FACULTY OF ENGINEERING & TECHNOLOGY,
SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Cycle Test – II

Learning Assessment (CLA 1)			
Levels	**Level of Thinking**	**Weightage Required (%)**	**Weightage Provided (%)**
1	Remember Understand	15%	14%
2	Apply Analyse	20%	22%
3	Evaluate Create	15%	14%

Academic Year: 2022-2023 (ODD SEM)
Program offered: B. Tech
Year / Sem : III/V
Course Code and Title: 18EEO306T/Energy Conservation
Maximum Marks: 50
Duration: 90 mins

PART A (Answer all the questions) **10*1 MARKS=10 MARKS**

Q. No.	Questions	Reference to CO	Reference to PO	Blooms Taxonomy	Marks Allotted	Answer
1	In general, designed chilled water temperature drop across the chillers is____ °C. a) 5 °C b) 1 °C c) 10 °C d) 15 °C	CO3		Understand	1	A
2	The ratio of maximum to minimum flow rate is called _____- a) turn – up ratio b) turn-down ratio c) up-down ratio d) None	CO3		Understand	1	B
3	For large capacity centrifugal pumps, design efficiencies are in the range of a) around 70% b) around 85% c) around 95% d) any of above	CO3		Remember	1	B
4	"A public expression of organisation's commitment to energy conservation and environmental protection" is called as a) Company policy b) Energy policy c) Management philosophy d) Corporate plan	CO3		Understand	1	B
5	"Training includes the complex technical issues that relate to energy efficient technologies". This is useful as part of a) Energy action planning b) Training division commitment c) Management philosophy d) None of above	CO3	2	Analyze	1	A
6	From the combination below, which is not a key element of a successful energy management program? a) Technical ability b) monitoring system & a strategy plan c) Security of plant d) top management support	CO3		Remember	1	C
7	To assess the existing situation of a plant, good energy saving strategy plan starts with… a) energy audit b) training c) seminar d) none of the above	CO3		Understand	1	A
8	If distribution of power is raised from 11 kV to 66 kV, the voltage drop would lower by a factor	CO2		Understand	1	B

	a) 6 times b) 1/6 times c) 36 times d) 1/36 times					
9	One lux is equal to ___. a) one lumen per meter b) one lumen per m3 c) one lumen per m2 d) None	CO2		Remember	1	C
10	The minimum illuminance required for non working interiors as per IS 3646 is___. a) 100 lux b) 50 lux c) 20 lux d) 1000 lux	CO2		Remember	1	C
11	Power factor is the ratio of ____ and apparent power. a) Active power b) Reactive power c) Load Factor d) Maximum Demand	CO2		Understand	1	A
12	With decrease in speed of the motor, the required capacitive kVAr: a) Increases b) Decreases c) Does not change d) None of the above	CO2		Understand	1	A
13	One lux is equal to ___. a) one lumen per meter b) one lumen per m3 c) one lumen per m2 d) None	CO2		Remember	1	C
14	The minimum illuminance required for non working interiors as per IS 3646 is___. a) 100 lux b) 50 lux c) 20 lux d) 1000 lux	CO2		Understand	1	C

PART B (Answer all questions) **3*5 MARKS= 15 MARKS**

Q. No.	Questions	Reference to CO	Reference to PO	Blooms Taxonomy	Marks Allotted	Marks Scored
15	A) During April-2003, the plant has recorded a maximum demand of 600 kVA and average PF is observed to be 0.82 lag, The minimum average PF to be maintained is 0.92 lag as per the independent utility supplier and every one % dip in PF attracts a penalty of Rs 10,000/in each month. a) Calculate the improvement in PF for May-2003 by installing 100kVAr capacitors. (OR) B) List and Explain in detail about energy conservation measures possible in lighting system?	CO2	3	Evaluate Understand	12	
12	A) i) Estimate the cooling tower capacity (TR) with the following parameters Water flow rate through CT = 120 m^3/h SP. Heat of water = 1 k.Cal/kg °C Inlet water temperature = 37 °C Outlet water temperature = 32 °C Ambient WBT = 29 °C (6 MARKS) ii) List all the components of cooling tower. (OR) B) Explain in detail about various Energy Saving Opportunities in FANs	CO3	1	Evaluate Understand	12	
13	A) Explain the possible energy saving measures for DG sets.	CO3 CO2	3	Remember	12	

	(OR) B) Differentiate between fan, blower and air compressors?					

CO ASSESSMENT		
Course Outcomes	**Marks Allotted**	**Marks Scored**
CO1		
CO2	**-**	
CO3	**-**	
CO4	**-**	
CO5	**-**	
Total		

Total Marks:

Signature of the Faculty