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: 2020-21 TY BTech	**School of Technology**	**Department: Electrical**
Course Code: ELE 304	**Course Title: Electric Drives**	**Semester : VI**
Day and Date: Tuesday, 08/06/2021	**End Semester Examination**	**Time : 2 Hrs. Max Marks: 50**

Instructions: 1) All Questions are compulsory.

Q.1		**Answer/Solve the following (any Two)**	**Marks**	**Bloom's Level**	**CO**
	a)	Explain steady state stability of drive. Find out expression for speed due to small perturbations for steady state stable Motor-Load System?	8	L3	CO1
	b)	What are the components of load torque? Also explain types of loads and its characteristics.	8	L2	CO1
	c)	Draw and explain the torque-speed characteristics of a separately excited DC motor during dynamic braking.	8	L2	CO1
Q.2		**Answer/Solve the following (any two)**			
	a)	Explain speed control of induction motor drives by Rotor Resistance control method	8	L4	CO2
	b)	Explain with neat diagram Closed-loop speed control for VSI Induction Motor Drives			
	c)	Closed-loop speed control of load commutated inverter synchronous motor drive	8	L3	CO3
Q.3		**Answer/Solve the following (any two)**			
	a)	Explain with neat diagram converter circuit and Closed-loop control of Switched Reluctance Motor	9	L3	CO3
	b)	Explain Digital controller block diagram for an IPM synchronous motor drive for EV propulsion.	9	L4	CO3
	c)	State important features of Stepper Motor. Also explain Torque vs Stepping (or Pulsing) rate characteristics of Stepper motor.	9	L3	CO4

*****ALL THE BEST*****