

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2025**

INDUSTRIAL ELECTRONICS AND DRIVES

[Maximum Marks: 75]

[Time: 3 Hours]

PART-A

I. Answer ‘all’ the following questions in one word or one sentence. Each question carries ‘one’ mark.

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1.	What is meant by doping in semiconductor?	M1.01	R
2.	Define Commutation in SCR.	M2.01	R
3.	What is back emf in DC motor?	M3.01	R
4.	Write down the equation of torque in DC motor.	M3.01	R
5.	What is the use of soft start in motors?	M3.04	R
6.	Why single phase induction motor is not self -starting?	M3.03	R
7.	What is the function of dual converter?	M4.01	R
8.	List any two applications of chopper.	M4.02	R
9.	Define electric drive.	M4.03	R

PART-B

II. Answer any ‘eight’ questions from the following. Each question carries ‘three’ marks.

(8 x 3 = 24 Marks)

		Module Outcome	Cognitive level
1.	Illustrate the difference between SCR and TRIAC.	M1.02	R
2.	Compare forward voltage triggering and gate triggering of SCR.	M2.01	U
3.	State Fleming's left-hand rule.	M3.01	R
4.	How the DC motors are classified based on the connection between the field winding and the armature?	M3.02	U
5.	Briefly explain the working of universal motor.	M3.03	U
6.	Write three applications of stepper motor.	M3.04	R
7.	List any three applications of cycloconverter.	M4.01	U
8.	Draw the circuit diagram of Jones chopper.	M4.02	R
9.	What is the purpose of step-down chopper?	M4.02	U
10.	List any three speed control methods of DC drives.	M4.03	R

Answer ‘all’ questions from the following. Each question carries ‘seven’ marks.

Module Outcome	Cognitive level
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