

11. Tegangan pada Titik 3h

Diketahui :

$$V_{3g} = (19525,8735-j55,5759) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{3h} &= V_{3g} - (I_{3h} \times Z_{3h}) \\ &= \{(19525,8735-j55,5759) - (3,2588-j0,4351)\} \text{ Volt} \\ &= (19522,6147-j56,011) \text{ Volt} \\ &= 19522,6153 \angle -2,5667^\circ \text{ Volt} \end{aligned}$$

12. Tegangan pada Titik 3i

Diketahui :

$$V_{3h} = (19522,6147-j56,011) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{3i} &= V_{3h} - (I_{3i} \times Z_{3i}) \\ &= \{(19522,6147-j56,011) - (3,2875-j0,0418)\} \text{ Volt} \\ &= (19519,3272-j56,0528) \text{ Volt} \\ &= 19519,4076 \angle -2,8716^\circ \text{ Volt} \end{aligned}$$

13. Tegangan pada Titik 3j

Diketahui :

$$V_{3i} = (19519,3272-j56,0528) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{3j} &= V_{3i} - (I_{3j} \times Z_{3j}) \\ &= \{(19519,3272-j56,0528) - (106,9404-j81,7601)\} \text{ Volt} \\ &= (19412,3868-j137,8129) \text{ Volt} \\ &= 19412,8759 \angle -7,0991^\circ \text{ Volt} \end{aligned}$$

14. Tegangan pada Titik 3k

Diketahui :

$$V_{3j} = (19412,3868-j137,8129) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{3k} &= V_{3j} - (I_{3k} \times Z_{3k}) \\ &= \{(19412,3868-j137,8129) - (11,6272-j1,4343)\} \text{ Volt} \end{aligned}$$

$$= (19400,7596-j139,2472) \text{ Volt}$$

$$= 19401,2593 \angle -7,1772^\circ \text{ Volt}$$

15. Tegangan pada Titik 3l

Diketahui :

$$V_{3k} = (19400,7596-j139,2472) \text{ Volt}$$

Jadi,

$$V_{3l} = V_{3k} - (I_{3l} \times Z_{3l})$$

$$= \{(19400,7596-j139,2472) - (4,8814-j0,4048)\} \text{ Volt}$$

$$= (19395,8782-j139,652) \text{ Volt}$$

$$= 19396,3809 \angle -7,1999^\circ \text{ Volt}$$

16. Tegangan pada Titik 3m

Diketahui :

$$V_{3l} = (19395,8782-j139,652) \text{ Volt}$$

Jadi,

$$V_{3m} = V_{3l} - (I_{3m} \times Z_{3m})$$

$$= \{(19395,8782-j139,652) - (12,4237-j1,4066)\} \text{ Volt}$$

$$= (19351,9022-j150,5837) \text{ Volt}$$

$$= 19352,4880 \angle -7,7811^\circ \text{ Volt}$$

17. Tegangan pada Titik 3n

Diketahui :

$$V_{3m} = (19351,9022-j150,5837) \text{ Volt}$$

Jadi,

$$V_{3n} = V_{3m} - (I_{3n} \times Z_{3n})$$

$$= \{(19351,9022-j150,5837) - (31,5523-j9,5251)\} \text{ Volt}$$

$$= (19351,9022-j150,5837) \text{ Volt}$$

$$= 19352,4880 \angle -7,7811^\circ \text{ Volt}$$

18. Tegangan pada Titik 3o

Diketahui :

$$V_{3n} = (19351,9022-j150,5837) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{30} &= V_{3n} - (I_{30} \times Z_{30}) \\
&= \{(19351,9022-j150,5837) - (40,5880-j11,8113)\} \text{ Volt} \\
&= (19311,3152-j162,395) \text{ Volt} \\
&= 19311,998 \angle -8,4091^\circ \text{ Volt}
\end{aligned}$$

19. Tegangan pada Titik 4

Diketahui :

$$V_3 = (19311,3152-j162,395) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_4 &= V_3 - (I_4 \times Z_4) \\
&= \{(19311,3152-j162,395) - (30,3039-j9,1483)\} \text{ Volt} \\
&= (19281,0113-j171,5433) \text{ Volt} \\
&= 19281,7744 \angle -8,8896^\circ \text{ Volt}
\end{aligned}$$

20. Tegangan pada Titik 5

Diketahui :

$$V_4 = (19281,0113-j171,5433) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_5 &= V_4 - (I_5 \times Z_5) \\
&= \{(19281,0113-j171,5433) - (12,4059-j1,6565)\} \text{ Volt} \\
&= (19268,6054-j173,1998) \text{ Volt} \\
&= 19269,3838 \angle -8,9884^\circ \text{ Volt}
\end{aligned}$$

21. Tegangan pada Titik 6

Diketahui :

$$V_5 = (19268,6054-j173,1998) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_6 &= V_5 - (I_6 \times Z_6) \\
&= \{(19268,6054-j173,1998) - (12,2692-j1,1411)\} \text{ Volt} \\
&= (19256,3362-j174,3409) \text{ Volt} \\
&= 19257,1254 \angle -9,0534^\circ \text{ Volt}
\end{aligned}$$

22. Tegangan pada Titik 7

Diketahui :

$$V_6 = (19256,3362-j174,3409) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_7 &= V_6 - (I_7 \times Z_7) \\ &= \{(19256,3362-j174,3409) - (41,3022-j4,2584)\} \text{ Volt} \\ &= (19215,034-j178,5993) \text{ Volt} \\ &= 19215,864 \angle -9,2945^\circ \text{ Volt} \end{aligned}$$

23. Tegangan pada Titik 8

Diketahui :

$$V_7 = (19215,034-j178,5993) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_8 &= V_7 - (I_8 \times Z_8) \\ &= \{(19215,034-j178,5993) - (34,1313-j9,9324)\} \text{ Volt} \\ &= (19180,9027-j168,669) \text{ Volt} \\ &= 19181,6442 \angle -8,7933^\circ \text{ Volt} \end{aligned}$$

24. Tegangan pada Titik 8a

Diketahui :

$$V_8 = (19180,9027-j168,669) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{8a} &= V_8 - (I_{8a} \times Z_{8a}) \\ &= \{(19180,9027-j168,669) - (31,8707-j9,6213)\} \text{ Volt} \\ &= (19149,032-j178,2903) \text{ Volt} \\ &= 19149,8619 \angle -9,3104^\circ \text{ Volt} \end{aligned}$$

25. Tegangan pada Titik 9

Diketahui :

$$V_8 = (19149,032-j178,2903) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_9 &= V_8 - (I_9 \times Z_9) \\ &= \{(19149,032-j178,2903) - (32,6901-j9,8686)\} \text{ Volt} \\ &= (19116,3419-j188,1589) \text{ Volt} \\ &= 19117,2678 \angle -9,8425^\circ \text{ Volt} \end{aligned}$$

26. Tegangan pada Titik 10

Diketahui :

$$V_9 = (19116,3419-j188,1589) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{10} &= V_9 - (I_{10} \times Z_{10}) \\ &= \{(19116,3419-j188,1589) - (5,8792-j0,4284)\} \text{ Volt} \\ &= (19110,4627-j188,5873) \text{ Volt} \\ &= 19731,8709 \angle -0,9144^\circ \text{ Volt} \end{aligned}$$

27. Tegangan pada Titik 11

Diketahui :

$$V_{10} = (19110,4627-j188,5873) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{11} &= V_{10} - (I_{11} \times Z_{11}) \\ &= \{(19110,4627-j188,5873) - (6,9849-j0,3687)\} \text{ Volt} \\ &= (19103,4778-j188,956) \text{ Volt} \\ &= 19721,702 \angle -0,9289^\circ \text{ Volt} \end{aligned}$$

28. Tegangan pada Titik 12

Diketahui :

$$V_{11} = (19103,4778-j188,956) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{12} &= V_{11} - (I_{12} \times Z_{12}) \\ &= \{(19103,4778-j188,956) - (6,1104-j0,3838)\} \text{ Volt} \\ &= (19097,3674-j189,3398) \text{ Volt} \\ &= 19714,0270 \angle -1,1450^\circ \text{ Volt} \end{aligned}$$

29. Tegangan pada Titik 13

Diketahui :

$$V_{12} = (19097,3674-j189,3398) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{13} &= V_{12} - (I_{13} \times Z_{13}) \\ &= \{(19097,3674-j189,3398) - (5,9803-j0,3757)\} \text{ Volt} \end{aligned}$$

$$= (19091,3871-j189,7155) \text{ Volt}$$

$$= 19705,2138 \angle -1,1576^\circ \text{ Volt}$$

30. Tegangan pada Titik 14

Diketahui :

$$V_{13} = (19091,3871-j189,7155) \text{ Volt}$$

Jadi,

$$V_{14} = V_{13} - (I_{14} \times Z_{14})$$

$$= \{(19091,3871-j189,7155) - (4,1430-j0,4690)\} \text{ Volt}$$

$$= (19087,2441-j190,1845) \text{ Volt}$$

$$= 19699,0347 \angle -1,16646^\circ \text{ Volt}$$

31. Tegangan pada Titik 15

Diketahui :

$$V_{14} = (19087,2441-j190,1845) \text{ Volt}$$

Jadi,

$$V_{15} = V_{14} - (I_{15} \times Z_{15})$$

$$= \{(19087,2441-j190,1845) - (19,0751-j1,9667)\} \text{ Volt}$$

$$= (19068,169-j192,1512) \text{ Volt}$$

$$= 19678,2592 \angle -1,1947^\circ \text{ Volt}$$

32. Tegangan pada Titik 16

Diketahui :

$$V_{15} = (19068,169-j192,1512) \text{ Volt}$$

Jadi,

$$V_{16} = V_{15} - (I_{16} \times Z_{16})$$

$$= \{(19068,169-j192,1512) - (1,8662-j0,0237)\} \text{ Volt}$$

$$= (19066,3028-j192,1749) \text{ Volt}$$

$$= 19676,4634 \angle -1,1987^\circ \text{ Volt}$$

33. Tegangan pada Titik 17

Diketahui :

$$V_{16} = (19066,3028-j192,1749) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{17} &= V_{16} - (I_{17} \times Z_{17}) \\
&= \{(19066,3028-j192,1749) - (5,1555-j0,7409)\} \text{ Volt} \\
&= (19061,1473-j192,9158) \text{ Volt} \\
&= 19668,6297 \angle -1,2100^\circ \text{ Volt}
\end{aligned}$$

34. Tegangan pada Titik 18

Diketahui :

$$V_{17} = (19061,1473-j192,9158) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{18} &= V_{17} - (I_{18} \times Z_{18}) \\
&= \{(19061,1473-j192,9158) - (4,9489-j0,7112)\} \text{ Volt} \\
&= (19056,1984-j193,627) \text{ Volt} \\
&= 19661,0197 \angle -1,2209^\circ \text{ Volt}
\end{aligned}$$

35. Tegangan pada Titik 18a

Diketahui :

$$V_{18} = (19056,1984-j193,627) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{18a} &= V_{18} - (I_{18a} \times Z_{18a}) \\
&= \{(19056,1984-j193,627) - (0,2007+j0,2097)\} \text{ Volt} \\
&= (19055,9977-j193,4173) \text{ Volt} \\
&= 19660,5775 \angle -1,2215^\circ \text{ Volt}
\end{aligned}$$

36. Tegangan pada Titik 19

Diketahui :

$$V_{18} = (19656,556 - j418,9309) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{19} &= V_{18} - (I_{19} \times Z_{19}) \\
&= \{(19656,556 - j418,9309) - (1,0354+j0,4723)\} \text{ Volt} \\
&= (19655,5206 - j419,4032) \text{ Volt} \\
&= 19659,9946 \angle -1,2223^\circ \text{ Volt}
\end{aligned}$$

37. Tegangan pada Titik 20

Diketahui :

$$V_{20} = (19655,5206 - j419,4032) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{20} &= V_{19} - (I_{20} \times Z_{20}) \\ &= \{(19655,5206 - j419,4032) - (4,9515 + j2,3047)\} \text{ Volt} \\ &= (19650,5691 - j421,7079) \text{ Volt} \\ &= 19655,0935 \angle -1,2293^\circ \text{ Volt} \end{aligned}$$

38. Tegangan pada Titik 21

Diketahui :

$$V_{20} = (19650,5691 - j421,7079) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{21} &= V_{20} - (I_{21} \times Z_{21}) \\ &= \{(19650,5691 - j421,7079) - (30,2408 + j3,1784)\} \text{ Volt} \\ &= (19620,3283 - j418,5295) \text{ Volt} \\ &= 19624,7917 \angle -1,2220^\circ \text{ Volt} \end{aligned}$$

39. Tegangan pada Titik 21a

Diketahui :

$$V_{21} = (19620,3283 - j418,5295) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{21a} &= V_{21} - (I_{21a} \times Z_{21a}) \\ &= \{(19620,3283 - j418,5295) - (22,1599 + j2,3291)\} \text{ Volt} \\ &= (19598,1684 - j420,8586) \text{ Volt} \\ &= 19602,6867 \angle -1,2302^\circ \text{ Volt} \end{aligned}$$

40. Tegangan pada Titik 21b

Diketahui :

$$V_{21a} = (19598,1684 - j420,8586) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{21b} &= V_{21a} - (I_{21b} \times Z_{21b}) \\ &= \{(19598,1684 - j420,8586) - (25,7811 + j2,7097)\} \text{ Volt} \\ &= (19572,3873 - j422,9683) \text{ Volt} \\ &= 19576,9570 \angle -1,2379^\circ \text{ Volt} \end{aligned}$$

41. Tegangan pada Titik 21c

Diketahui :

$$V_{21b} = (19572,3873 - j422,9683) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{21c} &= V_{21b} - (I_{21c} \times Z_{21c}) \\ &= \{(19572,3873 - j422,9683) - (243,4462 + j25,5442)\} \text{ Volt} \\ &= (19328,9411 - j448,5125) \text{ Volt} \\ &= 19334,1409 \angle -1,3292^\circ \text{ Volt} \end{aligned}$$

42. Tegangan pada Titik 21d

Diketahui :

$$V_{21c} = (19328,9411 - j448,5125) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{21d} &= V_{21c} - (I_{21d} \times Z_{21d}) \\ &= \{(19328,9411 - j448,5125) - (5,1923 + j0,5457)\} \text{ Volt} \\ &= (19323,7488 - j449,0582) \text{ Volt} \\ &= 19328,9658 \angle -1,3312^\circ \text{ Volt} \end{aligned}$$

43. Tegangan pada Titik 22

Diketahui :

$$V_{21} = (19620,3283 - j418,5295) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{22} &= V_{21} - (I_{22} \times Z_{22}) \\ &= \{(19620,3283 - j418,5295) - (6,6058 + j0,6942)\} \text{ Volt} \\ &= (19613,7225 - j419,223) \text{ Volt} \\ &= 19618,2022 \angle -1,2244^\circ \text{ Volt} \end{aligned}$$

44. Tegangan pada Titik 23

Diketahui :

$$V_{22} = (19613,7225 - j419,223) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{23} &= V_{22} - (I_{23} \times Z_{23}) \\ &= \{(19613,7225 - j419,223) - (48,8262 + j5,0887)\} \text{ Volt} \\ &= (19564,8963 - j424,3117) \text{ Volt} \\ &= 19569,4968 \angle -1,2424^\circ \text{ Volt} \end{aligned}$$

45. Tegangan pada Titik 24

Diketahui :

$$V_{23} = (19564,8963 - j424,3117) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{24} &= V_{23} - (I_{24} \times Z_{24}) \\ &= \{(19564,8963 - j424,3117) - (19,7388 + j2,0081)\} \text{ Volt} \\ &= (19545,1575 - j426,3198) \text{ Volt} \\ &= 19549,8064 \angle -1,2495^\circ \text{ Volt} \end{aligned}$$

46. Tegangan pada Titik 25

Diketahui :

$$V_{24} = (19545,1575 - j426,3198) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{25} &= V_{24} - (I_{25} \times Z_{25}) \\ &= \{(19545,1575 - j426,3198) - (23,2154 + j10,8452)\} \text{ Volt} \\ &= (19521,9421 - j437,165) \text{ Volt} \\ &= 19526,8363 \angle -1,2828^\circ \text{ Volt} \end{aligned}$$

47. Tegangan pada Titik 26

Diketahui :

$$V_{25} = (19521,9421 - j437,165) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{26} &= V_{25} - (I_{26} \times Z_{26}) \\ &= \{(19521,9421 - j437,165) - (15,3402 + j7,1663)\} \text{ Volt} \\ &= (19506,6019 - j444,3313) \text{ Volt} \\ &= 19511,6618 \angle -1,3048^\circ \text{ Volt} \end{aligned}$$

48. Tegangan pada Titik 27

Diketahui :

$$V_{26} = (19506,6019 - j444,3313) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{27} &= V_{26} - (I_{27} \times Z_{27}) \\ &= \{(19506,6019 - j444,3313) - (15,6856 + j7,3310)\} \text{ Volt} \\ &= (19490,9163 - j451,6623) \text{ Volt} \end{aligned}$$

$$= 19496,1487 \angle -1,3274^\circ \text{ Volt}$$

49. Tegangan pada Titik 28

Diketahui :

$$V_{27} = (19490,9163 - j451,6623) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{28} &= V_{27} - (I_{28} \times Z_{28}) \\ &= \{(19490,9163 - j451,6623) - (24,6564 + j11,5131)\} \text{ Volt} \\ &= (19466,2599 - j463,1754) \text{ Volt} \\ &= 19471,7694 \angle -1,3630^\circ \text{ Volt} \end{aligned}$$

50. Tegangan pada Titik 29

Diketahui :

$$V_{28} = (19466,2599 - j463,1754) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{29} &= V_{28} - (I_{29} \times Z_{29}) \\ &= \{(19466,2599 - j463,1754) - (6,9704 + j3,2607)\} \text{ Volt} \\ &= (19459,2895 - j466,4361) \text{ Volt} \\ &= 19464,8789 \angle -1,3731^\circ \text{ Volt} \end{aligned}$$

51. Tegangan pada Titik 29a

Diketahui :

$$V_{29} = (19459,2895 - j466,4361) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{29a} &= V_{29} - (I_{29a} \times Z_{29a}) \\ &= \{(19459,2895 - j466,4361) - (6,2267 + j2,9207)\} \text{ Volt} \\ &= (19453,0628 - j469,3568) \text{ Volt} \\ &= 19458,7242 \angle -1,3821^\circ \text{ Volt} \end{aligned}$$

52. Tegangan pada Titik 30

Diketahui :

$$V_{29} = (19715,8202 - j484,3484) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{30} &= V_{29} - (I_{30} \times Z_{30}) \\ &= \{(19459,2895 - j466,4361) - (14,7350 + j6,8835)\} \text{ Volt} \end{aligned}$$

$$= (19444,5545 - j473,3196) \text{ Volt}$$

$$= 19450,3144 \angle -1,3944^\circ \text{ Volt}$$

53. Tegangan pada Titik 31

Diketahui :

$$V_{30} = (19444,5545 - j473,3196) \text{ Volt}$$

Jadi,

$$V_{31} = V_{30} - (I_{31} \times Z_{31})$$

$$= \{(19444,5545 - j473,3196) - (24,9218 + j11,6371)\} \text{ Volt}$$

$$= (19419,6327 - j484,9567) \text{ Volt}$$

$$= 119425,6870 \angle -1,4305^\circ \text{ Volt}$$

54. Tegangan pada Titik 32

Diketahui :

$$V_{31} = (19419,6327 - j484,9567) \text{ Volt}$$

Jadi,

$$V_{32} = V_{31} - (I_{32} \times Z_{32})$$

$$= \{(19419,6327 - j484,9567) - (9,5288 + j4,4514)\} \text{ Volt}$$

$$= (19410,1039 - j489,4081) \text{ Volt}$$

$$= 19416,2729 \angle -1,4443^\circ \text{ Volt}$$

55. Tegangan pada Titik 32a

Diketahui :

$$V_{32} = (19410,1039 - j489,4081) \text{ Volt}$$

Jadi,

$$V_{32a} = V_{32} - (I_{32a} \times Z_{32a})$$

$$= \{(19410,1039 - j489,4081) - (22,5318 + j10,5259)\} \text{ Volt}$$

$$= (19387,5721 - j499,934) \text{ Volt}$$

$$= 19394,0167 \angle -1,4771^\circ \text{ Volt}$$

56. Tegangan pada Titik 33

Diketahui :

$$V_{32} = (19387,5721 - j499,934) \text{ Volt}$$

Jadi,

$$V_{32} = V_{32} - (I_{33} \times Z_{33})$$

$$\begin{aligned}
&= \{(19387,5721 - j499,934) - (20,4281+j9,5475)\}\text{Volt} \\
&= (19454,2643 - j509,4815) \text{ Volt} \\
&= 19460,9344 \angle -1,5001^\circ \text{ Volt}
\end{aligned}$$

57. Tegangan pada Titik 34

Diketahui :

$$V_{33} = (19454,2643 - j509,4815) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{34} &= V_{33} - (I_{34} \times Z_{34}) \\
&= \{(19454,2643 - j509,4815) - (50,5008+j23,5811)\}\text{Volt} \\
&= (19403,7635 - j533,0626) \text{ Volt} \\
&= 19411,0843 \angle -1,5736^\circ \text{ Volt}
\end{aligned}$$

58. Tegangan pada Titik 34a

Diketahui :

$$V_{34} = (19403,7635 - j533,0626) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{34a} &= V_{34} - (I_{34a} \times Z_{34a}) \\
&= \{(19403,7635 - j533,0626) - (11,1300+j5,1947)\}\text{Volt} \\
&= (19392,6335 - j538,2573) \text{ Volt} \\
&= 19400,1019 \angle -1,5898^\circ \text{ Volt}
\end{aligned}$$

59. Tegangan pada Titik 34b

Diketahui :

$$V_{34a} = (19392,6335 - j538,2573) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{34b} &= V_{34a} - (I_{34b} \times Z_{34b}) \\
&= \{(19392,6335 - j538,2573) - (18,1944+j8,4880)\}\text{Volt} \\
&= (19374,4391 - j546,7453) \text{ Volt} \\
&= 19382,1521 \angle -1,6164^\circ \text{ Volt}
\end{aligned}$$

60. Tegangan pada Titik 34c

Diketahui :

$$V_{34b} = (19374,4391 - j546,7453) \text{ Volt}$$

Jadi,

$$\begin{aligned}
 V_{34c} &= V_{34b} - (I_{34c} \times Z_{34c}) \\
 &= \{(19374,4391 - j546,7453) - (13,8624 + j6,4759)\} \text{ Volt} \\
 &= (19360,5767 - j553,2212) \text{ Volt} \\
 &= 19368,4791 \angle -1,6367^\circ \text{ Volt}
 \end{aligned}$$

61. Tegangan pada Titik 34d

Diketahui :

$$V_{34c} = (19360,5767 - j553,2212) \text{ Volt}$$

Jadi,

$$\begin{aligned}
 V_{34d} &= V_{34c} - (I_{34d} \times Z_{34d}) \\
 &= \{(19360,5767 - j553,2212) - (15,9685 + j7,4564)\} \text{ Volt} \\
 &= (19344,6082 - j560,6776) \text{ Volt} \\
 &= 19352,7317 \angle -1,6601^\circ \text{ Volt}
 \end{aligned}$$

62. Tegangan pada Titik 34e

Diketahui :

$$V_{34d} = (19344,6082 - j560,6776) \text{ Volt}$$

Jadi,

$$\begin{aligned}
 V_{34e} &= V_{34d} - (I_{34e} \times Z_{34e}) \\
 &= \{(19344,6082 - j560,6776) - (8,8017 + j4,1211)\} \text{ Volt} \\
 &= (19335,8065 - j564,7987) \text{ Volt} \\
 &= 19344,0536 \angle -1,6731^\circ \text{ Volt}
 \end{aligned}$$

63. Tegangan pada Titik 34f

Diketahui :

$$V_{34e} = (19335,8065 - j564,7987) \text{ Volt}$$

Jadi,

$$\begin{aligned}
 V_{34f} &= V_{34e} - (I_{34f} \times Z_{34f}) \\
 &= \{(19335,8065 - j564,7987) - (9,7542 + j4,5484)\} \text{ Volt} \\
 &= (19326,0523 - j569,3471) \text{ Volt} \\
 &= 19334,4369 \angle -1,6874^\circ \text{ Volt}
 \end{aligned}$$

64. Tegangan pada Titik 34g

Diketahui :

$$V_{34f} = (19326,0523 - j569,3471) \text{ Volt}$$

Jadi,

$$\begin{aligned}V_{34g} &= V_{34f} - (I_{34g} \times Z_{34g}) \\&= \{(19326,0523 - j569,3471) - (10,2049 + j4,7608)\} \text{Volt} \\&= (19315,8474 - j574,0551) \text{ Volt} \\&= 19324,3758 \angle -1,7022^\circ \text{ Volt}\end{aligned}$$

65. Tegangan pada Titik 34h

Diketahui :

$$V_{34g} = (19315,8474 - j574,0551) \text{ Volt}$$

Jadi,

$$\begin{aligned}V_{34h} &= V_{34g} - (I_{34h} \times Z_{34h}) \\&= \{(19315,8474 - j574,0551) - (13,2339 + j6,1851)\} \text{Volt} \\&= (19302,6135 - j580,2402) \text{ Volt} \\&= 19311,3326 \angle -1,7218^\circ \text{ Volt}\end{aligned}$$

66. Tegangan pada Titik 34i

Diketahui :

$$V_{34h} = (19302,6135 - j580,2402) \text{ Volt}$$

Jadi,

$$\begin{aligned}V_{34i} &= V_{34h} - (I_{34i} \times Z_{34i}) \\&= \{(19302,6135 - j580,2402) - (13,1948 + j6,1640)\} \text{Volt} \\&= (19289,4187 - j586,4042) \text{ Volt} \\&= 19298,3300 \angle -1,7412^\circ \text{ Volt}\end{aligned}$$

67. Tegangan pada Titik 34j

Diketahui :

$$V_{34i} = (19289,4187 - j586,4042) \text{ Volt}$$

Jadi,

$$\begin{aligned}V_{34j} &= V_{34i} - (I_{34j} \times Z_{34j}) \\&= \{(19289,4187 - j586,4042) - (12,4140 + j5,8072)\} \text{Volt} \\&= (19277,0047 - j592,2114) \text{ Volt} \\&= 19286,0992 \angle -1,7596^\circ \text{ Volt}\end{aligned}$$

68. Tegangan pada Titik 34k

Diketahui :

$$V_{34j} = (19277,0047 - j592,2114) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34k} &= V_{34j} - (I_{34k} \times Z_{34k}) \\ &= \{(19277,0047 - j592,2114) - (17,7638 + j8,2985)\} \text{ Volt} \\ &= (19259,2409 - j600,5099) \text{ Volt} \\ &= 19268,6006 \angle -1,7859^\circ \text{ Volt} \end{aligned}$$

69. Tegangan pada Titik 34l

Diketahui :

$$V_{34k} = (19259,2409 - j600,5099) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34l} &= V_{34k} - (I_{34l} \times Z_{34l}) \\ &= \{(19259,2409 - j600,5099) - (9,5201 + j4,4413)\} \text{ Volt} \\ &= (19249,7208 - j604,9512) \text{ Volt} \\ &= 19259,2242 \angle -1,8000^\circ \text{ Volt} \end{aligned}$$

70. Tegangan pada Titik 34m

Diketahui :

$$V_{34l} = (19249,7208 - j604,9512) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34m} &= V_{34l} - (I_{34m} \times Z_{34m}) \\ &= \{(19249,7208 - j604,9512) - (13,3874 + j6,2540)\} \text{ Volt} \\ &= (19236,3334 - j611,2052) \text{ Volt} \\ &= 19246,0410 \angle -1,8198^\circ \text{ Volt} \end{aligned}$$

71. Tegangan pada Titik 34n

Diketahui :

$$V_{34m} = (19236,3334 - j611,2052) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34n} &= V_{34m} - (I_{34n} \times Z_{34n}) \\ &= \{(19236,3334 - j611,2052) - (5,4217 + j2,5351)\} \text{ Volt} \\ &= (19230,9117 - j613,7403) \text{ Volt} \\ &= 19240,7027 \angle -1,8279^\circ \text{ Volt} \end{aligned}$$

72. Tegangan pada Titik 34o

Diketahui :

$$V_{34n} = (19230,9117 - j613,7403) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34o} &= V_{34n} - (I_{34o} \times Z_{34o}) \\ &= \{(19230,9117 - j613,7403) - (5,6686 + j2,6421)\} \text{ Volt} \\ &= (19225,2431 - j616,3824) \text{ Volt} \\ &= 19235,1215 \angle -1,8363^\circ \text{ Volt} \end{aligned}$$

73. Tegangan pada Titik 34p

Diketahui :

$$V_{34o} = (19225,2431 - j616,3824) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34p} &= V_{34o} - (I_{34p} \times Z_{34p}) \\ &= \{(19225,2431 - j616,3824) - (2,3848 + j1,1267)\} \text{ Volt} \\ &= (19222,8583 - j617,5091) \text{ Volt} \\ &= 19232,7740 \angle -1,8399^\circ \text{ Volt} \end{aligned}$$

74. Tegangan pada Titik 34q

Diketahui :

$$V_{34p} = (19222,8583 - j617,5091) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34q} &= V_{34p} - (I_{34q} \times Z_{34q}) \\ &= \{(19222,8583 - j617,5091) - (3,0937 + j1,4498)\} \text{ Volt} \\ &= (19219,7646 - j618,9589) \text{ Volt} \\ &= 19229,7285 \angle -1,8445^\circ \text{ Volt} \end{aligned}$$

75. Tegangan pada Titik 34r

Diketahui :

$$V_{34q} = (19219,7646 - j618,9589) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34r} &= V_{34q} - (I_{34r} \times Z_{34r}) \\ &= \{(19219,7646 - j618,9589) - (5,4201 + j2,5332)\} \text{ Volt} \\ &= (19214,3445 - j616,4257) \text{ Volt} \\ &= 19224,2299 \angle -1,8375^\circ \text{ Volt} \end{aligned}$$

76. Tegangan pada Titik 34s

Diketahui :

$$V_{34r} = (19214,3445 - j616,4257) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34s} &= V_{34r} - (I_{34s} \times Z_{34s}) \\ &= \{(19214,3445 - j616,4257) - (3,0794 + j1,4431)\} \text{ Volt} \\ &= (19211,2651 - j617,8688) \text{ Volt} \\ &= 19221,1984 \angle -1,8421^\circ \text{ Volt} \end{aligned}$$

77. Tegangan pada Titik 34t

Diketahui :

$$V_{34s} = (19211,2651 - j617,8688) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34t} &= V_{34s} - (I_{34t} \times Z_{34t}) \\ &= \{(19211,2651 - j617,8688) - (3,7305 + j1,7403)\} \text{ Volt} \\ &= (19207,5346 - j619,6091) \text{ Volt} \\ &= 19217,5258 \angle -1,8476^\circ \text{ Volt} \end{aligned}$$

78. Tegangan pada Titik 34u

Diketahui :

$$V_{34t} = (19207,5346 - j619,6091) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{34u} &= V_{34t} - (I_{34u} \times Z_{34u}) \\ &= \{(19207,5346 - j619,6091) - (3,9837 + j1,8508)\} \text{ Volt} \\ &= (19203,5509 - j621,4599) \text{ Volt} \\ &= 19213,6040 \angle -1,8535^\circ \text{ Volt} \end{aligned}$$

79. Tegangan pada Titik 35

Diketahui :

$$V_{34} = (19403,7635 - j533,0626) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{35} &= V_{34} - (I_{35} \times Z_{35}) \\ &= \{(19403,7635 - j533,0626) - (13,3039 + j6,2235)\} \text{ Volt} \\ &= (19390,4596 - j539,2861) \text{ Volt} \end{aligned}$$

$$= 19397,95744 \angle -1,5930^\circ \text{ Volt}$$

80. Tegangan pada Titik 36

Diketahui :

$$V_{35} = (19390,4596 - j539,2861) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{36} &= V_{35} - (I_{36} \times Z_{36}) \\ &= \{(19390,4596 - j539,2861) - (11,4110 + j5,3356)\} \text{ Volt} \\ &= (19379,0486 - j544,6217) \text{ Volt} \\ &= 19386,7000 \angle -1,6097^\circ \text{ Volt} \end{aligned}$$

81. Tegangan pada Titik 36a

Diketahui :

$$V_{36} = (19379,0486 - j544,6217) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{36a} &= V_{36} - (I_{36a} \times Z_{36a}) \\ &= \{(19379,0486 - j544,6217) - (11,8604 + j5,5381)\} \text{ Volt} \\ &= (19367,1882 - j550,1598) \text{ Volt} \\ &= 19375,0007 \angle -1,6271^\circ \text{ Volt} \end{aligned}$$

82. Tegangan pada Titik 36b

Diketahui :

$$V_{36a} = (19367,1882 - j550,1598) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{36b} &= V_{35} - (I_{36} \times Z_{36}) \\ &= \{(19367,1882 - j550,1598) - (2,3542 + j2,9863)\} \text{ Volt} \\ &= (19364,834 - j553,1461) \text{ Volt} \\ &= 19372,7325 \angle -1,6361^\circ \text{ Volt} \end{aligned}$$

83. Tegangan pada Titik 36c

Diketahui :

$$V_{36b} = (19364,834 - j553,1461) \text{ Volt}$$

Jadi,

$$\begin{aligned} V_{36c} &= V_{35} - (I_{36} \times Z_{36}) \\ &= \{(19364,834 - j553,1461) - (2,1645 + j2,7576)\} \text{ Volt} \end{aligned}$$

$$= (19362,6695 - j555,9037) \text{ Volt}$$

$$= 19370,6478 \angle -1,6445^\circ \text{ Volt}$$

84. Tegangan pada Titik 36d

Diketahui :

$$V_{36c} = (19362,6695 - j555,9037) \text{ Volt}$$

Jadi,

$$V_{36d} = V_{36c} - (I_{36d} \times Z_{36d})$$

$$= \{(19362,6695 - j555,9037) - (2,3501 + j2,9757)\} \text{ Volt}$$

$$= (19360,3194 - j558,8794) \text{ Volt}$$

$$= 19368,3843 \angle -1,6535^\circ \text{ Volt}$$

85. Tegangan pada Titik 37

Diketahui :

$$V_{36} = (19379,0486 - j544,6217) \text{ Volt}$$

Jadi,

$$V_{37} = V_{36} - (I_{37} \times Z_{37})$$

$$= \{(19379,0486 - j544,6217) - (2,3533 + j2,9916)\} \text{ Volt}$$

$$= (19376,6953 - j541,6301) \text{ Volt}$$

$$= 19384,2638 \angle -1,6011^\circ \text{ Volt}$$

86. Tegangan pada Titik 38

Diketahui :

$$V_{37} = (19376,6953 - j541,6301) \text{ Volt}$$

Jadi,

$$V_{38} = V_{37} - (I_{38} \times Z_{38})$$

$$= \{(19376,6953 - j541,6301) - (4,9101 + j2,2927)\} \text{ Volt}$$

$$= (19371,7852 - j543,9228) \text{ Volt}$$

$$= 19379,4198 \angle -1,6083^\circ \text{ Volt}$$

87. Tegangan pada Titik 39

Diketahui :

$$V_{38} = (19371,7852 - j543,9228) \text{ Volt}$$

Jadi,

$$V_{39} = V_{38} - (I_{39} \times Z_{39})$$

$$\begin{aligned}
&= \{(19371,7852 - j543,9228) - (11,7617+j5,5021)\}\text{Volt} \\
&= (19360,0235 - j549,4249) \text{ Volt} \\
&= 19367,8180 \angle -1,6255^\circ \text{ Volt}
\end{aligned}$$

88. Tegangan pada Titik 40

89. Diketahui :

$$V_{39} = (19360,0235 - j549,4249) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{40} &= V_{39} - (I_{40} \times Z_{40}) \\
&= \{(19360,0235 - j549,4249) - (28,0793+j13,1055)\}\text{Volt} \\
&= (19331,9442 - j562,5304) \text{ Volt} \\
&= 19340,1268 \angle -1,6667^\circ \text{ Volt}
\end{aligned}$$

90. Tegangan pada Titik 40a

Diketahui :

$$V_{40} = (19331,9442 - j562,5304) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{40a} &= V_{40} - (I_{40a} \times Z_{40a}) \\
&= \{(19331,9442 - j562,5304) - (4,1066+j1,9184)\}\text{Volt} \\
&= (19327,8376 - j564,4488) \text{ Volt} \\
&= 19336,0779 \angle -1,6727^\circ \text{ Volt}
\end{aligned}$$

91. Tegangan pada Titik 41

Diketahui :

$$V_{40} = (19331,9442 - j562,5304) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{41} &= V_{40} - (I_{41} \times Z_{41}) \\
&= \{(19331,9442 - j562,5304) - (5,9336+j2,7846)\}\text{Volt} \\
&= (19326,0106 - j565,315) \text{ Volt} \\
&= 19334,2769 \angle -1,6755^\circ \text{ Volt}
\end{aligned}$$

92. Tegangan pada Titik 41a

Diketahui :

$$V_{41} = (19326,0106 - j565,315) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{41a} &= V_{41} - (I_{41a} \times Z_{41a}) \\
&= \{(19326,0106 - j565,315) - (22,9750 + j10,7378)\} \text{ Volt} \\
&= (19303,0356 - j576,0528) \text{ Volt} \\
&= 19311,6291 \angle -1,7093^\circ \text{ Volt}
\end{aligned}$$

93. Tegangan pada Titik 42

Diketahui :

$$V_{41} = (19326,0106 - j565,315) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{42} &= V_{41} - (I_{42} \times Z_{42}) \\
&= \{(19326,0106 - j565,315) - (51,6336 + j24,1320)\} \text{ Volt} \\
&= (19274,377 - j589,447) \text{ Volt} \\
&= 19283,3881 \angle -1,7516^\circ \text{ Volt}
\end{aligned}$$

94. Tegangan pada Titik 42a

Diketahui :

$$V_{42} = (19274,377 - j589,447) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{42a} &= V_{42} - (I_{42a} \times Z_{42a}) \\
&= \{(19274,377 - j589,447) - (6,1942 + j2,8976)\} \text{ Volt} \\
&= (19268,1828 - j586,5794) \text{ Volt} \\
&= 19277,1093 \angle -1,7437^\circ \text{ Volt}
\end{aligned}$$

95. Tegangan pada Titik 42b

Diketahui :

$$V_{42a} = (19268,1828 - j586,5794) \text{ Volt}$$

Jadi,

$$\begin{aligned}
V_{42b} &= V_{42a} - (I_{42b} \times Z_{42b}) \\
&= \{(19268,1828 - j586,5794) - (6,5069 + j3,0439)\} \text{ Volt} \\
&= (19261,6759 - j589,6233) \text{ Volt} \\
&= 19270,6983 \angle -1,7533^\circ \text{ Volt}
\end{aligned}$$

96. Tegangan pada Titik 42c

Diketahui :

$$V_{42b} = (19261,6759 - j589,6233) \text{ Volt}$$

Jadi,

$$\begin{aligned}V_{42c} &= V_{42} - (I_{42a} \times Z_{42a}) \\&= \{(19261,6759 - j589,6233) - (3,8631 + j1,7948)\} \text{ Volt} \\&= (19257,8128 - j591,4181) \text{ Volt} \\&= 19266,8920 \angle -1,7590^\circ \text{ Volt}\end{aligned}$$