

Distributed power system EE010805G06

Part A

1. List the renewable energy sources which find their origin in sun.
2. Define Tip speed ratio.
3. Is geo thermal energy renewable ?Explain briefly.
4. What are the power quality issues associated with distributed generation?
5. What are the advantages of wind solar system.

Part B

1. Explain how emf is generated in a fuel cell and summarize the types of fuel cells.
2. Differentiate between drag force and lift force based on aerodynamic theory.
3. With a neat diagram explain the wind-solar hybrid system.
4. Briefly explain singe basin double effect tidal plant
5. Briefly explain about the main interfacing components of DG to the utility grid.

Part c

- 1a) Draw the V-I characteristics of solar cell .Explain briefly
- b) What is a PV cell? Explain a silicon cell with neat diagram. Explain the classifications

OR

- 2a) Draw the schematic of a solar PV electric plant.
 - b) Explain the battery regulator circuit with diagram.
3. What are the factors to considered while designing a wind farm?

OR

- 4 Explain the control and monitoring schemes of a wind farm.
- 5.a Explain how a PMSG machine can be used in wind power generation
- b.Explain the principle and application of wind electric system. State the basic Components and their working in wind electric system.

OR

- 6a. Explain with a neat diagram the working of various types of wind generators
- b.Explain any 4 types of rotors used for wind power generation with neat diagram
- 7.a.).Explain the parallel operation of generators in micro hydro system

b. Describe a closed cycle of OTEC system using NH_3 as working fluid and discuss the reasons why OTEC systems not yet in operation in the world's oceans for commercial power generation.

Or

8a. Briefly describe the geo thermal energy conversions

b Explain with a schematic diagram the anaerobic digestion system.

9. Explain the integrating techniques for DGs on networks.

Or

10. What are low voltage distribution networks? Explain the operation of DG interconnected with these networks.