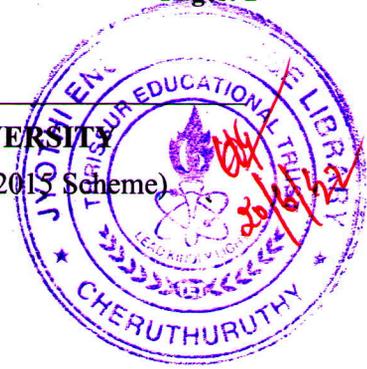


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Eighth Semester B.Tech Degree Examination June 2022 (2015 Scheme)



Course Code: MR404

Course Name: POWER ELECTRONICS AND DRIVES

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 5 marks.

		Marks
1	Classify power diodes.	(5)
2	Enumerate some of the application of MOSFET	(5)
3	Explain any one thyristor triggering methods.	(5)
4	Describe with a block diagram AC link chopper and C chopper.	(5)
5	Enumerate the requirements of a good inverters.	(5)
6	List some of the applications of cycloconverters.	(5)
7	Briefly explain factors affecting for the choice of electric drives.	(5)
8	Describe the block diagram of electrical drives.	(5)

PART B

Answer any three full questions, each carries 10 marks.

9	a) With circuit diagram describe any one thyristor protection method	(5)
	b) Enumerate some of the comparisons between MOSFET and BJT	(5)
10	With neat sketches, explain the operation of single phase half bridge controlled converter having resistive load.	(10)
11	Sketch and explain the working of current commutated chopper	(10)
12	Explain in detail about type A and type B chopper. Also draw its circuit diagram and necessary waveform.	(10)
13	Explain the operation any two types of PWM inverters with neat sketches	(10)

PART C

Answer any two full questions, each carries 15 marks.

14	a) Illustrate single phase voltage controller using resistive load.	(7)
	b) With neat sketch explain the multi stage sequence control of voltage controller.	(8)

- 15 a) Describe the operation of three phase to three phase cycloconverter. (10)
b) List some of the merits and applications of cycloconverters. (5)
- 16 a) Briefly explain the parts of motor drives (7)
b) Explain the factors effecting the steady state stability. (8)
- 17 a) Describe with neat sketch about the four quadrant operation of motor drives. (7)
b) Describe different types of load torque. (8)
