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:26/08/022** **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 1ϕ 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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