



# SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

COURSE NAME : 19EE01 BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

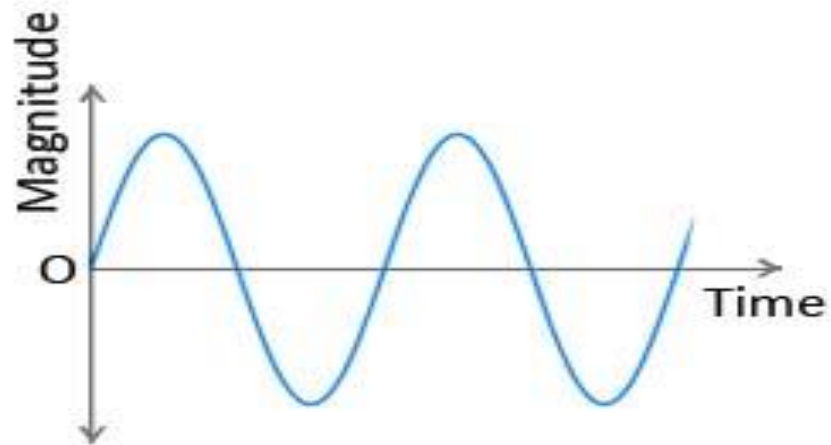
I YEAR /I SEMESTER MECHANICAL ENGINEERING

Unit 1 – Electrical Circuits and Measurements

AC & DC Circuits



# AC CIRCUITS



Alternating Current

AC is a sinusoidal in nature which have frequency in its signal

$$\text{Frequency } F = (1/T)$$

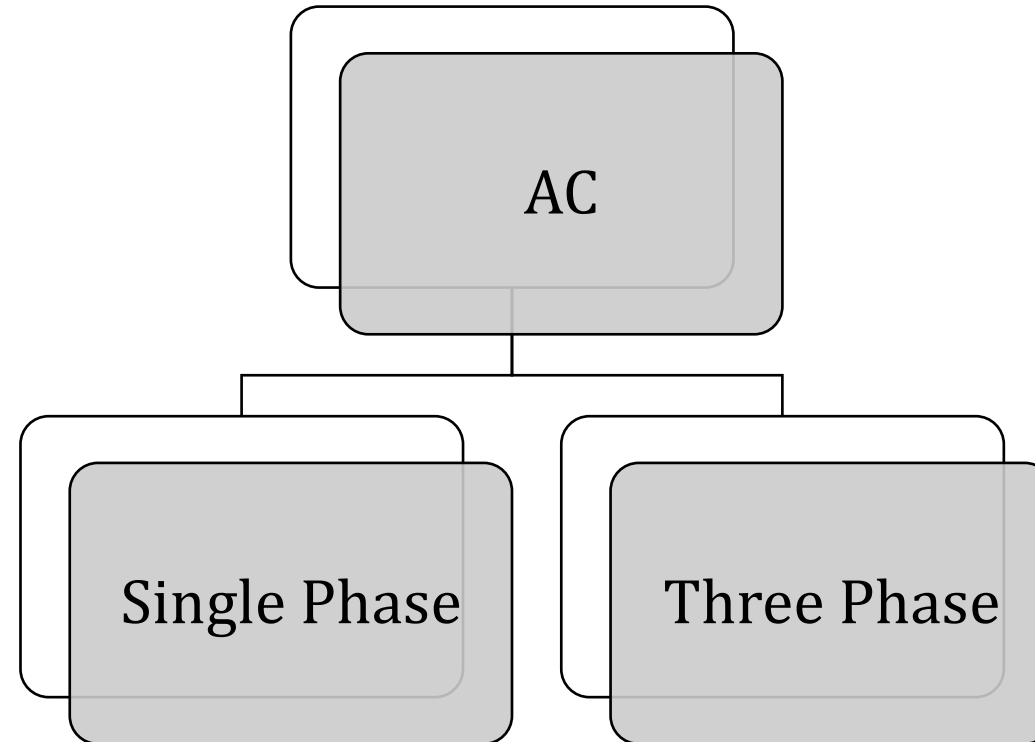
V- Voltage

I- Current

Z- Impedence

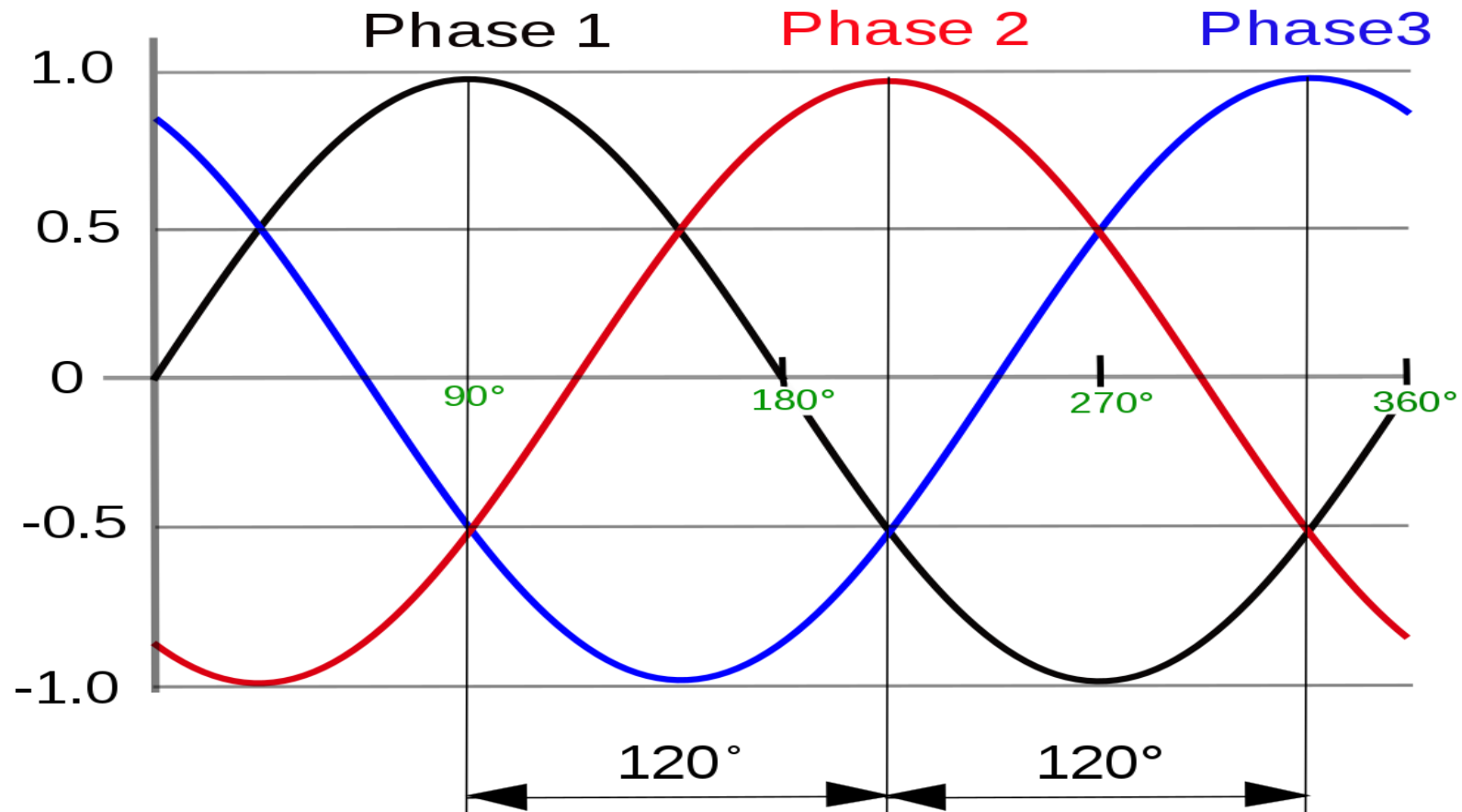


# TYPES OF AC





# THREE PHASE SUPPLY





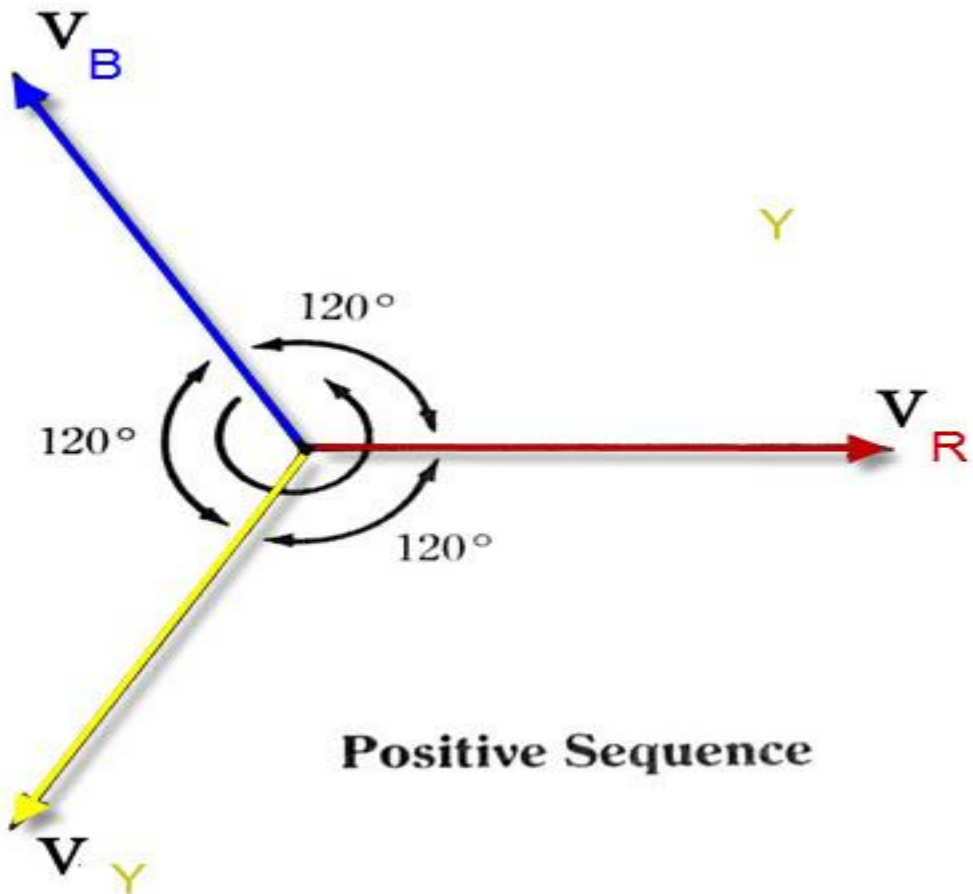
# ADVANTAGES OF THREE PHASE SUPPLY

- More power
- Smaller in size with higher capacity
- Self starting
- P.f and efficiency
- More economical

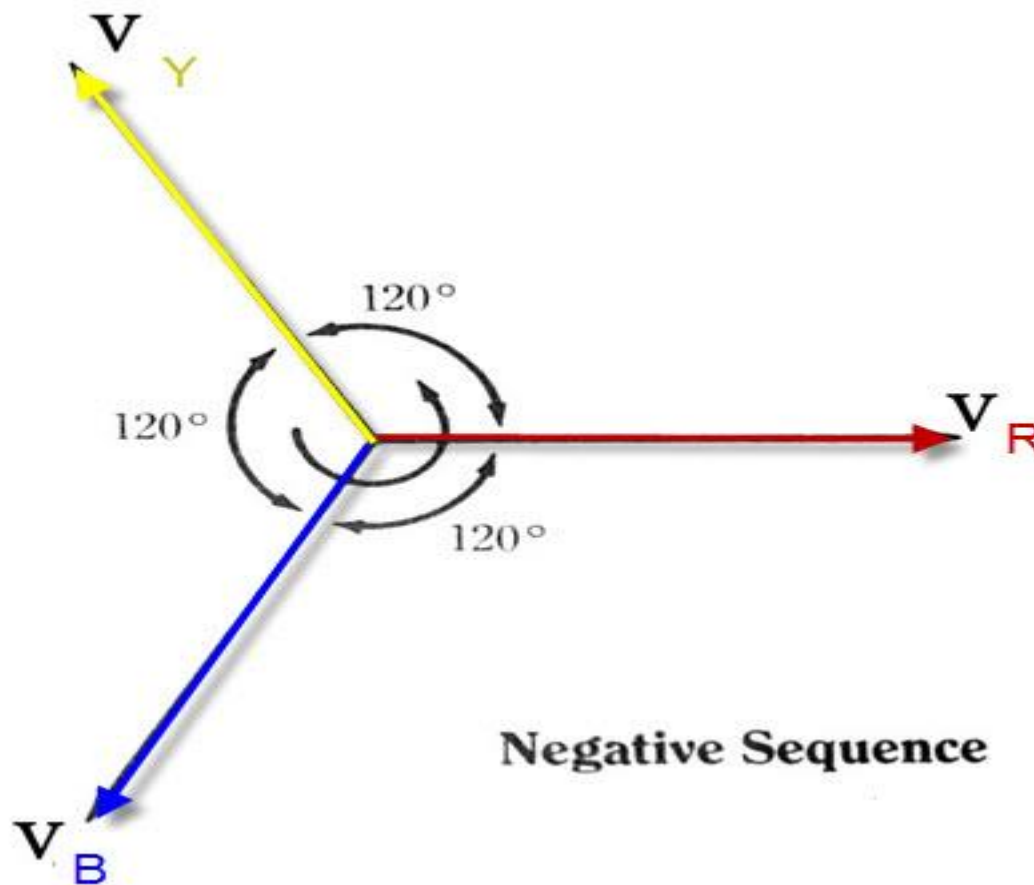




# AC & DC



**Positive Sequence**

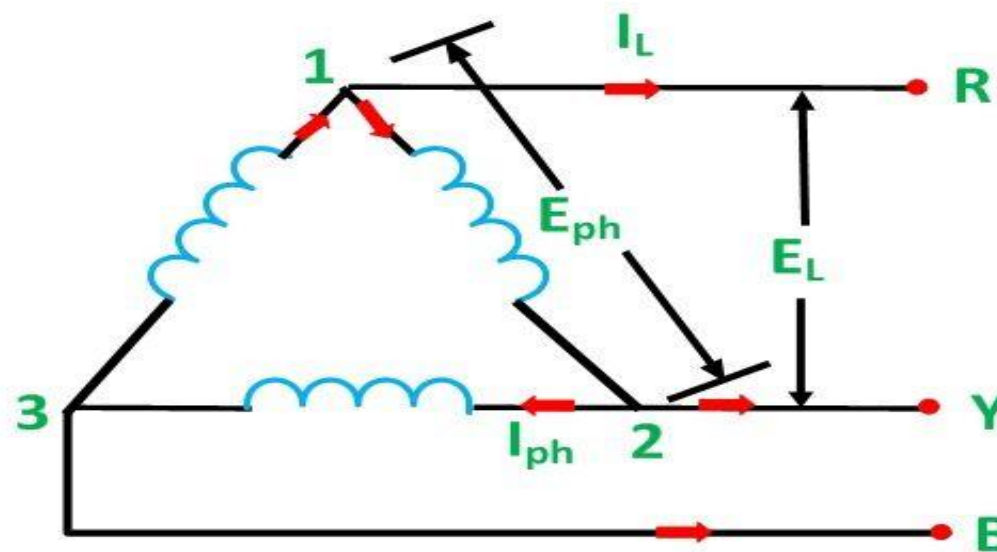
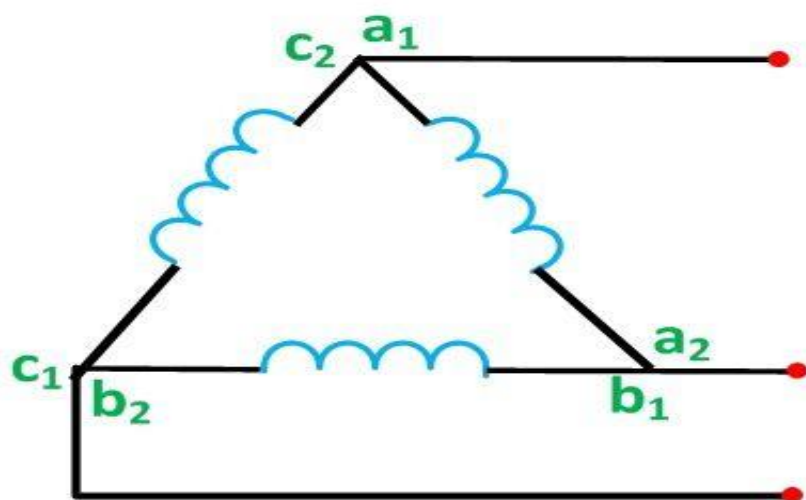


**Negative Sequence**





# Delta connection



Circuit Globe





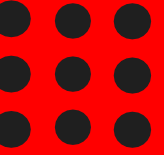
# DC



Direct Current

DC source is Direct current where the frequency is zero

I-Current  
V-Voltage  
R-Resistance





# REFERENCES

1. Bhattacharya. S.K, “Basic Electrical and Electronics Engineering”, Pearson Education , (2017)
2. Muthu Subramanian R, Salivahanan S,“ Basic Electrical and Electronics Engineering”, Tata McGraw Hill Publishers, (2009)
3. V.Mittle“ Basic Electrical Engineering”, Tata McGraw Hill Publishers, (2017)
4. Nagrath. I.J, “Electronics: Analog and Digital”, Prentice Hall India Pvt. Ltd., (2013)

## THANK YOU