

Chapter Objective

1. To compute the solar radiation on the earth's surface
2. To be able to perform thermal modelling

Chapter Motivation

Applications that need heat energy like water heating, cooking, desalination.

Sample Questions

1. What is the difference between insolation and irradiance?
2. What is the definition of solar constant?
3. What is the irradiance incident on a horizontal surface placed on the equator during the summer solstice day?
4. What are the modes of heat transfer?
5. How does one distinguish between convection and mass transfer mode of heat transfer?
6. Explain the terms thermal resistance, thermal resistivity, thermal coefficient and thermal conductance.
7. Explain how thermal resistance of convection is calculated.
8. Explain the heat transfer process in a distillation system.