## Paper / Subject Code: 42277 / Microgrid and Smart-grid (DLOC - IV)

1-Jan-2024 10:30 am - 01:30 pm 1T00837 - B.E.(Electrical Engineering)(SEM-VII)(Choice Base Credit Grading System ) (R- 19) ('C' Scheme) / 42277 - Microgrid and Smart-grid (DLOC - IV) QP CODE: 10038266

Duradon, Sms		ation. 5ms	[Max Marks. 60]	
			300	
N.I	B.:	(1) Question No 1 is Compulsory.		
		(2) Attempt any three questions out of the remaining five.		
		(3) All questions carry equal marks.		
		(4) Assume suitable data, if required and state it clearly.		
1		Attempt any FOUR	[20]	
	a	Define micro grid and state it's needs.		
	b	Define smart grid and elaborate it's need in current situation.		
	c	Give comparison between conventional grid and smart grid		
	d	Evaluate advantages and disadvantages of wind power system in micro-grid.		
	e	Justify the need of anti-Islanding scheme		
2			E101	
2	a	Draw schematic diagram of D.C. microgrid and elaborate it along with its advantages, disadvantages, and limitations.	[10]	
	b	Elaborate the significance of Energy storage devices in micro grid.	[10]	
3	a	Compare non-conventional sources from the point of micro-grid suitability.	[10]	
	b	Give importance of islanding in case of grid connected micro grid. Also give the proper sequence of operation for successful islanding.	[10]	
4	a	Draw a block diagram on centralized control and elaborate its working, advantages	[10]	
25	× 4	and limitations	[10]	
	b	What is black start. Elaborate role of micro grid in it.	[10]	
5	a	Elaborate opportunities & barriers of Smart Grid	[10]	
5	h	Enlist various communication methods used for smart grid and elaborate any one	[10]	
	5) 0	in detail.	[10]	
6	a	Draw and elaborate a functional block diagram of smart meter.	[10]	
	b	Describe the resilience and self-healing characteristics of smart grid	[10]	