

End Semester Examinations - 2015-16 Even Semester - May 2016

14ME3038 Renewable Energy Sources

Set A

Time : 3 hrs
Total Marks: 100

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1. Enumerate the different types of concentrating type collectors. Describe a collector used in power plant for generation of electrical energy

OR
 2. Why orientation is needed in concentrating type collectors? Describe the different methods of sun tracking
 3. Describe the different schemes for wind energy generation systems and its control mechanisms

OR
 4. Write short notes on:
 - (i) Applications of wind energy
 - (ii) Savonius rotor
 - (iii) Darrius rotor
 - (iv) Wind energy storage
 5.
 - (i) Derive an expression for emf of a fuel cell.
 - (ii) Derive the expressions for free energy and potencial of the fuel.

OR
 6. Write short notes on:
 - (i) Applications of fuel cell.
 - (ii) Types of electrodes for a fuel cell
 - (iii) Batteries for bulk energy storage
 - (iv) Advantages and disadvantages of a fuel cell.
 7.
 - (i) What are the techniques suggested for maintaining the bio gas production
 - (ii) Give a list of materials used for biogas generation

OR
 8.
 - (i) How are gasifiers classified? What is pyrolysis?
 - (ii) What are the potential applications of the gasifier?
 9. Explain with sketches the various methods of tidal power generation? Whant are the limitation of each method?
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Wishing you All the Best
