


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2023			
Course: Hybrid and Renewable Energy Technology		Semester: VIII	
Program: B.Tech. – Electrical Engg		Time: 03 hrs.	
Course Code: EPEG 4024		Max. Marks: 100	
Instructions: All the questions are to be attended. The corresponding marks are mentioned.			
SECTION A (5Q x 4M = 20Marks)			
S. No.		Marks	CO
Q 1	Describe the reasons for failure of Kyoto Protocol and CDM.	04	CO1
Q 2	Explain the Carbon Equivalent and GWP of gases in GHG emission.	04	CO1
Q 3	“Climate change need to handle on priority” Justify it.	04	CO1
Q 4	Illustrate the steps involved for deciding the size of Inverter in a typical solar system.	04	CO3
Q 5	Describe the effect of Over charging of Batteries in a Hybrid power System	04	CO3
SECTION B (4Q x 10M = 40 Marks)			
Q 6	Compare a typical Vapor Absorption Machine with Vapor Compressor Refrigeration.	10	CO1
Q 7	Illustrate the various kind of Thermal Energy Storage systems.	10	CO2
Q 8	Draw the schematic diagram and explain the functioning of a typical Solar Invertor.	10	CO3
Q 9	Justify the need and developmental process for INDC by various countries. OR Please elaborate that “Developing a Low Carbon Economy is not a just scientific problem.”	10	CO1
SECTION-C (2Q x 20M = 40 Marks)			
Q 10	“Maximum Power Point Tracker is too advantageous for solar farms”. Justify it and explain the functioning of it.	20	CO4
Q 11	Make a detailed comparison of a Mono Crystalline and Poly Crystalline solar panel. Also justify their applications. OR Explain the functioning of Charge Controller for avoiding the overcharging of Batteries	20	CO2