

Each question carries 4 marks.

Part A

1. Define following terminologies used in solar energy system (a) Solar constant (b) Direct radiation (c) Diffused radiation, and (d) Global solar radiation. Describe the components and working of photovoltaic system of electricity generation?
- 2.. What is average availability of solar energy in Delhi region? How electricity requirement of a 5 member's family can be met from solar power in Delhi region with normal house roof top.
3. What is the importance of animal energy in rural areas ? Describe the working of power generation system using animal power. Suggest, How to improve efficiency of animal power utilisation, give your views?

PART B

4. State the law of Bio-Sphere and prove that all parts of a tree are sources of energy with an example.
5. Write an equation for transesterification of vegetable oil and estimate the amount of methanol required for processing of a ton of vegetable oil.