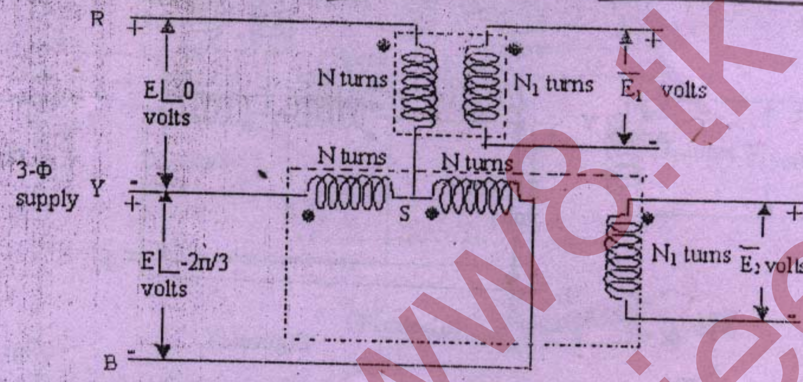
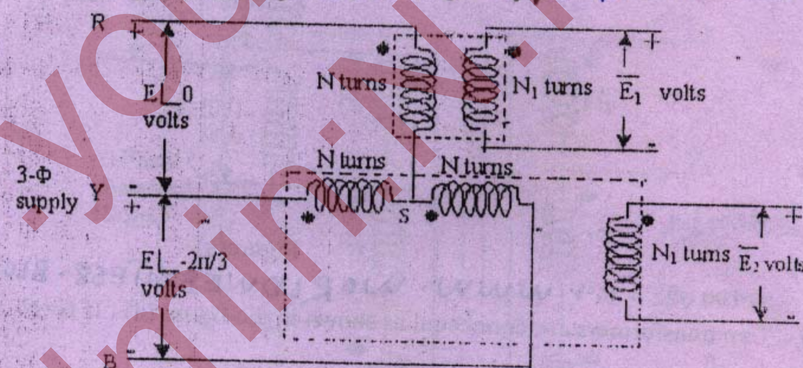
1. Two transformers are connected as shown in the figure (a) .If N = sqrt 3 N_1 and if the line R gets disconnected, overline E_2=



Figure(a)

:-> $\frac{E}{2\sqrt{3}}\angle\frac{-2\pi}{3}$V

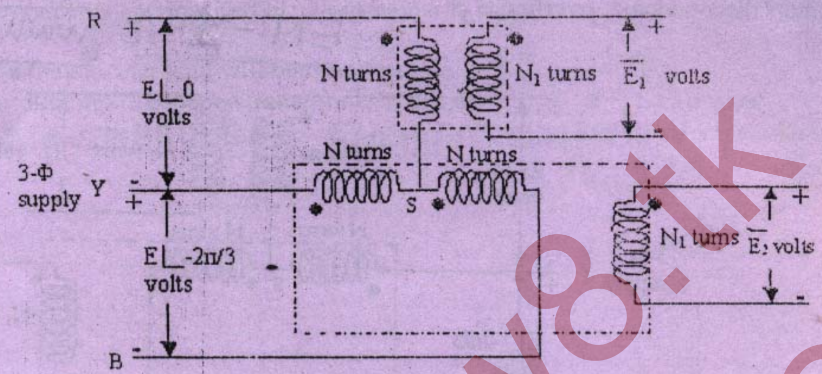
2. Two transformers are connected as shown in the figure(a) . If N=N_1 and if the line R gets disconnected then overline E_1 =



Figure(a)

:->0 V

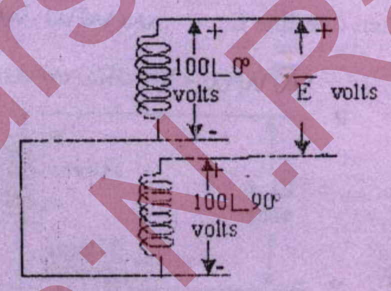
3. The windings of the teaser transformer in a Scott connection have 200 and 40 turns respectively. The 200 turn winding is on the three phase side, the line to neutral voltage of the 3-phase supply being 230.94V. The voltage across the 40 turn side is :->$40\sqrt{3}$V
4. One of the two transformers used for Scott connection has a primary winding of 200 turns with center tapping. The number of turns that the primary of the second transformer should have is :->$100\sqrt{3}$
5. For the voltages V1 $\angle\theta_1$ and V2 $\angle\theta_2$ to constitute a balanced 2- phase supply, :-> $V_1 = V_2$ and $\theta_1 - \theta_2 = \pm 90$
6. Two transformers are connected as shown in figure(a) . If N=N_1; overline E_2=



Figure(a)

:->$\frac{E}{2}\angle\frac{-2\pi}{3}$V

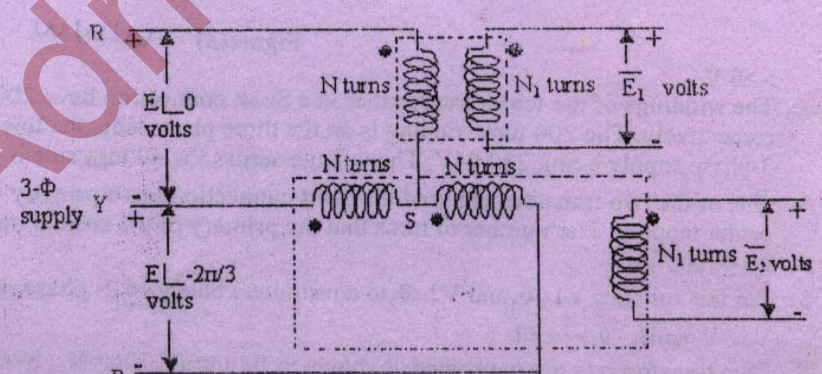
7. Scott connection is used to obtain a 180V, 2 phase output from a 400V, 3 phase supply. The voltage across the primary of the teaser transformer will be :->$200\sqrt{3}V$
8. A Scott connection gives a 2-phase output as shown in figure (a) . $\overline{E}$=



Figure(a)

:->$100\sqrt{2}\angle-45^{o}$V

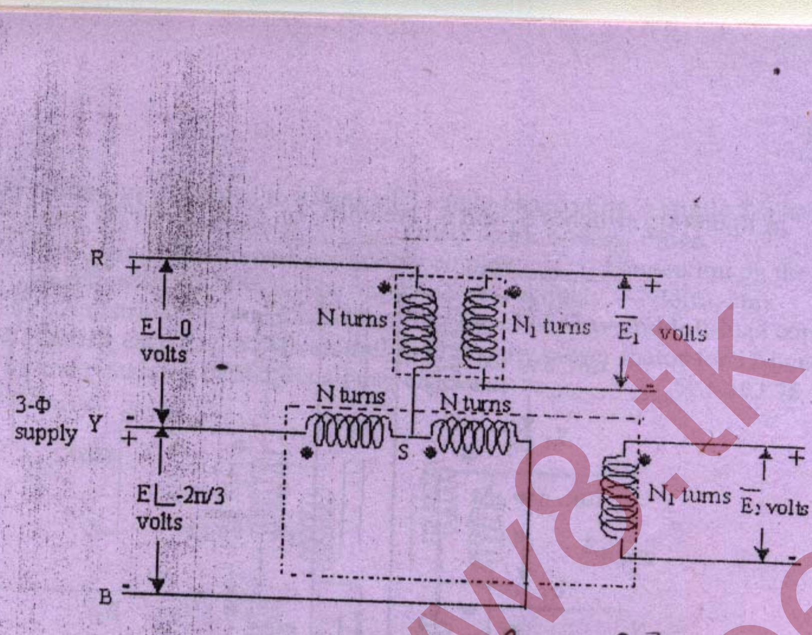
9. Two transformers are connected as shown in the figure (a) . If N=N_1 overline E $_1$=



Figure(a)

:-> frac{{ sqrt 3 E}} {2} angle 150^{0}V

10. Two transformers are connected as shown in figure(a) . If N=N_1 then overline E $_1$ =



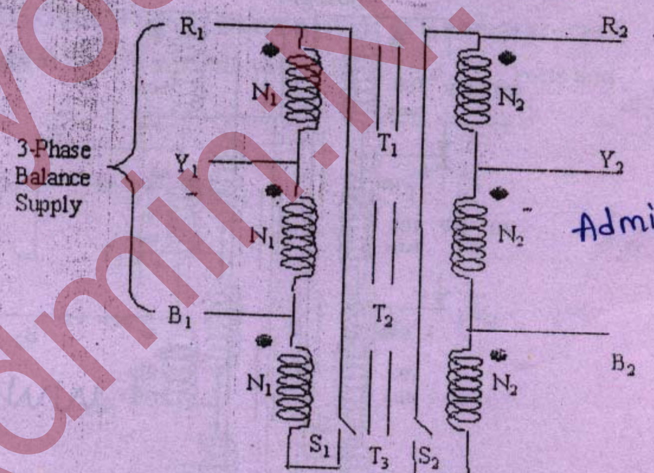
Figure(a)

:->$\frac{\sqrt{3}}{2}E\angle-30^0$**V**

11. Three units of 1:5 voltage ratio single-phase transformers are operated with lv side in Δ and hv side in Y. If the lv side receives a 400V, 3 phase supply, the line voltage on hv side is _____ :->**2000 $\sqrt{3}$V**

12. As compared to a Δ – Δ bank the capacity of the open delta bank is _ _ % . :->**57.7**
13. With three - phase transformer in open - delta, :->**The output voltages are balanced but can safely deliver only reduced currents**

14. In Figure(a) , if S1 and S2 are opened the resulting operation is called

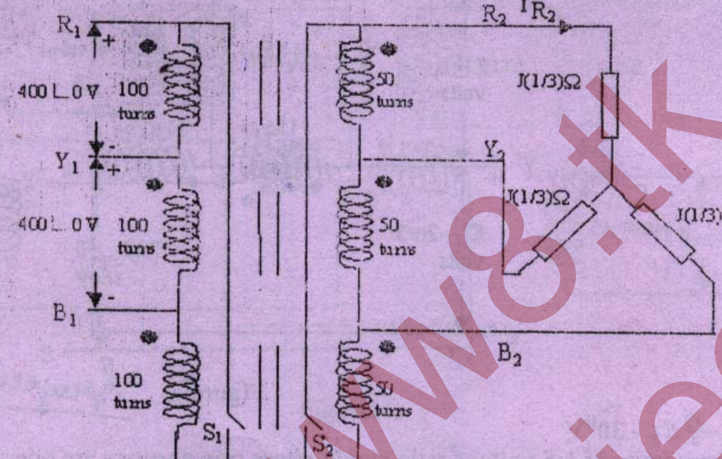


Figure(a)

:->**open - delta**

15. If neutral points are desired on high voltage as well as low voltage side of a 3 phase supply , the transformer should be connected in :->**Y- Y**
16. For given 3 phase kVA and line to line voltage rating, star connected windings require ____ copper and ____ insulation as compared to delta connected windings . The blanks are respectively :->**more, less**
17. The disadvantage of Δ – Δ operation of 3 phase transformer is :->**Absence of a star point**
18. For small kVA high voltage rating transformer , the amount of insulation is minimum for _____ connection . The reason is that the phase voltage is ______ the line voltage in this type of connection. The blanks are, respectively :->**Y-Y, $\frac{1}{\sqrt{3}}$**

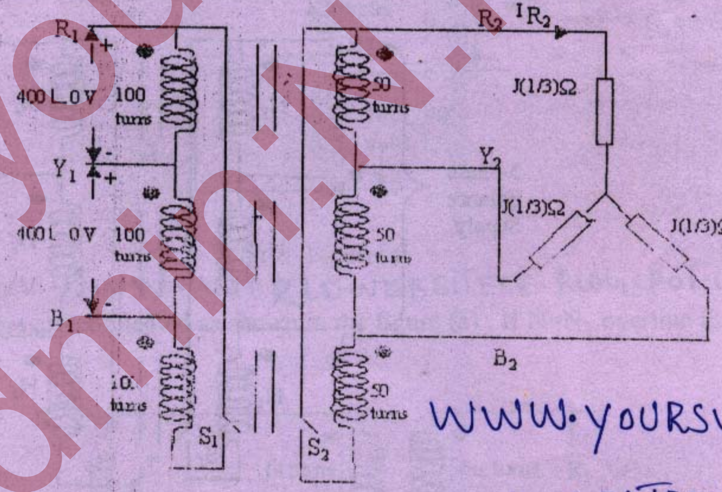
19. In figure(a) , switches S_1 and S_2 are open. $\overline{I}_{R_2}$ = _ _ _ _ amps



Figure(a)

:->$200\sqrt{3}\angle-120^0$

20. In figure(a) , switches S_1 and S_2 are open. If the transformers are working at rated current the hv phase current rating of the transformer is _ _ _ _ amps

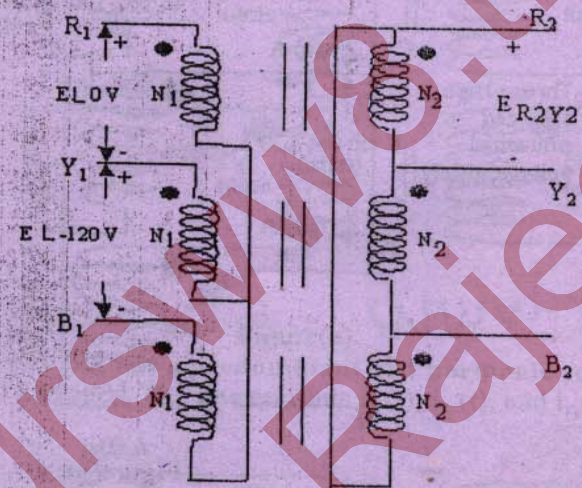


Figure(a)

:->$100\sqrt{3}$

21. A 3-phase 50kVA distribution transformer has a rated voltage core loss of 1kW. the energy lost by it due to iron losses in a day is :->**24kWH**
22. 1) Distribution transformers are designed to have _ _ _ _ _ _ core-loss. 2) For such transformers, a better figure of merit compared to full-load efficiency is _ _ _ _ efficiency. The blanks are, respectively :->**low, all-day**
23. Tubes are commonly attached to the walls of the tank housing distribution transformers. The purpose of these tubes is to :->**Help in dissipating the heat generated in the transformer**
24. Oil used in cooling of transformers should be _ _ _ _:->**a good electrical insulator**
25. 3-phase transformers of very large kVA are often built as three separate single-phase units rather than a single 3-phase unit. The reason is :->**the weight and size of the single 3-phase unit cause difficulties of transport and handling**

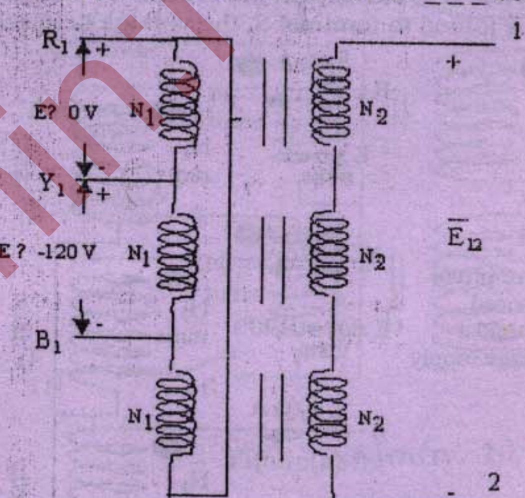
26. For the same ratings, as compared to a bank of 3 single-phase units, a single 3- phase unit w occupy ___space, and will require a _____ costly spare. :->**less, more**
27. 11 kV/400V distribution transformers commonly employ ____ connection on the hv side and ____ connection on the lv side. The blanks are respectively, :->**delta, star**
28. A 3-phase 50kVA distribution transformer has core losses of 1kW and full-load copper losse of 1(1/3) kW. During each day, it delivers full-load at unity power factor for 12 hours, and is on no-load for the remaining period. Its all day efficiency is ______ % :->**93.75**
29. In figure(a) ; $\overline{E}_{R2Y2}$=



Figure(a)

:->$\frac{N2}{N1}\frac{E}{\sqrt{3}}\angle-30$**volts**

30. Shown in the figure (a) the two possible values for E_{12} are ___ volts and ____ volts.



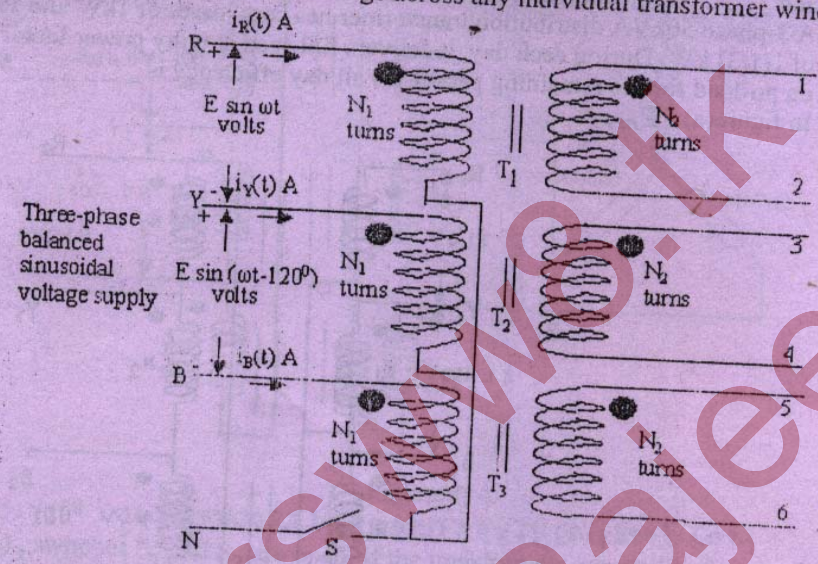
Figure(a)

:->**0 and 2(N_2/N_1)E**

31. The third harmonic component of the magnetization current of a single-phase transformer has an amplitude of 0.2 A. Its 4^{th} and 5^{th} harmonic components will have amplitudes respectively of :->**Zero, less than 0.2 A**
32. A single-phase iron-cored transformer receives 50 Hz sinusoidal voltage. The third-harmonic component of its no-load current will have a frequency of :->**150 Hz**
33. When the no-load current of a single-phase transformer is non-sinusoidal, the harmonics absent in it are, :->**all even harmonics**

34. For a transformer on no load, the voltage applied is sinusoidal. If the transformer is air cored, the current drawn will be _______. If it is iron cored, the current drawn will be _______. The blanks are, respectively, :->**sinusoidal, non-sinusoidal**

35. In figure (a) , switch S is open. The voltage across any individual transformer winding is

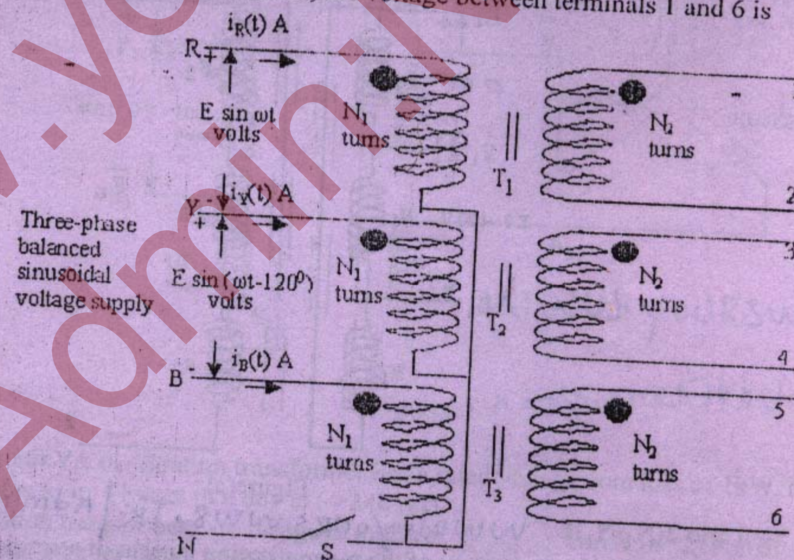


Figure(a)

:->**non-sinusoidal**

36. With star-star connection, it is desired to suppress triplen harmonics. This can be achieved by :->**tertiary windings in each phase, delta-connected**

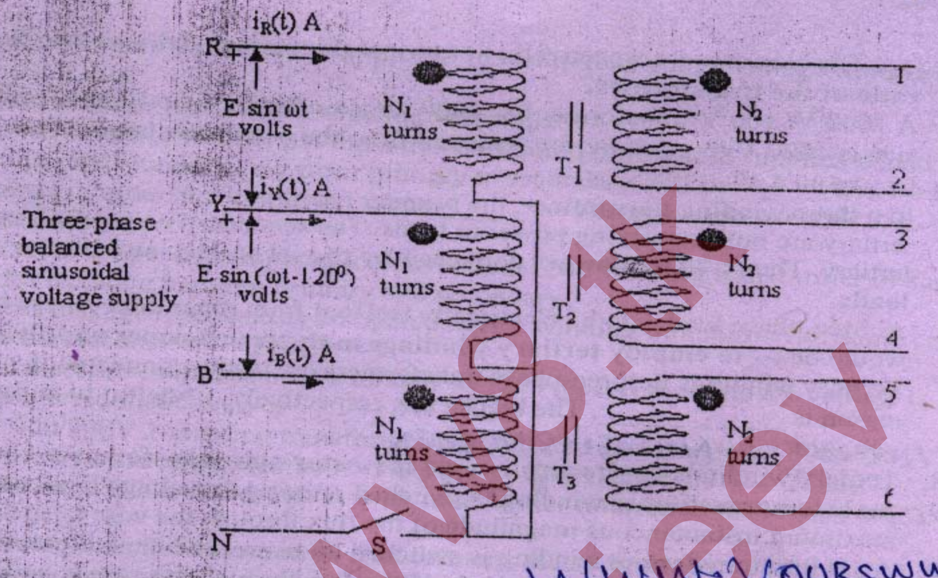
37. In figure(a) , switch S is closed. On the secondary side, if terminal 2 is joined to terminal 3, and terminal 4 is joined to terminal 5, the voltage between terminals 1 and 6 is



Figure(a)

:->**Zero**

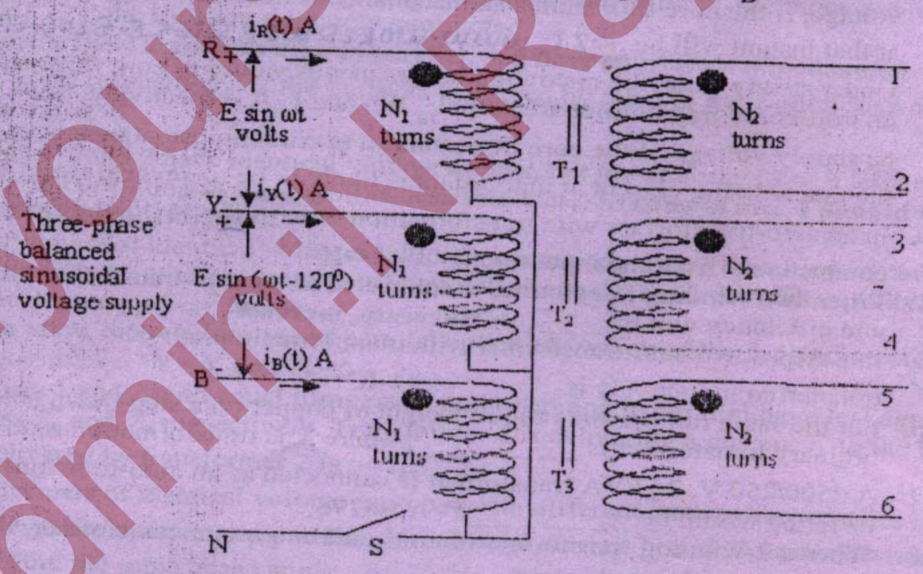
38. In figure(a) , switch S is open. On the secondary side, if terminal 2 is joined to terminal 3, and terminal 4 is joined to terminal 5, the voltage between terminals 1 and 6 is



Figure(a)

:->**not of supply frequency but has a predominant 3rd harmonic component.**

39. In figure (a) , the switch S is open. The line currents $i_R(t)$, $i_Y(t)$, and $i_B(t)$ cannot contain



Figure(a)

:->**triplen harmonics**

40. The primaries of a three-phase transformer are star-connected and receive a sinusoidal balanced 3-phase supply. If the no-load primary line currents contain third harmonic components, the phase angle between any pair of them is :-> 0^0
41. Parallel operation of transformers is least affected by tap changing if :->**The turns ratios of both the transformers are changed by the same amount.**
42. In distribution transformers, off-load tap-changing is done to account for ____. On-load ta changing is done to account for _______. The blanks are, respectively, :->**Seasonal load variations, short period load variations.**
43. Tap-changing in transformers is necessary to _______. Tap changing changes the ____

_ _. The blanks are, respectively, :->**control the voltage delivered to the consumers, turns ratio of the transformer.**

44. A 1000 V/ 100 V transformer has 1000 turns on the hv side. If the supply voltage on the hv side is 1000 V, but 5 turns are removed from the hv side by tapping, the lv side voltage will be :->**100.5 V**
45. In a three-winding transformer, the primary receives the ac supply while the secondary and tertiary are both supplying power to loads. The secondary voltage is larger than that of the tertiary. Then :->**The powers delivered by the secondary and tertiary depend on their loads.**
46. A three-phase load is to be electrically isolated from other three-phase loads. a simple solution would be :->**to employ tertiary windings in the transformer supplying to the loads.**
47. Tertiary windings in three-phase transformers are usally connected in _ _ _ _ _ _ _ _ _. The reason is _ _ _ _ _ _ _ _ _. The blanks are, respectively, :->**delta, to suppress harmonic voltages** Admin@N·RAJEEV
48. Tertiary windings are frequently used in :->**star-star transformers**
49. An N turn transformer winding is switched on to an ac voltage E sin ωt at the instant t=0. The maximum instantaneous magnitude of the flux through the core is :->**2E/Nω**
50. An N turn transformer winding is switched on to an ac voltage E cos ωt at the instant t=0. The maximum instantaneous magnitude of the flux through the core is :->**E/Nω**
51. Under syeady state, the maximum instantaneous values of flux and magnetizing current in an air cored transformer are $\phi_m Wb$ and I_mA respectively. Soon after switching on the ac supply voltage, if the core flux attains an instantaneous maximum of $2\phi_m Wb$, the magnetizing current at that instant will be :->**2 I_m** WWW.WORLDWEBSITES8.BLOGSPOT.COM
52. Under steady state, the maximum instantaneous values of core flux and magnetizing current in an iron-cored transformer are varphi$_m$ Wb and I_mA respectively. Soon after switching on the ac supply voltage, if the core flux attains a maximum instantaneous value of 2 varphi$_m$ Wb, the magnetizing current at that instant is likely to be :->**several times I_m**
53. In an auto-transformer with transformation ratio of K= V_2/V_1, the fraction of power transferred conductively from the input to output is :->K
54. When two winding transformer is connected as an auto-transformer, its output will be _ _ _ _ _ and efficiency will be _ _ _ _ :->**Increase, increase**
55. In a step-down auto-transformer with transformation ratio K = V_2/V_1.the fraction of power transferred inductively is _ _ _ _ _ :->**1-K**
56. For the same ratings, the ratio of weight of copper on a step-down auto-transformer to an ordinary transformer is _ _ _ _ _ _ _ _, where K is transformation ratio (V_2/V_1) :->**1-K**
57. A 2500/250 V, 25 kVA transformer is connected as an auto-transformer to give 2500/2750 V. its rating would be _ _ _ _ _ _ _ _ kVA :->275
58. When a 2-winding transformer is connected as an auto-transformer, the kVA rating can :->**increase or decrease**
59. A bank of three identical single phase 250kVA, 11kV/230V transformers is used to provide 400V low tension supply from a 11kV, three phase substation. The effective rating of the bank will be _ _ _ _ _ _ kVA :->**750**
60. A single phase transformer has a rating of 15 kVA, 600/120 V, it is connected as an auto-transformer to supply at 720V from a 600V primary source. The maximum load it can supply is _ _ kVA :->**90**
61. A 400V/ 100V, 10kVA, two winding transformer is reconnected as an auto-transformer across a suitable voltage source. The maximum rating of such an arrangement could be _ _ _ _ kVA :->**12.5**
62. In a step down auto transformer the supply voltage and current are V_1 volts and I_1A while the load voltage and current are V_2 volts and I_2A. The transformed volt amperes are :->$V_2(I_2 - I_1)$
63. Transformer is rated in kVA instead of kW because :->**Total transformer losses depend on volt-amperes**

64. An auto-transformer is preferably employed in institutions where voltage transformation ratio is :->**Nearly unity**
65. An auto-transformer has :->**One winding with taps**
66. A step down auto-transformer having a transformation ratio of 0.8 supplies a load of 3kW. The power transferred conductively from primary to secondary will be ____ kW :->**2.4**
67. Auto-transformers are not employed when ____ :->**Voltage ratio exceeds 3:1**
68. An auto-transformer
    I. requires less copper as compared to conventional two winding transformer of same capacity
    II. provides isolation between primary and secondary
    III. Has less leakage reactance as compared to two winding transformer of same capacity
    Select the correct answer :->**I &III**
69. An auto-transformer supplies a load of 5kW at 120V,upf. If the primary voltage is 240V, the power transferred inductively is ____ kW :->**2.5**
70. A 2kVA, 400/200V 2-winding transformer is connected as a stepdown 600V/200V auto transformer. Its kVA rating will be :->**3**
71. The resistance of a 200/400V, 2kVA 1-ph transformer referred to the lv side is 2Ω. Its per unit value is :->**0.1**
72. For satisfactory parallel operation of transformers, the secondaries of both transformers must have :->**Same voltage**
73. In parallel operation load sharing by transformers is according to :->**inverse ratio of their impedances**
74. For successful parallel operation of two single phase transformers, the most essential condition is that their :->**Polarities are properly connected**
75. Transformers 1 and 2 are operating in parallel, and have equivalent impedances $(r_1 + jx_1)\Omega$ and $(r_2 + jx_2)\Omega$ respectively. If the currents delivered by them to a common load are to be in phase :->$\frac{x_1}{r_1} = \frac{x_2}{r_2}$
76. Transformers 1 and 2 have identical voltage ratings, but transformer 1 has a larger kVA rating. When they are operating in parallel, it is desirable that :->**Transformer 1 should take up more load than transformer 2**
77. Two transformers of identical voltages but different capacities are operating in parallel. If their impedances and x/r ratios are equal, :->**They will share the load current equally, and will operate at th same power factor**
78. Keeping in view, the requirement of parallel operation, which of the 3-ph connections given below is possible? :->**Y - Y and Δ–Δ**
79. Transformers 1 and 2 with equal turns ratios and operating in parallel have leakage impedances $\overline{Z_1}$ and $\overline{Z_2}$ respectively. Transformer 1 is delivering a current $\overline{I_1}$ to the load. Current delivered by transformer 2 is :->$\overline{I_1 Z_1}/\overline{Z_2}$
80. Two transformers of identical voltage ratio but with different leakage impedances $(r_1 + jx_1)\Omega$ and $(r_2 + jx_2)\Omega$ are operating in parallel. If their load current $\overline{I_1}$ and $\overline{I_2}$ have different magnitudes but the same phase angle :->$\frac{I_1}{I_2} = \frac{r_2}{r_1} = \frac{x_2}{x_1}$
81. A 11KV / 400V, 1000kVA,Y/Y transformer is reconnected as Δ / Y transformer with high voltage side connected in Δ. The rating of new connection will be :->$11/\sqrt{3}$KV/400V, 1000KVA
82. Two single phase transformers with equal turns ratios have impedances of 0.5+j 3 ohms and 1+j6 ohms with respect to secondary. If they operate in parallel, how will they share a load of 150A at 0.8 power factor lagging? :->**100A, 50A**
83. A transformer may have negative voltage regulation when its load power factor is :->**Leading**
84. In a power transformer the tapings are provided on :->**HV side**
85. The core of a transformer has :->**Low reluctance**
86. Sumpner's test on a transformer is conducted mainly to determine the ___ :->**Heat produced**
87. The test of a transformer which gives information regarding regulation, efficiency and temperature rise under load conditions is ______ test :->**Back-to-back**
88. The efficiency of two identical transformers under load conditions can be determined by :-

>**Back-to-back test**

89. In a back-to-back test to be conducted on pair of transformers, the secondaries are connected :-
>**Series opposing**

90. Powers measured in a sumpners test on two identical transformers yield information about :-
>**Both core and copper loss**

91. Two transformers each having iron losses Pi watt and copper loss of Pc are put back-to-back test and full load current is allowed to flow through secondaries,the total input will be :->2 **(Pc+Pi)**

92. Two single phase transformers of same rating 40KVA, are tested by the back- to- back method and give following results: W1 (in the parallel circuit) = 800W, W2 (in the series circuit at rated current) = 1000W. Then the efficiency of each transformer at unity power factor is___ % :->**97.8**

93. A transformer is working at its maximum efficiency. Its total losses are 1500W. Then its iron losses will be :->**Equal to 750W**

94. In a transformer, in general :->**OC test is conducted on LV side and SC test is conducted on HV side**

95. Open circuit test on a transformer gives.:->**Hysteresis loss and eddy current loss**

96. During SC test, the core losses are negligible. This is because :->**The voltage applied across the high voltage side is a fraction of its rated voltage**

97. In performing a sc test on a transformer, low voltage side is usually short circuited this is because it has :->**Current delivered by the supply needs to be smaller**

98. The open circuit test on a transformer is usually performed by exciting the low voltage winding. This is because :->**It draws sufficiently large no load current which can be conveniently measured**

99. While performing short circuit test on a transformer the impressed voltage magnitude is kept constant but the frequency is increased, the short circuit current will :->**Decrease**

100. The short circuit test conducted on a 1-ph 5:1 transformer on HV side with LV side short circuited, gives a wattmeter reading of 1000W. If the test is conducted from LV side short circuiting HV winding, the wattmeter reading will be :->**1000W**

101. The short circuit voltage of a transformer mainly depends on its :->**Equivalent impedance**

102. if R is the equivalent resistance, X is the equivalent reactance, cos(Φ) is the leading power factor at full load current I, then the voltage rise of transformer is _____ :-> IRcos(Φ) – IXsin(Φ)

103. Positive voltage regulation is an indication of ______ load :->**Inductive or capacitive**

104. A transformer has %R = 3 and %X = 5, its %regulation at 0.8 power factor lead is _____ % :->**-0.6**

105. full-load voltage regulation of a power transformer is zero when power factor of the load is near :->**Unity, leading**

106. The voltage regulation of a transformer at full load and 0.8 power factor lagging is 2.5 %. The voltage regulation at full-load 0.8 power factor leading may be ____ % :->**1**

107. A transformer has a voltage regulation of 3 % at full-load 0.8 power factor lagging. At full-load unity power factor, the regulation will be ___ :->**Less than 3.75 %**

108. The voltage regulation of a large transformer is mainly influenced by :->**Winding impedance and load power factor**

109. The regulation is maximum when the power factor of the load is :->R_{eq}/Z_{eq} **leading**

110. A 2400/240V, 240kVA, single phase transformer has a core loss of 1.8KW at rated voltage. Its equivalent resistance is 1.0 %, then the transformer efficiency at 0.9 power factor and on full load is _____ % :->**98.1**

111. Given the maximum efficiency of a transformer of a 500kVA, 3300/500 V, 50Hz 1-ph transformer is 96 % and occurs at full load, unity power factor. Its equivalent resistance ref lv is :->**(1/96)Ω**

112. Core type transformer is generally suitable for :->**High voltage, low output**

113. A single phase transformer has specifications of 250kVA, 11,000 V/ 415V, 50Hz. What are the approximate values of hv and lv rated currents? :->**Primary current = 22.7A, secondary**

current = 602A

114. The primary to secondary ratio of transformer is 1:2. If the primary is connected to 50Hz supply, the frequency of secondary supply is ____Hz. :->**50**
115. For given kVA and voltage ratings, which of the following transformers has the least weight? :-> **600Hz transformer**
116. A 400Hz transformer is operated at 50Hz, its kVA rating is :->**Reduced to 1/8 times**
117. At 50 Hz operation, a single phase transformer has hysteresis loss of 200W and eddy current loss of 100W. Its core loss at 60Hz operation with core flux density unchanged is :->**384W**
118. A transformer designed for operation on 60Hz supply is worked on 50Hz supply without changing its voltage ratings. Then,
    1) The maximum flux density in the core ________.
    2) The eddy current loss __________. The blanks are respectively, :->**Increases , remains constant**
119. can a 50Hz transformer be used for 25Hz, if input voltage is maintained constant at rated value corresponding to 50Hz :->**No, flux will be doubled which will drive the core to excessive saturation**
120. If the frequency of the input voltage of a transformer is increased keeping the magnitude of voltage unchanged, then hysteresis loss will ______ and eddy current loss will _________ :->**Decrease, remains constant**
121. Transformer operates poorly at low frequencies because :->**Magnetizing current is abnormally high**
122. If Pi be the iron losses and Pc be the copper losses at full-load, the load current at which maximum efficiency occurs is _______ times of full load current :->$\sqrt{Pi/Pc}$
123. In a transformer, the total full-load losses are 100W and total losses at half-load are 50W. The iron losses are___ watts :->**33.3**
124. A 2kVA transformer has iron losses of 150W and full load copper losses of 250W. the maximum efficiency of the transformer would occur when the total loss is ____ watts :->**300**
125. In a transformer, if the iron losses and full-load copper losses are 40.5kW and 50kW respectively, at what fraction of load will the efficiency be maximum? :->**0.9**
126. The iron loss in a 10kVA, 240V/100V, 1-ph transformer is 100 Watts. The maximum efficiency occurs at full-load. When the lv current is 50A, the copper losses will be ______ watts :->**25**
127. A transformer has a core losses of 200W and full load copper losses of 800W. the maximum efficiency of the transformer will occur at :->**0.5 times full load current**
128. A single phase transformer when supplied from 220V, 50Hz has eddy current loss of 50W. if the transformer is connected to a voltage of 330V, 50Hz, then the eddy current loss will be _____ watts :->**112.5**
129. A 220V/100V, 50Hz 1-ph transformer having a negligible winding resistance operates from a variable voltage, variable frequency such that V_1/f(V_1 =primary applied voltage, f= supply frequency) is constant. This will cause ____ :->**Variation in eddy current loss and hysteresis loss**
130. The Hysteresis and eddy current losses of a single phase transformer working at 200V, 50Hz supply are Ph and Pe respectively. The percentage decreases in these, when operated at 160V, 40Hz supply are _____% and _____%.(assume steinmetz coefficient =2). :->**20, 36**
131. A 10 KVA, 400/200V, 1-ph transformer with a percentage resistance of 3 % and percentage reactance of 6 % is supplying a current of 50A to a resistance load. The value of load voltage will be _______ volts. :->**194**
132. In a transformer equivalent circuit, the core loss is represented as :->**Shunt resistance**
133. In a transformer the resistance between primary and secondary winding is ______ ohm :->**infinite**
134. A 20KVA, 2000V/200V, 50Hz transformer has a high voltage winding resistance of 0.1 ohm and low voltage winding resistance of 0.01 ohm. The equivalent resistance referred to HV in ohms is______ :->**1.1**
135. The value of impedance on LV side, when referred to HV side :->**Increases**

136. In a 4:1 turns ratio transformer, the leakage reactance as referred to lv side is 0.05Ω . The leakage reactance as referred to the hV side is ____ :->**0.8 Ω**

137. The primary and secondary windings are interlaced for :->**Reduced leakage reactance**

138. The leakage flux of primary and secondary windings can be reduced to minimum by __ :->**Windings of primary and secondary are wound one upon the other coaxially**

139. A 200V/400V, 1-ph transformer has impedance referred to LV side of 4+j4 Ω. Its impedance referred to HV side is _____ Ω. :->**16+j16**

140. A 230/460V transformer has a lv resistance of 0.2 ohm and a reactance of 0.5 ohm and corresponding values for the hv are 0.75 ohm and 1.8 ohm respectively. The total voltage drop when hv side current is 10A at 0.8 power factor lagging is _____ volts :->**35.2**

141. A 10kVA, 2000/400V,1-ph transformer has hv winding resistance and reactance of 5 ohms and 12 ohms respectively. The lv resistance and reactances are 0.2 and 0.48 ohm respectively. The equivalent impedance referred to hv side is _____ ohms. :->**26**

142. A 5kVA transformer has a turn ratio of $N_1/N_2 = 10$. The impedance of hv winding is 3+j5 ohms, while that of lv winding is 0.5+j0.8 ohm. The impedance of the transformer when referred to hv is _____ ohms. :->**53.0+j85**

143. For a given voltage per turn, the number of turns in the primary winding of a transformer depends on ________ :->**input voltage**

144. In the expression for the induced emf in a transformer winding E= 4.44fNØ, Ø is the :->**maximum value**

145. If in a transformer the secondary turns are doubled and at the same time the primary voltage is reduced by half, then the secondary voltage will __________ :->**not change**

146. A transformer having 1000 primary turns is connected to a 250V ac supply. For a secondary voltage of 400V, the number of secondary turns should be __________ :->**1600**

147. The self induced voltage of a coil depends upon __________ :->**the voltage applied to the coil**

148. In a two winding transformer, the emf/turn in secondary winding is always _________ the emf/ turn in primary.(k>1) :->**equal to**

149. In a transformer supplying half full load at Zpf lagging, it is likely that the supply voltage ________ the load voltage by ______ . The blanks are respectively, :->**lags, small angle**

150. The primary and secondary induced e.m.fs overline {E$_1$} and overline {E$_2$} in a two-winding transformer are always __________ :->**either in - phase with each other or anti phase with each other**

151. The induced e.m.f. in the secondary of a transformer will depend on __________ :->**frequency, flux and number of turns in the secondary**

152. The primary (220V side) of a 220V/6V, 50Hz transformer is connected to 110V, 60Hz supply. The secondary out put voltage is: :->**3.0V**

153. When the secondary of the transformer is loaded, the flux in the transformer core will :->**remain constant**

154. When the secondary of the transformer is loaded, the current in the primary side will :->**be the sum of no-load current and balancing component of current drawn due to secondary current**

155. A 5kVA, 200/100V single phase transformer delivers 50A at rated voltage, the input current will be :->>**25A**

156. A 10kVA, 230/1000V single phase transformer is fed from a 230V supply. With lagging loads, the voltage across the load will be :->**< 1000V**

157. When a transformer is delivering rated current to a loads :->**Power output can be zero**

158. A transformer operates :->**at a p.f. depending on the load p.f.**

159. A 400/200V, single phase transformer is supplying a lv side load of 25A at a p.f. of 0.866 lagging. On no-load, the current and p.f. are 2A and 0.208lagging. The current drawn from the supply is :->**13.9A**

160. A single phase transformer with a ratio of 440/110V takes a no-load current of 5A at 0.2pf lagging. If the lv secondary supplies a current of 120A at a p.f. of 0.8 lagging, the current taken by the primary _____________ :->**34.45A**

161. A transformer is supplying a unity power factor load. The power factor at primary terminal will be _______________ :->**about 0.95 lagging**
162. The useful flux of a transformer is 1Wb. When it is loaded at 0.8 p.f. lag, then the mutual flux :->**remains constant**
163. How is the power drawn by a transformer on no-load utilized? :->**for supplying no-load iron losses and no-load copper losses**
164. According to the name plate of a small transformer, the secondary rated voltage is 220V. Which of the following statements about it is true? :->**220V is no-load voltage**
165. For a 1.15kVA, 460/230V transformer connected to a standard single phase 50Hz supply, the no-load current referred to the lv side is likely to be _______ :->**0.1A**
166. The no-load current drawn by transformer is usually what percent of the full-load current? :->**2 to 5 %**
167. Under no-load condition, the power factor of a transformer is ________. (approximately) :->**about 0.4 lagging**
168. In a transformer the exciting current has two components- magnetizing component and core-loss component. Neglecting leakage impedance drop, :->**The former lags the impressed voltage by 90^0 while the latter is in phase with the impressed voltage.**
169. In an ideal transformer with a primary applied voltage of $\overline{V_1}$, the no-load primary current $\overline{I}_0$:->**lags behind $\overline{V_1}$ by 90^0** WWW.YOURSWW8.TK
170. No-load current in a transformer(approximately) :->**lags behind the voltage by about 75^0**
171. A 220V,50Hz transformer with laminations of 0.35 mm thick has eddy current loss of 120W.If this transformer is built with 0.7 mm thick laminations and is worked from 110V, 25Hz, then the eddy current loss would be :->**120W**
172. Transformer at no-load behaves like _______________ :->**an inductive reactor, pf = 0.2lagging**
173. Transformers are rated in kVA because _______________ :->**total transformer losses depends on volt amperes**
174. The efficiency of the transformer will be maximum when _______________ :->**copper losses = iron loss**
175. which loss is not common between a transformer and rotating machine :->**windage losses**
176. A transformer core is laminated to _______ :->**reduce eddy current losses**
177. If copper loss of a transformer at 7/8th full-load is 4900W, then its full-load Cu loss would be ________Watt. :->**6400**
178. Silicon steel used in laminations mainly reduces _______ :->**hysteresis loss**
179. The full - load copper loss of a transformer is 1600W. At half-full load the copper losses will be ________ :->**400W**
180. Hysteresis losses in a transformer varies as ________ :-> $B_{max}^{1.6}$
181. A 200kVA transformer has an iron loss of 1kW and full-load copper loss of 2kW. Its load kVA corresponding to maximum efficiency is __________.kVA. :->**141.4**
182. The magnitude and the frequency of the voltage applied to a transformer are varied in such a way that their ratio is constant. At 50Hz, the hysterisis and eddy current losses are 50W each. The total iron losses at 100Hz will be :->**300W**
183. The transformer oil used in transformers provides _______ :->**insulation and cooling**
184. Material used for the construction of transformer core is usually ___________ :->**silicon steel**
185. The path of a magnetic flux in a transformer should have __________ :->**low Reluctance.**
186. Which of the following properties is not desirable in the material for transformer core? :->**high hysterisis loss**
187. The function of conservator in a transformer is _______ :->**to take care of the expansion and contraction of transformer oil due to variation of temperature of surroundings**
188. The chemical used in breather for transformer should have the quality of _____ :->**absorbing moisture**
189. The use of higher flux density in the transformer design _______ :->**reduces weight per**

kVA

190. The thickness of laminations used in a transformer is usually _____________ :->0.4mm to 0.5mm

191. The size of a transformer core will be dependent on ______ :->kVA

192. The core used in high frequency transformer is usually ______ :->air core