

Induction Motor

- ⇒ Induction motor (defn, advantage, disadvantage)
- ⇒ Induction motor (working principle)
- ⇒ RMF / How RMF is produced?
- ⇒ Exact equivalent circuit (at an slip), transformer equivalent circuit.
- ⇒ Power stages in 3 phase induction motor
- ⇒ Synchronous VS Induction
- ⇒ Synchronous motor working principle
- Math: ~~33.3~~, ~~33.4~~, 34.5, 34.14(a), 34.19, 34.27
34.3, 34.4

Stepper Motor:

- ⇒ Driving modes
- ⇒ VFD
- ⇒ Magnet : ① Variable frequency drive
② Permanent magnet
③ Hybrid

Math: 39.1, 39.2

Measurement and error

- ⇒ Accuracy VS precision
- ⇒ 6.1, 6.2 - (All math from slide)
6.2 → 4.1, 4.2 (***)
- ⇒ slide 5, 6 (Tanek sin) : Impedance matching
Mechanical loading
- ⊗ sin en notes (Full)

OP-Amp

- ⇒ Defn of op-amp
- ⇒ Subtractor amplifier
- ⇒ log amplifier
- ⇒ CMRR, voltage gain (voltage curve)
- ⇒ characteristics of op-amp

Math: 12.3, 12.4, 13.5-13.8, 13.10, 13.11, 14.8, 14.9

- ⇒ 7 segment, DVM

OP-to electronics

- ⇒ Thermocouple Math
- ⇒ Transducer (Tarek sin 10 no slide)
 - ⇒ Defn
 - ⇒ electrical transducer
 - ⇒ characteristics
 - ⇒ types
- ⇒ PV cell (10 star)
 - ⇒ Working principle
 - ⇒ Advantages, disadvantages, Defn
- ⇒ Temp [RTD
- ⇒ Piezo electric (Application)
- ⇒ photodiode / LED (***

From Tareq Sir (slide 3)

- ⇒ Stepper motor working principle
- ⇒ Stepper motor types and contribution
- ⇒ Rotor ⇒
 1. PMR (Permanent magnet rotor)
 2. VRR (Variable Reluctance Rotor)
 3. HIR (Hybrid Rotor)

[Figure + Description (2 line)]

- ⇒ How synchronous motor make self starting
- ⇒ RTD (Principle)
- ⇒ Strain Gauge (Principle + Gauge factor eqn prove) ***
- ⇒ Piezo electric (Principle) ***
- ⇒ RTD vs Thermocouple
- ⇒ Thermocouple (single math)
- ⇒ Measurement & error (all math)