

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular End Semester Examination – Summer 2022

Course: B. Tech.

Branch : Electrical

Semester : VI

Subject Code & Name: BTEEC603 POWER ELECTRONICS

Max Marks: 60

Date: 26/08/2022

Duration: 3.45 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.		
A) Explain V-I characteristics of Power Diode.	CO-2	6
B) Give the Advantages, disadvantages and application of IGBT.	CO-3	6
C) Explain V-I characteristics of SCR.	CO-2	6
Q.2 Solve Any Two of the following.		
A) Give comparison between R triggering, RC triggering, UJT triggering.	CO-2	6
B) Explain Commutation.	CO-2	6
C) Explain Thyristor Firing Circuit.	CO-3	6
Q. 3 Solve Any Two of the following.		
A) Explain effect of source inductance on the performance of 3 phase Full bridge diode rectifier.	CO-2	6
B) Explain 1 phase Half wave rectifier with R-L Load and freewheeling diode.	CO-2	6
C) Explain 1 ϕ Half wave diode Rectifier with R Load.	CO-2	6
Q.4 Solve Any Two of the following.		
A) Explain single phase Full wave AC voltage controller with RL Load.	CO-2	6
B) Explain single phase half wave AC Voltage controller with R-Load.	CO-2	6
C) Compare ON-OFF Control and Phase angle control.	CO-3	6
Q. 5 Solve Any Two of the following.		
A) Explain principle of Step-down chopper (Back) operation.	CO-2	6
B) Explain performance parameters of Inverter.	CO-2	6
C) Explain half bridge inverter with R-load.	CO-2	6

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