



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 : 19EC309 ELECTRICAL MACHINES AND POWER SYSTEMS

II YEAR / 03 SEMESTER MECH & MCT

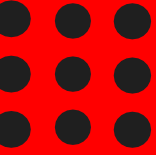
Unit 1 – DC Machines

Construction and Operation of DC Motor



Can You Guess?

- Which gear we are chosen while starting the vehicle?
- Which gear we are chosen while travelling in the hills?
- Which gear we are chosen while travelling in linear NH?
- What's your speed to travel of 100m with No-load, 5Kg, 10kg & 50kg etc?





TYPES OF CHARACTERISTICS

1. Torque and Armature Current Characteristics (T vs I_a)

It is also known as electrical characteristics.

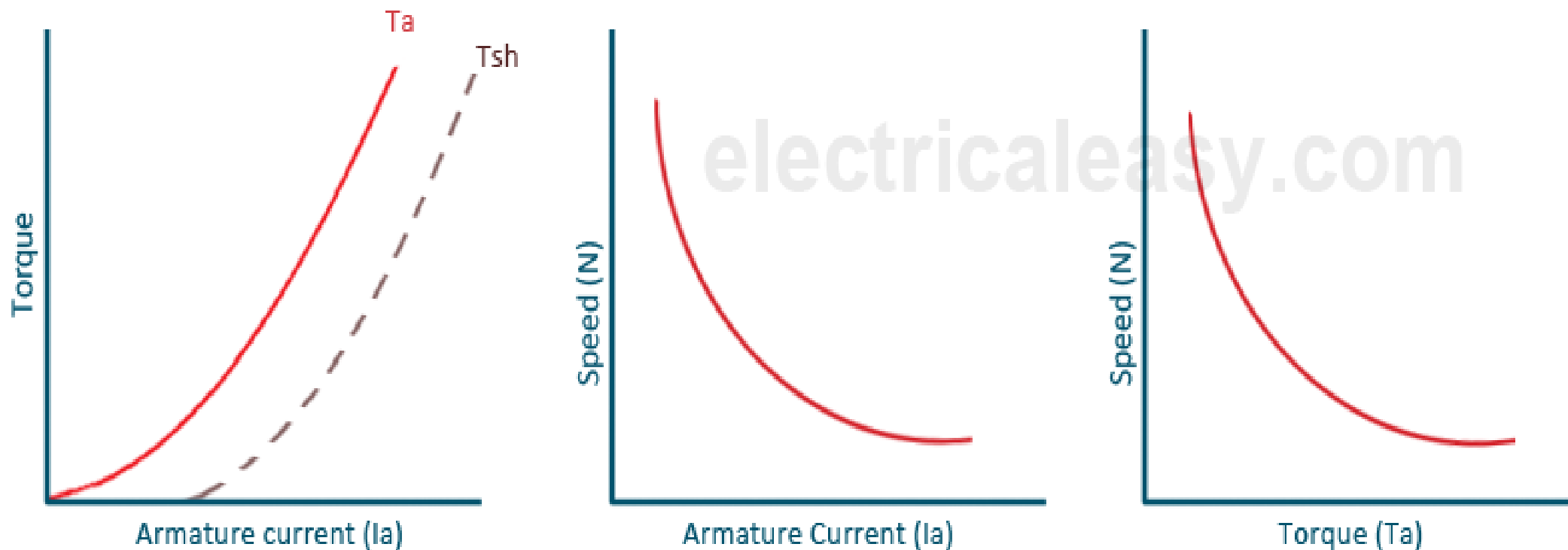
2. Speed and Armature Current Characteristics (N vs I_a)

3. Speed and Torque Characteristics (N vs T)

It is also known as mechanical characteristics.



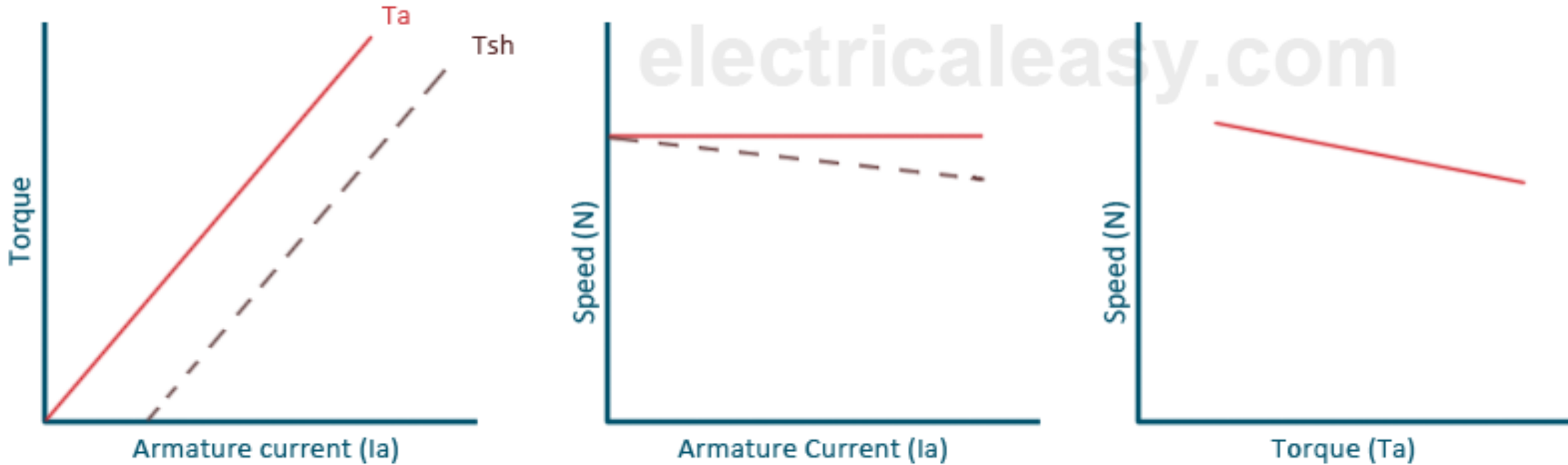
DC Series Motor



Characteristics of DC series motor



DC Shunt Motor



Characteristics of DC shunt motor



REFERENCES

1. Murugesh Kumar K, “Electric Machines Vol I”, Vikas Publishing Pvt Ltd , (2010)
2. Gupta J.B,“ Theory and Performance of Electrical Machines”, S.K.Kataria and Sons, (2002)
3. Kothari D.P and Nagrath I.J“ Electric Machines”, Tata McGraw Hill Publishers, (2002)
4. Bhimbhra P.S., “Electrical Machinery”, Khanna Publishers, (2003)

THANK YOU