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Question Paper Code: 58763

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

One Credit

Mechanical Engineering

15UME863-SOLAR ENERGY

(Regulation 2015)

Duration: 1.30 hours

Maximum: 30 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- The function of a solar collector is to convert _____
 - Solar Energy into Electricity
 - Solar Energy radiation
 - Solar Energy thermal energy
 - Solar Energy mechanical energy
- Solar air heaters used for
 - Industrial Purpose
 - Drying for agricultural
 - Space heating
 - Space heating
- Which of the following is a disadvantage of most of the renewable energy sources?
 - Highly polluting
 - High waste disposal cost
 - Unreliable supply
 - High running cost
- Flat plate collector absorbs _____
 - Direct radiation only
 - Diffuse radiation only
 - Direct and diffuse both
 - All of the above
- The Collector Concentrator mirror reflector having the shape
 - Highly polluting
 - High waste disposal cost
 - Unreliable supply
 - High running cost

6. Horizontal axis and vertical axis are the types of:
(a) Nuclear reactor (b) Wind mills (c) Biogas reactor (d) Solar cell
7. Steam reforming is currently the least expensive method of producing:
(a) Coal (b) Biogas (c) Hydrogen (d) Natural gas
8. Common energy source in villages is
(a) Electricity (b) Coal (c) Sun (d) Wood and animal dung
9. Direct Solar energy is used for
(a) Water heating (b) Distillation (c) Drying (d) All of the above
10. Which is the parameters affecting the life cycle cost of Solar system
(a) Depreciation rate and final salvage value (b) Operating costs
(c) Taxes (d) Furnace

PART - B (1 x 20 = 20 Marks)

11. (a) (i) Explain with neat sketch any two type concentrating collectors in detail. (10)
(ii) Explain with a neat diagram working of a solar Still. (10)
- Or
- (b) (i) Explain with a neat diagram working of a solar cooker. (10)
(ii) Explain the mirror step and Fresnel collector with neat sketch. (10)
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