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Question Paper Code: 50073

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

One Credit

Mechanical Engineering

15UME863 - SOLAR ENERGY

(Regulation 2015)

Duration: Three hours

Maximum: 30 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- In Flat-plate Collector most commonly used liquid is
 - Mercury
 - Water
 - Steam
 - Crude oil
- Flat-Plate Collector (FPC) is
 - Simple design
 - Less weight
 - Complicated design
 - Less space required
- The Collector Concentrator mirror reflector having the shape
 - Cylinder
 - Cylindrical parabola
 - Tube
 - Sphere
- Solar air heaters used for
 - Industrial Purpose
 - Drying for agricultural
 - Space heating
 - All the above
- The value of the heat transfer coefficient between the absorber plate and the air is low then the efficiency is
 - Lower efficiency
 - Higher efficiency
 - Medium efficiency
 - None of these
- Solar air heater volume of fluid is to be handled as
 - large volume
 - less volume
 - Maximum volume
 - Half of the volume

7. 7. Conventional forced-air , gas-heating system would Include the cost of
 (a) Furnace (b) Taxes (c) Salvage value (d) none of these
8. Solar system future cost is
 (a) Rapair (b) Insurance (c) Taxes (d) All the above
9. Which is the variable cost
 (a) Collector (b) Solar components
 (c) Sensor devices (d) None of these
10. Which of the following is a non-renewable resource
 (a) Coal (b) Forests (c) Water (d) Wildlife

PART - B (20 x 1 = 20 Marks)

11. (a) Explain with neat sketch of a solar heating system and what are the advantages and disadvantages of the system. (20)

Or

- (b) Explain the working principle of Solar Cell. (20)
