



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



COURSE NAME: 19EEO305 /Renewable Energy Generation Technology

III YEAR / VI SEMESTER

UNIT 2- SOLAR ENERGY

Topic 8 – Standalone PV lighting system



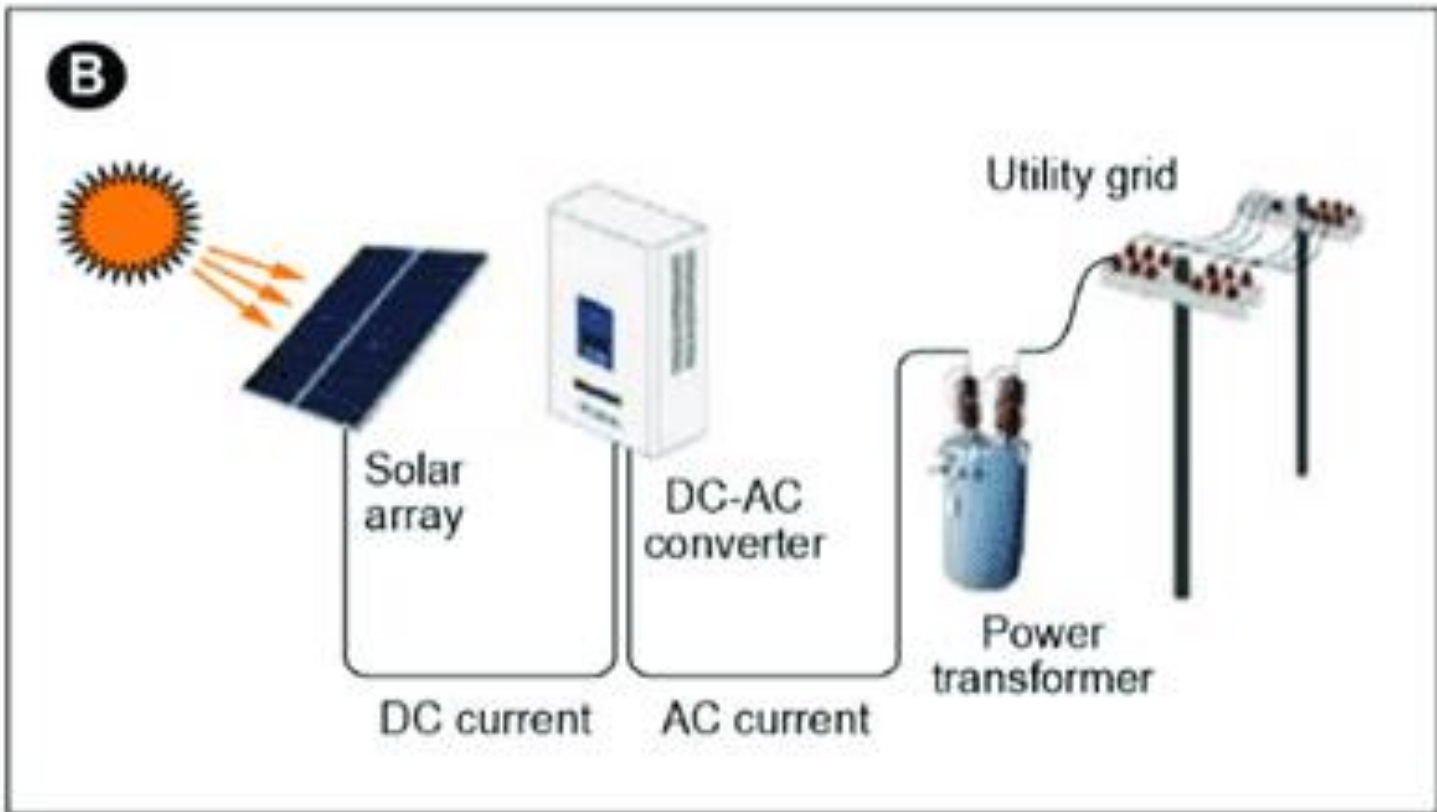
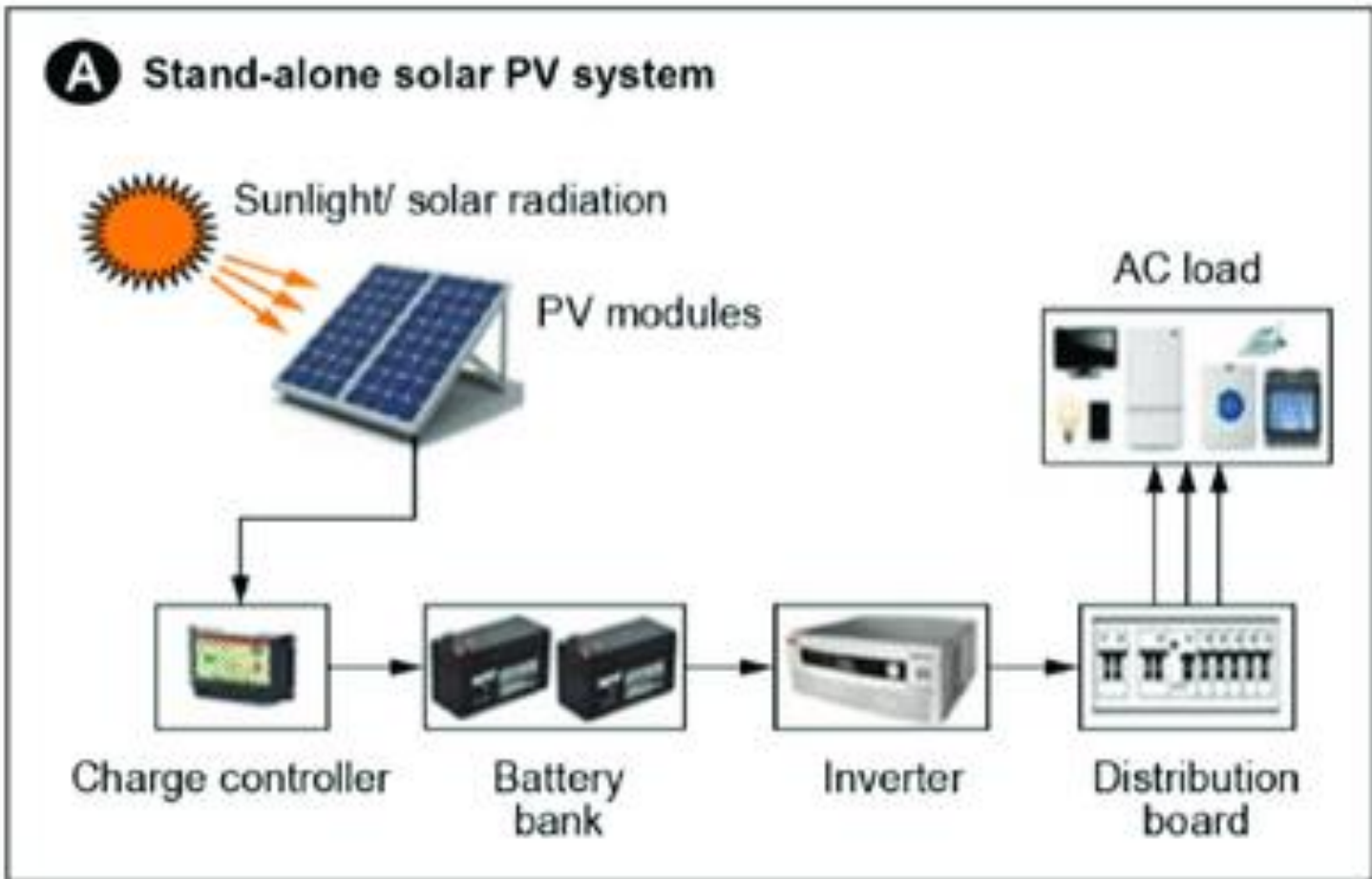
SUCCESSFUL STUDENT

Positive
Attitude

Professionally
Groomed

Socially
Interactive

Technically
Skillful





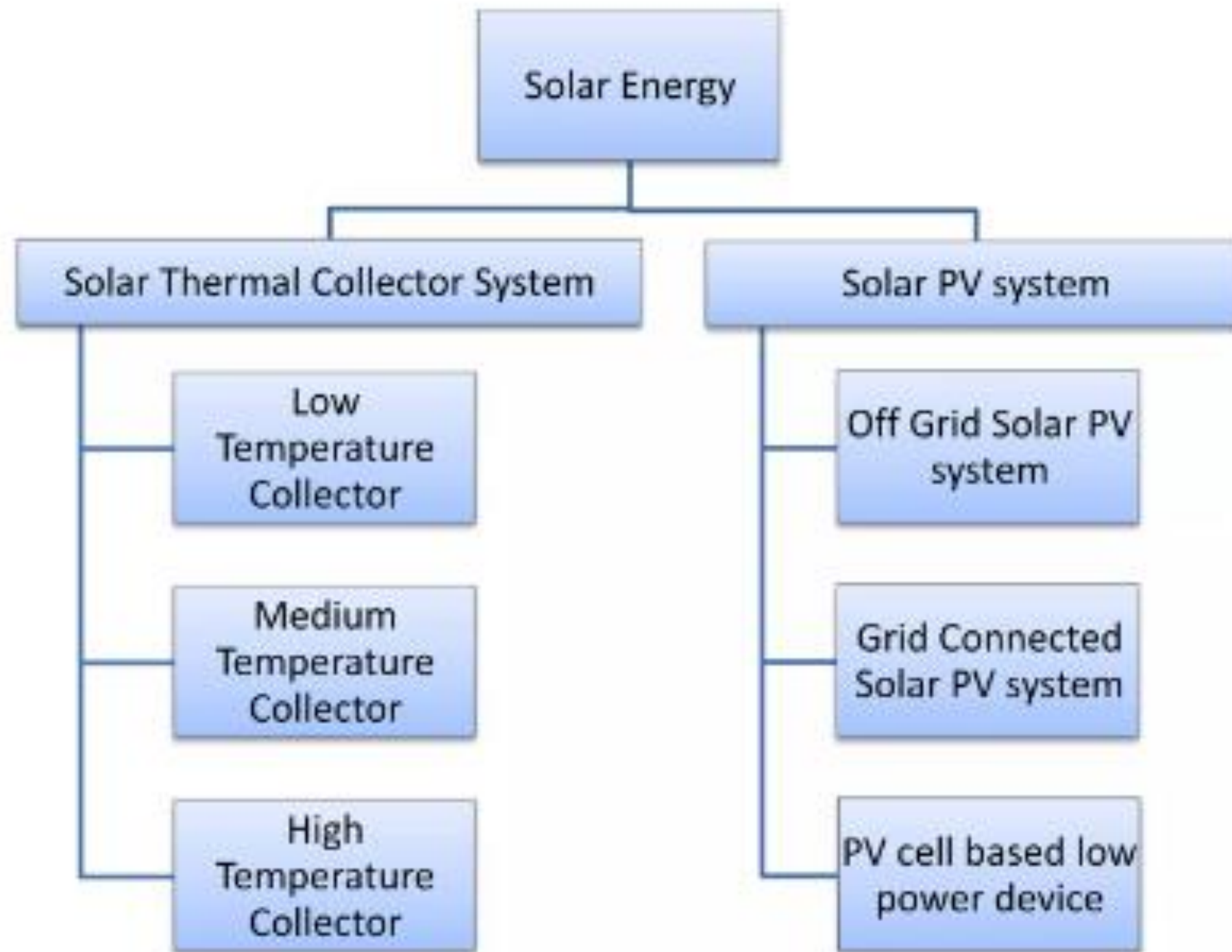
India Solar Radiation Map



Daily Global Radiation (KJ m-2 per day)		
City	Horizontal Radiation	Optimum Tilt Radiation
New Delhi	19.67	21.54
Kolkata	17.47	19.07
Pune	20.40	21.94
Chennai	20.12	20.99



Solar Energy System

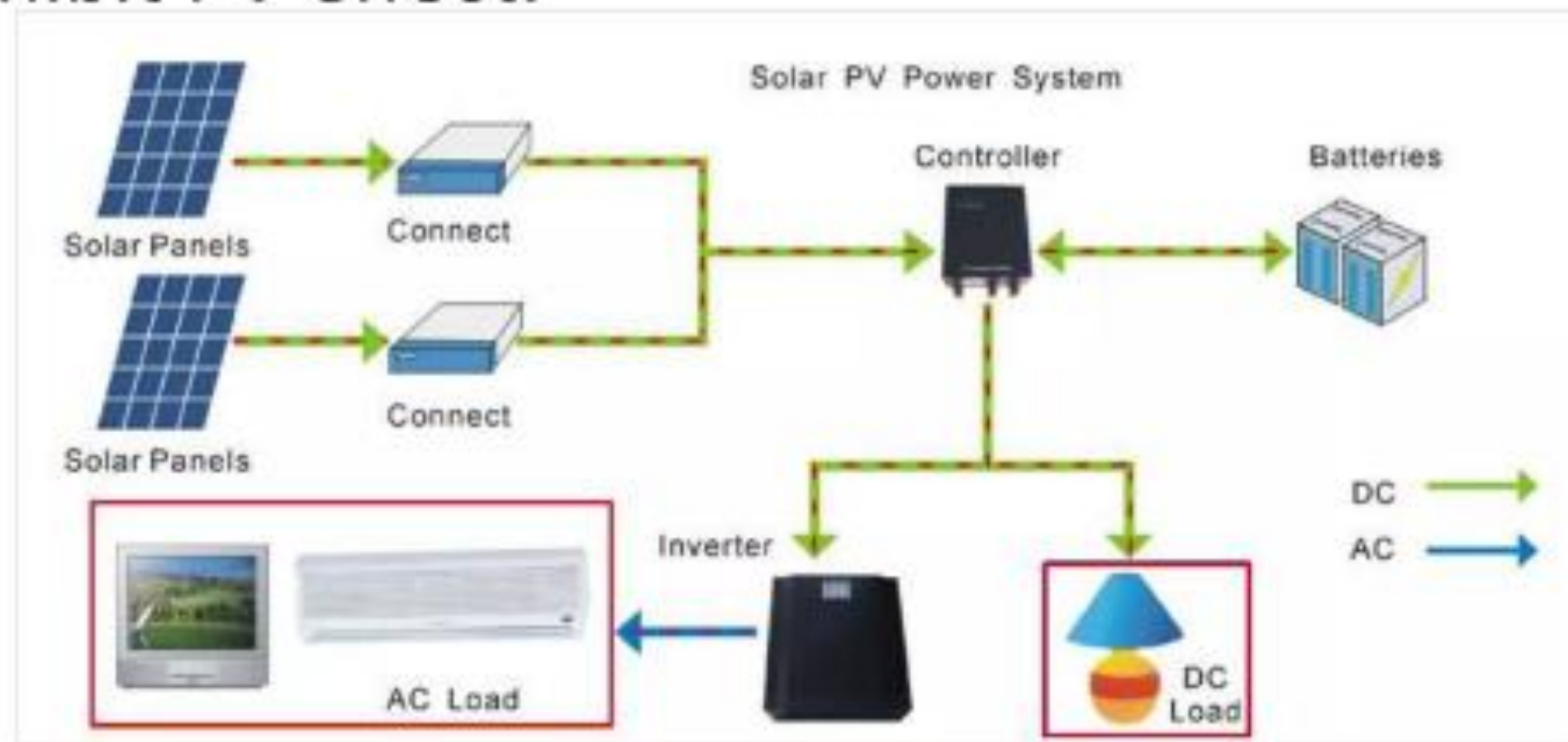




Solar PV system



Photovoltaic (PV) is method of generating electrical power by converting solar radiation into direct current using semiconductor which exhibit PV effect.





Design Step

- Solar Energy Estimation
- Load Estimation
- Inverter Selection
- Battery Bank Size
- Solar Module calc.
- Cost Estimation





ASSESSMENT



publicdomainvectors.org





REFERENCE



Reference Book:

1. S.P. Sukhatme, 'Solar Energy', Tata McGraw Hill Publishing Company Ltd., New Delhi, 1997. (UNIT II)
2. G.N. Tiwari, 'Solar Energy – Fundamentals Design, Modelling and applications', Narosa Publishing House, New Delhi, 2002. (UNIT II)
3. S.M. Muyeen," Wind Energy Conversion Systems: Technology and Trends", Springer 2012. [UNIT III]

Text Book:

1. G.D. Rai, 'Non Conventional Energy Sources', Khanna Publishers, New Delhi, 2006. (UNIT I - V)
2. D.P.Kothari, K.C.Singal and Rakesh Ranjan,"Renewable energy sources and Emerging Technologies", PHI Pvt. Ltd., 2009. (UNIT I-V)



THANK YOU!!

