

Roll No.

24486

B. Tech 7th Sem. (ME)

Examination – June, 2016

SOLAR ENERGY ENGINEERING

Paper : ME-431-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt five questions. Question Number 1 is compulsory and attempt at least one question from each Section.

1. Write short note on the following : 4 × 5 = 20
- (a) Solar radiation properties of surfaces.
 - (b) Heliostats
 - (c) Solar drying of grains.
 - (d) Passive cooling.

SECTION – A

2. Discuss in detail about construction and working of various types of solar collectors. 20

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3. What is the effect of solar radiation upon structures ?
Explain steady state heat transmission and periodic heat transfer. 20

SECTION - B

4. Explain in detail the continuous and intermittent vapour absorption systems for cooling applications. 20
5. Explain the areas where the cooling applications of solar system are used and also explain about the different types of absorbent and refrigerant combination. 20

SECTION - C

6. What is a solar system ? Explain the solar system in detail with all its terminologies used. 20
7. Explain in detail about solar lighting systems, solar cookers and solar pumps. 20

SECTION - D

8. Explain the various types of solar electric conversion systems in detail with neat and clean diagram. 20
9. What is global warming ? Explain its effects on environment. What are the remedial measures taken by international bodies ? 20