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

Question Paper Code: 55T10

Ph.D COURSE WORK DEGREE EXAMINATION, APRIL 2019

Elective

Course work

15PPE510 - SOLAR AND ENERGY STORAGE SYSTEM

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1.	(a)	What are the characteristics of solar spectrum? Which part of the spectrum is known as visible spectrum.	CO1- U	(20)
		Or		
	(b)	Briefly discuss features of a silicon solar cell that affect its spectral response.	CO1- U	(20)
2.	(a)	In a stand-alone system, explain what problems may result from the use of a power conditioning unit those short circuits solar panels.	CO2- Ana	(20)
		Or		
	(b)	Explain the concept of self-regulation as applied to battery charging with solar cells.	CO2- Ana	(20)
3.	(a)	Write in detail about the utility application for photovoltaic	CO3- C	(20)
		Or		
	(b)	Write short notes on onsite storage.	CO3- C	(20)

4.	(a)	Examine any one of the secondary or rechargeable battery technology.	CO4- U	(20)
		Or		
	(b)	Explain any one of the rechargeable battery technology.	CO4- U	(20)
5.	(a)	Write short notes on water pumping.	CO5- U	(20)
		Or		
	(b)	Give specific details as to why solar cells are well suited to telecommunication application.	CO5- U	(20)