

ELEMENTS OF ELECTRICAL ENGINEERING

Course Code : UE25EE141A/B



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ELEMENTS OF ELECTRICAL ENGINEERING

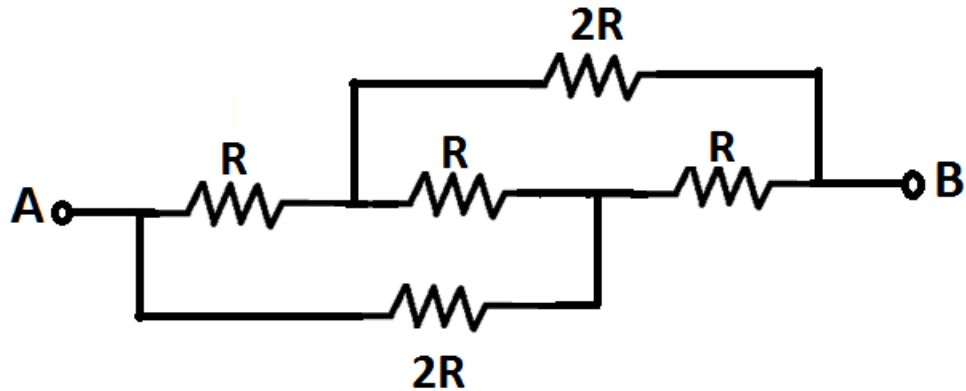
Numerical Examples – Star-Delta Transformation

Jyothi T N

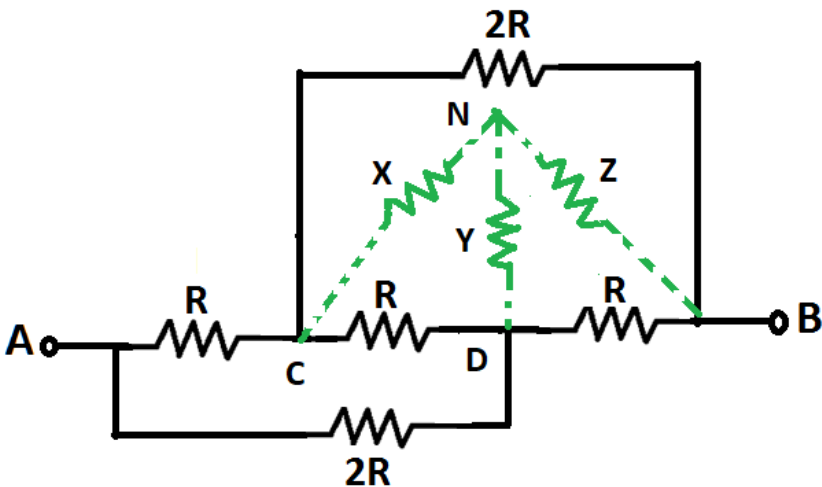
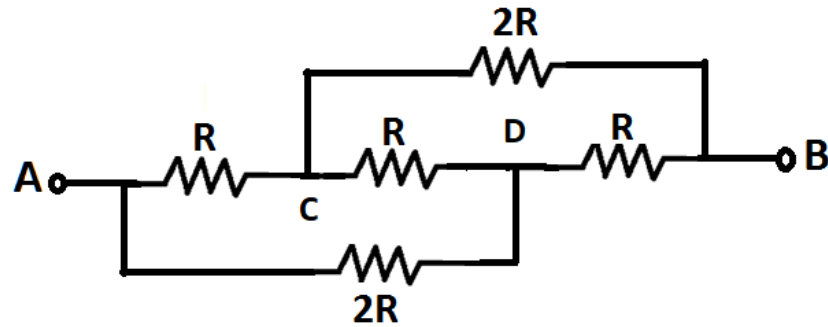
Department of Electrical & Electronics Engineering

Question:

Find the equivalent resistance between the terminals A & B in the given network.



Solution:

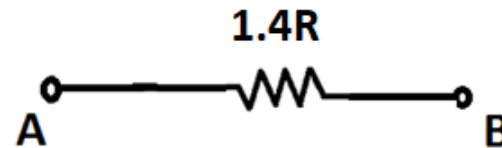
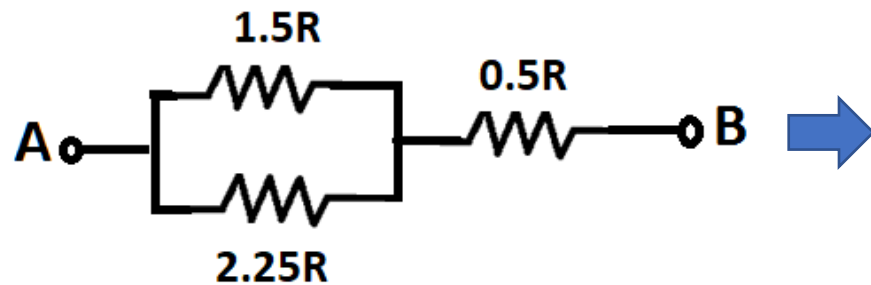
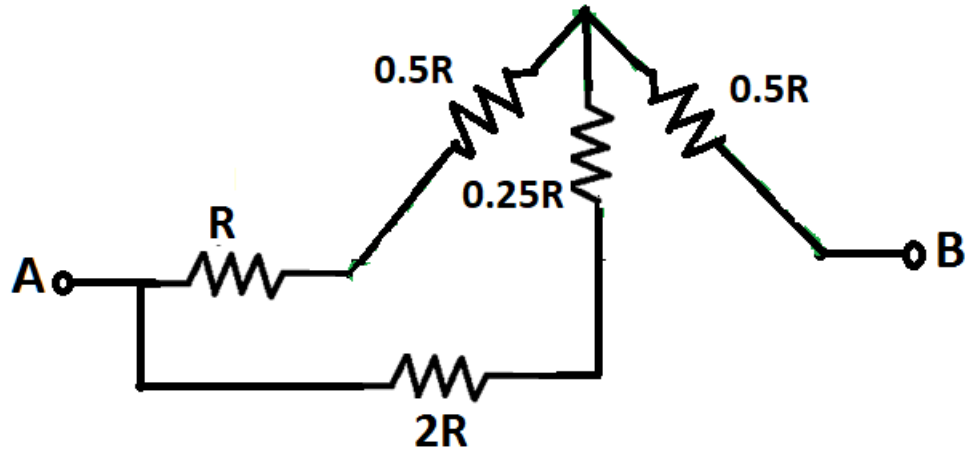


$$X = \frac{R * 2R}{(R + 2R + R)} = \frac{R}{2} \Omega$$

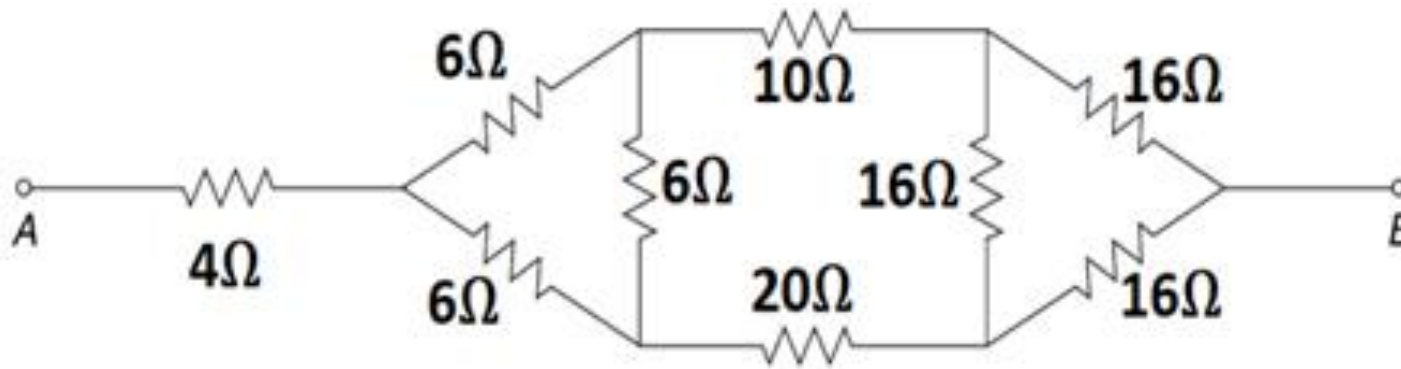
$$Y = \frac{R * R}{(R + 2R + R)} = \frac{R}{4} \Omega$$

$$Z = \frac{R * 2R}{(R + 2R + R)} = \frac{R}{2} \Omega$$

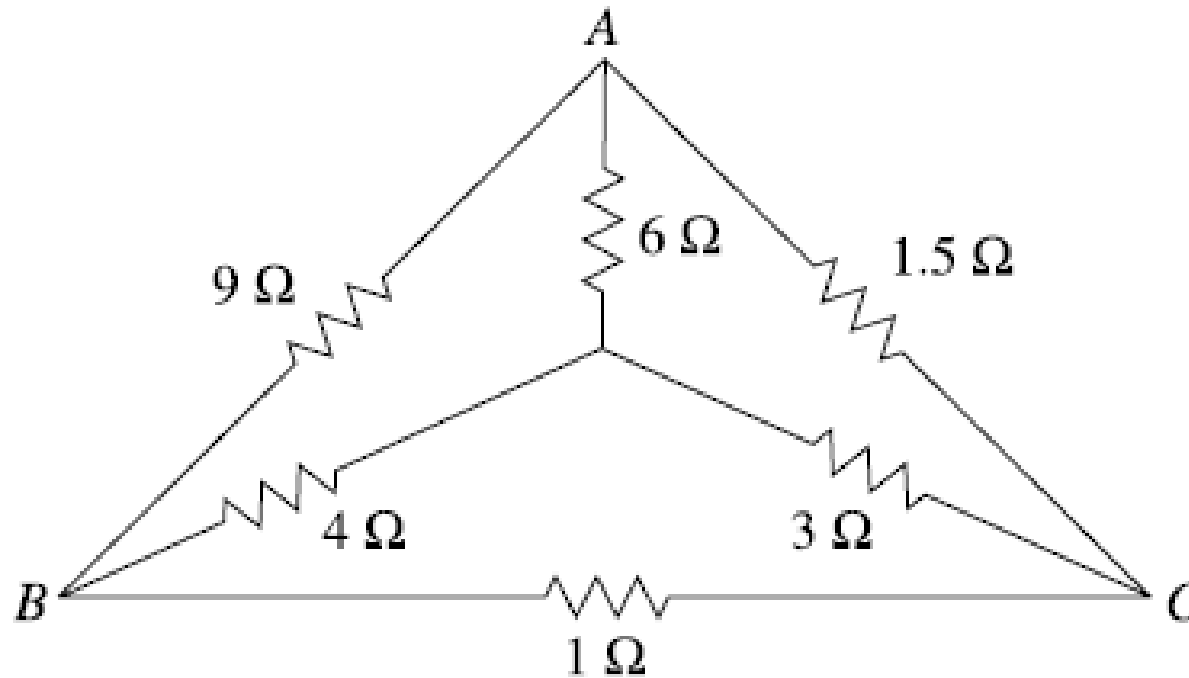
Solution (Continued..) :



Obtain the equivalent resistance between the terminals A & B in the given network



Obtain the equivalent resistance between the terminals A & B in the given network



Text Book:

1. **“Basic Electrical Engineering” S.K Bhattacharya, 1stEdition Pearson India Education Services Pvt. Ltd., 2017**
2. **“Basic Electrical Engineering”, D. C. Kulshreshta, 2ndEdition, McGraw-Hill. 2019**
3. **“Special Electrical Machines” E G Janardanan, PHI Learning Pvt. Ltd., 2014**

Reference Books:

1. **“Engineering Circuit Analysis” William Hayt, Jack Kemmerly, Jamie Phillips and Steven Durbin, 10th Edition McGraw Hill, 2023**
2. **“Electrical and Electronic Technology” E. Hughes (Revised by J. Hiley, K. Brown & I.M Smith), 12th Edition, Pearson Education, 2016.**



THANK YOU

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