

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 58763

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 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)

- Which is the parameters affecting the life cycle cost of Solar system
 - Depreciation rate and final salvage value
 - Operating costs
 - Taxes
 - Furnace Answer(a)
- Which among the following is not a renewable source of energy?
 - Solar energy
 - Biomass energy
 - Hydro-power
 - Geothermal energy
- Solar air heaters used for
 - Industrial Purpose
 - Drying for agricultural
 - Space heating
 - All the above
- Flat plate collector absorbs _____
 - Direct radiation only
 - Diffuse radiation only
 - Direct and diffuse both
 - All of the above
- 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

6. Fuel cells are:
- (a) Carbon cell (b) Hydrogen battery
(c) Nuclear cell (d) Chromium cell
7. Horizontal axis and vertical axis are the types of:
- (a) Nuclear reactor (b) Wind mills (c) Biogas reactor (d) Solar cell
8. Steam reforming is currently the least expensive method of producing:
- (a) Coal (b) Biogas (c) Hydrogen (d) Natural gas
9. Common energy source in villages is
- (a) Electricity (b) Coal (c) Sun (d) Wood and animal dung
10. Both power and manure is provided by:
- (a) Nuclear plants (b) Thermal plant
(c) Biogas plants (d) Hydroelectric plant

PART - B (1 x 20 = 20 Marks)

11. (a) Explain the major components of a photovoltaic system with their advantages and disadvantages? Explain with a neat diagram working of a solar cell ? (20)
- Or
- (b) Explain with neat diagram the two-pass Solar Air Heater. (20)
-