



# SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

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

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)

COIMBATORE-641 035, TAMIL NADU



**B**

Reg. No:

**B.E/B.Tech- Internal Assessment – III**  
**Academic Year 2024-2025 (EVEN Semester)**  
**Fourth Semester**

**Electrical and Electronics Engineering**  
**23EEE210 – ELECTRICAL MACHINES & DRIVES**

**Time: 1<sup>1/2</sup> Hours**

**Maximum Marks: 50**

**Answer All Questions**

		CO	Blooms
1.	What is a Chopper?	CO4	UND
2.	Apply the concept of single-phase controlled rectifiers in digitally controlling speed of a lab-scale DC motor.( GATE EE 2022)	CO4	APP
3.	Compare Half and fully controlled rectifier fed DC drive.	CO4	UND
4.	Outline the advantages of stator voltage control in induction motor.	CO5	UND
5.	Highlight how slip power recovery can benefit high-torque applications in conveyor systems.( GATE 2023)	CO5	UND
<b>PART – B (2*13=26 Marks) &amp; (1*14=14 Marks)</b>			
		CO	Blooms
6.	(a) Illustrate the operation of Single phase fully controlled converter speed control of DC Drive with neat diagram. (OR)	CO4	UND
	(b) Evaluate the performance of a four-quadrant chopper-fed separately excited DC drive used in regenerative industrial cranes.( GATE EE 2021)	CO4	ANA
7.	(a) Examine the forward motoring, forward braking, reverse motoring and reverse braking operation of a chopper fed DC Drive in detail (OR)	CO5	APP
	(b) Design a microcontroller-based stepper motor control interface for high-precision medical pumps. (GATE EE 2024).	CO5	UND
8.	(a) Analyze the operation of a static rotor resistance method of speed control with a neat sketch (OR)	CO4	ANA
	(b) Examine the digital controlled of reluctance motor with neat diagram.	CO5	ANA

**Bloom's Taxonomy:**

**REM** – Remember **UND** – Understand **APP**– Apply **ANA**– Analyze **EVA** - Evaluate **CRT** - Create