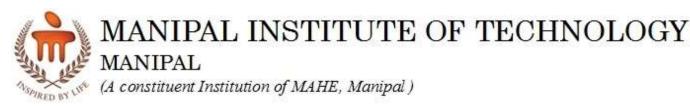
Reg. No.



VII SEMESTER B.TECH (ELECTRICAL & ELECTRONICS ENGINEERING) MAKE UP EXAMINATIONS, JANUARY 2018

SUBJECT: ADVANCED ENERGY MANAGEMENT [ELE 4005]

REVISED CREDIT SYSTEM

		REVISED GREDIT STSTEW		
Time	e: 3 Hours	Date: 02 January 2018	Max. Marks:	50
Instr	 wettions to Candidates: Answer ALL the questions. Missing data may be suitab 			
1A.	Explain with a neat sketch electrical network?	on how a EMS (Energy management system	-	05)
1B.	Explain the drawbacks of using a file based systems to store EMS data.			05)
2A.	Suppose you want to monitor energy consumption of the occupants in an apartment building. Your job is to set up the energy information system using a relational database. Your first step to do is set up an Entity-Relationship Model that should roughly represent the following real-world objects:			
	 Occupants of the apar Consumption details of Monthly bills of the oc 	of the occupants		
		nship Model. Find sensible attributes for yo candidates. What problems do you encounter del with the ER Model?	r? Are there	06)
2B.	With reference to the ER model developed in Q2A, write relational algebraic queries and SQL statements for			
	-	ne occupants and their contact number. Insumption details of the occupants for th		04)
3A.	Explain the methodology a Demand-Side-Management (dopted for the technology assessment to DSM).	-	05)
3B.	Explain the technology options available in terms of improving power factor of a facility?			05)
4A.	With the help of suitable exater tariffs.	amples explain the terms Time-of-Day and		05)
4 B .	Explain DSM strategies in int	erior lighting?	(0	05)

5A. The cost characteristics of two units in a plant are:

C1 = 0.40 P1²+160 P1+K1 Rs/hr

C2 = 0.45 P2²+120 P2+K2 Rs/hr

Where P1 and P2 are power output in MW. Find the optimum load allocation between the two units, when the total load is 162.5MW. What will be the daily loss if the units are loaded equally? **(06)**

5B. List and explain the functions of Supervisory Control and Data Acquisition (SCADA) systems. *(04)*