Sanjay Ghodawat University, Kolhapur

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

2020-21

EXM/P/09/00

Year and Program: TYB.Tech	**School of Technology**	**Department: Electronics**
Course Code: ECE304	**Course Title: Power Electronics**	**Semester :VI**
Day and Date:	**End Semester Examination**	**Time:2 Hrs.** **Max Marks:50**

Instructions: 1) All Questions are compulsory.

Q.1		**Answer the following (any Two)**	**Marks**	**Bloom's Level**	**CO**
	a)	Recall the working ofPMOSFET.	8	L1	CO1
	b)	Demonstrate construction and working of IGBT.	8	L3	CO1
	c)	Explain class B commutation of SCR with circuit diagram and waveforms.	8	L2	CO2
Q.2		**Answer the following (any two)**			
	a)	If a 1 phase full wave fully controlled rectifier is inputted with a 230V, 50 Hz supply, which is supplying power to a 10 ohm load impedance then,**calculate**, i) Vdc, ii) Vrms, iii) FF iv) VRF at 45^0firing angle.	8	L3	CO3
	b)	**Determine** the Vdc, Idc, Vrms, Irms and rectification efficiency for a single phase half wave controlled rectifier supplied with 230V, 50 Hz and firing angle equals to 60^0 if load resistance is 10 ohms.	8	L3	CO3
	c)	**Draw** and **explain** the circuit diagram and waveforms for 180^0mode of conduction for 3 phase inverter with R load.	8	L2	CO4
Q.3		**Answer the following (any two)**			
	a)	Discuss thecircuit diagram and waveforms of Jones chopper.	9	L4	CO5
	b)	Designthe speed control for DC motor using chopper.	9	L5	CO5
	c)	Explain block diagram and working of PLC	9	L2	CO6

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