E **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 55015

M.E. DEGREE EXAMINATION, APRIL 2019

Elective

Power Electronics and Drives

15PPE515 - WIND ENERGY CONVERSION SYSTEMS

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20= 100 Marks)

1.	(a)	Describe with neat sketch the working of wind energy conversion system with major components.	CO1- U	(20)
		Or		
	(b)	Explain the different generation schemes of wind energy conversion systems	CO1- U	(20)
2.	(a)	Briefly explain the horizontal axis type wind turbine.	CO2- U	(20)
		Or		
	(b)	Design and describe the power control techniques of wind turbine	CO2- U	(20)
3.	(a)	Give the steady state model od non salient pole synchronous machine.	CO3-U	(20)
		Or		
	(b)	Explain Generator model for Steady state and Transient stability analysis.	CO3-U	(20)
4.	(a)	Explain with relevant waveforms the interface wind turbine using variable speed synchronous generator with boost dc converter.	CO4 -Ana	(20)
		Or		
	(b)	Draw the schematic diagram of Permanent Magnet synchronous generator and briefly describe the modelling of PMSG	CO4 -Ana	(20)
5.	(a)	Explainlow-voltage ride through control strategy of grid	CO5- U	(20)

connected variable speed wind turbine generator system

Or

(b) Discuss the current practices and industry trends wind interconnection impact on dynamic performance of the power system.. CO5-U (20)