

Anna University Exams – Regulation 2017  
Important Questions – 3rd Semester BE/BTECH EE8353 Electrical  
Drives and Controls

UNIT - 1

1. Write a brief note on classes of duty for an electric motor.
2. Draw the typical temperature rise-time curve and derive the equation for temperature rise in an electric drive
3. Explain in detail about the various types of electric drives
4. Explain the factors governing the selection of motors
5. Draw the block diagram and explain the basic elements of an electric drive system.
6. Compare the D.C and A.C drives

Unit – II

1. Explain the Speed-Torque characteristics of three phase induction motor with neat diagrams
2. Explain about the speed-torque characteristics of a DC Shunt Motor with Suitable graphs and diagrams.
3. Explain various methods of braking of DC Shunt Motors with neat diagrams.
4. Draw and explain various load characteristics of DC Shunt Motor
5. Explain the Speed-Torque characteristics of Single phase induction motor with neat diagrams

Unit III

1. Draw a neat schematic diagram of a three point starter and explain its working
2. Explain with neat circuit diagram, the star-delta starter method of starting squirrel cage induction motor
3. Explain with neat diagram the starting of three phase slip ring induction motor
4. Explain the typical control circuits for DC Series and Shunt motors
5. Draw and explain the manual auto-transformer starter for three phase induction motor.

Unit IV

1. . Discuss the Ward-Leonard speed control system with a neat circuit diagram. Also mention its advantages and disadvantages.
2. Explain with neat sketch the chopper control method of speed control of DC motors.
3. Explain with neat sketches about the DC Shunt Motor speed control by using single phase fully controlled bridge converter
4. Explain the speed control schemes of DC Series Motor
5. Explain how the speed of a DC Shunt Motor can be varied both above and below the rated speed at which it runs with full field current

Unit V

1. Explain the speed control schemes of phase wound induction motors.
2. Explain the static Kramer method and static Scherbius method of speed control of three phase induction motor
3. Explain in detail about the various methods of solid state speed control techniques by using inverter
4. Explain in detail about Slip power recovery scheme.
5. Explain the different methods of speed control used in three phase induction motors.
6. Draw the power circuit arrangement of three phase variable frequency inverter for the speed control of three phase induction motor and explain its working.