

1. Discuss with the help of recent statistics commercial and non-commercial energy reserves and production in India.
2. Explain the advantages and limitation of the use of non-conventional sources of energy
3. Explain the following a. Solar constant, b. Solar radiation data of India
4. Sketch and explain the working of shading ring pyrheliometer
5. Explain Tar sands and oil shale as energy sources and also mention their limitations
6. What is the need for alternate energy sources, explain by considering solar energy?
7. Define the following a. Latitude, b. Declination angle, c. Surface azimuth angle, d. Hour angle e. Zenith angle
8. Write short notes on spectral distribution of extra-terrestrial radiation
9. With schematic representation, explain the mechanism of absorption, scattering, beam and diffuse radiation received at earth surface
10. With the help of a neat sketch, explain the working principle of sunshine recorder
11. With the help of appropriate sketch, explain altitude, zenith angle and solar azimuth angle
12. With a neat sketch, explain the working principle of an instrument used to measure global radiation
13. Describe the principle Of working of a solar pond with neat sketch.
14. Describe in brief, the different energy storage methods used in the solar system.
15. Define the following terms: a. Langley, b. Declination, c. Surface azimuth angle, d. Hour angle, e. Day length