

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE Winter Examination – 2022 Course: B. Tech. Branch : Electrical Engineering Semester : V Subject Code & Name: BTEEC503 Power Electronics Max Marks: 60 Date: 02/02/2023 Duration: 3 Hr.			
Instructions to the Students: 1. All the questions are compulsory. 2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question. 3. Use of non-programmable scientific calculators is allowed. 4. Assume suitable data wherever necessary and mention it clearly.			
		(Level/CO)	Marks
Q. 1	Solve Any Two of the following.		12
A)	Briefly explain different areas of application of power electronics.	CO2	6
B)	Enlist and explain different triggering methods of thyristor.	CO1	6
C)	Draw symbol, structure and characteristics of SCR, GTO and TRIAC.	CO2	6
Q.2	Solve Any Two of the following.		12
A)	Explain 1 ϕ half controlled bridge rectifier with R-load circuit and waveforms.	CO3	6
B)	Explain 1 ϕ fully controlled bridge rectifier with R-load circuit and waveforms.	CO3	6
C)	Explain effect of input impedance effect with circuit and waveforms.	CO2	6
Q. 3	Solve Any Two of the following.		12
A)	Explain control strategies of chopper.	CO1	6
B)	Explain PWM control and operation.	CO2	6
C)	Explain types of chopper circuits.	CO3	6
Q.4	Solve Any Two of the following.		12
A)	Briefly explain classification of inverters.	CO1	6
B)	Explain single-phase Current Source Inverter.	CO3	6
C)	Explain reduction of harmonics in the inverter output voltage.	CO2	6
Q. 5	Solve Any Two of the following.		12
A)	Explain Single phase voltage controllers.	CO3	6
B)	Give in details about the applications for AC motor drives.	CO2	6
C)	Explain principle of cycloconverter operation.	CO1	6
*** End ***			

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