage winding of large rating transformers
- (b) high voltage winding of small rating transformers
- (c) low voltage winding of small rating transformers
- (d) none of these.

Answer: (b) high voltage winding of small rating transformers

87. In core type transformers, the concentric windings are used with

- (a) low voltage winding placed next to core.
- (b) low voltage winding on the outer-side.
- (c) high voltage winding placed next to core.
- (d) high voltage winding on the outer-side.

Answer: (a) low voltage winding placed next to core.

88. The yoke sections of transformers using hot-rolled laminations is made 15 percentage greater than that of the core to

- (a) to increase the size of the transformer.
- (b) to reduce the copper loss.
- (c) to reduce the iron loss in yoke and magnetizing current.
- (d) to provide better cooling.

Answer: (c) to reduce the iron loss in yoke and magnetizing current.

89. When two single phase transformers are running in parallel and if the impedance triangles of the transformers are not identical in shape and size then

(a) power factor of one transformer and power factor of common load will be same.

(b) power factors at which the transformers operate will be different from one another and again these will be different from power factor of common load.

(c) power factors at which the transformers operate will be same but different from power factor of common load.

(d) power factors at which the transformers operate and power factor of common load all will be same.

Answer: (b)

90. What is the typical use of an auto-transformer ?

(a) Control transformer.

(b) Isolating transformer.

(c) Variable transformer.

(d) Toy transformer.

Answer: (c) Variable transformer.

91. In a transformer the magnitude of mutual flux

(a) varies at low loads and constant at high loads.

(b) is low at low loads and high at high loads.

(c) is high at low loads and low at high loads.

(d) same at all loads.

Answer: (d) same at all loads.

92. The principle of working of a transformer is

(a) mutual induction.

(b) static induction.

(c) self induction.

(d) dynamic induction.

Answer: (a) mutual induction.

93. In a transformer an insulating material may fail due to

(a) moisture.

(b) dust.

(c) voids in the winding.

(d) any of the above.

Answer: (d) any of the above.

94. The reactance of a transformer depends on

(a) leakage flux.

(b) size of the core.

(c) size of the tank.

(d) all of the above.

Answer: (a) leakage flux.

95. In a transformer on no load, the input voltage

(a) is always at 60 degrees to the magnetizing current.

(b) is in phase with magnetizing current.

(c) leads the magnetizing current by 90 degrees.

(d) lags the magnetizing by 90 degrees.

Answer: (c) leads the magnetizing current by 90 degrees.

96. The value of useful flux least depends on

(a) load

(b) magneto-motive force

(c) voltage

(d) all of the above

Answer: (a) load

97. Which of the following can be reduced when the flux density in the transformer core is increased?

(a) Copper losses.

(b) Output frequency.

(c) Size of the transformer.

(d) None of the above.

Answer: (c) Size of the transformer.

98. A tap changer is used on a transformer for

(a) adjustments in secondary voltage.

(b) adjustments in primary voltage.

(c) adjustments in both primary and secondary voltages.

(d) none of the above.

Answer: (a) adjustments in secondary voltage.

99. Which of the following will improve the mutual coupling between primary and secondary circuits?

- (a) High reluctance magnetic core.
- (b) Transformer oil of high breakdown voltage.
- (c) Low reluctance magnetic core.
- (d) Winding material of high resistivity.

Answer: (c) Low reluctance magnetic core.

100. Leakage fluxes of a transformer may be minimized by

- (a) avoiding overloads.
- (b) keeping magnetizing current to the minimum.
- (c) reducing the reluctance of the iron core to the minimum.
- (d) sectionalizing and interleaving the primary and secondary windings.

Answer: (d)

101. The magnetizing current for sinusoidal voltage applied, will be

- (a) always sinusoidal.
- (b) always non-sinusoidal.
- (c) sinusoidal or non-sinusoidal depending upon the saturation point.
- (d) none of the above.

Answer: (c) sinusoidal or non-sinusoidal depending upon the saturation point.

102. The transformation ratio of a transformer, for a given application

(a) depends on secondary load.

(b) is constant but not fixed.

(c) is fixed but not constant.

(d) none of the above.

Answer: (c) is fixed but not constant.

103. The output current corresponding to the maximum efficiency for a transformer having core loss of 200 W and [equivalent resistance](#) referred secondary of 0.5 ohms is

(a) 5 A

(b) 10 A

(c) 15A

(d) 20 A

Answer: (d) 20 A

104. The saving in copper achieved by converting two winding transformer into an auto-transformer is determined by

- (a) load on the secondary.
- (b) voltage transformation ratio.
- (c) size of the transformer core.
- (d) magnetic quality of core material.

Answer: (b) voltage transformation ratio.

105. While performing a short-circuit test on a transformer, usually low-voltage side is short-circuited because it has

- (a) low insulation.
- (b) easy access.
- (c) lower terminal voltage and higher current rating.
- (d) more number of turns.

Answer: (c) lower terminal voltage and higher current rating.

106. The secondary winding of a current transformer whose primary is carrying current should

- (a) not be open-circuited.
- (b) not be short-circuited.
- (c) either of the above.

(d) none of the above.

Answer: (a) not be open-circuited.

107. In large transformers, oil is invariably used in order to

(a) lubricate the core.

(b) insulate the core.

(c) insulate the coils.

(d) none of the above.

Answer: (c) insulate the coils.

108. Dust should never be allowed to accumulate on the windings and core of a dry type transformer because it

(a) reduces dissipation of heat.

(b) may short-circuit the windings.

(c) absorbs oil and grease.

(d) tends to corrode the metal surface.

Answer: (a) reduces dissipation of heat.

109. Increase in secondary current of a transformer brings about increase in primary current. This is possible because

- (a) primary and secondary windings are capacitively coupled.
- (b) primary and secondary windings are inductively coupled.
- (c) primary and secondary windings are conductively coupled.
- (d) none of the above.

Answer: (b)

110. An [auto-transformer](#) is preferred to a conventional 2-winding transformer

- (a) where ratio of transformation is low.
- (b) where it is required to isolate the two windings electrically.
- (c) because it is much safer to use an auto-transformer.
- (d) where large number of secondary taps are needed.

Answer: (a) where ratio of transformation is low.

111. Transformer for constant voltage applications is considered good if its voltage regulation is

- (a) low
- (b) high
- (c) zero

(d) none of the above

Answer: (a) low

112. Transformer supplying load having negative resistance characteristics such as arc load, is considered if its voltage regulation is

(a) low.

(b) high.

(c) either of the above.

(d) none of the above.

Answer: (b) high.

113. For given effective applied voltage of constant frequency eddy current losses

(a) become less with peaked wave shape of applied voltage.

(b) independent of the wave shape of the applied voltage.

(c) either of the above.

(d) none of the above.

Answer: (b)

114. While rising and while falling, if a wave is symmetrical, it contains

- (a) even harmonics in addition to fundamental.
- (b) odd harmonics in addition to fundamental.
- (c) both odd and even harmonics in addition to fundamental.
- (d) none of the above.

Answer: (b) odd harmonics in addition to fundamental.

115. While rising and falling if a wave is not symmetrical, it contains

- (a) even harmonics in addition to fundamental.
- (b) odd harmonics in addition to fundamental.
- (c) both odd and even harmonics in addition to fundamental.
- (d) none of the above.

Answer: (a) even harmonics in addition to fundamental.

116. In order to find the full-load efficiency of a transformer the losses which must be known

- (a) may be found by performing open-circuit and short-circuit tests.
- (b) may be found by measuring winding resistances and calculating the I^2R losses.
- (c) may be found by measuring the input to the primary with secondary open.

(d) cannot be found except by actually loading the transformer fully.

Answer: (a) may be found by performing open-circuit and short-circuit tests.

117. Which of the following statement concerning parallel operation of transformers is incorrect?

(a) Transformers must be operated at the same frequency.

(b) Transformers must have same transformation ratio.

(c) Transformers must have equal kVA.

(d) Transformers must have equal voltage ratings.

Answer: (c) Transformers must have equal kVA.

118. [Current transformers](#) for meters and relays usually have

(a) 1 : 2 ratio.

(b) 5 : 1 ratio.

(c) 5A secondaries.

(d) 15 A secondaries.

Answer: (c) 5A secondaries.

119. All day efficiency is the ratio of output to input in

- (a) kVA at a particular instant.
- (b) kW at particular instant.
- (c) kVARh at particular instant.
- (d) kWh during 24 hours.

Answer: (d) kWh during 24 hours.

120. While performing back-to-back test, the amount of power consumed is equal to

- (a) iron and copper losses of two transformers at full load.
- (b) full load rated output of the two transformers.
- (c) rated output of two transformers and iron and copper losses of trans. formers at full load.
- (d) none of the above.

Answer: (a) iron and copper losses of two transformers at full load.

121. The purpose of performing Surnpner's test is mainly to find out

- (a) regulation of the transformer.
- (b) efficiency of the transformer.
- (c) the temperature rise on full load economically.

(d) none of the above.

Answer: (c) the temperature rise on full load economically.

122. When 240 V D.C. supply is given to an unloaded 220 V, 50Hz transformer

(a) secondary will carry heavy current.

(b) primary will carry heavy current and may possibly burn.

(c) we will get A.C. voltage on secondary side according to turn ratio.

(d) we will get high voltage on secondary side.

Answer: (b) primary will carry heavy current and may possibly burn.

123. In a transformer, if the magnitude of magnetizing current is more

(a) its power factor will become low on leading side.

(b) its power factor will become low on lagging side.

(c) it has no effect on the power factor of the transformer .

(d) none of the above.

Answer: (b) its power factor will become low on lagging side.

124. In measuring voltage or current by means of instrument transformer

- (a) only ratio errors need to be considered.
- (b) both ratio as well as phase angle error need to be considered.
- (c) either of the above.
- (d) none of the above.

Answer: (a) only ratio errors need to be considered.

125. In which of the following the highest rating transformer is likely to find application ?

- (a) Transmission.
- (b) Substation.
- (c) Generation.
- (d) Distribution.

Answer: (c) Generation.

126. In a transformer maximum voltage regulation occurs when the power factor of the load is

- (a) 0.4
- (b) lagging.
- (c) leading.

(d) unity.

Answer: (b) lagging.

127. In a transformer minimum voltage regulation occurs when the power factor of the load is

(a) leading.

(b) lagging.

(c) 0.8

(d) unity.

Answer: (a) leading.

128. When a delta connected primary of a 3-phase transformer is connected to 3-phase supply

(a) magnetizing current in phase winding will carry third harmonics but line current will be free from it.

(b) magnetizing current in phase winding will contain third harmonics and line current will also contain third harmonics.

(c) magnetizing current will not contain third harmonics but line current will contain third harmonics.

(d) none of the above.

Answer: (a)

129. Scott connections are used to convert

- (a) three-phase supply to D.C. supply
- (b) three-phase supply to three-phase supply
- (c) three-phase supply to two-phase supply
- (d) three-phase supply to single-phase supply

Answer: (c)

130. Which of the following 3-phase connections of transformer create disturbances in communication systems

- (a) star/delta
- (b) delta/star
- (c) star/star
- (d) delta/delta.

Answer: (c) star/star

131. Delta-delta power transformer is protected by current transformer having

- (a) star/star connections
- (b) delta/delta connections
- (c) star/delta connections

(d) delta/star connections

Answer: (a) star/star connections

132. Star-star power transformer is protected by current transformer having

(a) star/star connections

(b) delta/delta connections

(c) star/delta connections

(d) delta/star connections

Answer: (b) delta/delta connections

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