SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION

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

INTERNAL ASSESSMENT EXAMINATION – III

III Semester

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

19EC309 – Electrical Machines and Power Systems

Regulations 2019

S. No.	PART A
1	List the merits of Repulsion motor.
2	Discuss the applications of micro stepping VR stepper.
3	List the properties of linear induction motor.
4	Mention any two existing HVDC system in India.
5	Write the need of EHVAC Transmission.
6	The stepper motor has a step angle of 1.8º and is driven at 4000rps. Determine (a) Resolution (ii) Rotor speed.
7	Mention the disadvantages of hysteresis motor.
8	Write the Advantages and Limitations of EHVAC Transmission.
9	List the types of HVDC links
10	Examine the major equipment of a substation.
	PART B
1	Discuss in detail about the construction and working of Repulsion motor with neat diagram.
2	Elaborate the working of linear induction motor with a neat sketch and its applications
3	With a suitable block diagram illustrate and mention the structure of transformer sub-stations.
4	Compare and contrast the EHVAC and HVDC system.
5	A Variable Reluctance stepper motor has a step angle of 3˚, Determine the following: i) Resolution. ii) Number of steps per shaft to make 10 revolutions iii)Shaft speed if stepping frequency is 2400pulse/sec.
6	With a neat diagram explain the structure of electric power system.
7	Elaborate the construction and working of variable reluctance stepper motor with a neat sketch.
8	Discuss the construction and operation of AC servo motor. Also write its application,
9	Draw a typical configuration of Extra High Voltage AC (EHVAC) Transmission system. Also discuss the advantages and disadvantages of EHVAC system.
10	What are the different types of bus-bar arrangements used in sub-stations? Illustrate with suitable diagrams.
11	i) A single stack 3 phase variable reluctance motor has a step angle of 15º. Find the number of stator and rotor poles. (ii) With a neat diagram explain the working of linear induction motor.
12	Describe the various types of High Voltage Direct Current (HVDC) Transmission system with neat diagram.