

Government Engineering College, Dahod
Electrical Engineering Department
Assignment -1

Sub. Code: 180904

Semester : VIII

Sub: Electrical Machine Design-II

Last date of Submission: 25/04/15

- 1) Explain the factors affecting the selection of Air gap of three phase Induction Motor
- 2) Discuss the advantages achieved on selecting larger air gap in a three phase induction motor.
- 3) Explain the effect of Harmonic Induction Torque and Harmonic synchronous Torque on the performance of three phases Induction Motor.
- 4) What is dispersion coefficient? Show its effect on maximum power factor and overload capacity of three phases Induction Motor.
- 5) Draw and explain briefly the current distribution wave form spreaded over one pole pitch in bars and end rings squirrel cage induction motor.
- 6) Explain the effect of skewing the rotor slots in a squirrel cage induction motor
- 7) Give the rules for selecting number of rotor slots in induction motor.
- 8) Derive the equation for relationship between rating and size of the machine in case of three phase induction motor.
- 9) Discuss some methods to mitigate harmonic torques in three phase induction motor.
- 10) Discuss how the magnetizing current can be estimated from the design data in a three phase induction motor
- 11) State the rules for the selection of rotor slots. Describe the methods for reducing the effect of harmonics torque.
- 12) Explain the deciding factor for stator slots and state the equation for
 - (i) Area of stator slots
 - (ii) Stator winding resistance
 - (iii) Stator copper losses

By

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