Electrical Power System (CBCS Pattern) M. Tech. Third Semester CBCS PEPS31 - Self Study Course

P. Pages : 1 Time : Three Hours			<b>GUG/W/18/11</b> 0   * 3 1 8 2 *   Max. Marks	GUG/W/18/11065 Max. Marks : 70	
	Note	s: 1. 2. 3. 4. 5. 6.	Attempt <b>any five</b> questions from the following. All questions carry equal marks. Assume suitable data wherever necessary. Illustrate your answers wherever necessary with the help of neat sketches. Use of Drawing Instruments, Thermodynamic Psychometric Charts and Refrigeration charts is permitted. Use of non programmable calculator is permitted. Draw neat diagrams wherever necessary.		
1.	a)	Define	smart grid concept and explain its necessity.	7	
	b)	List diff	èrence between conventional grid & smart grid.	7	
2.	a)	Explain Electror	how the reliability of smart grid can be enhanced by integrating Intelligent nic Devices (IEDs) into it.	7	
	b)	List diff Home &	Perent smart appliances & describe an integration of smart appliances into grid for & Building Automation.	7	
3.	a)	Explain	concept of micro grid and its need & applications.	7	
	b)	Write a	note on protection and control of microgrid.	7	
4.	a)	Describ	e power quality Issues of grid connected Renewable energy Sources.	7	
	b)	Explain	the concept of power quality & EMC in smart grid.	7	
5.	a)	Explain	the concept of Reactive Power Control in Smart grid.	7	
	b)	Explain	the importance of power quality in smart grid & how it can be improved.	7	
6.	a)	Write a	note on 'IP based Protocols'.	7	
	b)	Explain	cloud computing & its need.	7	
7.	a)	Explain	how automatic meter reading can make the system smarter.	7	
	b)	What is	Geographic Information System (GIS). Explain the components of GIS.	7	
8.	a)	Explain	Wide Area Measurement Systems.	7	
	b)	Why cy	ber security is of prime importance in smart grid & how it can be achieved.	7	

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