

Birla Institute of Technology and Science, Pilani

BITS F462 Renewable energy

Mid Sem (Open Book)

Time: 90 minutes

Weightage: 25%

Date: 03/ 11 / 2022

Note: Assume suitable data wherever necessary.

- Q.1. Institute's swimming pool remains closed during the winter season. Please suggest a **sustainable and efficient** solution for making it operational during that period with a neat sketch. Also, explain in detail the technology used. [10]
- Q.2. Institute has decided to use solar energy effectively on campus. Please suggest the types of solar systems which may be installed and used on campus. Justify your suggestion and explain the working of those systems with a neat sketch. [10]
- Q.3. Which type of solar water heating system is used in your hostel? Explain with a neat sketch the working principle of the same. Is it the most efficient one? Justify. [10]
- Q.4. Explain with a neat sketch(s) the working principle of a pyranometer for measurement of the global, beam, and diffused radiation. [8]
- Q.5 Explain the Trombe wall with a neat sketch. [7]
- Q.6. Can parabolic trough collectors work efficiently during rains? Justify your answer with a neat sketch. [5]

*****BEST LUCK*****