SRM Institute of Science and Technology
College of Engineering and Technology
School of Computing

SRM Nagar, Kattankulathur – 603203, Chengalpattu District, Tamilnadu

Academic Year: 2023-24 (ODD) **SET -B**

Test: CLA-T2 **Date: 12-10-2023**
Course Code & Title: 18EEO301T SUSTAINABLE ENERGY **Duration:** 2 Periods
Year & Sem: IV Year / VII Sem **Max. Marks:** 50

Course Articulation Matrix:

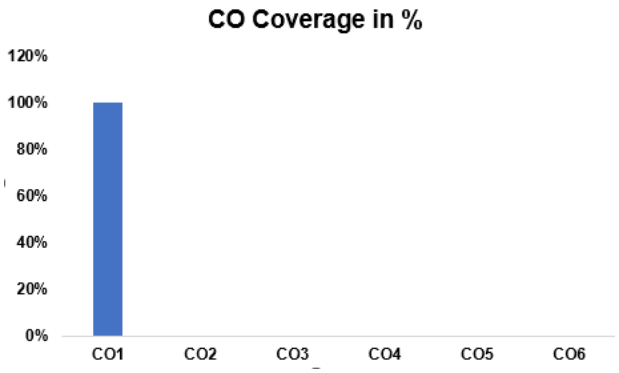
S.No.	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	CO1	3	2	2				1					
2	CO2	3	2	2				1					
3	CO3	3	2					1					
4	CO4	3	2					1					
5	CO5	3	2	2				1					

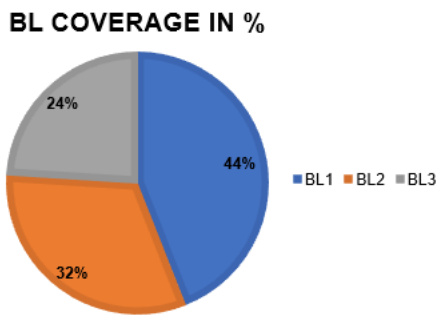
Part - A
(5 x 4= 20 Marks)

Instructions: Answer any four Questions

Q. No	Question	Marks	BL	CO	PO
1	Analyze the factors involved in estimation of wind energy at a site?	**4**	**2**	**2**	**1**
2	Explain briefly about various grid interconnection requirements of WECS	**4**	**3**	**2**	**1**
3	Explain the process of photosynthesis involved in producing bio mass energy.	**4**	**3**	**3**	**1**
4	Write the significance of the following (a) Combustion (b) Gasification	**4**	**2**	**3**	**1**
5	Discuss about benefits of repowering in renewable energy.	**4**	**2**	**2**	**1**
	Part – B **(15 x 2 = 30 Marks)**				
	Instructions: Answer any one Question				
6	(a) Derive the expression of maximum theoretical efficiency obtained from the propeller type wind turbine. **(Or)** (b) Describe the various power electronic converters used in WECS with neat diagram.	**15**	**3**	**2**	**1**
7	(a)Explain with neat sketch the construction and working of KVIC bio-gas plant. **(Or)** (b)Describe the two stage digestion process used in rural places in India for generating bio- mass energy with schematic diagram.	**15**	**2**	**3**	**1**

Course Outcome (CO) and Bloom's level (BL) Coverage in Questions





Approved by the Audit Professor/Course Coordinator