

UNIT-III WIND ENERGY

S.NO	Questions	BT	CO	PO
	Part–A(Short answer questions)	L1	CO3	1,2,3,4,6,7
1	Define wind energy and its significance in renewable energy systems.	L1	CO3	1,2,3,4,6,7
2	What are the main factors influencing wind energy potential?	L2	CO3	1,2,3,4,6,7
3	Explain the term "Betzlimit" in wind energy systems.	L1	CO3	1,2,3,4,6,7
4	How is wind speed monitored and measured?	L2	CO3	1,2,3,4,6,7
5	What are off.shore wind turbines, and how are they different from onshore turbines?	L2	CO3	1,2,3,4,6,7
6	List any two environmental benefits of wind energy	L1	CO3	1,2,3,4,6,7
7	Explain the importance of site selection in the development Of wind energy projects.	L1	CO3	1,2,3,4,6,7
8	Development of wind energy projects	L2	CO3	1,2,3,4,6,7
9	List any two environment all benefits of wind energy.	L1	CO3	1,2,3,4,6,7
10	List any two advantages and disadvantages wind energy.	L1	CO3	1,2,3,4,6,7

S.NO	Part-B(Long answerquestions)	BT	CO	PO
1	Explain the working principle of a wind energy conversion system (WECS). Discuss its components, advantages, and Challenges in detail.	L1	CO3	1,2,3,4,6,7
2	What factors influence wind energy potential? Discuss the methods for assessing wind resources and the importance of site selection for wind turbines.	L1	CO3	1,2,3,4,6,7
3	Describe the different types of wind turbines and their applications.Compare horizontal-axis and vertical-axis wind turbines in terms of design and efficiency.	L2	CO3	1,2,3,4,6,7
4	Analyze the environmental and safety aspects of wind energy.How does wind energy contribute to reducing Green house gas emissions?	L1	CO3	1,2,3,4,6,7
5	What are off shorewind energy systems?Discuss their advantages, challenges, and potential for large-scale renewable energy generation.	L1	CO3	1,2,3,4,6,7



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