


Name:	 UPES <small>UNIVERSITY OF TOMORROW</small>
Enrolment No:	

UPES
End Semester Examination, December 2023

Course: Understanding New Energy Resources **Semester: V**
Program: BBA OG **Time : 03 hrs.**
Course Code: OGOG3002 **Max. Marks: 100**
Instructions:

SECTION A
10Qx2M=20Marks

S. No.	Question	Marks	CO
Q 1	Expand the following: GDAM, GTAM	2	CO1
Q 2	Where in India we should construct Wind Power Plants?	2	CO1
Q 3	Where in India we should construct Green Hydrogen production plants?	2	CO1
Q 4	Which is the largest Hydro Power Plant in the world?	2	CO1
Q 5	What is Green Hydrogen?	2	CO1
Q 6	Which is the main source of electricity of Norway?	2	CO1
Q 7	Why we need to monitor Wind power plant height at Jaisalmer Rajasthan?	2	CO1
Q 8	At what temperature and pressure, we need to store hydrogen?	2	CO1
Q 9	What is RoE?	2	CO1
Q 10	Where only Geothermal power plant located in India?	2	CO1

SECTION B
4Qx5M= 20 Marks

Q 1	What is Energy storage? Explain its operational value chain.	5	CO2
Q 2	How can Oil and Gas Industries handle revenue inflow wrt Energy Transition?	5	CO2
Q 3	What is the importance of Open Access for Indian renewable energy sector?	5	CO2
Q 4	What indicators are seen to identify ideal location for constructing Wind Power Plant	5	CO2

SECTION-C
3Qx10M=30 Marks

Q 1	Analyze the variables that are considered for Energy demand forecasting. What tools are used for forecasting?	10	CO3
Q 2	Analyze the role of Energy Storage technologies wrt Energy security of India.	10	CO3
Q 3	Differentiate among Grey Hydrogen, Blue Hydrogen and Green Hydrogen. Critically analyze Green Hydrogen Policy/Mission in India.	10	CO3

SECTION-D
2Qx15M= 30 Marks

	<p>Calculate the Tariff for Wind Power Plant of 100 MW capacity with help of Following parameters:</p> <ol style="list-style-type: none"> 1. Capital Cost = Rs. 6 Crores per MW 2. Interest on debt = 10 % per Annum 3. Interest on working capital= 10 % per Annum (Assume working capital as 10% of Capital Cost) 4. CUF= 30 % and Depreciation= 6 % per annum 5. RoE= 14 % per annum 6. O&M Cost – 5 Lakhs per MW per Year 		
Q 1	Calculate the fixed cost/tariff as per the above data	15	CO4
Q 2	What steps you can undertake to reduce Tariff.	15	CO4