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B.Tech 7th Semester (ME) F-Scheme
Examination, December-2017
SOLAR ENERGY ENGINEERING

Paper-ME-431-F

Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five questions in all. Question number one is compulsory and select at least one question from each section.

1. Write short note on the following: 5×4

- (a) Solar System and Its Terminology.
- (b) Concept of Green house effect.
- (c) Solar cooker design
- (d) Application of solar energy.

Section-A

2. Explain Solar Radiation Properties of Surfaces, Shading of Surfaces and Steady State Heat Transmission. 20
3. Discuss in detail about sun, earth and earth-sun angles, time and derived solar angles. 20

Section-B

4. Explain with neat and clean diagram types of Solar Collectors. Discuss the efficiency of flat plate collector in comparison to other collectors. 20

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5. What is solar lighting and solar pumps? Explain the application of each with suitable example in industry. 20

Section-C

6. Explain Vapour absorption system for cooling application with neat and clean sketch. 20
7. What is Refrigerator? Discuss various absorbent used in it. Explain also the various passive cooling systems with neat and clean diagram. 20

Section-D

8. What is Photo voltaic cell? How it is different from Solar cell? Explain both of them in detail. 20
9. What is ozone layer depletion? Explain in detail the phenomenon and also discuss the various Remedial measures taken by international bodies to avoid ozone layer depletion. 20

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