

Section 3

1. Draw the structure of tandem solar cell and illustrate its characteristics and how it is advantageous over single cell photovoltaics
2. Illustrate the PV installation with all required components. Why the cost factors increase in commercial installation.
3. Depict the structure of organic solar cells. Describe the advantages and disadvantages compared to inorganic solar cells
4. Mention the different types of solar cells. Demonstrate the thermophotovoltaics construction and its advantages over normal PV cells.
5. Draw the structure of perovskite solar cells and mention its advantages over silicon solar cells. Mention the important implementation of solar technology in locomotives
6. Compare the organic and inorganic photovoltaics in terms of their advantages and disadvantages

Section 4

1. Describe the importance of texture, light absorption probability, recombination loss characteristics in solar cells.
2. Illustrate five important testing parameters of solar cells with neat i-v diagram
3. Describe fill factor, efficiency and i-v characteristics of solar cells
4. Illustrate the importance of solar angle and describe the solar simulator in analysis of solar cells
5. How solar simulator used in study of solar irradiance. Discuss the uses of solar simulator in other fields
6. What are factors that affect the solar cell degradation, explain methods to minimize the degradation of solar panels.
7. Explain the importance of solar angle and solar cell performance
8. Illustrate the fill factor, max power in solar cell characteristics with a neat I-V curve