SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION

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

III Semester

B.E- Mechanical and Mechatronics Engineering (Additive Manufacturing)

23EEB204 – Electrical Machines and Power Systems

Regulations 2023

UNIT IV – SPECIAL MACHINES

PART A

1. List the merits of Repulsion motor.
2. Discuss the applications of micro stepping VR stepper.
3. Quote the properties of linear induction motor.
4. Define stepping angle.
5. Mention the disadvantages of hysteresis motor.
6. List the types of Hysteresis motor
7. Name the various modes of excitation of stepped motor
8. Distinguish the half step and full step operations of a stepping motor.
9. Define slewing.
10. Express the equation for step angle of stepper motor.
11. Calculate the stepping angle for a 3phase, 24 pole permanent magnet stepper motor.

PART B & C

1. Discuss in detail about the construction and working of Repulsion motor with neat diagrams.
2. Elaborate the working of linear induction motor with a neat sketch and also write its applications
3. Summarize the constructional details, principle of operation and the application of Hysteresis motor.
4. Elaborate the construction and working of variable reluctance stepper motor with a neat sketch.
5. Discuss the construction and operation of servo motor. Also write its application,
6. Discuss the construction and working principle of hybrid stepper motor with neat diagrams.